DRAFT

CITY OF SAN DIEGO VERNAL POOL HABITAT CONSERVATION PLAN

Environmental Impact Report/ Environmental Impact Statement

September 2016

Project No. 441044
SCH# 2011111075

City of San Diego
Planning Department
1010 Second Avenue, Suite 1200, MS 413
San Diego, California 92101

The City of SAN DIEGO

PLANNING DEPARTMENT

Date of Notice: September 30, 2016

PUBLIC NOTICE OF A DRAFT ENVIRONMENTAL IMPACT REPORT (EIR)/ ENVIRONMENTAL IMPACT STATEMENT (EIS)

I.O. No.: 11003302

PUBLIC NOTICE: The City of San Diego Planning Department has prepared a Draft EIR/EIS for the following project and is inviting your comments regarding the adequacy of the document. The Draft EIR/EIS and associated technical appendices have been placed on the City of San Diego Planning Department website under the heading "Draft CEQA Documents" and can be accessed using the following link:

https://www.sandiego.gov/planning/programs/ceqa

The Draft EIR/EIS public notice has also been placed on the City Clerk website at:

http://www.sandiego.gov/city-clerk/officialdocs/notices/index.shtml

Your comments must be received by December 1, 2016 to be included in the final document considered by the decision-making authorities. Please send your written comments to the following address: **Myra Herrmann, Environmental Planner, City of San Diego Planning Department, 1010 Second Avenue, East Tower, Suite 1200, MS 413, San Diego, CA 92101 or email your comments to PlanningCEQA@sandiego.gov with the Project Name (Vernal Pool HCP) and Project Number (441044) in the subject line. Please note, only written comments received either via US Mail, hand-delivered, or via email, will be considered official comments in the Final PEIR.**

PROJECT NAME: Vernal Pool Habitat Conservation Program (VPHCP)
PROJECT No. 441044 / SCH No. 2011111075
COMMUNITY AREAS: Citywide
COUNCIL DISTRICTS: All Council Districts

PROJECT LOCATION: The VPHCP Plan Area is the geographical area for which the protections provided under the VPHCP are afforded to the seven covered species and for which the Section 10 permit applies. The VPHCP Plan Area includes lands subject to the City of San Diego's (CITY) jurisdiction within the jurisdictional boundary of the City, as well as three areas owned

by the City's Public Utilities Department (PUD) in the unincorporated portion of San Diego County. The VPHCP Plan Area also includes preserved lands within San Diego that are under the ownership of the United States Fish and Wildlife Service (USFWS) or the California Department of Fish & Wildlife (CDFW). The VPHCP Plan Area's extent is, by design, the same area covered by the City's Multiple Species Conservation Program Subarea Plan (MSCP SAP), and includes lands inside and outside the Multi-Habitat Planning Area (MHPA).

PROJECT DESCRIPTION: **CITY COUNCIL APPROVAL and ADOPTION** of the VPHCP, the Vernal Pool Management and Monitoring Plan (VPMMP), Amendments to the City's General Plan, the Kearny Mesa Community Plan, the Otay Mesa Community Plan, as well as Amendments to the Land Development Code (LDC) Environmentally Sensitive Lands Regulations (ESL), and the Land Development Manual (LDM) Biology Guidelines (the discretionary actions under CEQA). Issuance of a federal Incidental Take Permit (ITP) under Section 10(a)(1)(B) of the Federal Endangered Species Act (FESA; the federal action under the National Environmental Policy Act "NEPA") will be required by the USFWS after the City's approval process is complete.

The VPHCP is a conservation plan for vernal pools and seven threatened and endangered vernal pool species that do not currently have federal coverage under the City of San Diego's MSCP SAP. The VPHCP would be compatible with, and would expand upon, the City's existing MSCP SAP to conserve additional lands with vernal pools that are occupied with threatened and endangered vernal pool species. The VPHCP Plan Area encompasses 206,124 acres. Once fully implemented, the VPHCP would expand the City's existing MHPA by adding approximately 275 acres of lands with valuable vernal pools resources. The VPHCP would conserve an additional eight vernal pool complexes and additional 226 pools (approximately 9% more), totaling 2.8 acres of basin area, over what is currently conserved. Once adopted, vernal pool lands within the MHPA would be subject to the provisions of the VPHCP, in addition to the City's MSCP SAP and other existing land use and biological resource plans, policies, and regulations.

Approval of the Project would provide for the conservation of the vernal pool resources within the existing City of San Diego Multi-Habitat Planning Area (MHPA) and conserved lands plus additional core lands containing the seven focal species (San Diego fairy shrimp, Riverside fairy shrimp, San Diego button celery, spreading navarretia, San Diego mesa mint, California Orcutt grass, and Otay mesa mint) and associated vernal pool habitat. This proposal would provide a comprehensive approach to the protection and management of the vernal pool preserve areas.

This document has been prepared as a joint EIR/EIS due to the combined local, state, and federal discretionary actions and permits associated with the Project. Co-lead agencies are the City, pursuant to the California Environmental Quality Act (CEQA), and the USFWS pursuant to NEPA, as further described in the Draft EIR/EIS. The City and USFWS also coordinated with the CDFW on the scope and analysis of this EIR/EIS to support subsequent processing/issuance of any required amendments to and/or findings of consistency with the City's incidental take authorization (California Endangered Species Act [CESA]/Permit No. PRT-830421) that was received in 1997 with adoption of the City's MSCP in order to maintain

state coverage for vernal pool habitat and the seven covered vernal pool species addressed in the VPHCP, and to meet the requirements under California Fish and Game Code Section 2800 et seq. for listed and non-listed species conserved under a Natural Communities Conservation Plan (NCCP).

The VPHCP; VPMMP; Amendments to the General Plan, Kearny Mesa Community Plan, Otay Mesa Community Plan; and Amendments to the LDC and LDM, can be found on the Planning Department – MSCP website at:

https://www.sandiego.gov/planning/programs/mscp/vphcp

Applicant: City of San Diego Planning Department

Recommended Finding: The Draft EIR/EIS concludes that the proposed project would result in significant environmental impacts in the following area: **Historical Resources (including Historic Properties, Archaeological and Tribal Cultural Resources).** All other impacts analyzed in this Draft EIR were found to be less than significant.

Availability in Alternative Format: To request this Notice, the Draft EIR/EIS and/or supporting documents in alternative format, call the Planning Department at (619) 235-5200 (800) 735-2929 (TEXT TELEPHONE).

Additional Information: For environmental review information, contact Myra Herrmann at (619) 446-5372 or by email, mherrmann@sandiego.gov. If you are interested in obtaining additional copies of the Compact Disk (CD) or a hard-copy of the EIR/EIS, they can be purchased for the cost of reproduction, at the Planning Department. A hard copy of the Draft EIR/EIS may be reviewed in the office of the Planning Department with appointment only. For information regarding public meetings/hearings on this project, contact the Project Manager, Jeanne Krosch, at (619) 236-7225 or via email: jkrosch@sandiego.gov.

This notice was published in the SAN DIEGO DAILY TRANSCRIPT and distributed on **September 30, 2016**.

Alyssa Muto
Deputy Director
Planning Department

The City of SAN DIEGO
Planning Department
Environmental & Policy Analysis Division

DRAFT
ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL IMPACT STUDY

PROJECT NO. 441044
SCH NO. 2011111075

SUBJECT: CITY COUNCIL APPROVAL and ADOPTION of the Vernal Pool Habitat Conservation Plan (VPHCP), the Vernal Pool Management and Monitoring Plan (VPMMP), Amendments to the City's General Plan, the Kearny Mesa Community Plan, the Otay Mesa Community Plan, as well as Amendments to the Land Development Code (LDC) Environmentally Sensitive Lands Regulations (ESL), and the Land Development Manual (LDM) Biology Guidelines (the discretionary actions under CEQA). Issuance of a federal Incidental Take Permit (ITP) under Section 10(a)(1)(B) of the Federal Endangered Species Act (FESA; the federal action under the National Environmental Policy Act "NEPA") will be required by the United States Fish and Wildlife Service (USFWS) after the City's approval process is complete.

The VPHCP is a conservation plan for vernal pools and seven threatened and endangered vernal pool species that do not currently have federal coverage under the City of San Diego's Multiple Species Conservation Program Subarea Plan (MSCP SAP). The VPHCP would be compatible with, and would expand upon, the City's existing MSCP SAP to conserve additional lands with vernal pools that are occupied with threatened and endangered vernal pool species. The VPHCP Plan Area encompasses 206,124 acres. Once fully implemented, the VPHCP would expand the City's existing Multi-Habitat Planning Area (MHPA) by adding approximately 275 acres of lands with valuable vernal pools resources. The VPHCP would conserve an additional eight vernal pool complexes and additional 226 pools (approximately 9% more), totaling 2.8 acres of basin area, over what is currently conserved. Once adopted, vernal pool lands within the MHPA would be subject to the provisions of the VPHCP, in addition to the City's MSCP SAP and other existing land use and biological resource plans, policies, and regulations.

The VPHCP would focus on the following seven threatened and endangered vernal pool species included for coverage (covered species):

- San Diego fairy shrimp
- Riverside fairy shrimp
- San Diego button celery
- Spreading navarretia
- San Diego mesa mint
- California Orcutt grass
- Otay Mesa mint

The VPHCP would provide additional conservation (beyond existing conservation) for the following covered species:

- San Diego mesa mint - five additional occupied pools conserved (1% increase)
- San Diego button-celery -three additional occupied pools conserved (1% increase)
- Riverside fairy shrimp – three additional occupied pools conserved (2% increase)
- San Diego fairy shrimp – 30 additional occupied pools conserved (6% increase)

The VPHCP includes a Mitigation Framework that outlines required avoidance, minimization, and compensatory mitigation measures.

This document has been prepared as a joint EIR/EIS due to the combined local, state, and federal discretionary actions and permits associated with the Project. Co-lead agencies are the City, pursuant to the California Environmental Quality Act (CEQA), and the USFWS pursuant to NEPA, as further described in the draft EIR/EIS. The City and USFWS also coordinated with the California Department of Fish & Wildlife (CDFW) on the scope and analysis of this EIR/EIS to support subsequent processing/issuance of any required amendments to and/or findings of consistency with the City's incidental take authorization (California Endangered Species Act [CESA]/Permit No. PRT-830421) that was received in 1997, with adoption of the City's MSCP in order to maintain state coverage for vernal pool habitat and the seven covered vernal pool species addressed in the VPHCP, and to meet the requirements under California Fish and Game Code Section 2800 et seq. for listed and non-listed species conserved under a Natural Communities Conservation Plan (NCCP).

The VPHCP Plan Area is the geographical area for which the protections provided under the VPHCP are afforded to the seven covered species and for which the Section 10 permit applies. The VPHCP Plan Area includes lands subject to the City of San Diego's (CITY) jurisdiction within the jurisdictional boundary of the City, as well as three areas owned by the City's Public Utilities Department (PUD) in the unincorporated portion of San Diego County. The VPHCP Plan Area also includes preserved lands within San Diego that are under the ownership of the USFWS or the CDFW. The VPHCP Plan Area's extent is, by design, the same area covered by the City's MSCP SAP, and includes lands inside and outside the MHPA.

Applicant: City of San Diego, Planning Department

ENVIRONMENTAL DETERMINATION:

Based on the analysis conducted for the project described above, the City of San Diego has prepared the following Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act (CEQA) and Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act (NEPA). The analysis conducted identified that the project could result in significant impacts to the following issue area(s): **Historical Resources (including Historic Properties, Archaeological and Tribal Cultural Resources).**

The purpose of this document is to inform decision-makers, agencies, and the public of the significant environmental effects that could result if the project is approved and implemented, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

PUBLIC REVIEW DISTRIBUTION:

The following agencies, organizations, and individuals received a copy or notice of the Draft EIR/EIS and were invited to comment on its accuracy and sufficiency. Copies of the Draft EIR/EIS, the Mitigation Monitoring and Reporting Program and any technical appendices may be reviewed in the offices of the Planning Department, or purchased for the cost of reproduction.

Federal Government
Federal Aviation Administration (1)
U.S. Department of Transportation (2)
MCAS Miramar Air Station (13)
U.S. Army Corps of Engineers (16)
U.S. Environmental Protection Agency (19)
U.S. Border Patrol (22)
U.S. Fish and Wildlife Service (23)
U.S. Fish and Wildlife Service - Anan Raymond, Regional SHPO
U.S. Army Corps of Engineers (26)

State Of California
CALTRANS District 11 (31)
California Department of Fish and Game (32)
California Environmental Protection Agency (37A)
Department of Toxic Substance Control (39)
California State Parks – San Diego Coast District (40A)
California State Parks – Southern Service Center (40B)
Office of Historic Preservation (41)
California Natural Resources Agency (43)
California Regional Water Quality Control Board, Region 9 (44)
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California Coastal Commission (47)
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California State Coastal Conservancy (54)
Native American Heritage Commission (56)
California Energy Commission (59)
California Department of Conservation (60)

County of San Diego
Vector Control (63)
Planning and Development Services (68)
Parks Department 69)
County Water Authority (73)

City of San Diego
Mayor's Office (91)
Scott Chadwick
Stacey LoMedico
Paz Gomez
David Graham
Ron Villa
Jack Straw
Council President Lightner, District 1
Councilmember Zapf, District 2
Councilmember Gloria, District 3
Councilmember Cole, District 4
Councilmember Kersey, District 5
Councilmember Cate, District 6
Councilmember Sherman, District 7
Councilmember Alvarez, District 8
Council President Pro Tem Emerald, District 9

Office of the City Attorney
Shannon Thomas, Deputy City Attorney
Inga Lintvedt, Deputy City Attorney

Planning Department (Applicant)
Jeff Murphy, Director
Tom Tomlinson, Assistant Director
Alyssa Muto, Deputy Director
Jeanne Krosch, Senior Planner/Project Manager – MSCP
Myra Herrmann, Senior Planner – Environmental
Denise Russell, Assistant Planner - Environmental
Seth Litchney, Senior Planner - Long Range Planning
Bobby Mordenti, Associate Planner - Long Range Planning
Kristy Forburger, Senior Planner – MSCP
Kim Roeland, Senior Planner - MSCP
Angela Abeyta, Supervising Management Analyst - Facilities Financing

Real Estate Assets Department
Cybele Thompson, Director
Rodney Propst, Deputy Director
Wayne Reiter
Brandi Mulvey

Park and Recreation Department
Herman Parker, Director
Andrew Field, Assistant Director
Casey Smith, Deputy Director – Open Space Division
Betsy Miller, Senior Planner
Public Utilities Department
Halla Razak, Director
John Helminski, Assistant Director
Keli Balo, Project Officer
Nicole McGinnis, Senior Planner

Development Services Department
Kerry Santoro, Deputy Director
Anita Eng, Biologist
Environmental Analysis Senior Staff

Public Works Department
James Nagelvoort, Director
Marnell Gibson
Carrie Purcell

Economic Development Department
Kevin Sullivan

Environmental Services Department
Mario Sierra, Director
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Lisa Wood

Transportation & Storm Water Department
Kris McFadden, Director
Andrew Kleis, Deputy Director
Genene Lehotsky
Mark Stephens

City Libraries
Central Library, Government Documents (81 & 81A)
Balboa Branch Library (81B)
Beckwourth Branch Library (81C)
Benjamin Branch Library (81D)
Carmel Mountain Ranch Branch Library (81E)
Carmel Valley Branch Library (81F)
City Heights/Weingart Branch Library (81G)
Clairemont Branch Library (81H)
College-Rolando Branch Library (81I)
Kensington-Normal Heights Branch Library (81K)
La Jolla/Riford Branch Library (81L)
Linda Vista Branch Library (81M)
Logan Heights Branch Library (81N)
Malcolm X Library & Performing Arts Center (81O)
Mira Mesa Branch Library (81P)
Mission Hills Branch Library (81Q)
Mission Valley Branch Library (81R)
North Clairemont Branch Library (81S)
North Park Branch Library (81T)
Oak Park Branch Library (81U)
Ocean Beach Branch Library (81V)
Otay Mesa-Nestor Branch Library (81W)
Pacific Beach/Taylor Branch Library (81X)
Paradise Hills Branch Library (81Y)
Point Loma/Hervey Branch Library (81Z)
Rancho Bernardo Branch Library (81AA)

Rancho Peñasquitos Branch Library (81BB)
READ San Diego (81CC)
San Carlos Branch Library (81DD)
San Ysidro Branch Library (81EE)
Scripps Miramar Ranch Branch Library (81FF)
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Skyline Hills Branch Library (81HH)
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City Advisory Committees and Boards
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Park & Recreation Board (89)
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Other City Governments
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City of Santee (104)
San Diego Association of Governments (108)
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San Diego Gas & Electric (114)
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Other Agencies, Organizations and Individuals
Lindsey Cavallaro, AECOM (Environmental Consultant)
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- Pala Band of Mission Indians (225N)
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- Pechanga Band of Mission Indians (225P)
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Debbie Knight (320)
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Carmel Valley Trail Riders Coalition (351)
Carmel Mountain Conservancy (354)
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Dave Dilday (460A)
John Turpit, Michael Merrill Architecture + Planning
David Hogan, Chaparral Lands Conservancy
Van Collinsworth
Joe Frichtel
Greg Mason, Alden Environmental
Claudio Castruita
Dustin Janeke, HDR Consulting
John Buse, Center for Biological Diversity
Richard Halsey, The California Chaparral Institute
Rodriguez Family Trust
David & Amy French
L-3 Communications Corp
Thuan Nguyen
Liew Chee Boon & Lai Lai Fong, Fah S & Polly Liew
Riesgo Family Trust
Kearny P C C P Otay 311 LLC
Lisa Lawson, Pardee Homes
San Diego Gas & Electric Company
San Diego Spectrum Owners Assn
Kenneth B & Karen Perry, et al
Southview LLC – Clem Abrams
Southview LLC
ARE-SD Region No 32 Exchange LLC
Carole G Marquez Trust
Michael Lee
Blas Family Trust

INC
Trustees et al
Rami & Mutyala Challa Hemalatha
Marcelino & Teresa Ortiz Trust
Fine Particle Technology Corp
Nhatnam Nguyen
Cubic Corporation
Pardee Homes
Western Pacific Housing – Torrey Santa Fe LLC
Solar Turbines Inc.
Southview Development Partners LLC
Elizabeth CH
Aispuro Trust
Sea Breeze 56 LLC
Trust 06-13-97
Yoshindo & Betty T Shibuya Trust
B U M S Properties LLC
L N R Kearny Mesa Inc.
Cook Inlet Region Inc.
Friends of Los Penasquitos Canyon Preserve
Garden Communities RP LLC
Greenfield Square LLC
City of San Diego Open Space Park Facilities District No 1
Valdivia Hilario G & Maria G Revocable 1997 Trust 06-13-97
Shibuya Yoshindo & Betty T Trust 06-16-82
Friends of Los Penasquitos Canyon Preserve Inc
The Salk Institute for Biological Studies San Diego California
Forest Park III L P H H Apartments L P Et Al
Air California Adventure LLC, Dba Torrey Pines Gliderport
San Diego Gas & Electric Co
Otay-T J North L L C
Dassons Real Estate LP
Hattie M Davisson Trust
Southview L L C
Blackwill Pamela M
Miranda Octaviano&Isabel M Castro Ramon V&Rosa O Et Al
Rhodes Keith B Living Trust 11-11-99
Marmolejo Frank Cardoza Jose P&Raquel M
Luna Roberto A Gomez Marcia A
Eastgate Miramar Associates
Otay Business Park L L C
State of California Department of Transportation
MBH Enterprises
Teledyne Industries Inc
Pardee Homes
State Of California Department Of Transportation
Handler Trust 08-27-83
Expo Propane Inc
Ytreeide Bruce A Revocable Living Trust 03-22-00
Kenneth B & Karen Perry Et Al, Kuta Living Revocable Trust
Antoinette Saraspe, San Ysidro Industrial Park LTD

Carrie Schneider, Canyon Coalition
Rikki Schroeder, RMA Consultants
Clifton Williams, Latham & Watkins
Zoura Family Trust 10-08-09
Southview Development Partners L L C
Otay Mesa LLC
Arellano Burgueno Corp
Manuel & Mary C Lieras
Rhodes & Grus Investments
Keith B Rhodes Living Trust 11-11-99
Dexstar Inc
Frederick Jennings
Robinhood III Robinhood III
Eastgate Miramar Associates, Eastgate Miramar Associates Et Al
Teresita L Alcaraz L Tr
County of San Diego
Torrey Hills Master Assn
Roman Catholic Bishop of San Diego
Carl & Rosa Harry Family 2007 Trust 12-27-07 Et Al
Bruce A Ytreeide Revocable Living Trust 03-22-00 Perry Kenneth B & Karen Et Al
Otay-T J North L L C
San Diego C M I L L C
FELCO Construction Inc
Pulido Living Trust 12-12-06
Eastgate Industrial Center Owners Assn Inc
Alvarez Jose Alvarez Josefina
San Ysidro Land Trust 07-19-07
Corn Daxton J Corn Maxwell H
Fieldstone Communities L L C
Lozano Raymond S & Martha Peralta Gloria
Southview L L C
The Newland Group Inc The
Pamela M Blackwill
San Diego Spectrum Owners Assn
Shibuya Yoshindo & Betty T Trust 06-16-82
San Diego Gas & Electric Co
Juan A & Pilar C Romero
Daniel S & Jessica R Drosman Family Trust 10-31-05
San Ysidro Industrial Park Ltd
Carlos R Luna
Barbara Velez
Jose A & Rosa Garcia & Guadalupe D P Garcia Jose A & Rosa & Atjian Pilar & Eduardo
Hoffman Jose M & Blanca D Hoffman Jose Jr & Hoffman Jose & Blanca D
Kaiser Foundation Hospitals
Manzano Francisco J A & Deaguilar Elena C
Velasquez Amparo S Revocable Trust 09-06-00
Valdivia Hilario G & Maria G Revocable 1997 Trust 06-13-97
Torrey Highlands Homeowners Assn
Handler Trust 08-27-83
John S. Collins
Salerno Ralph N Trust 04-26-06 Williams Gary T & Louise C

Burrola Ernestina Living Trust 01-14-11 Avila Sylvia
Square One Development Corp
Beaver Essie M Wilcox William J
Jose M Sanchez
Leticia Valdivia
Otay Business Park L L C
Amparo S Velasquez Revocable Trust 09-06-00
Otay Mesa Crossing L L C
San Diego Unified School District
New Age LLC, Dba Mission Trails Golf Course
Linda Abbott, Mildred G Abbott Family Trust
Bruce April, Chief Caltrans District 11
Michael Beck, Endangered Habitats League
Catholic Diocese of San Diego
Eusebio Castruita
Franciso & Ana Castruita
Elizabeth Drakulich
John Hagey et al, Robert H. Hagey Jr. Trust
Nancy Hauser, Vista Del Verde HOA
Frederick Jennings
Jon Keeley, U.S. Geological Survey
Su Kraus, Moose Creek Nursery
Lincoff et al, Milton Handler Trust
McMillan Otay Ranch LLC
Ronaldo & Jocelyn Nimuan
John Northrup
Shaw Texas IV LLC/Pardee Homes
Idec-Nobel Research Center
Hanson Aggregates Pacific
Kaiser Foundation Hospitals
Kearny PCCP Otay 311 LLC
MBH Enterprises
McCaw Family Trust
Otay Business Park LLC
Otay Greenfield Developers LLC
Otay Industrial One LLC
Otay Mesa Crossings LLC
Square One Development Corp
Sunroad Investment Corp
Candlelight Properties
Harold A Clayton
Mike Abrams
Theresa Acerro
Glenn Allen, NRES
Jimmy Ayala, Pardee Homes
Lynne Baker, Endangered Habitats League
Jeff Barfield, RBF
Jillian Bates, Rincon Consultants
Ellen Bauder PhD
Michael Beck, Endangered Habitats League
Vandana Bhairi

Spencer Bigelow
Molly Bigger, Sierra Club
Chuck Black, MCAS Miramar
Pam Blackwill, Rhodes Crossing
Russ Boggs, SDMBA
David Boyer, MCAS Miramar
Adrienne Brown
Cindy Burrascano
Cindy Buxton
Ed Caliri, US Border Patrol
Roxy Carter, SD Audubon Society
Josh Corona-Bennett, ECORP
George Course, Back Country Coalition
Beth Dirksen, Sna Diego County Parks
Mark Dodero, Recon Environmental
Shannon Dougherty, SD Audubon Society
Angelika Drake, Del Mar Mesa Board
Preston Drake, Del Mar Mesa Community Planning Board, Trails Subcommittee
William Dudley, Balboa Park Examiner
Brent Eastty, HDR
Pamela Epstein, Sierra Club
Mike Evans
Beth & John Frice
Grant Frost, SDG&E
Cesar Garcia, Natiuos
Juan Garcia
Kimberly Gelardi
Bonnie Gendron, Back Country Coalition
Mike Gonzales, RBF Consulting
Patricia Gordon-Reedy, CBI
Gardner Grady, SDMBA
Matt Guilliams, UC Berkeley
Zarina Hackney
Joy Hagin, Cubic
Susan Hall
Bobbi Herdes, Recon
Tom Huffman, Helix Environmental Planning
Mel Ingalls/Todd Ingalls, Ingalls Enterprises
Chad Iverson, Menlo Equities
Vipul Joshi, Dudek
Richard Julien, San Diego Mtn. Bike Association
Robin Kinmont, Rincon Consultants
Michael Klein, KEPS
Fred Kramer, SDTT
Yuko Kurahashi
Jason Kurnow, Helix Environmental Planning
Carmen Lopez
Cary Lowe, Attorney at Law
Ivan Maric
Jerry McCaw
Robert McDowell, SMPG

Robert Mikutzit, San Diego Mtn. Bike Association
Pat Mock, URS
Mike Moore
Kailash Mozumder, ICF International
Tina Nagel
Brian Nixon
Cailin O'Meara, RECON Environmental
Charlotte Orren
Minette Ozaki, Los Penasquitos Canyon CAC.
John Ponder, Sheppard Mullin
Jennifer Price, County of San Diego
Beth Procsal, RECON Environmental
Alberto Pulido, ROR
Dave Robbins
Antonio Rodriguez, Rodriguez Trust
Gustavo Rodriguez
Rubin Rodriguez
Evelyn Rubach, US Border Patrol
Hal Ryan, OMP Otay
Peter Sawicki
Christina Schaefer
Joe Schrats
Cody Sears
Catherine Sei
Lee Sherwood, RECON Environmental
Jenny Shih
Marie Simouich, University of San Diego
Gary Smith, Partners 4 Nature
Grayson Sobel, Sierra Club
Jeff Thomas, Panorama Environmental, Inc
Victoria Ury
Gabriel Valdez, Pulido Trust
Gloria Valenti-Gerak, Media Planning & Placement
Jim Whalen, J. Whalen Assoc.
Lee Zoura

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( ) No comments were received during the public input period.

( ) Comments were received but did not address the accuracy or completeness of the draft environmental document. No response is necessary and the letters are incorporated herein.

( ) Comments addressing the accuracy or completeness of the draft environmental document were received during the public input period. The letters and responses are incorporated herein.

Alyssa Muto, Deputy Director
Planning Department

September 30, 2016
Date of Draft Report

Date of Final Report

Analysts: Myra Herrmann
Denise Russell

DRAFT
CITY OF SAN DIEGO
VERNAL POOL
HABITAT CONSERVATION PLAN

ENVIRONMENTAL IMPACT REPORT/
ENVIRONMENTAL IMPACT STATEMENT
Project No. 441044
SCH# 2011111075

City of San Diego
Planning Department
1010 2nd Ave, Suite 1200, East Tower, MS 413
San Diego, California 92101

Contact: Jeanne Krosch

September 2016

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LIST OF ACRONYMS AND ABBREVIATIONS

˚F	degrees Fahrenheit
AB	Assembly Bill
ALUCP	Airport Land Use Compatibility Plan
APE	area of potential effects
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
B.P.	before present
BLA	Boundary Line Adjustment
BMP	best management practice
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH_4	methane
City	City of San Diego (governing body)
city	city of San Diego (physical location)
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CRAM	California Rapid Assessment Method
CRHR	California Register of Historical Resources
CWA	Clean Water Act
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency

ESL	Environmentally Sensitive Lands
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FMP	Framework Management Plan
GHG	greenhouse gas
GWP	global warming potential
HCP	habitat conservation plan
HFC	hydrofluorocarbon
HRA	health risk assessment
HU	Hydrologic Unit
IA	Implementing Agreement
INRMP	Integrated Natural Resources Management Plan
IPCC	Intergovernmental Panel on Climate Change
ITP	incidental take permit
JRMP	Jurisdictional Runoff Management Plan
LCFS	low carbon fuel standard
LDC	Land Development Code
LDM	Land Development Manual
LEV	low emission vehicle
MHPA	Multi-Habitat Planning Area
MSCP	Multiple Species Conservation Program
MMRP	mitigation, monitoring and reporting program
MMT	million metric tons
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MSCP	Multiple Species Conservation Program
MT	million tons
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NCCP	Natural Community Conservation Plan

NEPA	National Environmental Policy Act
NF_3	nitrogen trifluoride
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NO	nitric oxide
NO_2	nitrogen dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OEHHA	Office of Environmental Health Hazard Assessment
PFC	perfluorocarbon
PM	particulate matter
PM_{10}	PM equal to or less than 10 micrometers in diameter
$PM_{2.5}$	PM equal to or less than 2.5 micrometers in diameter
PRC	Public Resources Code
RAQS	Regional Air Quality Strategy
ROG	reactive organic gases
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SAP	Subarea Plan
SB	Senate Bill
SCIC	South Coastal Information Center
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDG&E	San Diego Gas & Electric
SFHA	Special Flood Hazard Area
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SO_2	sulfur dioxide
SR	State Route

SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TMDL	Total Maximum Daily Load
TWP	Technical White Paper
U.S.	United States
U.S.C.	United States Code
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VPHCP	Vernal Pool Habitat Conservation Plan
VPI	Vernal Pool Inventory
VPMMP	Vernal Pool Management and Monitoring Plan
WQIP	Water Quality Improvement Plan

KEY TERMS AND DEFINITIONS

Below are definitions for key terms that are used throughout this EIR/EIS.

Adaptive Management - A method for examining alternative strategies for meeting measurable biological goals and objectives and then, if necessary, adjusting future conservation management actions according to what is learned.

Certificate of Inclusion - A certificate issued by the City of San Diego to a Third Party to ensure compliance with the terms and conditions of the VPHCP and Permit that extends the City's Take coverage to such parties for Covered Activities carried out in accordance with the Take Authorizations under the Permit and in accordance with the terms and conditions thereof.

Covered Activities - Land use, public infrastructure, and conservation activities that will be specifically compatible with the Vernal Pool Habitat Conservation Plan (VPHCP) and that will be authorized under the VPHCP for take of covered species. Covered activities are actions that generally occur repeatedly in one location or throughout the permit area.

Conserved Lands - Lands with 100% hardline conservation (no development is permitted)

Covered Projects - Projects involving land use development within the city for which hardline Preserve boundaries have been established and any incidental take of covered species would be approved through the VPHCP for covered projects. Lands with covered projects have areas delineated for development and preservation and/or mitigation.

Covered Species - The species to be conserved and managed consistent with the approved VPHCP such that, through approval of the VPHCP, U.S. Fish and Wildlife Service (USFWS) will authorize their impacts (for plant species) or exempt their take under Section 10 (for animal species) of the federal Endangered Species Act (FESA). Those species addressed in the Plan for which conservation measures will be implemented and for which the permittee seeks authorization for impact/take under Section 10 of FESA and Section 2081 of the California Endangered Species Act (CESA).

Critical Habitat - Critical habitat is a term defined and used in FESA. It is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Implementing Agreement - An agreement that legally binds the permittee to the requirements and responsibilities of a habitat conservation plan (HCP) and Section 10 permit. It may assign the responsibility for planning, approving, and implementing the mitigation measures under the HCP.

Incidental Take - Take of any federally listed wildlife species that is incidental to, but not the purpose of, otherwise lawful activities. Any taking otherwise prohibited, if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity (50 CFR 17.3).

Listed Species - Those species designated as candidate, threatened, or endangered pursuant to CESA and or listed as threatened or endangered under FESA.

Multi-Habitat Planning Area (MHPA) - The City's planned habitat preserve within the Multiple Species Conservation Program Subarea. In this document, the MHPA is also referred to as “the Preserve,” although not all of the lands with the MHPA will ultimately be preserved. The City's planned MHPA totals 56,831 acres, with 52,727 acres (90%) targeted for preservation (approximately 30% of the planned regional preserve). Implementation of the VPHCP would add additional lands containing vernal pool resources to the MHPA.

Multiple Species Conservation Program (MSCP) - A comprehensive, long-term habitat conservation planning program that covers approximately 900 square miles (582,243 acres) in southwestern San Diego County pursuant to FESA and the California Endangered Species Act (CESA) and the California Natural Community Conservation Planning Act. It has been developed cooperatively by participating jurisdictions/special districts in partnership with federal/state Wildlife Agencies, property owners, and representatives of the development industry and environmental groups. The MSCP is the regional program through which the MHPA will be assembled as each participating jurisdiction implements their portion of the MSCP.

Preserve – Areas within the MHPA that have been conserved and existing conservation areas.

Projects - Well-defined actions that occur once in a discrete location.

Planned Projects - Projects involving land use development within the City for which hardline Preserve boundaries have been established and take has been authorized or exempted through a process other than the VPHCP (such as an approved USFWS Biological Opinion [BO]). Planned Projects included in the VPHCP are Castlerock (BO No. 15B0240-15F0536); Candlelight (BO No. 08B0715-08F0817); and Metropolitan Airpark (BO - pending).

Road (Rut) Pool – A man-made depression, such as tire tracks or road ruts, that supports one or more covered species but does not contain vernal pool indicator species. For purposes of the VPHCP and impact analysis, road (rut) pools are considered vernal pools.

Take - Under Section 3(18) of FESA, "…to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" with respect to federally listed endangered species of wildlife. Federal regulations provide the same taking prohibitions for threatened wildlife species. According to CESA (Section 86 of the California Fish and Game Code), take means to hunt, pursue, catch, capture, or kill.

Vernal Pool - Seasonal, depression-type wetlands that result from a unique set of physical parameters and support a specific biological assemblage of plant and animal species. Functional vernal pool ecosystems form under specific physical conditions when small, shallow depressions collect precipitation to create a seasonally perched water table.

Vernal Pool Complex - A collection of vernal pools that occur in proximity on the same soil series and are typically hydrologically connected.

Vernal Pool Watershed – A topographically defined catchment area from which surface water flows to a vernal pool.

Vernal Pool Habitat Conservation Plan (VPHCP) Plan Area - The geographical extent of land that would be included in the VPHCP, for which the protections provided under the VPHCP are afforded to the seven focal species, and also for which the Section 10 permit will apply. The VPHCP Plan Area includes lands subject to the City's jurisdiction within the jurisdictional boundary of the City, as well as three areas owned by the City's Public Utilities Department in the unincorporated portion of San Diego County. The VPHCP Plan Area also includes preserved lands within San Diego that are under the ownership of USFWS or California Department of Fish and Wildlife (CDFW). The VPHCP Plan Area's extent is, by design, the same area covered by the City's MSCP Subarea Plan and, as such, includes lands that are inside and outside the MHPA.

Vernal Pool Management and Monitoring Plan (VPMMP) - The primary purpose of the VPMMP was to expand on the MSCP Framework Management Plan to provide management strategies, directives, and recommendations for all lands containing vernal pools in the City to preserve and restore their physical function and biotic components, and promote the recovery of associated threatened and endangered species. The VPMMP presents management challenges and opportunities for vernal pools at both a general City-wide and a local site-specific scale. The

regulatory requirement to comply with the VPMMP varies according to the status (e.g., ownership) of a given site and is noted in each site-specific discussion. Existing requirements and recommendations at various scales, such as USFWS Biological Opinions (BOs), also are included and referenced in the VPMMP. The VPMMP is intended to guide vernal pool management on public and private, preserved and developable lands within the City. The history, issues, requirements, and goals for each site containing vernal pools are provided. The VPMMP has been reviewed and updated as part of this VPHCP effort but is a stand-alone document.

Wildlife Agencies - A term used for the collective reference to the USFWS and CDFW.

EXECUTIVE SUMMARY

This Environmental Impact Report\Environmental Impact Statement (EIR/EIS) has been prepared for the City of San Diego (City) Vernal Pool Habitat Conservation Plan (VPHCP or Project), located in the southwestern portion of San Diego County. This EIR\EIS analyzes the potential environmental effects associated with implementation of the Project (including direct and indirect impacts, secondary impacts, and cumulative effects). This joint EIR/EIS has been prepared in compliance with the National Environmental Policy Act (NEPA) as implemented by Council on Environmental Quality Regulations (Title 40 Code of Federal Regulations Parts 1500–1508) and the California Environmental Quality Act (CEQA) (California Public Resources Code Section 21000 et seq.) as implemented by the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 1500-15387). This document has been prepared as a joint EIR/EIS due to the combined local, state, and federal discretionary actions and permits associated with the Project. Co-lead agencies are the City (CEQA) and the U.S. Fish and Wildlife Service (USFWS) (NEPA). The City and USFWS also coordinated with the California Department of Fish and Wildlife (CDFW) on the scope and analysis of this EIR/EIS for purposes of any subsequent related City and/or state actions that may be necessary to fully implement the VPHCP. The Project includes approval and adoption of the VPHCP and associated amendments to the City Land Development Code, Biology Guidelines, General Plan, Otay Mesa Community Plan, Kearny Mesa Community Plan, and the City's existing state Natural Community Conservation Plan (NCCP)(Multiple Species Conservation Program [MSCP]) permits, which are the discretionary actions under CEQA, as well as the issuance of a federal incidental take permit under Section 10(a)(1)(B) of the Federal Endangered Species Act (FESA), which is the federal action under NEPA. The local action requiring CEQA documentation includes the evaluation and processing/state issuance of any required amendments to and/or findings of consistency with the City's incidental take authorization (California Endangered Species Act [CESA]/Permit No. PRT-830421) that was received in 1997 with the adoption of the City's MSCP to maintain state coverage for vernal pool habitat and the seven covered vernal pool species addressed in the VPHCP. As an informational document, this EIR\EIS is intended to provide public decision-makers, responsible or other interested agencies, and the general public with an assessment of potential environmental effects of the Project.

ES.1 PROJECT DESCRIPTION

The VPHCP is a conservation plan for vernal pools and seven threatened and endangered vernal pool species (referred to as the covered species herein) that do not currently have federal coverage under the City's MSCP Subarea Plan (SAP). The VPHCP would be compatible with,

and would expand upon, the City's existing MSCP SAP to conserve additional lands with vernal pools that are occupied with threatened and endangered vernal pool species.

The VPHCP Plan Area (i.e., the area within the City's jurisdiction for which the VPHCP applies) encompasses 206,124 acres. Once fully implemented, the VPHCP would expand the City's existing Multi-Habitat Planning Area (MHPA) by adding approximately 275 acres of lands with valuable vernal pools resources. This includes adding approximately 191 acres of lands to the MPHA that were not previously conserved, as well as incorporating 84 acres of previously conserved lands into the MHPA boundary. The VPHCP would conserve an additional eight vernal pool complexes within the Plan Area, and conserve an additional 226 pools (approximately 9% more), totaling 2.8 acres of basin area, over what is currently conserved under the existing conservation.

In this document, the MHPA is also referred to as "the Preserve," although not all of the lands with the MHPA will ultimately be preserved. The City's planned MHPA totals 56,831 acres, with 52,727 acres (90%) targeted for preservation (approximately 30% of the planned regional preserve). Implementation of the VPHCP would add lands containing vernal pool resources to the MHPA. Once adopted, vernal pool lands within the MHPA would be subject to the provisions of the VPHCP, in addition to the City's MSCP SAP and other existing land use and biological resource plans, policies, and regulations, as applicable.

The lands within the VPHCP Plan Area contain valuable vernal pool resources. These vernal pool resources contain species, including the seven listed species proposed for coverage that are protected under CESA and/or FESA. The purpose of the VPHCP is to preserve the network of vernal pool habitat within this matrix of open space; protect the biodiversity of these unique wetlands; and define a formal strategy for the long-term conservation, management, and monitoring of vernal pools and associated species. A Habitat Conservation Plan (HCP) is required under FESA to accompany an application for an incidental take permit (ITP) when associated with nonfederal activities. Under FESA, an ITP is required when activities may result in take of threatened or endangered wildlife. The VPHCP also must ensure adequate minimization and mitigation for the effects of the authorized incidental take of state and federal protected vernal pool resources within the city. The VPHCP includes a Mitigation Framework that outlines required avoidance, minimization, and compensatory mitigation measures.

The VPHCP would focus on the following seven threatened and endangered vernal pool species included for coverage (covered species):

- San Diego fairy shrimp
- Riverside fairy shrimp

- San Diego button celery
- Spreading navarretia
- San Diego mesa mint
- California Orcutt grass
- Otay Mesa mint

The VPHCP would provide additional conservation (beyond existing conservation) for the following covered species:

- San Diego mesa mint – five additional occupied pools conserved (1% increase)
- San Diego button-celery – three additional occupied pools conserved (1% increase)
- Riverside fairy shrimp – three additional occupied pools conserved (2% increase)
- San Diego fairy shrimp – 30 additional occupied pools conserved (6% increase)

ES.2 PROJECT LOCATION AND SETTING

The VPHCP Plan Area is the geographical area for which the protections provided under the VPHCP are afforded to the seven covered species and for which the Section 10 permit applies. The VPHCP Plan Area includes lands subject to the City's jurisdiction within the jurisdictional boundary of the City, as well as three areas owned by the City's Public Utilities Department in the unincorporated portion of San Diego County. The VPHCP Plan Area also includes preserved lands within San Diego that are under the ownership of USFWS or CDFW. The VPHCP Plan Area's extent is, by design, the same area covered by the City's MSCP SAP, and includes lands inside and outside the MHPA.

ES.3 PROJECT OBJECTIVES

The purpose of the VPHCP is to preserve the network of vernal pool habitat within this matrix of open space, protect the biodiversity of these unique wetlands, and define a formal strategy for their long-term conservation, management, and monitoring.

The specific conservation goals of the VPHCP serve as the CEQA project objectives and are as follows:

1. Provide for the conservation and management of covered species addressed by the VPHCP;
2. Preserve vernal pool resources through conservation partnerships between federal, state, local agencies, and private development partnerships;

3. Allow for appropriate and compatible economic growth and development that is consistent with applicable laws;
4. Provide a basis for permits necessary for lawful incidental take of vernal pool covered species;
5. Provide a comprehensive means to coordinate and standardize mitigation and compensation requirements of FESA, CESA, CEQA, and NEPA within the VPHCP Plan Area;
6. Provide a more efficient project review process that results in greater conservation values than project-by-project, species-by-species review; and
7. Provide clear expectations and regulatory predictability for persons carrying out covered activities within the VPHCP Plan Area.

ES.4 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

Chapter 5.0 of this EIR\EIS presents the environmental analysis of the Project. Table ES-1 summarizes the significant impacts identified in the environmental analysis for each issue area. Table ES-1 also outlines the mitigation measures proposed to reduce and/or avoid the environmental effects, with a conclusion as to whether the impact has been mitigated to below a level of significance.

Based on the analysis presented in Chapter 5, the Project would result in significant direct and cumulative impacts that can be reduced to below a level of significance with the incorporation of mitigation for the issue area Historical Resources (Project and Expanded Conservation Alternative). No potentially significant impacts were identified for the Existing Conservation/No Project Alterative. No significant and unavoidable impacts were identified for the Project or any of the alternatives. The following issue areas would result in impacts that are below a level of significance without the incorporation of mitigation: Land Use, Biological Resources, Air Quality, Greenhouse Gases, Hydrology and Water Quality, and Environmental Justice. The Project would not result in a cumulatively considerable contribution to a long-term direct or indirect cumulatively considerable adverse impact related to Land Use, Biological Resources, Air Quality, Greenhouse Gas Emissions, Hydrology and Water Quality, and Environmental Justice.

The VPHCP Mitigation Framework, included in Chapter 11, would also be adopted as part of the VPHCP under the Project, and would be implemented on a project-by-project basis for covered projects and covered activities, as well as future development that is consistent with the

Table ES-1
Summary of Environmental Impacts and Mitigation

Issue Area	Impact	Mitigation Measure	Level of Significance After Mitigation
Historical Resources			
Would the project result in any alteration, including adverse physical or aesthetic effects, and/or destruction of a prehistoric or historic building (including an architecturally significant building), structure, object, or site?	Prehistoric or historic buildings, structures, objects, or sites could potentially be affected by ground-disturbing activities related to restoration undertaken as part of the VPHCP (i.e., topographical recontouring) or in areas where covered activities will occur This would be a direct and cumulative impact for the Project and Expanded Conservation Alternative only.	**Mitigation Measure HIST-1 as described in Section 5.5 Historical Resources.**	Less than Significant
Would the project result in the disturbance of any human remains, including those interred outside of dedicated cemeteries?	Historical resources and unknown human remains would potentially be affected by ground-disturbing activities related to restoration undertaken as part of the VPHCP (i.e., topographical recontouring) or in areas where covered activities will occur. This would be a direct and cumulative impact for the Project and Expanded Conservation Alternative only.	**Mitigation Measure HIST-1 as described in Section 5.5 Historical Resources.**	Less than Significant

Issue Area	Impact	Mitigation Measure	Level of Significance After Mitigation
Would the project result in a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.?	Tribal cultural resources could potentially be affected by ground-disturbing activities related to restoration undertaken as part of the VPHCP (i.e., topographical recontouring) or in areas where covered activities will occur. This would be a direct and cumulative impact for the Project and Expanded Conservation Alternative only.	**Mitigation Measure HIST-1 as described in Section 5.5 Historical Resources.**	Less than Significant
Would the project result in any alteration, directly or indirectly, of any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting,	Historic properties as defined in Section 106 of the NHPA and considered as part of the human environment under NEPA could potentially be affected by ground-disturbing activities related to restoration undertaken as part of the VPHCP (i.e., topographical	**Mitigation Measure HIST-1 as described in Section 5.5 Historical Resources.**	Less than Significant

Issue Area	Impact	Mitigation Measure	Level of Significance After Mitigation
materials, workmanship, feeling, or association? (NEPA).	recontouring) or in areas where covered activities will occur. This would be a direct and cumulative impact for the Project and Expanded Conservation Alternative only.		

provisions of the VPHCP. The Mitigation Framework includes general avoidance and minimization measures as required by FESA, compensatory mitigation consistent with the City's Environmentally Sensitive Lands (ESL) Regulations, and general requirements for enhancement and restoration plans required as part of compensatory mitigation, which will be consistent with the general requirements outlined in the City's Land Development Manual (LDM) Biology Guidelines.

No significant impacts were found for the issue areas of Agricultural Resources, Energy, Geologic Conditions, Health and Safety, Mineral Resources, Noise, Paleontological Resources, Population and Housing, Public Services and Facilities, Public Utilities, Recreational Resources, Transportation/Circulation/Parking, and Visual Effects/Neighborhood Character.

ES.5 POTENTIAL AREAS OF CONTROVERSY

Pursuant to CEQA Guidelines Section 15123(b)(2), an EIR/EIS shall identify areas of controversy known to the lead agency, including issues raised by the agencies and the public, and issues to be resolved, including the choice among alternatives and whether and how to mitigate for significant effects. A Notice of Preparation)/Notice of Intent was circulated beginning December 20, 2011, for a 30-day review period to interested public agencies, organizations, community groups, and individuals to receive input on the Project. A public scoping meeting to receive comments on issues of concern to be addressed in the EIR/EIS was held on December 12, 2011. Comments received during the public scoping period expressed concern regarding the following issues:

- Accuracy and completeness of vernal pool data inventory information
- Inclusion of enough area to adequately conserve all important vernal pool resources
- Consideration of other sensitive and indicator vernal pool species
- Development restrictions for land owners
- Funding and availability of perpetual funding mechanism

ES.6 SUMMARY OF PROJECT ALTERNATIVES

CEQA mandates that alternatives to the Project be analyzed. Section 15126.6 of the CEQA Guidelines requires the discussion of "a range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen any of the significant effects of the Project," even if the alternatives would impede the attainment of the Project objectives to some degree. Section 3.4 of this EIR/EIS details the Project alternatives, and each alternative is analyzed at an equal level of

detail throughout the document with Chapter 6 providing a comparison summary of the alternatives impacts. Alternatives included within this analysis are the following:

Expanded Conservation Alternative: The Expanded Conservation Alternative adds additional lands to the MHPA, beyond those conserved under the VPHCP, that include vernal pool resources and/or habitat with potential for vernal pools to be present or restored, generally located in Otay Mesa. The Expanded Conservation Alternative would conserve an additional nine vernal pool complexes within the Plan Area, and conserve an additional 277 pools (11% more), totaling 3.7 acres of basin area, over what is currently conserved under the existing conservation. The Expanded Conservation Alternative would conserve a greater number of pools occupied by San Diego mesa mint (five additional pools), San Diego button-celery (eight additional pools), Riverside fairy shrimp (3 additional pools), and San Diego fairy shrimp (31 additional pools) compared to the Project. The Expanded Conservation Alternative was developed with USFWS to include lands identified with historical vernal pool resources, appropriate soil types for vernal pools, or other factors that could provide quality vernal pool habitat.

Existing Conservation/No Project Alternative: The Existing Conservation/No Project Alternative would result in no approval or implementation of the VPHCP. No new actions, policies, or permits would be issued in association with vernal pool protection beyond those already afforded by the MSCP/MHPA. Under the Existing Conservation/No Project Alternative, a Section 10(a)(1)(B) permit would not be issued to the City. Instead, activities involving take of the covered species normally prohibited under Section 9 of FESA would require individual 10(a) permits or Section 7 consultation if a federal nexus exists under the current FESA regulations. To obtain a permit to take a listed species under Section 10(a)(1)(B) of FESA, the applicant must prepare an adequate site-specific HCP. The Existing Conservation/No Project Alternative would include the City operating under existing state NCCP/MSCP authorizations, which includes coverage and conservation of vernal pool habitat and the seven vernal pool species addressed in the VPHCP.

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CHAPTER 1.0
INTRODUCTION

This joint Environmental Impact Report and Environmental Impact Statement (EIR/EIS) has been prepared for the City of San Diego's (City) Vernal Pool Habitat Conservation Plan (VPHCP or Project). The VPHCP is a comprehensive habitat conservation plan (HCP) designed to protect, enhance, and restore vernal pool resources in specific areas of the city of San Diego (city), while improving and streamlining the environmental permitting process for impacts to threatened and endangered species associated with vernal pools.

This document has been prepared as a joint EIR/EIS due to the combined local, state, and federal discretionary actions and permits associated with the Project. Co-lead agencies are the City, pursuant to the California Environmental Quality Act (CEQA), and the U.S. Fish and Wildlife Service (USFWS), pursuant to the National Environmental Policy Act (NEPA), as described in further detail in Section 1.2, Purpose of the EIR/EIS and Intended Uses. The City and USFWS also coordinated with the California Department of Fish and Wildlife (CDFW) on the scope and analysis of this EIR/EIS for purposes of any subsequent related City and/or state actions that may be necessary to fully implement the VPHCP. The Project includes approval and adoption of the VPHCP and associated amendments to the City Land Development Code (LDC), Biology Guidelines, General Plan, Otay Mesa Community Plan, Kearny Mesa Community Plan, and policies (the discretionary actions under CEQA), as well as the issuance of a federal ITP under Section 10(a)(1)(B) of the Federal Endangered Species Act (FESA; the federal action under NEPA). It is expected that to fully implement the VPHCP and streamline existing permits already in place, the City and CDFW may use the information in this EIR/EIS as a basis to evaluate and process/issue any necessary amendment(s) to and/or findings of consistency with the City's existing Multiple Species Conservation Program (MSCP) Subarea Plan (SAP), Implementing Agreement, and state 2835 Natural Community Conservation Plan (NCCP) authorization to maintain coverage for vernal pool habitat and the seven covered vernal pool species addressed in the VPHCP. This joint EIR/EIS has been prepared in compliance with NEPA as implemented by Council on Environmental Quality (CEQ) Regulations (Title 40 Code of Federal Regulations [CFR] Parts 1500–1508) and CEQA (California Public Resources Code [PRC] Section 21000 et seq.) as implemented by the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, Sections 1500-15387). Joint environmental documents are permitted and encouraged under both the Council on Environmental Quality (CEQ) Regulations (Section 1506.4) and the CEQA Guidelines (Section 15222). A consistent format has been established for the environmental consequences section of this EIR/EIS to assist the reader in reviewing and understanding the implications for the Project and its alternatives.

For this joint document, both CEQA and NEPA terminology is provided, generally with CEQA being listed first. This EIR/EIS evaluates the potential for environmental effects from the Project.

1.1 PROJECT OVERVIEW

The VPHCP is a conservation plan for vernal pools and seven threatened and endangered vernal pool species (referred to as the covered species herein) that do not currently have federal coverage under the City's MSCPSAP. The VPHCP would be compatible with, and would expand upon, the City's existing MSCP SAP to conserve additional lands with vernal pools that are occupied with threatened and endangered vernal pool species.

The VPHCP addresses vernal pool conservation for 206,124 acres (Figure 1-1, referred to as the VPHCP Plan Area, located in the southwestern portion of San Diego County.

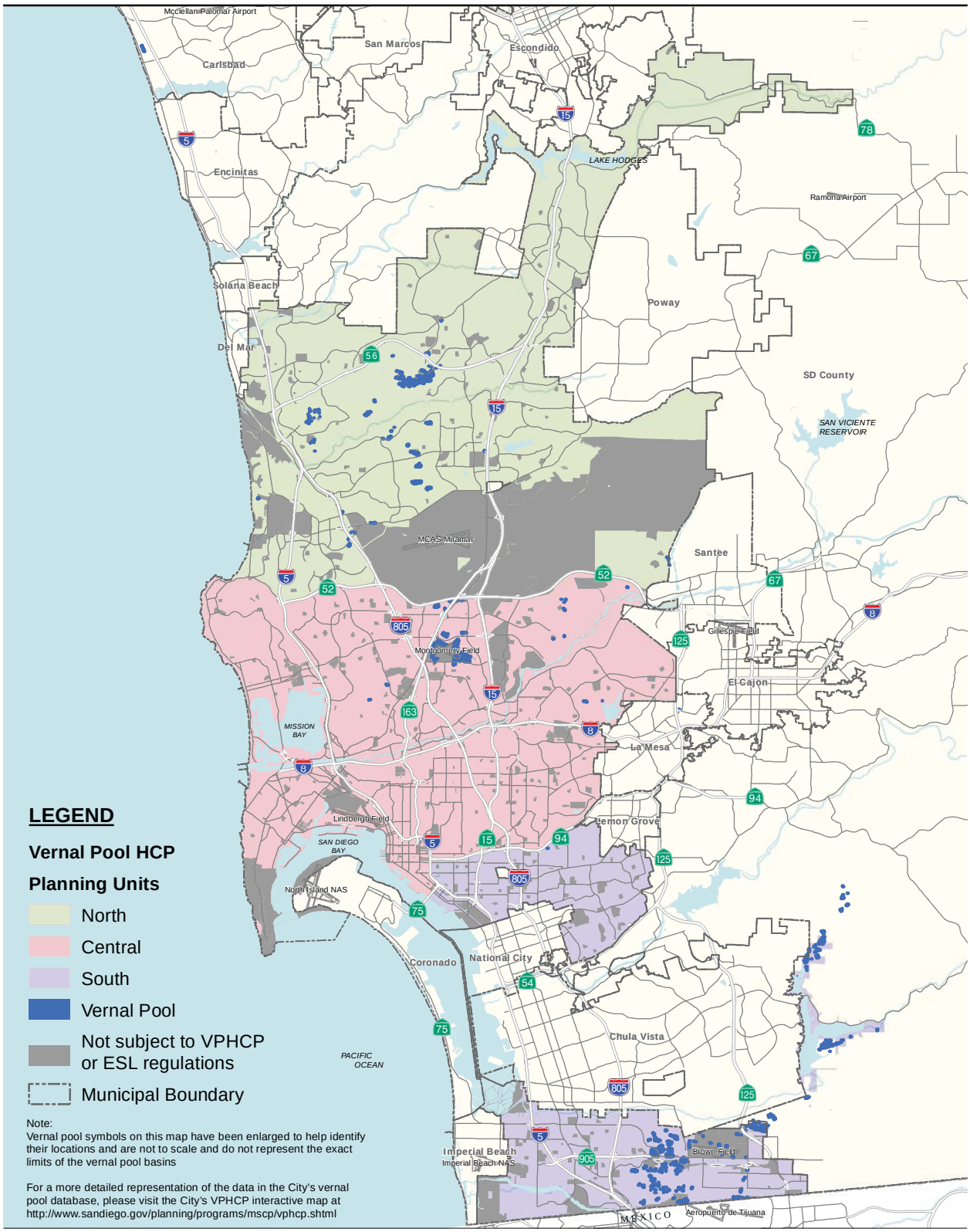
The Project includes approval and adoption of the VPHCP and associated amendments to the City LDM Biology Guidelines, General Plan, Otay Mesa Community Plan, and Kearny Mesa Community Plan (the discretionary actions under CEQA), as well as the adoption and implementation of the VPHCP, which includes the issuance of a city-wide incidental take permit (ITP) from USFWS under Section 10(a) of FESA (i.e., proposed action under NEPA) for impact to/incidental take of the following seven listed species (two crustaceans and five plants):

- San Diego fairy shrimp (*Branchinecta sandiegonensis*)
- Riverside fairy shrimp (*Streptocephalus woottoni*)
- San Diego button-celery (*Eryngium aristulatum* var. *parishii*)
- Spreading navarretia (*Navarretia fossalis*)
- San Diego mesa mint (*Pogogyne abramsii*)
- California Orcutt grass (*Orcuttia californica*)
- Otay Mesa mint (*Pogogyne nudiuscula*)

San Diego and Riverside fairy shrimp are listed by USFWS as endangered species. With the exception of spreading navarretia, which is listed as a federally threatened species, all of the above plant species are federally listed and state-listed endangered species. The seven listed species are proposed for coverage under the VPHCP and are referred to as "the covered species" throughout this EIR/EIS.

1.2 PURPOSE OF THE EIR/EIS AND INTENDED USES

In addition to federal, state, and local permits and discretionary actions required for implementation of the VPHCP, the environmental consequences associated with the Project must



Source: City of San Diego; SANDAG; SanGIS.

5 2.5 0 5 Miles

Scale: 1:316,800; 1 inch = 5 miles

Figure 1-1
VPHCP Plan Area

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig1_1_VPCHP_PlanArea.mxd, 7/5/2016, daniel_arellano

be evaluated pursuant to the requirements of NEPA and CEQA. Due to the need for federal, state, and local approval, adoption, and implementation, a joint EIR/EIS is the appropriate document to consider environmental consequences of the Project, including alternatives that satisfy the requirements of both NEPA and CEQA in one document and through concurrent processing. Approval and implementation of the VPHCP and issuance of the ITP could potentially result in significant environmental impacts or substantial adverse effects; therefore, preparation of an EIR/EIS is necessary.

The federal action requiring NEPA review is the issuance of an ITP for the VPHCP under Section 10(a) of FESA. The local action requiring CEQA documentation includes the evaluation and processing/issuance any required amendments to and/or findings of consistency with the City's incidental take authorization (California Endangered Species Act [CESA]/Permit No. PRT-830421) that was received in 1997 with the adoption of the City's MSCP to maintain state coverage for vernal pool habitat and the seven covered vernal pool species addressed in the VPHCP. The VPHCP has been designed to meet the requirements under California Fish and Game Code Section 2800 et seq. for listed and nonlisted species conserved under an NCCP.

The City action requiring CEQA review is adoption of the VPHCP, including funding mechanisms and conditions of coverage, a Vernal Pool Management and Monitoring Plan (VPMMP), amendments to the City's General Plan, Otay Mesa Community Plan, and Kearny Mesa Community Plan, as well as amendments to the LDC Environmentally Sensitive Lands (ESL) Regulations and Land Development Manual (LDM) Biology Guidelines.

It is expected that to fully implement the VPHCP and streamline existing permits already in place, CDFW may use the information in this EIR/EIS as a basis to evaluate and process/issue any necessary amendment(s) to and/or findings of consistency with the City's existing MSCP SAP, Implementing Agreement, and State 2835 NCCP authorization to maintain state coverage for vernal pool habitat and the seven covered vernal pool species addressed in the VPHCP. Elements of the VPHCP that could require amending existing state permits include (but are not limited to) replacing the take/impact levels for vernal pool habitat and species; incorporating the covered projects and activities, including hardlined projects identified in Chapter 4 (Covered Projects and Activities) of the VPHCP; and adopting the adaptive management, monitoring and funding program identified in Chapter 7 (Management, Monitoring, and Reporting) and Chapter 10 (Preserve Management and Funding Mechanisms) of the VPHCP. The management and monitoring provisions in the VPHCP, which are based on updated vernal pool mapping and surveying information, would replace the older MSCP provisions from the MSCP Framework Management Plan (FMP) for vernal pools and the seven covered species.

This EIR/EIS will be used as an informational document intended to provide public decision-makers, responsible or other interested agencies, and the general public with an assessment of potential environmental effects of the Project. The joint EIR/EIS will provide and evaluate the following:

- Potential environmental consequences associated with adoption and implementation of the VPHCP;
- The Expanded Conservation Alternative that meets the goals and objectives of the VPHCP;
- Existing Conservation/No Project Alternative;
- Mitigation measures for identified significant environmental effects;
- Cumulative and growth-inducing impacts from the Project; and
- Data for use by decision-makers to make an informed approval decision.

1.3 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

As required by NEPA and CEQA, lead and responsible agencies must be identified that will be responsible for approval, permitting, and review/comment of the environmental document.

The City is identified as the lead agency for the CEQA compliance requirements of the Project, pursuant to Article 4 (Sections 15050 and 15051) of the CEQA Guidelines. The lead agency, as defined by CEQA Guidelines Section 15367, "…is the public agency which has the principal responsibility and authority for carrying out or approving a project."

The agency carrying out the federal action is responsible for complying with the requirements of NEPA. Per NEPA (Section 1508.16), the lead agency is defined as "…the agency or agencies preparing or having taken primary responsibility for preparing the EIS." USFWS is identified as the federal lead agency pursuant to NEPA.

Several other agencies have special roles with respect to the Project and may use this EIR/EIS as the basis for their decisions to issue approvals and/or permits that might be required.

Section 15381 of the CEQA Guidelines defines a responsible agency as follows:

> …a public agency which proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR or negative declaration. For the purposes of CEQA, the term 'responsible agency' includes all public agencies other than the lead agency which have discretionary approval power over the project.

Additionally, Section 15386 of the CEQA Guidelines defines a trustee agency as follows:

> …a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the state of California.

Section 1508.5 of NEPA defines a cooperating agency as follows:

> …any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment…A State or local agency of similar qualifications or, when the effects are on a reservation, an Indian Tribe, may by agreement with the lead agency become a cooperating agency.

Responsible, trustee, or cooperating federal, state, and local agencies that may rely on this EIR/EIS in a review capacity or as a basis for subsequent necessary related actions, including issuance of findings of consistency with and/or amendment to a permit for implementation of the VPHCP, may include CDFW as trustee agency and responsible agency for determining the VPHCP's consistency with the City's existing NCCP (MSCP) permit requirements and/or any related actions necessary to maintain state coverage for vernal pool habitat and the seven covered vernal pool species addressed in the VPHCP.

1.4 TECHNICAL WHITE PAPERS SUPPORTING THE VPHCP DEVELOPMENT PROCESS

A series of eight Technical White Papers (TWPs) were prepared that provided background research, technical data, and analysis to assist the City with development of the VPHCP (Table 1-1). Although the data and analysis presented in the TWPs are now superseded by the VPHCP, their general concepts, topics, and purposes are relevant to the Project as a whole. Since their publication, the technical data analyses have evolved during the VPHCP development process; thus, TWPs are not considered a reference for technical data, but rather a resource for the processes and methodologies used to develop the VPHCP. The TWPs were peer reviewed by members of the scientific community (see Chapter 13, List of Preparers). The TWP process was also an opportunity for the City to solicit participation and input from the general public in the VPHCP process. The eight TWPs are summarized in the table below:

Table 1-1
VPHCP Technical White Papers

Technical White Paper	Title	Primary Author	Brief Description
1	Focal Species Status Update in the City of San Diego	AECOM	Provides a status update on the seven focal (i.e., Covered) vernal pool species including listing status, species description, habitat, life cycle, status and distribution, threats and pressures, propagation and restoration potential, and status in VPHCP Plan Area.
2	Assessment of Focal Species Conservation	AECOM	Presents data related to the conservation of the seven focal species within the City's VPHCP Plan Area ("the Preserve"), as well as two alternative preserve boundaries. The goal of the analysis is to compare the conservation provided for the focal species by each alternative VPHCP boundary, as well as identify the gaps in conservation of each alternative.
3 & 4	Adaptive Management and Monitoring Strategy for the City of San Diego Vernal Pool Habitat Conservation Plan (a combined document)	AECOM	TWP 3 & 4 is a combined document that provides management and monitoring strategies, directives, and recommendations for all lands containing vernal pools in the Preserve to preserve and/or restore their biological components, particularly the seven focal species.
5	Cost Evaluation for Implementation of Management and Monitoring	AECOM	Provides a cost evaluation for implementing the VPHCP monitoring and management program over the 31-year life of the permit.
6	Recommendations for Conditions of Coverage	AECOM	Recommends conditions of coverage for the seven focal species consistent with the goals and objectives of the VPHCP.
7	Conservation Analysis	AECOM	Synthesizes the information and analysis contained in the previous TWPs for use in preparation of the VPHCP, and by USFWS for its Section 7 Biological Opinion for the VPHCP.
8	Preserve Management Funding Mechanisms (SANDAG SB)	SANDAG	Provides an analysis of funding sources as well as options for mechanisms to fund the VPHCP over the life of the permit.

In 2002, the City received funding from the State of California through a USFWS Traditional Section 6 Grant to complete an inventory and management plan of vernal pools within the City's jurisdiction. Much of the City and private lands had never been surveyed for specific vernal pools and, in many cases, historical maps did not accurately represent the existing basins. The Vernal Pool Inventory (VPI) project used advanced technology to update information on the location of individual vernal pools and complexes, including documentation of changes in vernal pool distribution due to development and restoration efforts. The inventory expanded and updated existing information and provides the basis for the analysis of vernal pool conservation efforts within San Diego. In 2012, the City, USFWS, CDFW, San Diego Association of Governments (SANDAG), and AECOM gathered additional available vernal pool data from surveys, reports, and the public, resulting in a database that includes the best available information for vernal pools and the seven covered species on private and public lands. The

database was analyzed in preparation of the VPHCP to determine the extent of vernal pool protection, as well as preservation and management needs.

1.5 PUBLIC INVOLVEMENT PROCESS

Public participation is a key component of CEQA and NEPA, with opportunities for public participation required throughout the environmental review process. The general purpose of the public outreach is:

- Inform the public and policy makers that the VPHCP and associated environmental analysis are underway.
- Involve representatives of interested groups and individuals in the planning process.
- Build a broad base of understanding and support for the VPHCP.

The CEQA Notice of Preparation (NOP) and NEPA Notice of Intent (NOI) are to provide formal notification to federal, state, and local agencies involved with funding or approval of a project, and to other interested organizations and members of the public, that an EIR/EIS will be prepared. The NOP and NOI are intended to encourage interagency communication concerning a proposed project and provide sufficient background information so that agencies, organizations, and individuals can respond with specific comments and questions on the scope and content of the EIR/EIS prior to its preparation. The NOP and NOI for the Project were issued in December 2011. A copy of the NOP and NOI and the comment letters received on those notices are included as Appendix A.

Public outreach has included affected parties such as City departments and decision-makers, private property owners, environmental groups, developers, special interest groups, and interested individuals. The development of the VPHCP has included numerous opportunities for public input throughout the process, as outlined in Table 1-2.

The City published a preliminary draft VPHCP on its website to provide the public an opportunity to review and provide comments prior to the completion of the public review draft VPHCP. A total of 15 comments were submitted. The City reviewed public comments in coordination with the Wildlife Agencies and made changes to the draft VPHCP. A summary of these comments is provided in Appendix B of this EIR/EIS.

Table 1-2
VPHCP Public Outreach/Input Opportunities

Public Outreach/Input Opportunity	Date
Initial VPHCP Workshop	January 14, 2011
Initial workshop materials posted on City website with email link for comments	January 2011
EIR/EIS Scoping Meeting	December 12, 2011
Notice of Preparation and Scope of Work distributed for 30-day public review	December 20, 2011
Notice of Intent distributed for 30-day public review	December 20, 2011
Otay Mesa Community Planning Meeting	February 15, 2012
Otay Mesa Property Owner's Association meeting	March 1, 2012
Second VPHCP Workshop	March 15, 2012
Second VPHCP Workshop materials posted on City website with email link for comments	March/April 2012
Property Owner's meeting	June 26, 2012
Technical White Papers 1 through 6 posted on City's website with email link for comments	August 2012
Third VPHCP Workshop	August 30, 2012
Third VPHCP Workshop materials posted on City website with email link for comments	September 2012
Vernal Pool Information Workshop	December 12, 2013
Preliminary HCP document and interactive map posted on City website for a 30-day review	March 10, 2015
Wetland Advisory Board Meeting	February 1, 2016
Otay Mesa Community Planning Group Meeting	February 17, 2016
Community Planner's Committee Meeting	February 23, 2016
Otay Mesa Owner's Meeting	May 5, 2016
Code Monitoring Team (CMT) Meeting	May 11, 2016
Technical Advisory Committee (TAC) Meeting	May 11, 2016
Business Industry Association (BIA), Legislative Policy Committee	May 20, 2016
Kearny Mesa Community Planning Group Meeting	September 21, 2016

1.6 EIR/EIS SCOPE AND CONTENT

EIR/EIS Scope

The scope of analysis and the content for this EIR/EIS were established based on professional judgment regarding the nature of the VPHCP, City EIR and USFWS EIS procedures, Appendix G of the CEQA Guidelines, USFWS Guidelines for Implementing NEPA (USFWS 2003), and comments received during the NOP/NOI review process as detailed in Section 1.5, Public Involvement Process. The City and USFWS also coordinated with CDFW on the scope and analysis of this EIR/EIS for purposes any subsequent related City and/or state actions that may be necessary to fully implement the VPHCP. As noted in Table 1-2, a public scoping meeting to receive comments on issues of concern to be addressed in the EIR/EIS was held on December 12, 2011. It is important to note that scoping for the EIR/EIS process is focused on the content of the environmental information and analysis to be included in the EIR and not on the components

or strategy of the VPHCP itself. The EIR/EIS process is to address environmental effects of the VPHCP as proposed. The key considerations raised during the public scoping process were:

- Need for a comprehensive vernal pool data inventory
- Adequacy of proposed conservation to allow vernal pool species to recover
- Consideration of whether the VPHCP is inclusive enough to adequately conserve all important vernal pool resources
- Development restrictions for private property owners subject to the VPHCP
- Identification of funding sources
- Adequacy of funding availability in perpetuity
- Provision of public access and educational opportunities within the lands included in the VPHCP
- Consideration and coverage of other sensitive and indicator vernal pool species
- Consideration of impacts from emergency situations (i.e., fire response)
- Consideration of impacts from urban runoff and pollution
- Need to clearly define and show Preserve boundaries

EIR/EIS Content

This EIR/EIS evaluates the direct, indirect, permanent, temporary, and cumulative effects of the Project and alternatives, and proposes mitigation measures to minimize those effects, as feasible. The following issues were determined to be potentially significant and adverse and are, therefore, fully evaluated in Chapter 5, Environmental Consequences (Sections 5.1 through 5.7) of this EIR/EIS:

- Land Use
- Biological Resources
- Air Quality
- Greenhouse Gas Emissions
- Historical Resources
- Hydrology and Water Quality
- Environmental Justice

The following 10 issue areas were determined, based on preliminary CEQA and NEPA review, not to have a significant adverse effect on the environment as a result of VPHCP implementation: Agricultural Resources, Geologic Conditions, Health and Safety, Mineral Resources, Noise, Paleontological Resources, Population and Housing, Public Services and

Utilities, Transportation/Circulation and Parking, and Visual Effects and Neighborhood Character.

1.7 AVAILABILITY OF THE EIR/EIS FOR PUBLIC REVIEW

The Draft EIR/EIS is distributed for review to the public and interested and affected agencies for a 60-day review period for the purpose of providing comments "on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant and adverse effects of the Project might be avoided and mitigated" (CEQA Guidelines Section 15204). CEQA (PRC Section 21091(a); CEQA Guidelines Section 15105(a)) and NEPA (40 CFR Section 1506.10) require a 45-day public review period for a draft EIR; however, because this document is issued as a joint EIR/EIS, the public review period is extended to 60 days to concurrently meet the federal lead agency (USFWS) public review requirements.

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CHAPTER 2.0
ENVIRONMENTAL SETTING

This chapter presents a description of the location and physical setting of San Diego and describes the current physical environmental conditions within the vicinity of the VPHCP Plan Area.

2.1 REGIONAL CONTEXT

The San Diego region is located in southern California, in the southwest corner of the continental United States. It is bordered on the south by Mexico, on the west by the Pacific Ocean, on the north by Orange and Riverside counties, and on the east by the Colorado Desert and Imperial County. The San Diego area includes 18 cities (SANDAG 2010) and many unincorporated communities within an estimated 4,200 square miles (U.S. Census 2015), with a majority of residents living in the western half of the region. With its substantial military presence, and reputation as a research and economic growth center, the region has experienced considerable development pressure over the years.

The City's corporate limits encompass approximately 343 square miles of land within San Diego County (SANDAG 2010). The San Diego metropolitan area is generally bounded on the north by Escondido and Poway, the foothills of the coastal mountains on the east, the Mexican border on the south, and the Pacific Ocean on the west. Approximately 42% of the region's population, representing an estimated 1.3 million residents (U.S. Census 2015), resides within the City limits. San Diego is the second most populous city in the state of California (City of San Diego 2011b). By 2020, San Diego's population is expected to rise to 1.5 million residents and to 1.69 million by 2030 (City of San Diego 2011b).

2.2 PHYSICAL CHARACTERISTICS OF THE REGION

With its varied topography consisting of coastal bluffs and plains, mesas, inland valleys, and foothills and mountains, and high number of sunny days, the San Diego region supports one of the most biologically diverse environments in the continental United States. While the region's climate and soils support a wide variety of species and habitat types, human activities over time have modified many of the region's plant communities and replaced large tracts of native vegetation, including wetlands with agriculture and urban development, especially in the central and western half of the region where most development is focused. A description of the physical characteristics of the San Diego region is included below, as well as an overview of vernal pools.

Climate

The region's sunny Mediterranean-type climate is strongly influenced by its proximity to the coast, which moderates temperatures and tempers prevailing winds. Nighttime and early morning clouds are characteristic in coastal areas during the spring and summer, and the region experiences relatively cool summers and warmer winters as compared to other areas of similar latitude.

As compared to coastal areas where daily temperature ranges average 15 degrees Fahrenheit (°F), inland daytime temperatures can be noticeably warmer and nighttime temperatures noticeably cooler, with daily temperature ranges of 30° F or more. San Diego rarely experiences freezing temperatures. The average annual high temperature is approximately 70° F; the average annual low is 55° F.

Dry easterly winds occasionally bring temperatures in the 90s and 100s to the eastern sections of the city and outlying suburbs. These winds, also known as "Santa Anas," may last several days and are predominant in the fall.

Topography

The San Diego metropolitan area consists of a broad stream-dissected coastal plain, which transitions 10 to 15 miles inland from the Pacific Ocean to the foothills before ascending to mountain and valley relief in the eastern half of the county. Elevations generally range between sea level and 600 feet. The highest coastal elevations include Mount Soledad in coastal La Jolla at 822 feet. At 1,600 feet, Cowles Mountain, in the eastern part of the city, is the highest peak. Deep canyons separate mesas and provide natural open space and a transition between many of the city's more densely populated communities.

Drainage

Seven watersheds lie within the City's jurisdictional boundary. From north to south, these are the San Dieguito, Peñasquitos, San Diego, Pueblo, Sweetwater, Otay, and Tijuana watersheds. Drainages within these watersheds are generally from east to west and extend from the interior foothills and mountains to the coast, outletting in the coastal lagoons, marshes, bays, or created channels before flowing to the Pacific Ocean. Wetlands associated with the drainages or smaller seasonally wet depressions are located throughout the San Diego area, including foothills and inland valleys, mesas, and coastal areas. Surface streams in these regions are predominantly intermittent, flowing only during periods of high rainfall. In addition, much of the area is steeply sloped, leading to potentially high rainfall runoff rates and flood hazards.

Vernal Pools

Vernal pools are seasonal, depression-type wetlands that result from a unique set of physical parameters and support a specific biological assemblage of plant and animal species. Functional vernal pool ecosystems form under specific physical conditions when small, shallow depressions collect precipitation to create a seasonally perched water table. In San Diego County, these basins are generally oval to circular in shape and one to several hundred square feet in size (Zedler 1987). The features occur most often on level ground and are often associated with hillocks known as mima mounds; however, sometimes these wetlands can occur on former landslide areas and are then referred to as "slump" pools. Vernal pools in the City are primarily associated with Huerhuero, Stockpen, Redding, and Olivenhain soil series, and the basins are sealed either by subsurface layers of impervious hardpan, or clay that expands to seal the basin when saturated. The claypan or the hardpan subsurface creates the perched water table that is required for the presence of ponding (Greenwood and Abbot 1980). Figure 2-1 is a schematic cross-section of a vernal pool that illustrates the perched water table. From a geomorphological level, most of complexes associated with a hardpan are found in the central portions of the City in the Kearny Mesa, Claremont Mesa, and Mira Mesa areas. Claypan pools are mostly associated with Otay Mesa in the southern portion of the City. Vernal pools in the Del Mar Mesa area of the City are a mixture of claypan and hardpan substrates (Bauder and McMillan 1998).

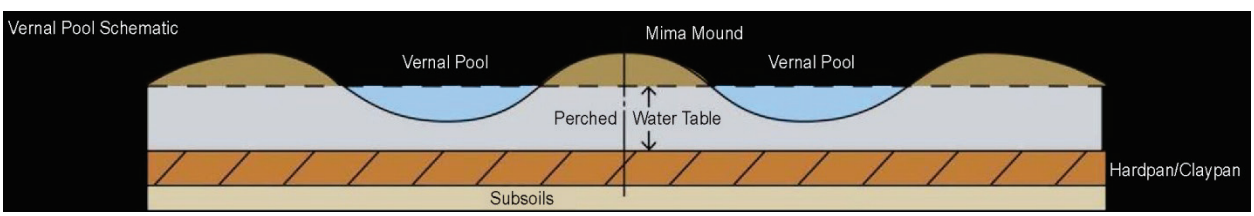


Figure 2-1. Schematic Cross-Section of a Vernal Pool

These ecosystems are defined by seasonal hydrologic extremes: desiccated pool basins during the dry months followed by variable lengths of saturation and inundation during the rainy season. In southern California, the interannual variation in precipitation augments the inconsistent moisture conditions. This drastic change between vegetated wetland and dry basin defines a vernal pool and separates them from other wetland ecosystems (Zedler 1987).

Although seasonal wetlands are found worldwide, vernal pools sharing physical and biological parameters occur within the Mediterranean climate zone of the western United States, from southern Oregon, to northern Baja California, Mexico. In southern California, remnants of historic vernal pools occur on coastal mesas in the counties of Santa Barbara, Los Angeles, Orange, and San Diego, as well as inland in the San Diego foothills and Riverside basalt terraces.

The VPHCP considers a seasonally flooded depression to be a vernal pool if it includes one or more of the vernal pool indicator species, based on the species listed in Appendix A of the VPHCP. Consistent with the City's LDM Biology Guidelines Attachment II, A.3, depressions that are man-made, such as tire tracks or road ruts, may still be considered vernal pools if they contain at least one indictor plant species. Road ruts and other seasonal depressions that are not vernal pools may contain wildlife associated with vernal pools, such as San Diego or Riverside fairy shrimp, but will not contain vernal pool plant indicator species (often referred to as road pools). The VPHCP and reference to vernal pools in this EIR/EIS also applies to these man-made road ruts and other seasonal depressions if they contain one or more of the covered species.

For convenience of reference, groups of vernal pools are sometimes referred to as vernal pool complexes that may include two to several hundred individual vernal pools (Keeler-Wolf et al. 1998). Vernal pool complexes are defined as a series of vernal pool groups that are hydrologically connected with similar soil types and species compositions. A vernal pool series is a set of complexes located in a geographic area that can be related to a particular mesa top or similar geographic area. For example, the "J" series of vernal pools occur on lands in the Otay Mesa community of San Diego. Within San Diego County, vernal pool complexes were first described and surveyed by Beauchamp and Cass (1979) and subsequently updated in 1986 (Bauder) and 2004 (City of San Diego). The use of series and complexes is a helpful tool for planning and management, but it is recognized that a complex can be subjective. For the VPHCP, all vernal pools have been assigned both a complex identification code and a subcomplex name (e.g., J14, Cal Terraces South).

Local upland vegetation communities associated with vernal pools include needlegrass grassland, annual grassland, coastal sage scrub, maritime succulent scrub, and chaparral (USFWS 1998b). Vernal pool habitat and species are considered sensitive because they have been greatly reduced due to land development, agricultural clearing, and other anthropogenic factors. Within the City, vernal pool complexes are found in the following areas: Del Mar Mesa, Mira Mesa, Carmel Mountain, Rancho Peñasquitos, Torrey Hills, Torrey Highlands, University, Kearny Mesa, Mission Trails Regional Park, East Elliott, Tierrasanta, Serra Mesa, Navajo, Otay Mesa, Otay Lakes, Proctor Valley, and Marron Valley.

2.3 VPHCP PLAN AREA OVERVIEW

The VPHCP Plan Area is the geographical area for which the protections provided under the VPHCP are afforded to the seven covered species, as shown in Figure 1-1 and for which the Section 10 permit applies. The VPHCP Plan Area encompasses 206,124 acres in the southwestern portion of San Diego County. The VPHCP Plan Area includes lands subject to the City's jurisdiction within the jurisdictional boundary of the City, as well as three areas owned by

the City's Public Utilities Department in the unincorporated portion of San Diego County. The VPHCP Plan Area also includes existing conserved lands within San Diego that may be owned by other entities (e.g. not subject to City's land use jurisdiction), where certain covered activities (i.e., restoration, enhancement, management, and/or monitoring activities) may occur if the land owner receives a Certificate of Inclusion.. The VPHCP Plan Area's extent is, by design, the same area covered by the City's MSCP SAP; however, the VPHCP is a separate but complementary conservation plan for vernal pools and the seven covered species not covered under the City's federal permit for the MSCP SAP.

In certain areas, the VPHCP Plan Area overlaps with the plan areas for the San Diego Gas & Electric (SDG&E) and/or San Diego County Water Authority (SDCWA) HCPs. Due to the small scale of the SDG&E and SDCWA rights-of-ways (ROWs), the City is unable to identify which vernal pools occur within these utility ROWs and may be covered under the SDG&E or SDCWAHCPs.

The VPHCP Plan Area is characterized by urban land uses covering approximately 55.4% of the area with the remainder as open space/park system or undeveloped vacant land. Because of the large expanse of the VPHCP coverage area, the physical characteristics described in this section are discussed in overall generalities.

Within the VPHCP Plan Area are 54 mapped vernal pool complexes; the majority of these complexes have had some type of restoration and/or enhancement (previously and/or currently). The number of mapped vernal pools within the VPHCP Plan Area is representative of data collected over multiple years from multiple sources and is not necessarily an absolute value during any given year.

For planning and management purposes, the VPHCP Plan Area is divided into three "planning units": North, Central, and South. The planning units were selected for convenience of management due to the proximity of vernal pools within each unit. The planning units are described below and shown in Figures 2-2 through 2-4. Full details of each planning unit can be found in the VPHCP.

North VPHCP Planning Unit

The North VPHCP planning unit includes the City jurisdiction north of State Route (SR) 52 (see Figure 2-2). Mesa tops containing vernal pools in this area include Carmel Mountain, Del Mar Mesa, and Mira Mesa. In addition, a small area of vernal pools is located within the coastal zone. All vernal pool resources in the coastal zone are either conserved or required to be conserved; no impacts to vernal pools within the coastal zone would occur. The vernal pools on private

property are located within designated Preserve areas associated with the Crescent Heights, Salk Institute, and Tierra Alta projects. All of the projects include requirements for conservation and/or covenant of easements, a management plan, and funding for long-term management.

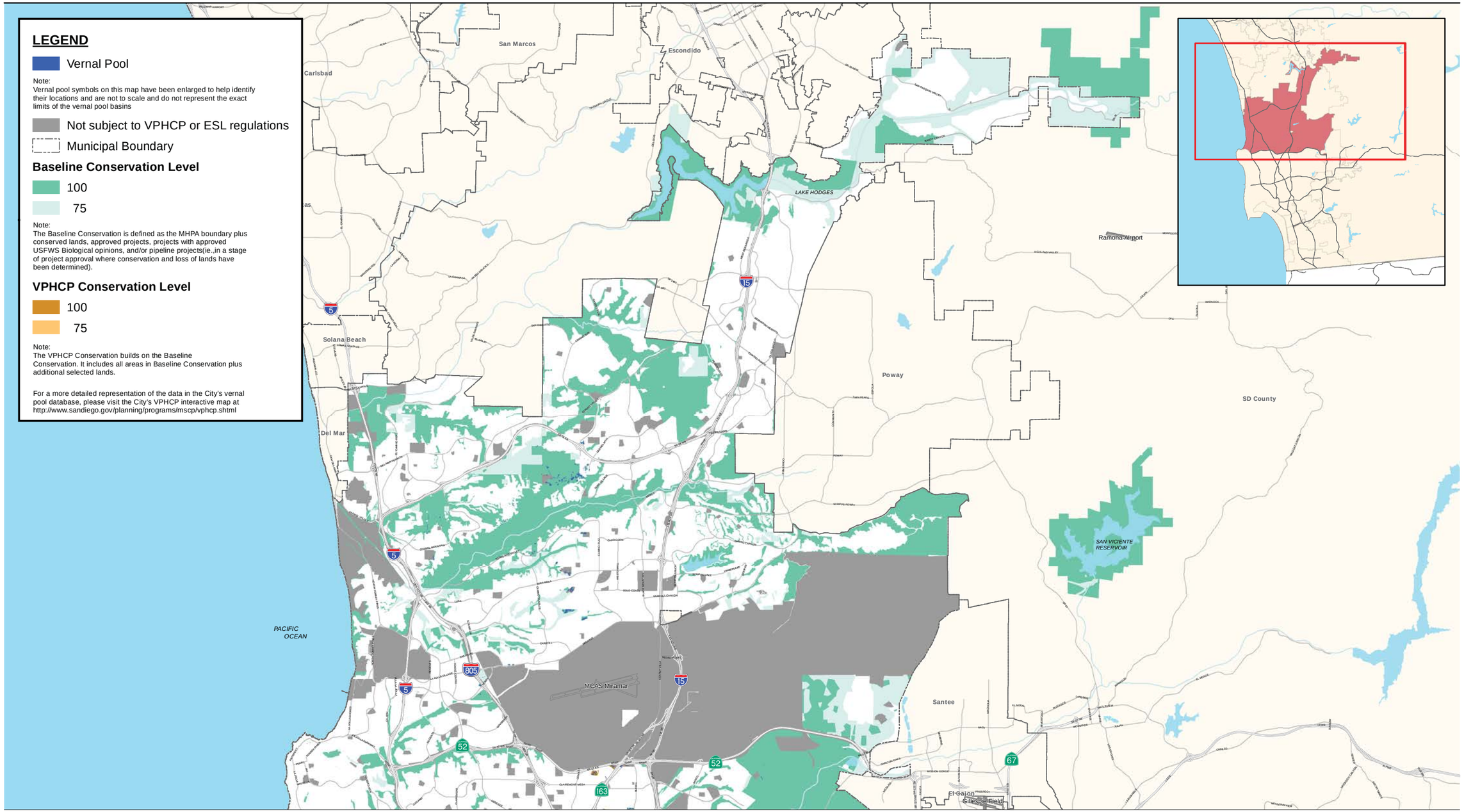
This planning unit contains tracts of interconnected existing and planned open space, interlaced with urban development. This planning unit includes 110,891 acres, or 48%, of the total VPHCP Plan Area. Approximately 43% of the land use within the North VPHCP planning unit is categorized as urban and 57% as open space.

The North VPHCP planning unit contains 933 mapped vernal pools. Vernal pool soils include clay and fine, coarse, sandy, and cobbly loam soil from the, Chesterton, Huerhuero loam, Redding, and Diablo-Olivenhain soil series. Vernal pool resources are present in varying conditions within the North VPHCP planning unit. Carmel Mountain is owned by the City with the exception of two private in holdings. A few vernal pools also occur south of Carmel Mountain near the SDG&E substation. Del Mar Mesa is split among various public agencies, including the City, CDFW, and USFWS. Each of these entities has mandates that direct their management of open space preserves. Del Mar Mesa also is part of the San Diego National Wildlife Refuge Vernal Pool Complex. Mira Mesa is predominately developed, but some vernal pools remain on isolated parcels throughout the mesa. Additional vernal pool areas that occur within the North VPHCP planning unit include pools on the city's eastern boundary (Castlerock project), adjacent to the City of Santee.

Central VPHCP Planning Unit

The Central VPHCP planning unit is located generally south of SR 52 and north of SR 94 (See Figure 2-3). Mesa tops that support vernal pools in this planning unit include Clairemont Mesa, Kearny Mesa, and Serra Mesa. Vernal pools are also found in portions of Mission Trails Regional Park. The Central VPHCP planning unit includes 81,296 acres, or 35%, of the total VPHCP Plan Area. Approximately 70% of the land use within the Central VPHCP planning unit is categorized as urban and 30% as open space. With the exception of Mission Trails Regional Park, the majority of this planning unit is heavily urbanized.

The Central VPHCP planning unit contains 620 mapped vernal pools. Vernal pool soils include clay and fine, coarse, sandy, and cobbly loam soil from the Bosanko, Chesterton, Diablo, Huerhuero, Olivenhain and Redding, series. Vernal pool resources are present in varying conditions within the Central VPHCP planning unit. Mission Trails Regional Park contains high-quality pools in two locations within the park. Several vernal pool series continue to persist in



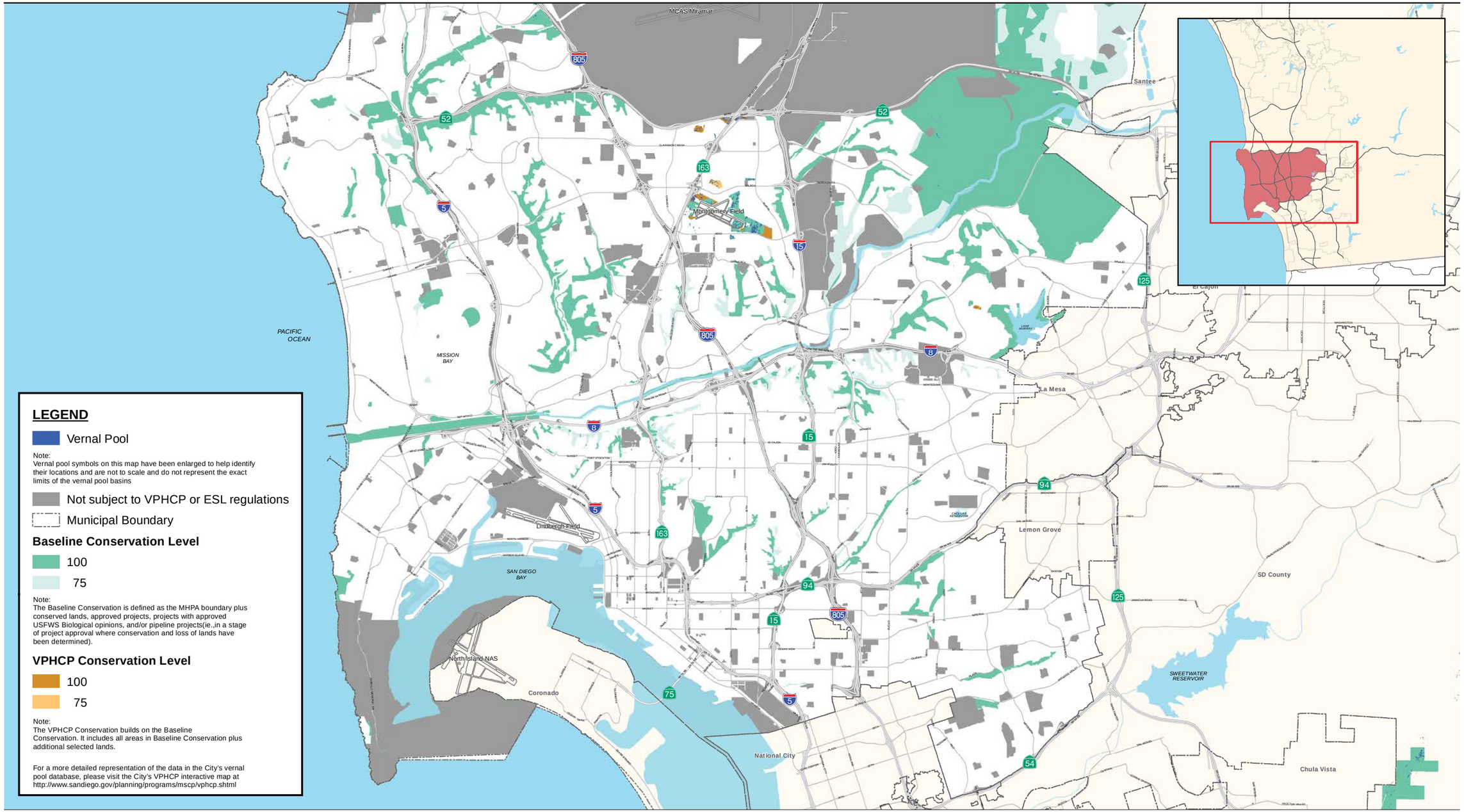
Source: City of San Diego; SANDAG; SanGIS.

2.5 1.25 0 2.5 Miles

Scale: 1:158,400; 1 inch = 2.5 miles

Figure 2-2
North VPHCP Planning Unit

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig2_2_VPCHP_North.mxd, 7/5/2016, daniel_arellano



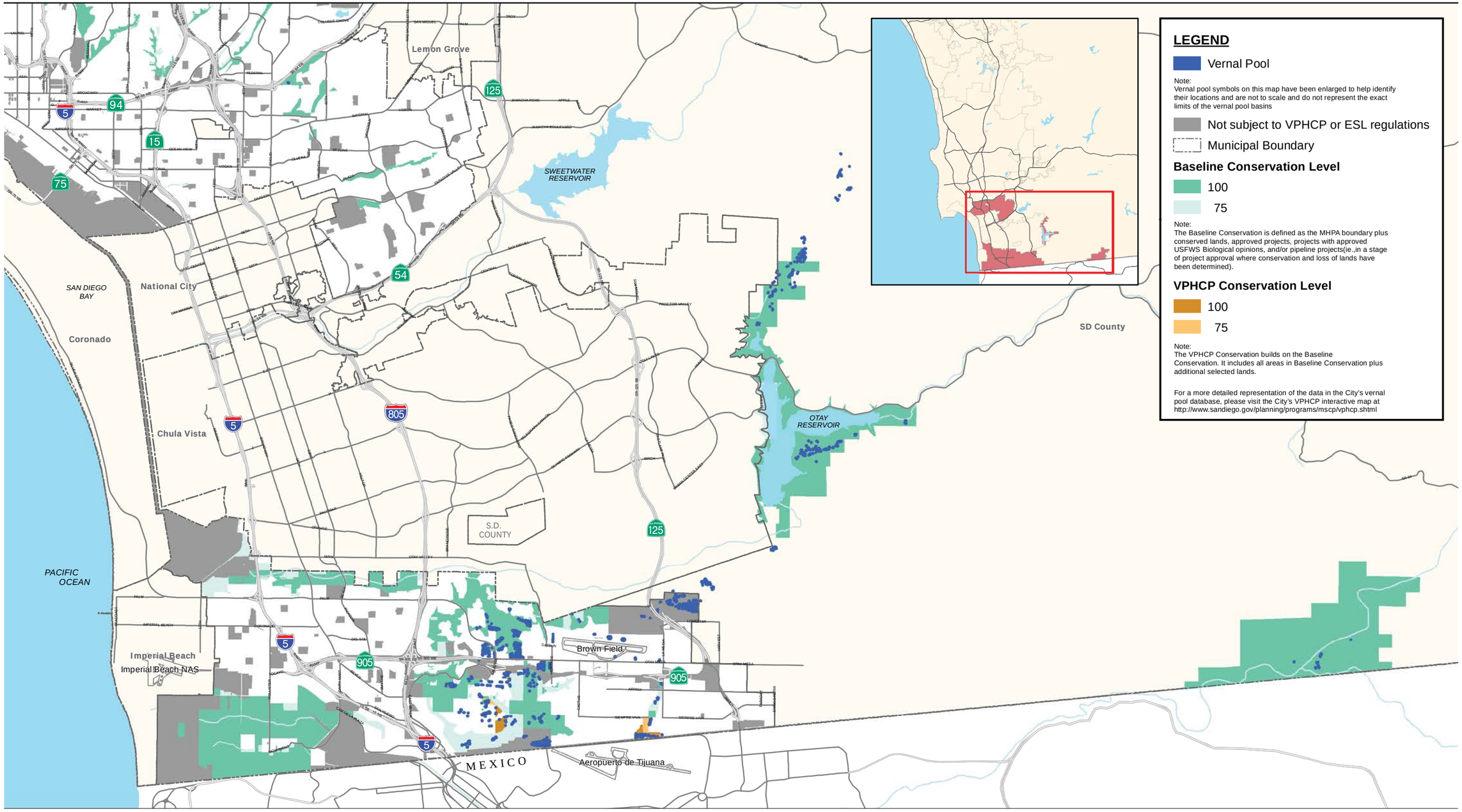
Source: City of San Diego; SANDAG; SanGIS.

1.75 0.875 0 1.75 Miles

Scale: 1:110,880; 1 inch = 1.75 miles

Figure 2-3
Central VPHCP Planning Unit

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig2_3_VPCHP_Central.mxd, 7/5/2016, daniel_arellano



Source: City of San Diego; SANDAG; SanGIS.

1.75 0.875 0 1.75 Miles

Scale: 1:110 ,880; 1 inch = 1.75 miles

Figure 2-4
South VPHCP Planning Unit

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig2_4_VPCHP_South.mxd, 7/5/2016, daniel_arellano

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Kearny Mesa south of SR 52 on property owned by the City, and under private ownerships. Large concentrations of vernal pools occur on Montgomery-Gibbs Executive Airport and on isolated private parcels near the airport. Smaller locations of vernal pools occur in the Central VPHCP planning unit near Lake Murray and Tecolote Park.

South VPHCP Planning Unit

The South VPHCP planning unit is located generally south of SR 94, and north of the international border between the United States (U.S.) and Mexico (see Figure 2-4). Areas containing vernal pools include Otay Mesa, Proctor Valley, Otay Lakes, and Marron Valley. The South VPHCP planning unit includes 38,742 acres, or 17%, of the total VPHCP Plan Area. Approximately 53% of the land use within the South VPHCP planning unit is categorized as urban and 47% as open space.

The South VPHCP planning unit includes the majority of the vernal pools in the VPHCP Plan Area with 1,038 mapped vernal pool resources. Vernal pool soils include clay and fine, coarse, sandy, and cobbly loam soil from the Diablo, Gravel, Huerhuero, Linne, Olivenhain, Redding, and Stockpen. The Otay Mesa community in this planning unit contains the largest tracts of vernal pools that have been conserved and restored and also the largest area of vernal pool resources that still retains development potential. Multiple private property owners control areas of vernal pool resources, especially south of SR 905 where planned urban development has not yet occurred. Vernal pools located on the mesa to the west of Spring Canyon and along the drainage swale adjacent to La Media Road are notable examples of vernal pool resources. In addition, vernal pool resources are located on Brown Field Municipal Airport, which is owned and operated by the City.

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CHAPTER 3.0
PROJECT DESCRIPTION

This chapter includes the Project background and a history of the VPHCP development process (Section 3.1), the Project purpose and objectives (Section 3.2), a detailed description of the Project (Section 3.3) and the alternatives to the Project (Section 3.4). In addition, as required by FESA, development of the VPHCP included alternatives that were considered but ultimately eliminated for various reasons (Section 3.5). A discussion of the discretionary actions, permits, and approvals required for the Project is included in Section 3.6).

The VPHCP is a comprehensive conservation planning document designed to create, manage, and monitor a vernal pool ecosystem preserve within San Diego. Establishment of the city-wide Preserve through implementation of the VPHCP is intended to protect vernal pool habitat and viable populations of seven listed vernal pool species included for coverage, while accommodating continued economic development and quality of life for San Diego residents.

The Project includes the following discretionary actions under CEQA: City Council approval and adoption of the VPHCP and amendments to the City's LDC ESL Regulations, LDM Biology Guidelines, General Plan, Otay Mesa Community Plan, Kearny Mesa Community, and Local Coastal Program. The issuance of an ITP under Section 10(a)(1)(B) of FESA is the federal action that requires review under NEPA.

NEPA and CEQA require the objective evaluation of a "reasonable" range of project alternatives. Equal comparison of these reasonable alternatives allows for the advantages and disadvantages of each to be weighed and analyzed. Under NEPA, reasonable alternatives are those that are practical or feasible from a technical and economic perspective, and based on common sense (46 Federal Register 18026, as amended; 51 Federal Register 15618). Section 15126.6 of the CEQA Guidelines requires that an EIR "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." Factors used to determine feasibility include site suitability, economic limitations, availability of infrastructure, consistency with local plans and policies, other plan or regulatory limitations, and jurisdictional boundaries.

The alternatives identified in this document (see Section 3.4, Project Alternatives) are analyzed at an equal level of detail to facilitate the ultimate selection of an alternative that best reflects the

desired benefits and outcomes. That alternative will be identified as the Preferred Alternative and the Environmentally Preferable Alternative.

3.1 PROJECT BACKGROUND

The development of the VPHCP is a result of decades of combined local, state, and federal discretionary actions and permits associated with vernal pool conservation in the city. This section summarizes the history of the VPHCP development process as well as the City's historic efforts related to vernal pool conservation, monitoring, and management.

3.1.1 Conservation Planning Context

A wide variety of existing federal, state, and City policies, plans, and regulations form the overall planning context for the VPHCP and drive the process for the development, approval, and implementation of the VPHCP. The VPHCP has been designed to comply with and complement those applicable and guiding federal, state, and City policies.

Federal Endangered Species Act of 1973

FESA, under the authority of USFWS and the National Marine Fisheries Service (NMFS), provides for the protection and conservation of fish, wildlife, and plants that have been federally listed as threatened or endangered. NMFS's jurisdiction under FESA is limited to the protection of marine mammals (with the exception of manatees and sea otters), marine fishes, and anadromous fishes; all other species are subject to USFWS jurisdiction. No species under NMFS jurisdiction are included in the Proposed Plan; therefore, NMFS jurisdiction is not included in the description below.

USFWS can list species as either endangered or threatened. An endangered species is at risk of extinction throughout all or a significant portion of its range (FESA Section 3[6]). A threatened species is likely to become endangered in the foreseeable future (FESA Section 3[19]). Section 9 of FESA prohibits the take of any fish or wildlife species listed under FESA as endangered and most species listed as threatened. Take, as defined by FESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Harm is defined as "any act that kills or injures the species, including significant habitat modification." Section 9 prohibits the "take" of listed animal species and the "removal or reduction to possession" of any listed plant species "under federal jurisdiction" (e.g., on federal land). Even though under FESA there is no prohibition of take of plants, the VPHCP covers five plants, which allows for "no-surprises" assurances for these species. FESA includes mechanisms that provide exceptions to the Section 9 take prohibitions. These are addressed in FESA under

Section 7 for federal actions and Section 10 for nonfederal actions. “Take” as applied to covered plant species in the VPHCP means impacts to plant species and their associated habitat.

In cases where federal land, funding, or authorization is not required for an action by a nonfederal entity, the take of listed species must be permitted by USFWS through the Section 10 process. Private landowners, corporations, state agencies, local agencies, and other nonfederal entities must obtain a Section 10(a)(1)(B) ITP for take of federally listed fish and wildlife species “that is incidental to, but not the purpose of, otherwise lawful activities.”

The take prohibition under FESA does not apply to listed plants. Under Section 9(a)(2)(B) of FESA, endangered plants are protected from “removal, reduction to possession, and malicious damage or destruction” in areas that are under federal jurisdiction. Section 9(a)(2)(B) of FESA also provides protection to plants from removal, cutting, digging up, damage, or destruction where the action takes place in violation of any state law or regulation or in violation of a state criminal trespass law. Thus, FESA does not prohibit the incidental take of federally listed plants on private or other nonfederal lands unless the take or action resulting in take requires federal authorization or is in violation of state law. Thus, Section 10 ITPs are necessary only for take of wildlife and fish species. The Section 7(a)(2) prohibition against jeopardy, however, applies to plants, and USFWS may not issue a Section 10(a)(1)(B) ITP if the issuance of that permit would result in jeopardy to a listed plant species.

To receive a Section 10(a)(1)(B) ITP, the permit applicant is required to provide the following:

- A complete description of the activity sought to be authorized.
- The common and scientific names of the species to be covered by the permit, as well as the number, age, and sex of such species, if known.
- An HCP.

The HCP must specify the following mandatory elements:

- The impact that will likely result from the taking of covered species.
- The steps the applicant will take to monitor, minimize, and mitigate such impacts; the funding that will be available to implement such steps; the implementation of adaptive management; and the procedures to be used to deal with unforeseen circumstances.
- The alternative actions to taking of covered species the applicant considered and the reasons why such alternatives are not proposed to be utilized.
- Such other measures that the Director [of the Department of Interior or Commerce] may require as being necessary or appropriate for purposes of the Plan (50 CFR 17.22[b]).

The VPHCP is intended to satisfy these requirements.

To receive an ITP, Section 10(a)(2)(B) of FESA requires that the following criteria be met:

- The taking will be incidental to otherwise lawful activities.
- The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking.
- The applicant will ensure adequate funding for the HCP and procedures to deal with unforeseen circumstances.
- The taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild.
- The applicant will ensure that other measures that USFWS may require as being necessary or appropriate will be provided.
- USFWS has received such other assurances as may be required that the HCP will be implemented.

Prior to the approval of an HCP, USFWS is required to undertake an internal Section 7 consultation because issuance of an ITP is a federal action. (See the discussion of FESA Section 7, above.) Elements specific to the Section 7 process that are not required under the Section 10 process (e.g., analysis of impacts on designated Critical Habitat, analysis of impacts on listed plant species, and analysis of indirect and cumulative impacts on listed species) are included in the Plan to meet the requirements of Section 7.

In June 2000, USFWS adopted a five-point policy initiative designed to clarify elements of the HCP program as they relate to measurable biological goals, adaptive management, monitoring, permit duration, and public participation.

- *Biological Goals and Objectives* – HCPs must include biological goals and objectives that set out specific measurable targets that the plan is intended to meet.

- *Adaptive Management* – Adaptive management provides a means to address biological uncertainty and to devise alternative strategies for meeting biological goals and objectives.

- *Monitoring* – HCPs must institute a monitoring program to gauge the effectiveness of the plan in meeting the biological goals and objectives and to verify that the minimization and mitigation measures identified in the plan are being properly implemented.

- *Permit Duration* – Several factors are used to determine the duration of an ITP, including the timeframe of the proposed activities and the expected positive and negative effects on covered species associated with the proposed duration.
- *Public Participation* – Under the five-point policy guidance, USFWS sought to expand public participation in the HCP process to provide greater opportunity for the public to assess, review, and analyze HCPs and associated NEPA documentation. As part of this effort, USFWS has expanded the public review process for most HCPs.

California Endangered Species Act of 1970

CESA provides for the conservation, protection, restoration, and enhancement of any state endangered or threatened species and its habitat while allowing for the lawful take of such species provided that the take is incidental, minimized, fully mitigated for with adequate funding, and does not jeopardize the continued existence of the listed species. Under CESA, incidental take of state-listed species may be authorized if an applicant submits an approved plan that minimizes and "fully mitigates" the impacts of the take.

California Natural Community Conservation Planning Act of 1991

The California Natural Community Conservation Planning Act of 1991 (California Fish and Game Code Section 2800 et seq.) takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity by the State of California, and numerous private and public partners. A Natural Community Conservation Plan (NCCP) identifies and provides for the regional or areawide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity through an agreement between CDFW and the local jurisdiction. Such agreement is described in Section 2810 of the California Fish and Game Code and is as follows:

> *The department may enter into an agreement with any person or public entity for the purpose of preparing a natural community conservation plan, in cooperation with a local agency that has land use permit authority over the activities proposed to be addressed in the plan, to provide comprehensive management and conservation of multiple wildlife species…*

City of San Diego MSCP and SAP

To meet the requirements of the NCCP and FESA, the City participated in preparation of a regional MSCP in conjunction with USFWS and CDFW (the Wildlife Agencies). The MSCP is a long-term comprehensive habitat conservation planning program for southwestern San Diego

County that establishes an 187,000-acre preserve system. The main goal of the MSCP is to preserve a network of viable habitat and open space for the purpose of protecting biodiversity and sensitive species while allowing for smart growth. One of the primary objectives of the MSCP is to identify and maintain a preserve system that allows for animals and plants to exist at both the local and regional levels. Local jurisdictions, including the City, implement their portions of the regional MSCP through local SAPs, which describe specific MSCP implementing mechanisms within their respective jurisdictions.

The City prepared its SAP in coordination with the Wildlife Agencies in 1997. The primary goal of the City's MSCP SAP is to conserve and protect the City's rarest species. The preserve system established by the MSCP SAP, the MHPA, was developed by the City in cooperation with the Wildlife Agencies, property owners, and environmental groups. The MHPA is a planning area for core biological resources and corridors targeted for conservation. The existing MHPA encompasses 56,831 acres of which 52,727 acres would be conserved. The type and extent of development allowed within the MHPA are limited. Based on the preparation and approval of the MSCP, the City was granted a permit through USFWS. The City's permit initially covered 85 species, including the seven listed vernal pool species covered in the VPHCP. The City and the Wildlife Agencies signed an Implementing Agreement for the plan in July 1997. The Implementing Agreement, which identifies the roles and responsibilities of the parties to implement the City's MSCP SAP, serves as a binding contract between the City, USFWS, and CDFW and allows the City to issue incidental take authorizations for covered upland species under the provisions of the MSCP SAP without having to obtain separate permits from the state or federal agencies. Applicable state and federal permits are still required for some MSCP-covered listed wetland species and for take of listed species not covered by the MSCP.

3.1.2 History of VPHCP Development

In 1998, the City's SAP was subject to a lawsuit, *Southwest Center v. Bartel*, regarding the seven species included for coverage in the VPHCP. As a response to the lawsuit, in 2006, the U.S. District Court for the Southern District of California prohibited the City from permitting projects that would impact the seven listed vernal pool species under the City's SAP. In October of 2009, the City and USFWS entered into a Planning Agreement for the development of the VPHCP. After almost 2 years of mediation, the City decided in 2010 to relinquish federal coverage of these seven species under the City's SAP, which rendered the injunction moot. The VPHCP would be adopted in order for the City to obtain an ITP under Section 10(a)(1)(B) of FESA and address the Court's concerns about conservation of the seven vernal pool species in San Diego, thus receiving complete federal coverage of the seven listed pool species.

To obtain an ITP under Section 10(a)(1)(B) of FESA and to address the Court's concerns about conservation of the seven vernal pool species in San Diego, the City has developed the VPHCP. The VPHCP was been developed through a comprehensive planning approach to preserve the seven listed vernal pool species and the vernal pools they occupy within the City's jurisdiction. The VPHCP proposes to create an expanded Preserve for the conservation of vernal pools and covered species as well as a management and monitoring plan, consistent with the City's SAP Framework Management Plan. Funding for the Project has been provided by USFWS and administered through CDFW.

Currently, the City still has state coverage for the seven vernal pool species addressed in the VPHCP under the City's existing MSCP that was issued by CDFW in 1997. Part of the local action associated with the VPHCP includes the evaluation/processing of any required amendments to and/or findings of consistency with the City's state incidental take authorization (California Endangered Species Act [CESA]/Permit No. PRT-830421) to maintain state coverage for vernal pool habitat and the seven covered vernal pool species addressed in the VPHCP. The VPHCP has been designed to meet the requirements under California Fish and Game Code Section 2800 *et seq*. for listed and nonlisted species conserved under a Natural Community Conservation Plan (NCCP).

3.2 PROJECT PURPOSE AND OBJECTIVES

This section of the EIR/EIS provides the Project objectives (CEQA) and the purpose and need (NEPA) for the Project.

Section 15124[b] of the CEQA Guidelines requires that the project description contain a statement of objectives, including the underlying purpose of the proposed project. Implementing regulations for NEPA published by CEQ state that the Purpose and Need section in an EIS "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action" (40 CFR Section 1502.13).

The lands within the VPHCP Plan Area (Figure 1-1) contain valuable vernal pool resources. These vernal pool resources contain species, including the seven listed species proposed for coverage that are protected under CESA and/or FESA. The purpose of the VPHCP is to preserve the network of vernal pool habitat within this matrix of open space; protect the biodiversity of these unique wetlands; and define a formal strategy for their long-term conservation, management, and monitoring. An HCP is required under FESA to accompany an application for an ITP when associated with nonfederal activities. Under FESA, an ITP is required when activities may result in take of threatened or endangered wildlife. The VPHCP also must ensure

adequate minimization and mitigation for the effects of the authorized incidental take of state and federal protected vernal pool resources within the city.

The City's MSCP provides a structure for the long-term conservation, management, and monitoring of sensitive species and helps to avoid costly delays and uncertainty associated with a project-by-project approach toward vernal pool conservation. The City developed the VPHCP using the requirements of an HCP under Section 10(a)(1)(B) of FESA as the basis for take authorization for the focal vernal pool species, and as a long-term strategic plan for the protection of vernal pool resources within its jurisdiction. The VPHCP would complement, but be distinct from, the HCP prepared and adopted for the City's MSCP SAP.

3.2.1 CEQA Project Objectives

The specific conservation goals of the VPHCP, as defined by the Planning Agreement, serve as the CEQA project objectives and are as follows:

1. Provide for the conservation and management of covered species addressed by the VPHCP;
2. Preserve vernal pool resources through conservation partnerships between federal, state, local agencies, and private development partnerships;
3. Allow for appropriate and compatible economic growth and development that is consistent with applicable laws;
4. Provide a basis for permits necessary for lawful incidental take of vernal pool covered species;
5. Provide a comprehensive means to coordinate and standardize mitigation and compensation requirements of FESA, CESA, CEQA, NCCP Act, and NEPA within the VPHCP Plan Area;
6. Provide a more efficient project review process that results in greater conservation values than project-by-project, species-by-species review; and
7. Provide clear expectations and regulatory predictability for persons carrying out covered activities within the VPHCP Plan Area.

3.2.2 NEPA Purpose and Need

Under FESA, an ITP is required when activities may result in "take" (i.e., killing, harming, or harassing) of threatened or endangered wildlife. An HCP must accompany an application for an ITP when associated with nonfederal activities. The purpose of the habitat conservation planning

process associated with the permit is to ensure adequate minimization and mitigation for the effects of the authorized incidental take of state and federal protected vernal pool resources.

The traditional project-by-project process for resolving conflicts between species preservation and development is both costly and time-consuming. Moreover, the piecemeal process results in uncoordinated preservation of scattered and/or isolated vernal pool habitat areas set aside as mitigation for individual project impacts. These generally small, unconnected vernal pool habitat areas do not necessarily guarantee the continued viability of species population or ecosystem functions, which generally depend on interconnected habitat areas designed and managed in a coordinated manner. Thus, the VPHCP is needed to replace this project-by-project approach for approval and mitigation of projects with vernal pool resources to a coordinated, comprehensive approach based on goals and objectives of the VPHCP. This approach would ensure that project mitigation is directed to those areas most critical to maintenance of ecosystem function and species viability. The goal of the VPHCP is to target the highest quality areas for vernal pool preservation, enhancement and/or restoration, while allowing some development of lower-quality vernal pool resources.

3.3 DESCRIPTION OF THE PROJECT

The VPHCP is a conservation plan for vernal pools and the associated seven threatened and endangered species that do not have federal coverage under the City's MSCP. The Project is the adoption and implementation of the VPHCP and associated discretionary actions. Implementation of the VPHCP would provide an effective framework to protect, enhance, and/or restore vernal pool resources in specific areas of the city, while improving and streamlining the environmental permitting process for impacts to threatened and endangered species associated with vernal pools.

3.3.1 Addition of Lands to the MHPA

Once fully implemented, the VPHCP would expand the City's existing MHPA by adding approximately 275 acres of lands with valuable vernal pools resources. This includes adding approximately 191 acres of lands to the MPHA that were not previously conserved (Table 3-1), as well as incorporating 84 acres of previously conserved lands into the MHPA boundary (Table 3-2).

Table 3-1
Currently Unconserved Lands to be added to the MHPA under the VPHCP

APN	Total Parcel Acreage[1]	New Conserved acreage to be Added to MHPA[1,2]
308-040-1300	0.5	0.5
356-031-1300	11.4	11.4
356-032-0100	5.5	5.5
369-082-3000	2.5	2.5
773-040-1000	5.0	5.0
Montgomery-Gibbs Executive Airport (BLA)	42.3	42.3
645-040-4100	7.3	7.3
645-081-0300	10.6	10.6
645-090-4300	4.5	4.5
667-040-1300	30.9	30.9
667-060-2800	15.4	11.6
667-060-1200 667-060-1100	9.7	9.7
645-080-2800	10.1	10.1
369-140-2300	11.2	8.43
369-150-2100	3.7	2.79
667-060-1601 667-060-1602	10.0	7.5
667-060-1500	10.1	7.6
645-080-0300	8.0	8.0
645-074-0700	0.9	0.7
645-074-2000	0.9	0.7
645-075-1900	0.9	0.7
645-075-1800	0.9	0.7
645-076-1800	0.9	0.7
645-076-1900	0.9	0.7
645-076-0900	0.9	0.7
Total	**205.0**	**190.8**[3]

[1] Acreage has been rounded to nearest tenth based on GIS mapping data. Thus, totals may not appear to add correctly.
[2] Based on 75% Conservation.
[3] City Owned: 58.7acres; Private: 132.2 acres

Table 3-2
Currently Conserved Lands to be Included in the MHPA under the VPHCP

APN	Conserved Acreage to be added to MHPA
341-060-9000	8.77
343-252-1800	0.66
343-260-0900	0.99
307-373-1500	1.10
345-260-2000	2.54
309-030-2000	5.0
645-111-3000	6.38
645-040-5000	15.87
645-080-0800	15.48
306-420-0200	17.24
645-074-0600 645-074-2100 645-075-0600 645-075-0700 645-075-2000 645-074-0800 645-074-1900 645-075-0800 645-074-0900 645-074-1800 645-075-0900[1]	10.01
Total	**84.13**

[1] Eleven City owned parcels

In this document, the MHPA is also referred to as "the Preserve," although not all of the lands with the MHPA will ultimately be preserved. The City's planned MHPA totals 56,831 acres, with 52,727 acres (90%) targeted for preservation (approximately 30% of the planned regional preserve). Implementation of the VPHCP would add lands containing vernal pool resources to the MHPA. Once adopted, vernal pool lands within the MHPA would be subject to the provisions of the VPHCP, in addition to the City's MSCP SAP and other existing land use and biological resource plans, policies, and regulations, as applicable (discussed in Section 3.1.1, Conservation Planning Context and 5.1.2, Regulatory Framework, of this EIR/EIS).

3.3.2 Covered Species

The VPHCP would include coverage for the following seven threatened and endangered vernal pool species (covered species):

- San Diego fairy shrimp
- Riverside fairy shrimp
- San Diego button celery
- Spreading navarretia
- San Diego mesa mint
- California Orcutt grass
- Otay Mesa mint

More information on the covered species is provided in Section 5.2, Biological Resources.

3.3.3 Covered Projects and Covered Activities

The VPHCP includes a Mitigation Framework (summarized in Section 3.3.7, Mitigation Framework, and full text included in Chapter 11, Mitigation, Monitoring and Reporting Program) that requires avoidance, minimization, and compensation (i.e., conservation) for impacts to the seven covered species resulting from covered projects and covered activities identified in the VPHCP. These actions would apply to specific projects and covered activities for which incidental take authorization from USFWS would be obtained. Impacts would be evaluated based on project-level surveys and environmental review to determine consistency with the VPHCP.

The VPHCP covered projects are summarized and discussed below in Table 3-3. Please refer to Chapter 4 of the VPHCP for detailed descriptions of the covered projects and the associated covered activities, as well as their conditions for consistency as determined by the City.

Table 3-3
Projects and Activities Covered under the VPHCP

Projects/Activity Type	Description
Projects	
Covered (Hardlined) Projects	The Covered projects below involve land use development within the City for which hardline Preserve boundaries have been established and any Incidental Take of covered species would be approved through the VPHCP. Conservation measures consistent with the VPHCP have been or will be specified as binding conditions of approval in such projects' plans and discretionary approvals. • Tierra Alta • St. Jerome's Church • Pasatiempo Parks • Montgomery-Gibbs Executive Airport • Metropolitan Airpark at Brown Field • Pure Water Program

Projects/Activity Type	Description
Future Development Projects	• Private/public development permitted through the City • Third-parties receiving take authorization under the City's permitg through a Certificate of Inclusion •
Planned Development Projects	The Planned Projects below have planned development footprints that have been negotiated as take-authorized areas along with associated hardline conserved lands within the Preserve. Their conservation areas are identified as 100% conserved and will be added to the MHPA (Existing Conservation). • Castlerock (BO No. 15B0240-15F0536) • Rhodes Crossing1 (BO No. 08B0401-12FC0578) • Candlelight (BO No. 08B0715-08F0817)
Activities	
Road Improvements	• Use, maintenance, and repair of existing access roads • Expansion of existing roads • Development of new roads • Private roads
Essential Public Projects (EPPs)	• Please refer to the San Diego Municipal Code Land Development Code Biology Guidelines 2012 for the EPPs list and definitions.
Police and Fire	• Homeless or itinerant worker camps abatement • Brush management and weed abatement • Enforce local fire safety laws and protect public health, safety, and welfare as necessary to combat wildfires
Solid Waste	• Cover installation, maintenance, and repair • Gas collection and management system installation, maintenance, and repair • Use and maintenance of water collection, protection, and drainage structures • Installation of vegetation, removal of vegetation, maintenance of vegetation, and brush management and other vegetation control • Installation, removal, modification, and maintenance of fencing and other barriers and signs • Animal abatement measures • Waste site abatement and/or remediation
Public Utilities	• Maintenance, inspection, and repair activities for all existing sewer and water infrastructure • Maintenance and improvements of existing access paths to sewer and water infrastructure
Preserve Management	• Existing and new fences, signs (denoting conserved area and/or educational), and interpretive panels • Restoration and enhancement • Litter and trash removal • Education features • Monitoring and research
Parks and Recreation	• Maintenance and use of existing trails • Development of new trails • Brush management and weed abatement
Airport Safety and Maintenance	• Maintenance and inspection of existing safety areas, object- free areas, runway protection zones, critical areas, infields, runway and taxiway shoulders, and storm water conveyances • Maintenance, access, inspection, and operation of all existing equipment and infrastructure • Capital Improvement Program rehabilitation and/or maintenance of existing airport infrastructure. • Maintenance and inspection of existing public right-of-way access

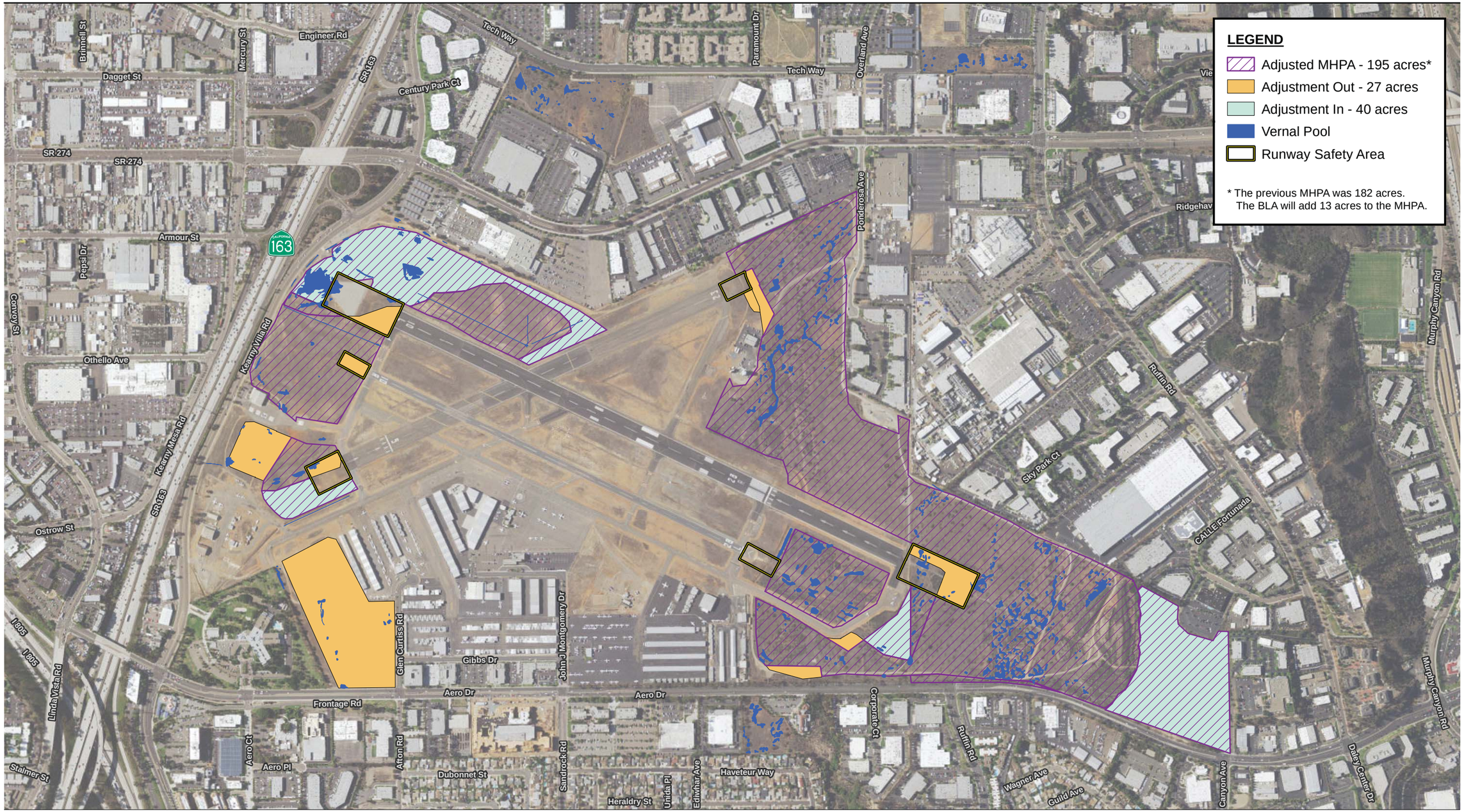
Covered projects with vernal pool resources would be required to analyze their biological impacts, mitigation, and conservation compared to the requirements and conditions of the VPHCP. If the projects are consistent with the VPHCP, they would be granted the authority to impact vernal pools with endangered species through the City's ITP, which would be issued upon the adoption of the VPHCP. Incidental take would be transferred as part of the discretionary approval by the City for the proposed land development activities determined to be consistent with the VPHCP.

Third parties proposing projects not subject to the City's discretionary land use authority (e.g., school district activities), would be required to seek incidental take through some other mechanism (e.g., Section 7 or Section 10[a] of FESA). Applicants not subject to the City discretionary land use authority may elect to utilize the City's land use permitting process to gain incidental take under the VPHCP, provided the City exercises legal control (i.e., Certificate of Inclusion) over the third party and project for purposes of implementing the VPHCP. Federal lands have an ESA Section 7 nexus and would not seek incidental take coverage from the City.

As noted above, the VPHCP includes a Mitigation Framework that requires avoidance, minimization, and mitigation for impacts to the seven covered species resulting from covered projects and covered activities. These avoidance, minimization, and mitigation measures as part of the Mitigation Framework are considered part of the Project and therefore are analyzed as such in Chapter 5, Environmental Consequences, of this EIR/EIS. Adverse effects from implementation of the VPHCP for the various issue areas (i.e., Land Use, Biological Resources, Historical Resources, etc.) will be evaluated based on the assumption that all applicable avoidance, minimization, and mitigation measures identified in the VPHCP would be implemented. Significant adverse impacts are only those that would occur after implementation of the Mitigation Framework's avoidance, minimization, and mitigation measures identified as part of the Project. Additional mitigation measures beyond those included as part of the Project would be developed only if significant adverse impacts are identified (refer to Chapter 5).

3.3.4 Montgomery-Gibbs Executive Airport MHPA Boundary Line Adjustment

As part of the Project, an MHPA Boundary Line Adjustment (BLA) at Montgomery-Gibbs Executive Airport would be processed, see Figure 3-1. While certain areas with vernal pool resources would be removed from the MHPA as part of the BLA, the BLA would result in an overall net gain of higher quality vernal pool acreage, number of pools, and improved biological value. Table 3-4 summarizes the total acreage and number of vernal pools, including pools occupied by the applicable covered species, within the existing MHPA, area to be removed and added to the MPHA, and the new MHPA (following the BLA).



Source: City of San Diego; SANDAG; SanGIS; NAIP 2014.

800 400 0 800 Feet

Scale: 1:9,600; 1 inch = 800 feet

Figure 3-1
Montgomery-Gibbs Executive Airport
MHPA Boundary Line Adjustment

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig3_1_MontgomeryField_MHPA.mxd, 9/19/2016, Paul_Moreno

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Table 3-4
MHPA Adjustments Resulting from BLA

Boundary Line Adjustment	Acreage	Vernal Pools	Pools with San Diego Fairy Shrimp	Pools with San Diego Mesa Mint
Existing MHPA	**182**	**277**	**117**	**25**
Removed from MHPA	-27	-25	-2	-1
Added to MHPA	+40	+20	+12	+0
Net Change with BLA	**+13**	**-5**	**+10**	**-1**
Adjusted MHPA	**195**	**272**	**127**	**24**

Note: Some vernal pools may be occupied by more than one covered species

Adjustments to the MHPA can be made without amending the MSCP Plan or subarea plan if the adjustment would result in the same or higher biological value of the Preserve (City of San Diego 1997). The determination of biological value is made by the City in accordance with the MSCP Plan and the VPHCP, with the concurrence of the Wildlife Agencies. As required, this EIR/EIS provides the biological evaluation (Section 5.2, Biological Resources) of the proposed BLA and also discusses the land use implications (Section 5.1, Land Use) associated with this element of the Project.

3.3.5 Overview of Conservation

Implementation of the VPHCP would expand the MHPA by 275 acres to include a total of 2,409 vernal pools located within a total of 53 vernal pool complexes, as well as 3,974 acres of modeled vernal pool habitat[1] (Table 3-5). Expansion of the MHPA would result in additional conservation of vernal pools, modeled habitat, covered species, and Critical Habitat for the covered species beyond existing conservation. The VPHCP adds lands to the existing MHPA that include vernal pools, as well as associated watershed, habitat buffers, and adjacent uplands to meet the tenets of appropriate and functional reserve design, as guided by USFWS (USFWS 2000). The protection of vernal pools, modeled vernal pool habitat, and Critical Habitat for the covered species as a function of the VPHCP reserve design through addition of lands to the MPHA is described below. The conservation analysis for the VPHCP is based on whether a vernal pool is located within the Preserve or not. Covered activities (e.g., management, trail use) are not evaluated in the VPHCP conservation analysis, as the location and extent of these future activities are unknown.

1 In recognition that there could be additional pools that have not been mapped, conservation of and potential impacts to modeled vernal pool habitat within the Plan Area from planned, covered, and future projects were assessed. The model included soils that support vernal pools in the plan area, slope (<12%), and undeveloped land within the plan area (see Appendix C of the VPHCP for further details on the model).

Table 3-5
Conservation of Vernal Pools after Implementation of the VPHCP

	Number of Complex Series in the VPHCP Plan Area	Number of Complex Series Conserved	Total Number of Pools in VPHCP Plan Area	Number of Pools inside Existing Conserved Areas	Number of Pools Conserved Based on Conservation Level[2]	% of Total Pools in VPHCP Plan Area Conserved	Acreage of Pools Conserved	Acreage of Modeled Habitat Conserved
Existing Conservation[1]	54	45	2,591	2,199	2,183	84%	34.7	3,797
MHPA after VPHCP Implementation	54	53	2,591	2,472	2,409	93%	37.5	3,974
Additional Conservation Resulting from VPHCP Implementation	n/a	8	n/a	273	226	9%	2.8	177

n/a = not applicable
[1]Existing conservation includes conserved lands within the City's existing MHPA, permitted projects, and planned projects. See Chapter 4 of the VPHCP for more detail.
[2]Pools and species population conserved is an estimate based on 75% or 100% conservation level by vernal pool complex. See Appendix C of the VPHCP for more detail on the conservation analysis for each vernal pool complex in the VPHCP Plan Area.

Conservation of Vernal Pools

Implementation of the VPHCP would provide additional conservation of vernal pools beyond current conservation within the City's existing MHPA, permitted projects, and planned projects (i.e., existing conservation), by adding lands to the MHPA that contain valuable vernal pool resources. Table 3-5 summarizes the additional conservation of vernal pools that would be provided under implementation of the VPHCP through addition of lands to the MHPA. The VPHCP would conserve an additional eight vernal pool complexes within the Plan Area, and conserve an additional 226 pools (approximately 9% more), totaling 2.8 acres of basin area, over what is currently conserved under the existing conservation.

In addition to conserving extant vernal pools, implementation of the VPHCP would result in the addition of lands to the MPHA that are suitable for vernal pool restoration (such as the mesa areas on Otay Mesa). Restoration of vernal pools and associated populations of covered species (per the goals and objectives of the VPHCP) would enhance the biological value of the MHPA, creating a more cohesive vernal pool Preserve and minimizing potential fragmentation of vernal pool habitat that could occur under the existing conservation scenario (i.e., piece-mealed or "postage stamp" conservation with no overall Preserve design for vernal pools). Once fully implemented, the VPHCP would add an additional 177 acres of modeled vernal pool habitat to the MHPA, representing a 3% increase in conserved habitat from existing conservation (Table 3-5).

Conservation of Covered Species

Table 3-6 summarizes the additional conservation of vernal pools occupied by the covered species (beyond existing conditions) that would be provided under implementation of the VPHCP through addition of lands to the MHPA. As shown, the VPHCP would provide additional conservation (beyond existing conservation) for the following covered species:

- San Diego mesa mint – three additional occupied pools conserved (<1% increase)
- San Diego button-celery – three additional occupied pools conserved (1% increase)
- Riverside fairy shrimp – three additional occupied pools conserved (2% increase)
- San Diego fairy shrimp – 31 additional occupied pools conserved (6% increase)

As shown in Table 3-6, the addition of lands to the MHPA through implementation of the VPHCP would result in 100% conservation for one additional species from the existing conservation (Riverside fairy shrimp). In addition, conservation of occupied vernal pools would increase for San Diego mesa mint, San Diego button-celery, and San Diego fairy shrimp.

Conservation of Critical Habitat

Critical Habitat for spreading navarretia, Riverside fairy shrimp, and San Diego fairy shrimp is designated by USFWS throughout the range of occurrence for these species, with only a portion of the total designated Critical Habitat for each species occurring within the City (Table 3-7). Critical Habitat is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection, as determined by USFWS. Critical Habitat may include areas that are currently occupied by a species and unoccupied areas that are essential for the species' conservation.. As shown in Table 3-7, additional lands with Critical Habitat would be added to the MHPA through implementation of the VPHCP. The additional areas of Critical Habitat that would be added to the MHPA (beyond existing conservation) have high-quality habitat that is suitable for vernal pool restoration, either as restoration associated with the VPHCP objectives, mitigation on a project-specific basis, or as a potential mitigation bank.

Table 3-6
Conservation of Vernal Pools Occupied with Covered Species (Total and % Pools Conserved) after Implementation of the VPHCP

	PONU Total Pools in VPHCP Plan Area	PONU Total Pools Conserved	PONU % Pools Conserved	POAB Total Pools in VPHCP Plan Area	POAB Total Pools Conserved	POAB % Pools Conserved	NAFO Total Pools in VPHCP Plan Area	NAFO Total Pools Conserved	NAFO % Pools Conserved	ERAR Total Pools in VPHCP Plan Area	ERAR Total Pools Conserved	ERAR % Pools Conserved	ORCA Total Pools in VPHCP Plan Area	ORCA Total Pools Conserved	ORCA % Pools Conserved	RFS Total Pools in VPHCP Plan Area	RFS Total Pools Conserved	RFS % Pools Conserved	SDFS Total Pools in VPHCP Plan Area	SDFS Total Pools Conserved	SDFS % Pools Conserved
Existing Conservation[1]	369	369	100%	337	332	99%	95	94	99%	732	719	98%	58	58	100%	131	128	98%	517	431	83%
MHPA after VPHCP Implementation[2]	369	369	100%	337	335	99%	95	94	99%	732	722	99%	58	58	100%	131	131	100%	517	462	89
Additional Conservation Resulting from VPHCP Implementation	n/a	0	0	n/a	3	<1%	n/a	0	0	n/a	3	1%	n/a	0	0	n/a	3	2%	n/a	31	6%

n/a= not applicable
[1] Existing Conservation includes conserved lands within the City's existing MHPA, permitted projects, and planned projects.
[2] Pools and species population conserved is an estimate based on 75% and/or 100% conservation level by vernal pool complex. See Appendix C of the VPHCP for more detail on the conservation analysis for each vernal pool complex in the VPHCP Plan Area. This table does not account for impacts associated with covered activities.

PONU = Otay Mesa mint
POAB = San Diego mesa mint
NAFO = Spreading navarretia
ERAR = San Diego button-celery
ORCA = California Orcutt grass
RFS = Riverside fairy shrimp
SDFS = San Diego fairy shrimp

Table 3-7
Summary of Critical Habitat Conservation

Critical Habitat Conservation	Spreading Navarretia Critical Habitat (Acres)	Riverside Fairy Shrimp Critical Habitat (Acres)	San Diego Fairy Shrimp Critical Habitat (Acres)
Total Critical Habitat Designation (for Species Range, occurs within and outside VPHCP Plan Area)	6,720	1,724	2,931
Total Acres in VPHCP Plan Area (% of Total Species Designation)	628 (9%)	804 (47%)	1,801 (61%)
Existing Critical Habitat Conservation in VPHCP Plan Area (% of Critical Habitat Conserved – Existing)	561 (89%)	724 (90%)	1,330 (74%)
Critical Habitat Conserved in MHPA through VPHCP (% of Critical Habitat Conserved with VPHCP)	565 (90%)	740 (92%)	1,409 (78%)
Additional Habitat Conserved with Implementation of the VPHCP (% of Additional Critical Habitat Conserved)	4 (1%)	16 (2%)	79 (4%)

As shown in Table 3-7, the VPHCP, when fully implemented, would conserve:

- Approximately 4 additional acres of spreading navarretia Critical Habitat from the existing conservation, to total 565 acres (90% of the total designated spreading navarretia Critical Habitat within the VPHCP Plan Area)
- Approximately 16 additional acres of Riverside fairy shrimp Critical Habitat from the existing conservation, to total 740 acres (92% of the total designated Riverside fairy shrimp Critical Habitat within the VPHCP Plan Area)
- Approximately 79 additional acres of San Diego fairy shrimp Critical Habitat from the existing conservation, to total 1,409 acres (78% of the total San Diego fairy shrimp Critical Habitat designation within the VPHCP Plan Area)

3.3.6 Conservation Strategy

The conservation strategy of the VPHCP was designed to meet the regulatory requirements of FESA and the NCCP Act and to streamline compliance with CEQA, NEPA, and other applicable environmental regulations. The VPHCP's overall conservation strategy for the covered species is to allow impacts to degraded vernal pools with low long-term conservation value in exchange for restoration, enhancement, preservation, and long-term management and monitoring of vernal pools with long-term conservation value in the MHPA. The conservation strategy builds on the existing conservation of the seven vernal pool species and habitat that has occurred under the City's MSCP SAP that includes most (84%) of the extant vernal pools in the City. Implementation of the conservation strategy would ensure the VPHCP's biological goal of

contributing to the recovery of the VPHCP covered species; ensuring that continued persistence of the covered vernal pool species populations identified in the VPHCP would be achieved. The conservation strategy is supported by a general approach to the conservation of vernal pools and associated covered species within the VPHCP Plan Area as follows:

1. Expand the City's existing MHPA to conserve targeted vernal pool complexes in a configuration that maintains habitat function and viability of the seven covered species within the VPHCP Plan Area, consistent with the Recovery Plan (USFWS 1998a);
2. Implement a VPHCP Management and Monitoring Plan to provide for long-term protection, management, and enhancement of vernal pool habitat and the covered species;
3. Avoid and minimize impacts to vernal pools and mitigate unavoidable impacts consistent with the VPHCP and the City's Municipal Code;
4. Conduct compliance and effectiveness monitoring of vernal pools and covered species to evaluate implementation of the VPHCP and track the status of the vernal pools and seven covered species; and
5. Where appropriate, introduce covered species into restoration areas to expand/restore species populations in historically occupied complexes to maintain viability of the seven covered species.

The design of the conservation strategy includes habitat-based and species-specific objectives for conservation, management, and/or restoration of the vernal pools and species covered under the VPHCP. The habitat-based objectives identify the number of specific vernal pools and complexes that would be conserved, managed, and/or restored through implementation of the VPHCP. The species-specific objectives include conservation, management, and/or restoration and enhancement actions for covered species. The objectives that constitute the conservation strategy, and would ultimately achieve the VPHCP's biological goals, are summarized in Table 3-8.

Table 3-8
VPHCP Conservation Objectives

Objectives	Conserve	Manage[1]	Restore[2]
Habitat-Based Objectives	Conserve in perpetuity at least 2,409 vernal pools (totaling approximately 37.5 acres of basin surface area) at 68 vernal pool sites (within 53 vernal pool complexes) in the MHPA in a configuration that maintains long-term viability of the VPHCP covered species.	Manage in perpetuity 59 vernal pool sites within the MHPA through implementation of the VPHCP Vernal Pool Management and Monitoring Plan or Site-Specific Management Plans (that are consistent with the VPHCP goals and objectives).	Restore 19 vernal pool sites (within 12 complexes) to a "Level 1" (stewardship) management condition within the MHPA through implementation of the VPHCP Management and Monitoring Plan or Site-Specific Management Plans (that are consistent with the VPHCP goals and objectives).
Species-Specific Objectives	Conserve occupied complexes identified in Appendix A of the VPMMP to stabilize covered species' populations.	Manage specific sites identified in Appendix A of the VPMMP to maintain the covered species populations consistent with the VPMMP (Appendix D).	Restore specific complexes identified in Appendix A of the VPMMP to enhance covered species populations to ensure long-term viability.
Otay Mesa mint	Conserve 369 vernal pools occupied by Otay Mesa mint within four sites.	Manage all conserved complexes/sites consistent with the VPMMP.	Establish viable populations of Otay Mesa mint within the J13; J16–18, J20–21, J27, and J28 complex series.
San Diego mesa mint	Conserve 335 vernal pools occupied by San Diego mesa mint within 19 sites.	Manage 12 sites as identified in Appendix A of the VPMMP and consistent with the VPMMP.	Restoration is not necessary for this covered species, as the populations of this species are adequately conserved under the VPHCP.
Spreading navarretia	Conserve 94 vernal pools occupied by spreading navarretia within seven sites.	Manage all conserved complexes/sites consistent with the VPMMP.	Establish viable populations of spreading navarretia within J11E, J11W, J12, J13, J16–18, J20–21, J27, J28, and R1.
San Diego button-celery	Conserve 722 vernal pools occupied by San Diego button-celery within 24 sites.	Manage 22 sites as identified in Appendix A of the VPMMP and consistent with the VPMMP.	Establish a viable population of San Diego button-celery within J13.
California Orcutt grass	Conserve 58 vernal pools occupied by California Orcutt grass within three sites.	Manage all conserved complexes/sites consistent with the VPMMP.	Establish viable populations of California Orcutt grass within J11E, J11W, J12, J13E, J14, J16-18, J20–21, J21, J27, and J28E.
Riverside fairy shrimp	Conserve 131 vernal pools occupied by Riverside fairy shrimp within 7 sites.	Manage all conserved sites consistent with the VPMMP.	Establish viable populations of Riverside fairy shrimp within J11E, J11W, J12, J13E, J14, J16-18, J20–21, J21, J27, and J28E.
San Diego fairy shrimp	Conserve 465 vernal pools occupied by San Diego fairy shrimp within 38 sites.	Manage 33 sites as identified in Appendix A of the VPMMP and consistent with the VPMMP.	Restoration is not necessary for this covered species, as the populations of this species are adequately conserved under the VPHCP.

[1] In addition to conservation, includes active management of sites at Level 1, as well as sites at Levels 2 and 3. The 9 vernal pool sites that will not be conserved and will not be actively managed under the VPMMP are either privately held (but may seek development entitlement in the future, at which point the City will ensure the property owner implements the recommended management in the VPMMP) or have been developed pursuant to prior approval by City and no management was required at that time, nor is any management being required as part of this VPHCP.
[2] Restoration would occur at specific vernal pool complexes to establish populations of covered species, consistent with the Recovery Plan (USFWS 1998). Restored populations would also be conserved and managed consistent with the VPHCP objectives listed in this table.

3.3.7 Mitigation Framework

The VPHCP includes compensatory avoidance, minimization, and mitigation measures to avoid or minimize adverse effects to vernal pool resources resulting from covered projects and covered activities. These required measures have been consolidated into a Mitigation Framework in this EIR/EIS document. The Mitigation Framework is considered part of the Project and once the VPHCP is adopted, the compensatory avoidance, minimization, and mitigation requirements are enforceable by the City. The full text and requirements of the Mitigation Framework are included in the Mitigation Monitoring and Report Plan ([MMRP], Chapter 11 of this EIR/EIS) and are briefly characterized below.

- General Avoidance and Minimization Measures would focus on the avoidance or minimize of take of individual covered species (i.e., death or injury) and their high-quality habitat (vernal pools). If avoidance is not feasible through project design, measures may include designing slopes away from vernal pools, temporary and permanent fencing, monitoring biologist during and post-construction, worker training, topsoil salvage, fugitive dust control, among others.
- Compensatory Mitigation would prevent net loss of vernal pool functions and values of impacted vernal pools and result in a biologically superior net gain in overall function and values of (a) the type of wetland resource being impacted and/or (b) the biological resources to be conserved.
- General Conditions for Compensatory Mitigation /Enhancement Projects include project-specific vernal pool restoration and enhancement plans consistent with the City's LDM Biology Guidelines for submittal to the City and Wildlife Agencies and require implementation of a perpetual long-term management, maintenance, and monitoring plan.

3.3.8 Mitigation Banking

Lands contributed to the MHPA Preserve by public or private owners in excess of the VPHCP mitigation requirements may either be used by such owner as vernal pool mitigation for that

owner's subsequent development project(s), or may be "banked" by those owners. Such banked lands can later be used to provide mitigation for future development projects of other owners with lands included in the VPHCP. A vernal pool "Conservation Bank" must comply with the "Conservation and Mitigation Banking Guidelines" issued by the California Natural Resources Agency (August 2014). To set up a vernal pool Conservation Bank, a land owner must prepare a restoration plan consistent with the requirements outlined above, and submit the plan to the City and Wildlife Agencies for approval.

3.3.9 Monitoring and Management Program

A major component of the VPHCP includes the management and monitoring of the vernal pool resources. A detailed adaptive management and monitoring strategy has been developed along with specific requirements and recommendations for all the vernal pool complexes within the City's ownership and land use authority. This section summarizes the VPHCP management and monitoring strategy, which would be implemented by the City through its VPMMP. The VPMMP is a framework plan that outlines site-specific management and monitoring actions for the vernal pool complexes that would be managed to achieve the VPHCP objectives. Site-specific management plans would be prepared by project proponents during their environmental review and/or the City for each complex included in the framework VPMMP, consistent with the requirements and regulations in the VPHCP and City's LDM Biology Guidelines, and must be approved by the City and the Wildlife Agencies. The site-specific management plans will identify the entity responsible for long-term management.

The intent of the VPMMP is to collect data necessary to determine the condition of vernal pools and determine if VPMMP standards have been met, or if a change in management actions is needed. The VPMMP monitoring methodology would allow for time- and cost-effective monitoring and data collection that evaluate and adaptively revise management actions based on the VPMMP standards. The data collected under the VPMMP are intended to efficiently inform management decisions, with the ultimate purpose of achieving the VPHCP objectives. The monitoring methods may change over time and would be coordinated closely with the regional monitoring efforts. Monitoring would be performed on City-owned lands, lands that the City has a legal access to manage and monitor (e.g., the General Dynamics site); and vernal pool sites conserved through the VPHCP. Monitoring would be conducted by City staff, paid consultants, or nonprofits, or other trained individuals that have been approved by the Wildlife Agencies (provided that all follow a standard monitoring protocol consistent with the VPMMP) and coordinated via the City's MSCP program. Monitoring would be coordinated with regional efforts conducted by other entities (e.g., USFWS, San Diego Management and Monitoring Program). Monitoring methods would include documenting observations during annual site visits

and incidental observations during management activities, as well as mapping and estimating species cover, population size/density, and presence/absence at each complex.

Monitoring results would determine the appropriate Management Level for each vernal pool complex. The required Management Level 1, 2, or 3 (with 3 requiring the most management) would be determined by selected management triggers. Each Management Level has a unique goal and would result in specific required management actions as summarized below. Chapter 7 of the VPHCP includes a detailed discussion of the monitoring and management program. An overview is provided below.

Management Level 1

The objective of Level 1 (stewardship) is to *maintain* existing habitat conditions and existing covered species population status. Level 1 complexes are deemed functioning at an acceptable to optimal condition. The required management actions are expected to result in maintenance of those conditions. In general, the management can be characterized as stewardship where little maintenance is needed to achieve the habitat and species-level VPHCP objectives. It is assumed that routine access patrol and enforcement would occur at all Level 1 sites. Access patrol visits would occur annually, at a minimum, at each site, or more frequently (e.g., monthly, weekly) as deemed appropriate by the City.

Management Level 2

The objective of Level 2 is to *stabilize* habitat conditions and covered species populations. Level 2 complexes are deemed functioning at an unacceptable condition and are perceived as declining in habitat quality and/or covered species persistence. Management can be characterized as enhancement where maintenance is needed to achieve the habitat and species-level VPHCP objectives. Management Level 2 includes all activities listed for Management Level 1, plus some additional enhancement activities (listed in Table 7-3 of the VPHCP). The required management actions are expected to result in an improvement in those conditions to Level 1.

Management Level 3

The objective of Level 3 is to *restore* habitat conditions and covered species populations. Level 3 complexes are deemed highly degraded and need restoration to meet the habitat and species objectives of the VPHCP. Management Level 3 includes all activities listed for Management Level 1, plus some additional restoration activities, such as topographical recontouring. The required management actions are expected to result in an improvement in those conditions to Level 1.

3.3.10 VPHCP Implementation

The City would fully implement the VPHCP, including responses to changed circumstances. The City would implement the VPHCP through permanent protection of existing City-owned land for the conservation of vernal pools, conservation of private lands through the development entitlement process, the permanent management and monitoring of these lands, and annual reporting to the Wildlife Agencies that accounts for all take authorized, conservation achieved and compliance and effectiveness monitoring. The City would extend take coverage to third-parties (i.e., private entities that receive coverage under the VPHCP) through development entitlements or a Certificate of Inclusion after confirming that a project within its jurisdiction is eligible for coverage and the project proponent has complied with all application requirements and other relevant terms of the VPHCP. As part of the development entitlement process for approved covered and future projects, owners of private properties and third-parties must submit a site-specific management and monitoring plan that is consistent with the requirements of the VPHCP and the City's LDM Biology Guidelines for approval by the City. The City would report the relevant details of approved covered and future projects to the Wildlife Agencies and for monitoring developer compliance with the VPHCP conservation measures and VPMMP. The Wildlife Agencies intend to manage and monitor their lands within the VPHCP Plan Area consistent with the goals and objectives of the VPHCP. To successfully implement the requirements of the VPHCP, the City would use the following three tools:

1. Conservation and/or management of existing open space with vernal pools.
2. Obtaining future open space within the MHPA through the development entitlement process.
3. Annual reporting on the status of ongoing management and monitoring of conserved vernal pool sites. Implementation of the VPHCP shall be consistent with the City's ESL Regulations.

Amendments to City Land Development Codes

Land development within the City is regulated by the LDC (Chapters 11 through 15 of the City's Municipal Code) and technical documents that set forth standards and guidelines established by the City in the Land Development Manual. These regulations, standards, and guidelines currently provide the tools to implement the City's MSCP SAP and would be modified to implement the VPHCP. To implement the VPHCP, the City would amend the Municipal Codes Chapter 11, 12, and 14, and the LDM Biology Guidelines, which are included the Appendix E of the VPHCP.

The ESL Regulations Wetland Deviation process would not be changed and would still apply to vernal pools within the MHPA. The Wetland Deviation includes the three deviations including the biologically superior option, which would allow impacts to low-quality wetland resources, including vernal pools, if the development results in a biologically superior project. The essential public project option allows a deviation for impacts where no feasible alternative to an essential public project exists that would avoid wetland impacts. The economic viability option allows a deviation to preserve economically viable use of a property that would otherwise be deprived by a strict application of the regulations.

MHPA Preserve Assembly

Implementation of the VPHCP would expand the MHPA by 275 acres to include a total of 2,409 vernal pools located within a total of 53 vernal pool complexes. The expanded MHPA would be assembled through the development entitlement process via application of the ESL Regulations and /or acquisition. Opportunistic acquisition by the City and/or other entities through grant funds is encouraged.

Implementation within Existing MHPA Preserve Lands

The following City departments own lands in the existing MHPA: Park and Recreation Department, Open Space Division; Public Utilities Department, Water/Wastewater Divisions; Environmental Services Department; and Real Estate Assets Department, Airport Division. The City owns and operates Montgomery-Gibbs Executive Airport in Kearny Mesa and Brown Field Municipal Airport in Otay Mesa. Future development and operational activities at Montgomery-Gibbs Executive Airport and operational activities at Brown Field will be covered under the VPHCP. However, any loss of vernal pool resources at Brown Field Municipal Airport from future development associated with Metropolitan Airpark will be permitted under a separate Biological Opinion for the Metropolitan Airpark project (Project No. 208889).

The City would continue to manage its lands consistent with the standards and requirements of the MSCP SAP. In addition, for vernal pool complexes within the MHPA, the City would provide management, monitoring, and reporting consistent with the VPHCP and would implement the City's VPMMP. For existing preserves under City control, existing approved management plans will be updated, as applicable, to reflect goals and objectives of the VPHCP, per the schedule included in the VPMMP.

Activities that may impact vernal pools on existing Preserve lands would be limited to those identified in the VPHCP (covered projects and covered activities). Mitigation in accordance with the VPHCP, ESL Regulations, and City's LDM Biology Guidelines would be required.

3.4 PROJECT ALTERNATIVES

This section describes the alternatives to the Project that are evaluated in this EIR/EIS, including the Expanded Conservation Alternative (Section 3.4.1) and the Existing Conservation/No Project Alternative (Section 3.4.2). The Existing Conservation/No Project Alternative would include the City operating under existing state NCCP/MSCP authorizations, which cover take/impacts to and conservation of vernal pool habitat and the seven vernal pool species addressed in the VPHCP. Per NEPA requirements, the environmental consequences of the alternatives are equally considered and evaluated at a level equal to the Project.

3.4.1 Expanded Conservation Alternative

The Expanded Conservation Alternative adds additional lands to the MHPA, beyond those conserved under the VPHCP, that include vernal pool resources and/or habitat with potential for vernal pools to be present or restored, generally located in Otay Mesa. The Expanded Conservation Alternative was developed with USFWS to include lands identified with historical vernal pool resources, designated Critical Habitat, appropriate soil types for vernal pools, or other factors that could provide quality vernal pool habitat.

The conservation of vernal pools, covered species, and Critical Habitat under the Expanded Conservation Alternative is described below. All other elements of the VPHCP as described in Section 3.3, Description of the Project, would also be applicable to the Expanded Conservation Alternative, including covered projects and covered activities, conservation strategies, monitoring and management, and implementation.

Conservation of Vernal Pools

Similar to the VPHCP, implementation of the Expanded Conservation Alternative would provide additional conservation of vernal pools beyond existing conservation within the City's existing MHPA, permitted projects, and planned projects (i.e., existing conservation), by adding lands to the MHPA that contain valuable vernal pool resources. The additional lands that would be added to the MHPA in addition to the VPHCP under the Expanded Conservation Alternative as summarized in Table 3-9.

Table 3-9
Additional Lands added to the MHPA under the Expanded Conservation Alternative

APN	Total Parcel Acreage[1]	Percent Conservation Required	Additional acreage to be Added to MHPA[1]
6670101400	20.4	75	15.3
6670101500	41.1	75	30.8
6670101900	6.9	75	5.2
6670102000	6.9	75	5.2
6670102100	6.9	75	5.2
6450761100	0.9	75	0.7
6450761200	0.9	75	0.7
6450761300	0.9	75	0.7
6450761400	0.9	75	0.7
6450761500	0.9	75	0.7
6450761600	0.9	75	0.7
6450730900	0.8	75	0.6
6450731100	0.8	75	0.6
6450731300	0.8	75	0.6
6450731400	0.8	75	0.6
6450741000	0.9	75	0.7
6450741100	0.9	75	0.7
6450741400	0.9	75	0.7
6450741500	0.9	75	0.7
6450741600	0.9	75	0.7
6450751000	0.9	75	0.7
6450751100	0.9	75	0.7
6450751200	0.9	75	0.7
6450751300	0.9	75	0.7
6450751600	0.9	75	0.7
6450751700	0.9	75	0.7
6450761700	0.9	75	0.7
6450800300	160.6	75	120.5
6450730800	0.8	75	0.6
6670100600	61.6	75	46.2
6450751500	0.9	75	0.7
6450761000	0.9	75	0.7
6450731000	0.8	75	0.6
6450741700	0.9	75	0.7
6450751400	0.9	75	0.7
6670103100	46.0	75	34.5
6450731200	0.8	75	0.6

APN	Total Parcel Acreage[1]	Percent Conservation Required	Additional acreage to be Added to MHPA[1]
6450741300	0.9	75	0.7
6461100500	9.2	75	6.9
6461100600	4.77	75	3.6
6461100700	5.0	75	3.8
6461100800	17.0	75	12.8
6461100800	17.0	75	12.8
6461100900	2.5	75	1.9
6461101000	10.0	75	7.5
6461101100	19.1	75	14.3
6670601000	49.4	75	37.1
6670601000	49.4	100	49.4
6670601000	49.4	100	49.4
3560320100	13.5	100	13.5
Total	**623.6**	**--**	**495.7**

[1]Acreage has been rounded to nearest tenth based on GIS mapping data. Thus, totals may not appear to add correctly.

Table 3-10 summarizes the additional conservation of vernal pools that would be provided under implementation of the Expanded Conservation Alternative through the addition of lands to the MHPA. The Expanded Conservation Alternative would conserve an additional nine vernal pool complexes within the Plan Area, and conserve an additional 277 pools (11% more), totaling 3.3 acres of basin area, over what is currently conserved under the existing conservation. In addition, the Expanded Conservation Alternative would conserve 4,142 acres of modeled vernal pool habitat (5% more than existing conservation).

Table 3-10
Conservation of Vernal Pools after Implementation of the Expanded Conservation Alternative

	Number of Complex Series in the VPHCP Plan Area	Number of Complex Series Conserved	Total Number of Pools in VPHCP Plan Area	Number of Pools Inside Existing Conserved Areas	Number of Pools Conserved Based on Conservation Level[2]	% of Total Pools in VPHCP Plan Area Conserved	Acreage of Pools Conserved	Acreage of Modeled Vernal Pool Habitat Conserved
Existing Conservation[1]	54	45	2,591	2,199	2,183	84%	34.7	3,797
MHPA after Implementation of Expanded Conservation Alternative	54	53	2,591	2,511	2,460	95%	38.0	4,142
Additional Conservation Resulting from Expanded Conservation Alternative	n/a	8	n/a	312	277	11%	3.3	345

[1]Existing conservation includes conserved lands within the City's existing MHPA, permitted projects, and planned projects. See Chapter 4 of the VPHCP for more detail.
[2]Pools and species population conserved is an estimate based on 75% or 100% conservation level by vernal pool complex. See Appendix C of the VPHCP for more detail on the conservation analysis for each vernal pool complex in the VPHCP Plan Area.

Conservation of Covered Species

Table 3-11 summarizes the additional conservation of vernal pools occupied by the covered species that would be provided under implementation of the Expanded Conservation Alternative as compared to existing conservation through addition of lands to the MHPA. The Expanded Conservation Alternative would provide additional conservation (beyond existing conservation) for the following covered species:

- San Diego mesa mint – three additional occupied pools conserved (<1% increase)
- San Diego button-celery – eight additional occupied pools conserved (1% increase)
- Riverside fairy shrimp – three additional occupied pools conserved (2% increase)
- San Diego fairy shrimp – 33 additional occupied pools conserved (7% increase)

The Expanded Conservation Alternative would conserve the same number of additional occupied pools as the VPHCP for Riverside fairy shrimp, resulting in 100% conservation for this species within the Plan Area. The Expanded Conservation Alternative would conserve an even greater number of pools occupied by San Diego button-celery (additional 5 pools) and San Diego fairy shrimp (additional 2 pools) compared to the VPHCP.

Table 3-11
Conservation of Vernal Pools Occupied with Covered Species (Total and % Pools Conserved) after Implementation of the Expanded Conservation Alternative

	PONU Total Pools in VPHCP Plan Area	PONU Total Pools Conserved	PONU % Pools Conserved	POAB Total Pools in VPHCP Plan Area	POAB Total Pools Conserved	POAB % Pools Conserved	NAFO Total Pools in VPHCP Plan Area	NAFO Total Pools Conserved	NAFO % Pools Conserved	ERAR Total Pools in VPHCP Plan Area	ERAR Total Pools Conserved	ERAR % Pools Conserved	ORCA Total Pools in VPHCP Plan Area	ORCA Total Pools Conserved	ORCA % Pools Conserved	RFS Total Pools in VPHCP Plan Area	RFS Total Pools Conserved	RFS % Pools Conserved	SDFS Total Pools in VPHCP Plan Area	SDFS Total Pools Conserved	SDFS % Pools Conserved
Existing Conservation[1]	369	369	100%	337	332	99%	95	94	99%	732	719	98%	58	58	100%	131	128	98%	517	431	83%
MHPA after Implementation of Expanded Conservation Alternative [2]	369	369	100%	337	3355	99%	95	94	99%	732	727	99%	58	58	100%	131	131	100%	517	464	90%
Additional Conservation Resulting from Expanded Conservation Alternative	n/a	0	0	n/a	3	<1%	n/a	0	0	n/a	8	1%	n/a	0	0	n/a	3	2%	n/a	33	7%

n/a= not applicable
[1] Existing Conservation includes conserved lands within the City's existing MHPA, permitted projects, and planned projects.
[2] Pools and species population conserved are an estimate based on 75% and/or 100% conservation level by vernal pool complex. See Appendix C of the VPHCP for more detail on the conservation analysis for each vernal pool complex in the VPHCP Plan Area.

PONU = Otay Mesa mint
POAB = San Diego mesa mint
NAFO = Spreading navarretia
ERAR = San Diego button-celery
ORCA = California Orcutt grass
RFS = Riverside fairy shrimp
SDFS = San Diego fairy shrimp

Conservation of Critical Habitat

Critical Habitat would be conserved under the Expanded Conservation Alternative as compared to existing conservation through the addition of lands to the MHPA following implementation of the VPHCP, as shown in Table 3-12 (similar to the Project). The additional areas of Critical Habitat that would be added to the MHPA have high-quality habitat suitable for vernal pool restoration, either as restoration associated with the VPHCP objectives, mitigation on a project-specific basis, or as a potential mitigation bank. As shown in Table 3-12, the Expanded Conservation Alternative, when fully implemented, would conserve:

- 35 additional acres (6%) of Spreading navarretia Critical Habitat
- 18 additional acres (2%) of Riverside fairy shrimp Critical Habitat
- 195 additional acres (11%) of San Diego fairy shrimp Critical Habitat

Table 3-12
Summary of Critical Habitat Conservation after Implementation of Expanded Conservation Alternative

Critical Habitat Conservation	Spreading Navarretia Critical Habitat (Acres)	Riverside Fairy Shrimp Critical Habitat (Acres)	San Diego Fairy Shrimp Critical Habitat (Acres)
Total Critical Habitat Designation (for Species Range, occurs within and outside VPHCP Plan Area)	6,720	1,724	2,931
Total Acres in VPHCP Plan Area (% of Total Species Designation)	628 (9%)	804 (47%)	1,801 (61%)
Existing Critical Habitat Conservation in VPHCP Plan Area (% of Critical Habitat Conserved – Existing)	561 (89%)	724 (90%)	1,330 (74%)
Critical Habitat Conserved in MHPA under Expanded Conservation Alternative (% of Critical Habitat Conserved with VPHCP)	596 95%	742 92%	1,526 85%
Additional Habitat Conserved with Implementation of the VPHCP under Expanded Conservation Alternative (% of Additional Critical Habitat Conserved)	**35** **6%**	**18** **2%**	**195** **11%**

3.4.2 Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in no approval or implementation of the VPHCP. In the VPHCP, this alternative is called the “Baseline Conservation Alternative.” However, in this EIR/EIS the same alternative is called the “Existing Conservation/No Project Alternative” to avoid confusion with CEQA/NEPA terminology related to baseline and baseline conditions used for analysis. No new actions, policies, or permits would be issued in association

with vernal pool protection beyond those already afforded by the MSCP/MHPA. Under the Existing Conservation/No Project Alternative, a Section 10(a)(1)(B) permit would not be issued to the City. Instead, activities involving take of the covered species normally prohibited under Section 9 of FESA would require individual 10(a) permits or Section 7 consultation if a federal nexus exists under the current FESA regulations. To obtain a permit to take a listed species under Section 10(a)(1)(B) of FESA, the applicant must prepare an adequate site-specific HCP. As described in Section 3.1.2, History of VPHCP Development, of this EIR/EIS, the City's state NCCP permit is still valid and covers take/impacts to, and conservation of, vernal pool habitat and the seven vernal pool species addressed in the VPHCP; therefore, the Existing Conservation/No Project Alternative would include the City operating under existing state NCCP/MSCP authorizations for vernal pool habitat and species.

The Existing Conservation/No Project Alternative is a continuation of the existing program for issuing take authorization on a project-by-project basis. This allows for a comparison of the impacts of not implementing a VPHCP and continuing the existing take authorization individually versus preparing a coordinated conservation plan and issuing incidental take authorization to the City. Under the Existing Conservation/No Project Alternative, the existing land use and environmental regulations process described in Chapter 3 of this EIR/EIS would continue and be required for all public and private projects proposed within the VPHCP study area. Existing ESL Regulations and compliance with the City's MSCP require mitigation for impacts to vernal pool resources and the seven covered species resulting in lands being set aside for MHPA/open space preservation. The configuration of the preserved land under the Existing Conservation/No Project Alternative would be implemented on a project-by-project basis instead of within a comprehensive vernal pool Preserve planning effort.

Impacts to vernal pools that are City wetlands could not occur without a wetland deviation. If a wetland deviation is not granted, or a property owner decides to avoid direct impacts to pools, avoided pools will likely be surrounded by development. Pools avoided in this manner would likely be subject to fragmentation/isolation and indirect effects often referred to as "edge effects" (e.g., unauthorized dumping, human and pet intrusion, invasion of nonnative species), and therefore rendered of little to no long-term conservation value.

A total of 2,199 vernal pools within 45 complexes across 34.7 acres are currently conserved under the existing conservation conditions as defined in Table 3-5. This includes conserved lands within the City's existing MHPA, permitted projects, and planned projects. These numbers and conservation values would remain the same under the Existing Conservation/No Project Alternative and the approximately 11% increase in conservation of vernal pools from the existing conservation that would result from implementation of the VPHCP would not occur. In

addition, no additional conservation of long-term value for the covered species would be expected beyond the current level of conservation (Table 3-6).

The Existing Conservation/No Project Alternative would involve status quo monitoring and management of currently conserved vernal pool resources based on existing monitoring and management requirements for existing conservation, where applicable. No additional enhancement, restoration, monitoring, or management would occur.

3.5 ALTERNATIVES CONSIDERED BUT REJECTED

3.5.1 Existing MHPA and Conserved Lands with Updated VPMMP Alternative

Similar to the Existing Conservation/No Project Alternative, under this alternative no additional lands would be added to the MHPA. This alternative would differ from the No Project/No Project Alternative by including the adoption of the VPMMP and funding strategy for the existing MHPA Preserve. This alternative was rejected because it would not provide adequate conservation for the covered species (with the exception of California Orcutt grass, which is 100% conserved under existing conditions); therefore, the City would not receive an ITP from USFWS. Specifically, this alternative would not meet the following Project objectives: (1) Provide for the conservation and management of VPHCP covered species and (4) Provide a basis for permits necessary for lawful incidental take of vernal pool covered species. Additionally, this alternative would not be consistent with the USFWS Recovery Plan for stabilizing the covered species (USFWS 1998a). As a result, this alternative would not be consistent with the Project objectives (Section 3.2.1, CEQA Project Objectives) and was therefore ultimately rejected.

3.5.2 No Management and Monitoring Alternative

The No Management and Monitoring Alternative was developed to reduce impacts to vernal pools and the covered species resulting from management and monitoring activities associated with the VPMMP. Under this alternative, the VPHCP would still be approved and implemented, and vernal pools would be conserved within the Preserve as envisioned in the VPHCP. However, the VPMMP would not be adopted as part of the VPHCP.

The driving factor behind development of this alternative is to avoid a small amount of take that is possible as a result of management and monitoring activities prescribed in the VPMMP. To avoid take, the No Management and Monitoring Alternative would not include any management or monitoring of vernal pools. This alternative is rejected as it would not allow management and monitoring of vernal pools and, thus, would not achieve the Project objective (1) Provide for the

conservation and management of VPHCP covered species. In addition, this alternative conflicts with the existing requirements of the NCCP permit, which required management and monitoring of covered species.

3.5.3 No Impacts to Vernal Pools or Vernal Pool Species Alternative

Under this alternative, no impacts from development would be allowed to vernal pools or the seven vernal pool species. As future development occurs, vernal pools and depressions with fairy shrimp would be preserved on-site, which would have the potential for conservation within "postage stamp" vernal pool preserves. These Preserve areas could be surrounded by development, resulting in increased risk of decline of the species and reduction of viable vernal pool habitat, creating pockets of Preserve areas with little to no long-term conservation value rather than an interconnected and unified Preserve with long-term conservation value. This would be consistent with the existing approach, which is implemented on a project-by-project basis for identifying individual vernal pool conservation areas instead of a comprehensive vernal pool Preserve area identified and adopted as part of the VPHCP.

Additionally, while this alternative would require a covenant of easement over the Preserve area and management and monitoring would occur, no restoration or enhancement (i.e., mitigation for impacts) would be required. This alternative would not be consistent with the Project objectives and was therefore ultimately rejected. Specifically, this alternative would not meet the following Project objectives: (1) Provide for the conservation and management of VPHCP covered species; (2) Allow for appropriate and compatible growth and development consistent with applicable laws; (3) Provide a basis for permits necessary for lawful incidental take of vernal pool covered species; (4) Provide a comprehensive means to coordinate and standardize mitigation and compensation requirements of FESA, CESA, CEQA, and NEPA within the VPHCP Plan Area; (5) Provide a more efficient project review process that results in greater conservation values than project-by-project, species-by-species review; and (7) Provide clear expectations and regulatory predictability for persons carrying out covered activities within the VPHCP Plan Area.

3.6 DISCRETIONARY ACTIONS, PERMITS, AND APPROVALS FOR IMPLEMENTATION OF THE VPHCP

One of the objectives of the CEQA/NEPA process is to ensure that a proposed project and its alternatives are consistent with relevant regulations, policies, and plans. Various approvals and permits would be necessary for implementation of the VPHCP. Table 3-13 lists the applicable permit or approval requirements, or other regulatory action.

Table 3-13
Permits and Approvals

Agency	Permit/Approval/Regulatory Action
City of San Diego	Certify the EIR, Adopt Findings, Adopt the Mitigation, Monitoring and Reporting Program (MMRP)
	File Notice of Determination
	Approve/adopt the VPHCP and Vernal Pool Management and Monitoring Plan (VPMMP)
	Amend General Plan to add policies related to VPHCP and revise MHPA discussion/maps to include expanded boundaries
	Amend Otay Mesa Community Plan to revise land use maps to include expanded MHPA boundaries and revise policies related to the protection, preservation, and long-term management of vernal pool resources
	Amend Kearny Mesa Community Plan to revise land use maps to include expanded MHPA boundaries and add policies related to the protection, preservation, and long-term management of vernal pool resources
	Amend Land Development Code and LDM Biology Guidelines to implement the VPHCP
	Amend the City's Local Coastal Program pertaining to regulations related to the VPHCP
	Approve MHPA Boundary Line Adjustment for Montgomery-Gibbs Executive Airport
	Authorize any necessary amendment(s) to and/or findings of consistency with the City's existing MSCP SAP, Implementing Agreement, and state 2835 NCCP to maintain state coverage for vernal pool habitat and the seven covered vernal pool species addressed in the VPHCP
U.S. Fish and Wildlife Service	Issue Record of Decision for EIS
	Issue Section 10(a)(1)(B) Incidental Take Permit
	Internal Biological Opinion
California Department of Fish and Wildlife	Approve any necessary amendment(s) to and/or findings of consistency with the City's existing MSCP SAP, Implementing Agreement, and/or state 2835 NCCP to maintain state coverage for vernal pool habitat and the seven covered vernal pool species addressed in the VPHCP.
State Historic Preservation Office	NHPA Section 106 Consultation

CHAPTER 4.0
HISTORY OF PROJECT CHANGES

The history of the Project has included numerous changes since issuance of the NOP (November 28, 2011), based on coordination with the Wildlife Agencies and input from independent scientific advisors and the public. In addition, following release of the VPHCP Preliminary Public Review Draft (released in March 2015), the VPHCP document was further refined based preliminary public comments. Although not required, the City released the VPHCP Preliminary Public Review Draft to solicit public involvement on preparation of the VPHCP. Specific changes are documented in a separate Response to Comments (RTC) table (Appendix B). A summary of the key Project changes since issuance of the NOP is provided below.

- The Project originally included lands exclusively under the jurisdiction of the City. Prior to release of the VPHCP Preliminary Public Review Draft (released in March 2015), the baseline conservation (i.e., "Existing Conservation") was expanded to include currently conserved lands owned and managed CDFW (e.g., Lopez Ridge) and USFWS (e.g., lands on Del Mar Mesa) planned projects (i.e., projects were impacts had been identified and hardline conservation had been established).
- The Project originally envisioned a vernal pool preserve system that was distinct from, but compatible with, the City's MPHA Preserve. The Project now incorporates the vernal pool preserve system as part of the MHPA Preserve (i.e., the vernal pool preserve established by the VPHCP part of, and included within, the MHPA).
- The number of privately-owned parcels within the Otay Mesa Southwest Village proposed to be incorporated into the MHPA as part of the Project has been greatly reduced from 25 parcels to 10 parcels.
- Since issuance of the NOP, hardline conservation areas have been established and/or revised for the following projects:
    - Otay Mesa/Southwest Village
    - Otay Mesa/1-acres
    - Hagey Parcel
    - Crossborder Facility
    - Southview East
    - Montgomery-Gibbs Executive Airport
    - Pasatiempo Park
    - Cubic

  - SANDER
  - Menlo KM
  - East Ocean Air

- An analysis of Critical Habitat conservation and loss was added to the VPHCP document.
- Some components from the hydrogeomorphic assessment method and California Rapid Assessment Method (CRAM) were integrated into the monitoring program based on input from scientific advisors.
- While originally included in the Project at the NOP stage, covered projects at Montgomery-Gibbs Executive Airport and Metropolitan Airpark were removed from the Project during the Preliminary Public Review Draft. However, covered projects at Montgomery-Gibbs Executive Airport and Metropolitan Airpark have since been added back into the Project. In addition, the Project now includes a BLA for Montgomery-Gibbs Executive Airport.
- Soil types and vernal pool categories (e.g., hardpan, claypan) were incorporated into the conservation analysis.
- The VPHCP clarifies covered activities and includes an analysis of impacts associated with covered activities.
- The covered and planned projects included Preliminary Public Review Draft have been revised based on status of these projects.

CHAPTER 5.0
ENVIRONMENTAL CONSEQUENCES

A total of seven environmental issue areas are evaluated in this chapter. A consistent format has been used for the Environmental Consequences section of this joint EIR/EIS to assist the reader in reviewing and understanding the implications of the Project and alternatives. Each individual topic analysis section is organized by (1) Affected Environment; (2) Regulatory Framework; (3) CEQA Thresholds of Significance; (4) Environmental Consequences; (5) Mitigation Measures; and (6) Level of Impact after Mitigation.

1. Affected Environment describes the existing conditions for the VPHCP Plan Area. The Affected Environment provides a description of conditions before project implementation and serves as the general baseline physical conditions for the analysis of project impacts.
2. Regulatory Framework provides a summary of plans, policies, regulations, and other regulatory mechanisms applicable to the VPHCP that are relevant to each issues area.
3. CEQA Thresholds of Significance defines specific criteria used to determine whether an impact is or is not considered significant under CEQA. CEQA requires that an EIR include a determination of significant effects and identification of feasible mitigation measures to minimize those effects, while NEPA does not. According to NEPA regulations, a finding of whether a proposed action significantly affects the quality of the human environment is determined by considering the context in which it will occur and the intensity of the action (40 CFR Section 1508.27). To facilitate review, each CEQA significance threshold is identified with a number and discussed as an independent issue with conclusions drawn specific to each threshold.
4. Environmental Consequences provides independent analyses of the Project and alternatives at an equal level of detail. This approach allows for comparison of the alternatives under each resource area and will facilitate the ultimate selection of an agency-preferred alternative for the Final EIR/EIS.
5. Mitigation Measures identify the means by which impacts could be reduced or avoided in cases where the analysis determines such impacts to be significant or substantially adverse under CEQA or NEPA, respectively.
6. Level of Impact after Mitigation identifies the impacts that would remain after application of mitigation measures (where applicable), and whether the remaining impacts would or would not be considered significant under CEQA.

One of the primary requirements of NEPA analyses is the evaluation of project alternatives at a level equal with that of the proposed project. For each environmental issue evaluated in Chapter 5, analyses are conducted for the Project as well as the two alternative scenarios (Expanded Conservation Alternative and Existing Conservation/No Project Alternative).

For purposes of the alternatives analysis, it is assumed that the policies and implementing techniques for the VPHCP would be similar for the Project and Expanded Conservation Alternative regardless of the Preserve boundary configuration. The Existing Conservation/No Project Alternative would be subject to existing policies and regulations and would not include any new or additional requirements; therefore, it would include the City operating under existing state NCCP/MSCP authorizations for vernal pool habitat and species. See Section 3.1.2, History of VPHCP Development, of this EIR/EIS.

Approval of the Project, which includes adoption of the VPHCP document and associated amendments to the City's land use planning policies and existing state MSCP permit (as necessary) to maintain state coverage for vernal pool habitat and species, as well as issuance of an ITP by USFWS, would not result in environmental impacts. However, implementation of projects and activities covered under the VPHCP have the potential for impacts to environmental resources and these future actions would be subject to the required measures of the VPHCP Mitigation Framework (summarized in Section 3.3.7 and full text included in Chapter 11, Mitigation Monitoring and Report Program). Projects and activities covered under the VPHCP would require subsequent environmental review to demonstrate consistency with the VPHCP regulations and would be required to implement the VPHCP Mitigation Framework, as applicable, to address potential impacts to environmental resources.

5.1 LAND USE

This section describes existing environmental conditions related to land use within the VPHCP Plan Area. This section also identifies pertinent policies and regulations governing land use associated with the VPHCP and evaluates the impacts and effects associated with implementation of the Project and its alternatives.

5.1.1 Affected Environment

Due to the expansive geographic extent of lands included in the VPHCP, there are a wide variety of land uses and land use planning documents applicable to the Plan Area. The VPHCP Plan Area encompasses 206,124 acres within the City's jurisdictional boundaries. Of those acres, approximately 55% is characterized by developed urban land uses. The remaining 45% is open space, parkland, or undeveloped vacant land. Existing land uses within the VPHCP Plan Area includes MHPA/open space, conserved lands, residential, commercial, industrial, airports, park and recreation, and agricultural.

Section 5.1.2, Regulatory Framework, provides information on the planning documents, policies, and regulations applicable to the VPHCP. Additional information regarding the planning context that drives the VPHCP is provided in Section 3.1.1, Conservation Planning Context. Section 3.1.2, History of VPHCP Development, also provides historic planning background that has shaped the development of the VPHCP, and Chapter 4, History of Project Changes, provides details of how the project has evolved over time.

5.1.2 Regulatory Framework

In addition to the conservation planning policies, plans, and regulations described in Section 3.1.1., the City has land use policies, plans, and regulations that are relevant to implementation of the VPHCP, which are described below.

City of San Diego General Plan

The City's General Plan provides public policy for the distribution of future land use, both public and private. On March 10, 2008, the San Diego City Council unanimously approved a comprehensive update to the City's General Plan. The plan sets out a long-range vision and policy framework for how the City should plan for projected growth and development, provide public services, and maintain the qualities that define San Diego over the next 20 to 30 years. The City's General Plan includes a Conservation Element (City of San Diego 2008a) that calls for the City to be a model for sustainable development and conservation. Policies are to conserve

natural resources; protect unique landforms; preserve and manage open space and canyon systems, beaches, and watercourses; prevent and reduce pollution; reduce the City's carbon footprint; and promote clean technology industries.

Specific General Plan policies presented in the Conservation Element on Open Space and Landform Preservation, Coastal Resources, and Wetlands that specifically relate to wetlands protection include:

Open Space and Landform Preservation

- CE-B.1. Protect and conserve the landforms, canyon lands, and open spaces that: define the City's urban form; provide public views/vistas; serve as core biological areas and wildlife linkages; are wetlands habitats; provide buffers within and between communities; or provide outdoor recreational opportunities.
    a. Utilize Environmental Growth Funds and pursue additional funding for the acquisition and management of MHPA and other important community open space lands.
    b. Support the preservation of rural lands and open spaces throughout the region.
    c. Protect urban canyons and other important community open spaces including those that have been designated in community plans for the many benefits they offer locally, and regionally as part of a collective citywide open space system (see also Recreation Element, Sections C and F; Urban Design Element, Section A).
    d. Minimize or avoid impacts to canyons and other environmentally sensitive lands, by relocating sewer infrastructure out of these areas where possible, minimizing construction of new sewer access roads into these areas, and redirecting of sewage discharge away from canyons and other environmentally sensitive lands.
    e. Encourage the removal of invasive plant species and the planting of native plants near open space preserves.
    f. Pursue formal dedication of existing and future open space areas throughout the City, especially in core biological resource areas of the City's adopted MSCP Subarea Plan.
    g. Require sensitive design, construction, relocation, and maintenance of trails to optimize public access and resource conservation.

- CE-B.2. Apply the appropriate zoning and Environmentally Sensitive Lands (ESL) regulations to limit development of floodplains, sensitive biological areas including wetlands, steep hillsides, canyons, and coastal lands.
    a. Manage watersheds and regulate floodplains to reduce disruption of natural systems, including the flow of sand to the beaches. Where possible and practical,

restore water filtration, flood and erosion control, biodiversity, and sand replenishment benefits.

b. Limit grading and alterations of steep hillsides, cliffs and shoreline to prevent increased erosion and landform impacts.

- CE-B.4. Limit and control runoff, sedimentation, and erosion both during and after construction activity.

Biological Diversity

- CE-G.1. Preserve natural habitats pursuant to the Multiple Species Conservation Program (MSCP), preserve rare plants and animals to the maximum extent practicable, and manage all City-owned native habitat to ensure their long-term biological viability.
    a. Educate the public about the impacts invasive plant species have on open space.
    b. Remove, avoid, or discourage the planting of invasive plant species.
    c. Pursue funding for removal of established populations of invasive species within open space.
- CE-G.2. Prioritize, fund, acquire, and manage open spaces that preserve important ecological resources and provide habitat connectivity.
- CE-G.3. Implement the conservation goals/policies of the City's MSCP Subarea Plan, such as providing connectivity between habitats and limiting recreational access and use to appropriate areas.
- CE-G.4. Protect important ecological resources when applying floodplain regulations and development guidelines.
- CE-G.5. Promote aquatic biodiversity and habitat recovery by reducing hydrological alterations, such as grading a stream channel.

Wetlands

- CE-H.1. Use a watershed planning approach to preserve and enhance wetlands.
- CE-H.2. Facilitate public-private partnerships that improve private, federal, state and local coordination through removal of jurisdictional barriers that limit effective wetland management.
- CE-H.3. Seek state and federal legislation and funding that support efforts to research, classify, and map wetlands including vernal pools and their functions, and improve restoration and mitigation procedures.

- CE-H.4. Support the long-term monitoring of restoration and mitigation efforts to track and evaluate changes in wetland acreage, functions, and values.
- CE-H.5. Support research and demonstration projects that use created wetlands to help cleanse urban and storm water runoff, where not detrimental to natural upland and wetland habitats.
- CE-H.6. Support educational and technical assistance programs, for both planning and development professionals, and the general public, on wetlands protection in the land use planning and development process.
- CE-H.7. Encourage site planning that maximizes the potential biological, historic, hydrological and land use benefits of wetlands.
- CE-H.8. Implement a "no net loss" approach to wetlands conservation in accordance with all City, state, and federal regulations.

As part of the Project, the City would amend the General Plan concurrently with adoption of the VPHCP to add policies related to the VPHCP and to revise the existing MHPA discussion and maps/graphics to include the expanded boundaries that encompass the lands conserved under the VPHCP.

City of San Diego Community Plans

As part of the General Plan, the City has developed community plans for each of the individual communities within San Diego. A community plan is a public document that contains specific proposals for future land uses and public improvements in a given community; it is not a regulatory document. Community plans provide tailored policies and a long-range physical development guide for elected officials and citizens engaged in community development. Natural resources are typically addressed within community plans. Most community plans include common policies or goals to preserve natural open space areas and sensitive resource areas, including wetlands. Some plans also include specific goals or recommendations for vernal pool preservation or management, while some do not directly address vernal pools.

The following City communities have lands within the VPHCP Plan Area.

Carmel Valley	Linda Vista	Serra Mesa
Del Mar Mesa	Mira Mesa	Tierrasanta
East Elliott	Navajo	Torrey Highlands
Encanto Neighborhood	Otay Mesa	Torrey Hills
Kearny Mesa	Rancho Peñasquitos	University

As part of the Project, the City would amend the Otay Mesa and Kearny Mesa Community Plans concurrently with adoption of the VPHCP to revise the land use maps to include the expanded MHPA boundaries. Policies related to the protection, preservation, and long-term management of vernal pool resources were added to the Otay Mesa Community Plan as part of the 2014 update process. Similar policies would be added to the Kearny Mesa Community Plan.

Unincorporated Areas/Cornerstone Lands

The following three areas are outside the limits of the City. However, these sites are owned by the City Public Utilities Department, Water Division and are part of the MSCP's Cornerstone Conservation Bank areas.

Otay Lakes (K 5) – The Otay Lakes (K 5) vernal pool site is located on 632 acres owned and managed by the City's Public Utilities Department. Although the area is not currently covered by a covenant of easement, it is obligated to be conserved as part of the MSCP Cornerstone Lands Conservation Bank Agreement prior to sale of any credits within this area. This area is included in the MHPA.

Marron Valley (MM 1) – The Marron Valley vernal pool site (MM 1) is located within 2,644 acres owned and managed by the City's Public Utilities Department. This area is located approximately 25 miles east of the Pacific Ocean along the U.S./Mexican border. This site is part of the MSCP Cornerstone Lands Conservation Bank Agreement and is included in the MHPA. A mitigation bank has been established for this area and credits are currently being overseen by the Public Utilities Department. Consistent with the Cornerstone Lands Conservation Bank Agreement, a conservation easement was recorded as part of the establishment of the bank for this area.

Proctor Valley (R 1) – This site (R 1) occurs on 157 acres owned and managed by the City Public Utilities Department in Proctor Valley. Although the site is not currently covered by a covenant of easement, it is obligated to be conserved as part of the MSCP Cornerstone Lands Bank Agreement prior to sale of any credits within this area. This area is within the MHPA.

Multiple Species Conservation Program

The City's MSCP SAP, which is discussed in Section 3.1.1 in the context of the VPHCP development process, specifically addresses wetlands and priorities for wetland avoidance. General planning policies and design guidelines identified in Section 1.4.2 of the MSCP SAP address construction and maintenance policies for roads and utilities; fencing, lighting and

signage; materials storage; mining, extraction and processing facilities; and flood control. All wetland restoration/revegetation proposals may be subject to permit authorization by federal and/or state agencies (depending on the resources present).

The City's MSCP SAP allows the City incidental take for federally listed and state-listed species as described in exchange for the preservation, management, and monitoring of large, contiguous open space areas. Thus, the MSCP designated 56,831 acres within the City's boundaries within which a permanent MSCP preserve system, or MHPA, serves as a planning area for core biological resources and corridors targeted for conservation. The type and extent of development allowed within the MHPA are limited as the MSCP requires, overall, 90% conservation (52,715 acres) of the MHPA. Development within the MHPA is limited to low-intensity uses and essential public facilities.

Section 1.4 of the MSCP SAP provides an overview of land use considerations. Conditionally compatible land uses allowed within the MHPA include the following:

- Passive recreation
- Utility lines and roads in compliance with policies in Section 1.4.2 of the MSCP SAP
- Limited water facilities and other essential public facilities
- Limited low-density residential uses
- Brush Management (Zone 2)
- Limited agriculture

General management goals outlined in the MSCP SAP (General Management Directives, Section 1.5.2) require that mitigation be performed in accordance with the ESL Regulations and LDM Biology Guidelines. Where restoration or revegetation is undertaken in the MHPA, directives require that the work be performed in accordance with a prepared plan that addresses financial responsibility, site preparation, planting specifications, maintenance, and monitoring and success criteria, and as remediation and contingency measures. Additionally, the MSCP SAP (Section 4.1.2) includes the MHPA Land Use Adjacency Guidelines to minimize impacts and maintain the function of the MHPA. The guidelines specifically address drainage, toxins, lighting, noise, barriers, invasives, brush management, and grading for projects located within and/or adjacent to the MHPA.

The MSCP, Section 5.4.2, and the SAP, Section 1.1.1 address MHPA boundary adjustments. Adjustments to the MHPA boundaries may be made without the need to amend either the SAP or the MSCP plan in cases where the new MHPA boundary results in an area of equivalent or higher biological value. The SAP further states that the determination of the biological value of a

proposed boundary change will be made by the City in accordance with the MSCP plan and with the concurrence of the Wildlife Agencies. If the adjustment is determined by the City and Wildlife Agencies to result in the same or higher biological value of the MHPA, no further action by the Wildlife Agencies is required. A MHPA boundary adjustment must be disclosed and addressed in the environmental document prepared for the specific project and approved by a discretionary hearing body.

The City's project review process for proposed development requires consideration/evaluation and protection of all environmentally sensitive resources and consistency with the MSCP SAP as part of the ESL Regulations and other related regulations. Some development in floodplains or of wetlands may currently be permitted with appropriate mitigation.

City of San Diego Land Development Code

Land development within the City is regulated by the LDC within Chapters 11 through 15 of the City's Municipal Code. Section 111.0102 of the San Diego Municipal Code defines the purpose of the LDC and is as follows:

> *The Land Development Code sets forth the procedures used in the application of land use regulations, the types of review of development, and the regulations that apply to the use and development of land in the City of San Diego. The intent of these procedures and regulations is to facilitate fair and effective decision-making and to encourage public participation.*

Impacts to sensitive biological resources including wetlands are only allowed per the LDC through a deviation if an applicant obtains a Site Development Permit and the required findings can be made for approval as specified in Sections 126.0504 (a)(b)(c). Specifically, LDC Section 126.0504 (c) requires that two supplemental findings be made to allow for a deviation from the Sensitive Biological Resources regulations:

1. There are no feasible measures that can further minimize the potential adverse effects on environmentally sensitive lands.
2. The proposed deviation is the minimum necessary to afford relief from special circumstances or conditions applicable to the land and not of the applicant's making.

In addition, the City's Land Development Manual establishes standards and guidelines through technical documents, including the ESL Regulations and LDM Biology Guidelines. These regulations and guidelines currently provide the tools to implement the City's MSCP SAP.

City of San Diego Environmentally Sensitive Land Regulations

The City's ESL Regulations help protect, preserve, and restore lands containing steep hillsides, sensitive biological resources, coastal beaches, sensitive coastal bluffs, or Special Flood Hazard Areas (SFHAs) and are regulated within Chapter 14, Article 3, Division 1 of the City's Municipal Code. The intent of the ESL Regulations is to ensure that development occurs in a manner that protects the overall quality of the resources, encourages a sensitive form of development, retains biodiversity and interconnected habitats, maximizes physical and visual public access to and along the shoreline, and reduces hazards due to flooding in specific areas while minimizing the need for construction of flood control facilities. The development regulations and guidelines for environmentally sensitive lands also serve to implement the MSCP by placing priority on the preservation of biological resources within the MHPA.

5.1.3 CEQA Thresholds of Significance

The following thresholds are derived from the City's 2016 Significance Determination Thresholds for the purpose of evaluating potential inconsistencies with any adopted land use plans, regulations, or other land use topics.

Project inconsistency or conflict with a plan does not in and of itself constitute a significant environmental impact. The plan or policy inconsistency would have to result in or relate to a significant environmental impact to be considered significant pursuant to the City's Significance Thresholds Guidelines and CEQA. With respect to land use, a significant impact would occur if the Project would result in:

1. *Inconsistency/conflict with the environmental goals, objectives, or guidelines of a community or general plan;*
2. *Inconsistency/conflict with an adopted land use designation or intensity and indirect or secondary environmental impacts occur;*
3. *Development or conversion of general plan or community plan designated open space or prime farmland to a more intensive land use;*
4. *Substantial incompatibility with an adopted plan;*
5. *Incompatible uses as defined in an airport land use plan or inconsistency with an airport's Land Use Compatibility Plan (ALUCP) as adopted by the Airport Authority;*
6. *Inconsistency/conflict with adopted environmental plans for an area, including inconsistency with the existing MSCP permit; and/or*
7. *Significantly increase the base flood elevation for upstream properties, or construct in a Special Flood Hazard Area (SFHA) or floodplain/wetland buffer zone.*

5.1.4 Environmental Consequences

ISSUE 1: *Would the project result in an inconsistency/conflict with the environmental goals, objectives, or guidelines of a community or general plan?*

Project

The City's General Plan provides public policy for the distribution of future land use, both public and private. As detailed in Section 5.1.2, Regulatory Framework, many environmental goals and policies are included in the Conservation Element of the General Plan. Most specific to vernal pools, the Open Space and Landform Preservation section includes policies regarding application of appropriate zoning and ESL Regulations to limit development of floodplains and sensitive biological areas including wetlands. Policies of this section also include the management of watersheds and regulation of floodplains to reduce disruption of natural systems and restore water filtration, flood and erosion control, and biodiversity. The Biological Diversity section includes policies specific to the preservation of natural habitats and rare plants and animals and the promotion of aquatic biodiversity and habitat recovery by reducing hydrological alterations. Additionally, the Wetlands section of the Conservation Element includes policies that state the City should seek state and federal legislation and funding that support efforts to research, classify, and map wetlands including vernal pools and their functions, and improve restoration and mitigation procedures; support the long-term monitoring of restoration and mitigation efforts to track and evaluate changes in wetland acreage, functions, and values; and encourage site planning that maximizes the potential biological, historic, hydrological, and land use benefits of wetlands.

Implementation of the VPHCP would not conflict with these environmental protection and preservation policies contained within the Conservation Element of the General Plan. The VPHCP contains many elements that would implement and further the ability of the City to achieve conservation goals and policies identified in the General Plan through the management of the vernal pool resources, restored hydrologic function, preservation of the vernal pool habitats and associated sensitive plant and animal species, and the long-term monitoring and reporting of the vernal pool restoration efforts and outcomes. As part of the Project, the City would amend the General Plan concurrently with adoption of the VPHCP to add policies related to the VPHCP and to revise the existing MHPA discussion and maps/graphics to include the expanded boundaries and ensure consistency. Thus, implementation of the VPHCP would not conflict with environmental goals of the General Plan.

Many of the Community Plans that have lands within the VPHCP Plan Area include environmental goals and policies, though many are not specific to vernal pools but are more

generalized regarding sensitive natural resources and the preservation of open space areas. In some communities where the occurrence of vernal pools is known to be extensive, the Community Plans contain policies specific to vernal pools. For example, the Mira Mesa Community Plan contains policies stating no encroachment shall be permitted into wetland, including vernal pools; remaining vernal pool habitat in the community shall be preserved and shall be protected from vehicular or other human-caused damage, encroachment in their watersheds and urban runoff; among other preservation and protection policies.

As part of the VPHCP implementation, the City would amend the Otay Mesa and Kearny Mesa Community Plans concurrently with adoption of the VPHCP to revise the land use maps to include the expanded MHPA boundaries. Policies related to the protection, preservation, and long-term management of vernal pool resources were added to the Otay Mesa Community Plan as part of the 2014 community plan update process. Similar policies would be added to the Kearny Mesa Community Plan. Policies that would be added to the Kearny Mesa Community Plan include:

- Require preservation, restoration, management, and monitoring within identified vernal pool preservation areas in accordance with City, state, and federal policies and regulations. The boundaries of vernal pool Preserve areas should be of sufficient size and shape to protect the vernal pool basins, watersheds, functional buffers, and areas necessary to maintain vernal pool ecosystem function and species viability.
- Design, as feasible, the Preserve areas to provide connectivity between vernal pools, surrounding open space, and nearby vernal pool complexes.
- Conduct management and monitoring of preserved and restored vernal pool sites in accordance with the city-wide regulations and LDM Biology Guidelines.

Amendments to the Kearny Mesa Community Plan and the land use map revisions to include the expanded MHPA boundaries would not conflict or be inconsistent with the environmental policies of the Kearny Mesa or Otay Mesa Community Plans. Additionally, implementation of the VPHCP and the preservation, restoration, and monitoring of sensitive vernal pool resources would not conflict with other community plan environmental policies, whether specific to vernal pools or more generally related to the preservation of natural resources and open space. Overall, the VPHCP would serve to implement and be consistent with the general environmental goals of community plans to protect and preserve sensitive resources and open space areas.

For these reasons, the Project would not result in a substantial adverse effect related to an inconsistency/conflict with the environmental goals, objectives, or guidelines of a community or general plan, and the impact would be less than significant.

Expanded Conservation Alternative

The Expanded Conservation Alternative would encompass more acreage than the Project; however, all of the implementation actions associated with the VPHCP would be identical. The additional acreage covered by the Expanded Conservation Alternative would not create inconsistency/conflict with environmental policies or goals of the General Plan or applicable Community Plan. Thus, the analysis provided for the Project is applicable to this alternative. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to an inconsistency/conflict with the environmental goals, objectives, or guidelines of a community or general plan, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's existing MHPA, permitted projects, and planned projects. Ongoing conservation efforts would continue at the same level and no additional restoration requirements or development restrictions would result from continued implementation of the Existing Conservation/No Project Alternative. No goals, objectives, or guidelines of a community or general plan would require additions or modifications for consistency. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to an inconsistency/conflict with the environmental goals, objectives, or guidelines of a community or general plan, and the impact would be less than significant. However, the Existing Conservation/No Project Alternative would not provide additional restoration or preservation of sensitive vernal pool resources and, thus, would not advance efforts to achieve goals or policies related to protection of sensitive natural resources.

ISSUE 2: *Would the project result in an inconsistency/conflict with an adopted land use designation or intensity and indirect or secondary environmental impacts occur?*

Project

A wide variety of land use designations are applicable to lands within the MHPA, for which the VPHCP would apply. Existing land use designations over both private and publicly held lands allow for development to occur on the property in accordance with existing development regulations and restrictions, such as ESL Regulations. Implementation of the Project would result in parcels being added to the MHPA (see Figures 2-2 through 2-4 and Tables 3-1 and 3-1). Consistent with ESL Regulations, parcels that would be wholly within the MHPA would be subject to a development restriction over the land requiring 75% conservation, with an allowed

25% for development. The Project would also add additional parcels into the MHPA where hard line Preserve boundaries (i.e., 100% conservation) as well as development areas have been established in coordination with the City and Wildlife Agencies. While lands that would be added to the MHPA under the Project currently do not have automatic development limitations as they would with implementation of the VPHCP (e.g., 75% or 100% conservation), they are generally known to have wetlands and other sensitive biological resources (e.g., nonnative grasslands, burrowing owl habitat) that would be subject to ESL Regulations and other mitigation, which could result in development restrictions.

Implementation of the VPHCP would include addition of new parcels into the MHPA resulting in restrictions on development that could potentially result in an inconsistency with existing land use designations on those parcels that currently allow for higher levels of development and density. However, as noted above, these lands would likely be subject to restrictions under current City, state, and federal regulations, including the ESL Regulations and USFWS permitting. Additionally, the land use designation inconsistencies would not result in an increased intensity or other secondary environmental effects. The VPHCP and MHPA restrictions would limit development requiring 75% and/or hard line conservation to protect and preserve the sensitive biological resources on-site. This required conservation of sensitive resource areas would serve to avoid and reduce potential environmental impacts, while still allowing for reasonable development to occur.

Property rights and capacity for future land development on public and private parcels would be altered due to implementation of the VPHCP, which would add parcels to the MHPA and place development restrictions over those parcels that may be inconsistent with current allowable development per existing land use designations. As described in Section 5.1.2, Regulatory Framework, development on lands with biological resources is currently constrained by federal, state, and local regulations, which generally require development to avoid or minimize impacts to sensitive resources, such as vernal pools, wetlands, or nonnative grasslands. As part of the Project, the City would amend the LDM Biology Guidelines to implement the VPHCP concurrently with adoption of the VPHCP as described in Section 3.3.10. Any modifications to the Biology Guidelines require approval of the Wildlife Agencies (see Section 9.12 of the Implementing Agreement for the MSCP). Under the VPHCP, an applicant that submits a development application to the City would be subject to a land use regulation and environmental review process comparable to the process under the Existing Conservation/No Project Alternative. As discussed above, parcels that would be incorporated into the MHPA with implementation of the VPHCP may have increased levels of conservation, which would result in a reduction of developable area on a given parcel. However, in practice, most parcels that would be incorporated into the VPHCP have existing biological resource constraints, such as vernal pools, wetlands, burrowing owl habitat, and/or nonnative grasslands. Thus, the developable area

on a given parcel would be constrained under existing conditions as well as due to the existing development restrictions of ESL Regulations and other state and federal permitting requirements.

Moreover, the potential to encroach further into the MHPA may be pursued consistent with the existing MHPA Boundary Line Adjustment process as allowed per the City's MSCP Plan, Section 5.4.2. Under this process, an applicant may request modifications to the MHPA boundary to remove lands as long as replacement lands of equal or greater biological value are added into the MHPA. Under the Project, public and private property owners would benefit from the issuance of a take permit to the City, which would streamline the permit process and clearly define project mitigation requirements for future projects that could potentially be less than those negotiated independently by landowners through the Section 10 or Section 7 permit process with USFWS. The streamlined process would allow for more timely completion of projects and greater efficiency in land development. Finally, owners of public and private parcels included in the VPHCP may experience advantageous new opportunities to have their lands acquired by purchase or by nonfiscal methods such as land exchanges or private mitigation banks.

For these reasons, the Project would not result in a substantial adverse effect related to an inconsistency/conflict with an adopted land use designation or intensity that would cause indirect or secondary environmental impacts, and the impact would be less than significant.

Expanded Conservation Alternative

The Expanded Conservation Alternative would encompass more acreage than the Project; however, all of the implementation actions and policies associated with the VPHCP would be identical. Thus, the analysis provided for the Project is applicable to this alternative. The increased acreage covered by the Expanded Conservation Alternative would result in additional land being added to the MHPA. Consistent with ESL Regulations, parcels that would be wholly within the MHPA would be subject to a development restriction over the land requiring 75% conservation, with an allowed 25% for development. The Expanded Conservation Alternative would also add additional parcels into the MHPA where hard line Preserve boundaries (i.e., 100% conservation) as well as development areas have been established in coordination with the City and Wildlife Agencies.

However, as discussed for the Project analysis, while the VPHCP development restrictions may result in less developable area than currently allowed by a zoning or land use designation for a parcel of land, many parcels would likely be subject to development restrictions per existing regulatory mechanisms due to existing sensitive biological resources. This required conservation of sensitive resource areas would serve to avoid and reduce potential environmental impacts, while still allowing for some development to occur.

For the same reasons as discussed for the Project, the Expanded Conservation Alternative would not result in a substantial adverse effect related to an inconsistency/conflict with an adopted land use designation or intensity that would cause indirect or secondary environmental impacts, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's existing MHPA, permitted projects, and planned projects. Ongoing conservation efforts would continue at the same level and no additional restoration requirements or development restrictions would result from continued implementation of the Existing Conservation/No Project Alternative and would remain consistent with current land use plans. As with the Project, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to an inconsistency/conflict with an adopted land use designation or intensity that would cause indirect or secondary environmental impacts, and the impact would be less than significant

ISSUE 3: *Would the project result in development or conversion of general plan or community plan designated open space or prime farmland to a more intensive land use?*

Project

Of the existing land to be incorporated into the MHPA with implementation of the VPHCP, approximately 76 acres are currently designated as open space. None of the land to be incorporated into the MHPA is designated as Prime Farmland by the Farmland Mapping and Monitoring Program. Any existing development restrictions currently on the lands would remain. As described above, with implementation of the Project, lands added wholly into the MHPA would be subject to a new development restriction of 75% conservation of parcels with an allowed development in 25% of a parcel (within the least sensitive area). Lands where a hard line designation has been determined would have identified conservation and development areas. Covered projects and covered activities as discussed in Chapter 3 of this EIR/EIS would be allowed. Consistent with the existing MSCP, an additional 5% encroachment may be allowed for essential public facilities (i.e., community circulation element roadways), if it can be demonstrated that no feasible alternative exists. This new development restriction would potentially serve to reduce the development allowed within parcels with sensitive resources and would result in a less intensive land use with increased conservation area. Existing open space and/or prime farmland land use designations would not be converted to a more intensive land use as a result of the Project.

The Project itself would result in restoration, maintenance, and monitoring of vernal pool resources. With the exception of protective fencing and signage in selected locations, no physical development would occur within the MPHA as a result of implementation. No element of restoration or ongoing maintenance and monitoring activities would induce or result in increased development or conversion of land to other uses.

For these reasons, the Project would not result in a substantial adverse effect related to development or conversion of general plan or community plan designated open space or prime farmland to a more intensive land use, and the impact would be less than significant.

Expanded Conservation Alternative

The Expanded Conservation Alternative would encompass more acreage than the Project; however, all of the implementation actions associated with the VPHCP would be identical. Thus, the analysis provided for the Project is applicable to this alternative. The increased acreage covered by the Expanded Conservation Alternative would result in additional land being conserved. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to development or conversion of general plan or community plan designated open space or prime farmland to a more intensive land use, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within and outside of the City's existing MHPA, and construction of permitted projects and planned projects. Ongoing conservation efforts would continue at the same level and no additional restoration requirements or development restrictions would result from continued implementation of the Existing Conservation/No Project Alternative. More intensive development on designated open space land or Prime Farmland would not occur as a result of the vernal pool conservation. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to development or conversion of general plan or community plan designated open space or prime farmland to a more intensive land use, and the impact would be less than significant.

ISSUE 4: *Would the project result in a substantial incompatibility with an adopted plan?*

Project

As detailed in Section 5.1.2, Regulatory Framework, there are a variety of adopted plans applicable to the Project. Issues 1, 2, and 3, discussed previously, address the consistency of the Project with applicable plans, such as the General Plan, community plans, and applicable policies. Issues 5 and 6, following this discussion, address airport land use plans and environmental plans, respectively. No significant conflicts with existing plans were identified. Also, as described throughout the land use analysis, modifications would be made to applicable planning documents to reflect the expanded MHPA boundaries and incorporate VPHCP language and policies. This would help to ensure consistency and eliminate any inconsistent or incompatible language between planning documents.

Private parcels that are incorporated into the MHPA under the VPHCP would be subject to a covenant of easement over the parcel area designated for open space. This could potentially reduce the developable area on a given parcel relative to its existing land use designation or zoning. However, most lands that would be incorporated into the VPHCP have existing biological resource constraints, such as vernal pools, wetlands, and/or native/nonnative grasslands. Thus, the developable area on a given parcel would be constrained under existing conditions due to the existing development restrictions of ESL Regulations as well as federal and state requirements. Thus, while the VPHCP development restrictions may result in less developable area than currently allowed by a zoning or land use designation for a parcel of land, this difference is not considered a substantial incompatibility.

As part of the Project, the MHPA boundary would be adjusted within the Montgomery-Gibbs Executive Airport site via an MHPA BLA, as described in Section 3.3.4 of the Project Description and Section 5.2, Biological Resources. The purpose of the BLA at this location is to incorporate areas of vernal pool resources that have a higher biological value than some existing locations currently within the MHPA at Montgomery-Gibbs Executive Airport. The areas proposed for inclusion through the BLA have more vernal pools, higher-quality vernal pools that support sensitive species, and overall improved connectivity within the vernal pool complex. Per the requirements of the MSCP and SAP, the City and Wildlife Agencies have determined that the lands being added to the MHPA as a result of the BLA have a higher biological value than the existing areas that would be removed from the boundaries. The comparison of biological values is provided in Section 5.2, Biological Resources. No amendment of the SAP is needed for an approved equivalent exchange (County of San Diego 1998). The BLA would occur in accordance with the requirements of the MSCP, SAP, and MSCP Implementing Agreement and no land use incompatibilities would result.

For these reasons, the Project would not result in a substantial adverse effect related to incompatibility with an adopted plan, and the impact would be less than significant.

Expanded Conservation Alternative

The Expanded Conservation Alternative would encompass more acreage than the Project; however, all of the implementation actions and policies associated with the VPHCP would be identical. Thus, the analysis provided for the Project, including the BLA, is applicable to this alternative. The approximately 89 additional acres of the land that would be incorporated into the MHPA as part of the Expanded Conservation Alternative are currently designated as open space. As with the Project, private parcels that are incorporated into the MHPA under the VPHCP would be subject to a covenant of easement over the parcel area designated for open space. Consistent with the Project, VPHCP development restrictions may potentially result in less developable area than currently allowed by a zoning or land use designation for a parcel of land. However, this difference is not considered a substantial incompatibility because most lands that would be incorporated into the VPHCP have existing biological resource constraints, such as vernal pools, wetlands, and/or native/nonnative grasslands. Thus, the Expanded Conservation Alternative would not result in a substantial adverse effect related to incompatibility with an adopted plan, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's existing MHPA, permitted projects, and planned projects. Ongoing conservation efforts would continue at the same level and no additional restoration requirements, management, or development restrictions would result from continued implementation of the Existing Conservation/No Project Alternative. There would be no modifications to existing environmental plans and vernal pool conservation efforts would continue within the context of the existing policies. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to incompatibility with an adopted plan and the impact would be less than significant.

ISSUE 5: *Would the project result in incompatible uses as defined in an airport land use plan or inconsistency with an Airport Land Use Compatibility Plan (ALUCP) as adopted by the Airport Authority?*

Project

Generally, incompatible uses near an airport and as described in airport land use plans are based on safety, airspace protection, and noise within the airport influence area as defined in the

ALUCP. Tall structures can be incompatible with height restrictions as an encroachment into airspace can create safety issues for air traffic. For safety reasons, certain land uses or development is also considered incompatible within ALUCP designed safety zones, such as the Runway Protection Zone. Aircraft noise can also be a public health concern dependent on the volume and frequency of aircraft that pass over sensitive land uses, such as residential areas. The nearby or adjacent location of sensitive noise receptors can create land use incompatibilities with airports and associated aircraft overflight.

The VPHCP would include lands adjacent to and near airports including Marine Corps Air Station (MCAS) Miramar, Montgomery-Gibbs Executive Airport, and Brown Field. Proposed activities associated with the VPHCP, such as restoration, maintenance, and monitoring, could occur on these parcels. The Project is not proposing construction of any structures. The VPHCP includes safety and maintenance procedures at the City's airports as a Covered Activity, as described in Table 3-3. The restoration of vernal pools at locations adjacent to airports would result in conserved areas of open space that would not place sensitive receptors or land uses in incompatible noise or safety areas as defined by an ALUCP. Biologists and other workers would occasionally be present on the vernal pool sites for restoration, maintenance, or monitoring activities, but would only be in that location for a short time before moving on to other sites and would not be adversely affected by aircraft noise. Operation and maintenances of an existing use is consistent with the ALUCPs.

Within the vicinity surrounding Montgomery-Gibbs Executive Airport, an MHPA BLA would be processed as part of the Project and would remove some acreage and add in other areas with vernal pools of higher biological value. This adjustment to the MHPA boundary would not alter the airport operations or result in any actions that could compromise safety or be incompatible with the ALUCP.

For these reasons, the Project would not result in a substantial adverse effect related to incompatible uses as defined in an airport land use plan or inconsistency with an ALUCP, and the impact would be less than significant.

Expanded Conservation Alternative

The Expanded Conservation Alternative would encompass more acreage than the Project; however, all of the policies and implementation activities associated with the VPHCP would be identical. Thus, the analysis provided for the Project, including the BLA, is applicable to this alternative. The increased acreage covered by the Expanded Conservation Alternative would not modify the VPHCP implementation. Similar to the Project, the Expanded Conservation Alternative would not result in a substantial adverse effect related to incompatible uses as

defined in an airport land use plan or inconsistency with an ALUCP, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's existing MHPA, permitted projects, and planned projects. Similar to the Project, activities associated with existing conservation efforts would not include construction of tall structures resulting in interference with air traffic and would not place sensitive receptors or land uses in incompatible noise or safety areas as defined by an ALUCP. Thus, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to incompatible uses as defined in an airport land use plan or inconsistency with an ALUCP, and the impact would be less than significant.

ISSUE 6: *Would the project result in an inconsistency/conflict with adopted environmental plans for an area?*

Project

As detailed in Section 5.1.2, Regulatory Framework, there are a variety of environmental plans applicable to the Project and the lands within the VPHCP Plan Area. The VPHCP has been developed to be consistent with the goals and objectives of the MSCP SAP and would provide further protection for vernal pool resources. The VPHCP Plan Area's extent is, by design, the same area covered by the City's MSCP SAP. The MSCP SAP and MHPA Land Use Adjacency Guidelines would remain in effect for the lands within the MHPA. As discussed in detail in Chapter 3, the VPHCP would have components similar to the MSCP including covered projects and activities, covered species and conditions of coverage, identification of lands for inclusion in the MHPA and allowed uses including limited development, a Mitigation Framework specifying mitigation measures, management and monitoring requirements, and funding requirements. The City would continue to manage their lands consistent with the standards and requirements of the MSCP SAP. For areas with vernal pool resources, management would also occur consistent with the VPMMP.

The VPHCP would provide complete coverage of the seven vernal pool species that do not currently have federal coverage under the MSCP SAP, regardless of whether they are in areas that are inside or outside of U.S. Army Corps of Engineers (USACE) jurisdiction. The City's state NCCP permit is still valid and addresses conservation and take of vernal pool species.

The VPHCP would expand upon the MHPA to conserve additional lands with vernal pools that are occupied with the vernal pool covered species. The VPMMP would apply within the existing and expanded MHPA. Compared to existing conditions, the VPHCP would conserve an additional eight vernal pool complexes within the Plan Area, and conserve an additional 273 pools (approximately 9% more), totaling 2.8 acres of basin area, over what is currently conserved. Thus, the Project would complement and expand upon existing conservation, protection, and regulation of vernal pool resources and would not be in conflict with, or create inconsistencies with, related environmental plans.

The modifications to the LDC ESL Regulations and LDM Biology Guidelines (as detailed in Section 3.3.10) would not substantially alter or change the overall goals and purpose of those regulations; rather, they would accurately reflect the expanded boundaries of the MHPA and ensure consistency and standardization between the applicable policies. None of the proposed changes, such as provision of conservation strategies, consistent requirements, and inclusion of VPHCP definitions, would create conflicts with existing environmental regulations. Most lands that would be incorporated into the VPHCP have existing biological resource constraints, such as vernal pools, wetlands, and/or native/nonnative grasslands.

As described under Issue 4 above, the BLA that would occur at Montgomery-Gibbs Executive Airport to incorporate areas of vernal pool resources that have a higher biological value than some existing locations currently within the MHPA would be in accordance with the requirements of the MSCP, SAP, and MSCP Implementing Agreement and no inconsistencies or conflicts would result.

For these reasons, the Project would not result in a substantial adverse effect related to an inconsistency/conflict with adopted environmental plans for an area, and the impact would be less than significant.

Consistency with Adopted State NCCP (MSCP) Permit

As further discussed in Section 3.1.2 of this EIR/EIS, in 1998 the City's MSCP SAP was subject to a federal lawsuit and, after almost 2 years of mediation, the City decided in 2010 to relinquish federal coverage of these seven species under the City's SAP. During this time, the City's state NCCP permit remained intact, and is still valid, for all 85 species. The City's existing MSCP SAP provides an FMP that includes management considerations and specific directives regarding vernal pool habitat and the seven covered vernal pool species that the state NCCP permit currently operates under. The VPHCP would replace the existing MSCP FMP for the seven vernal pool species. The five vernal pool plant species covered under the VPHCP were previously covered as Narrow Endemic species in the State's MSCP SAP NCCP authorization.

The City's LDM Biology Guidelines have been updated to clarify that conservation measures for the five vernal pool plant species are now covered under the VPHCP, which supersede the requirements in the MSCP SAP for vernal pool species and result in higher levels of conservation of these five Narrow Endemic species (refer to Appendix E of the VPHCP).

General and Community Plans

When the original MSCP was adopted in 1997, several areas of the City were undergoing extensive development. Since that time, those areas have been effectively planned/built out and the remaining area left to undergo large-scale planning and development is Otay Mesa. The VPHCP presents a unique opportunity to not only incorporate information on new vernal pool discoveries, science, and restoration since the MSCP was adopted, but also addresses Otay Mesa and other areas throughout the City, which contain important vernal pool resources and to guide development in these areas.

Proposed VPHCP

The City's VPHCP is intended to meet or exceed the conservation requirements under the NCCP Act (1991). The federal VPHCP will complement, but be distinct from, the federal HCP that was prepared and adopted for the City's MSCP SAP. The VPHCP would expand the City's existing MHPA to conserve additional lands with vernal pools that are occupied with the seven vernal pool species. As described in Chapter 5 of the VPHCP, the overall approach to conservation of vernal pool habitat and species within the VPHCP Plan Area is as follows:

1. Expand the City's existing MHPA to conserve targeted vernal pool complexes in a configuration that maintains habitat function and viability of the seven covered species within the VPHCP Plan Area, consistent with the Recovery Plan (USFWS 1998a);
2. Implement a VPHCP Management and Monitoring Plan to provide for long-term protection, management, and enhancement of vernal pool habitat and the seven covered species;
3. Avoid and minimize impacts to vernal pools and mitigate unavoidable impacts consistent with the VPHCP and the City's Municipal Code;
4. Conduct compliance and effectiveness monitoring of vernal pools and covered species to evaluate implementation of the VPHCP and track the status of the vernal pools and seven covered species; and

5. Where appropriate, introduce covered species into restoration plans to expand/restore species populations in historically occupied complexes to maintain viability of the seven covered species.

The VPHCP EIR/EIS contains sufficient supporting information/analysis on how the proposed VPHCP would affect the state's existing NCCP coverage requirements for the seven vernal pool species including analyzing how the proposed VPHCP would affect the state's existing NCCP coverage requirements for the seven vernal pool species under the City's MSCP SAP. To evaluate consistency with the state's existing NCCP permit at the programmatic level, changes to any of the following six issues were considered:

1. Take/conservation of vernal pool habitat
2. Take/conservation of the seven vernal pool species
3. Preserve design and function
4. Take/conservation from management and monitoring activities
5. General Plan and Community Plan policies
6. City's MSCP SAP Implementing Regulations (i.e.,, ESL Regulations and LDM Biology Guidelines)

For the purpose of EIR/EIS analysis with the City's existing state NCCP permit, the baseline analysis represents existing conditions under which the City still operates under its valid state NCCP (MSCP) permit. Accordingly, where "existing conservation" is shown in the various tables throughout the EIR/EIS, it also represents the City's operating under its valid NCCP (MSCP) permit and, therefore, serves as the basis for the quantitative aspects of this programmatic-level analysis. Additional detailed biological information specific to consistency with the NCCP permit is provided in Section 5.2, Biological Resources under Issue 5.

1. Take/Conservation of Vernal Pool Habitat

As described further in Section 5.2, Biological Resources, of this EIR/EIS and Table 3-5, Conservation of Vernal Pools after Implementation of the VPHCP, the VPHCP would result in a net benefit to the existing MSCP for vernal pool habitat and species by conserving an additional 273 pools (98% more), totaling 2.8 acres of basin area, over what is currently conserved under the existing conservation (i.e., existing City MSCP permit), increasing the conservation levels for two of the vernal pool species (San Diego mesa mint and Riverside fairy shrimp), and adding 275 acres of land to the City's existing MHPA. Where complexes occupied by covered species are not conserved under the VPHCP, or where the covered species population within a complex is not conserved, compensatory mitigation would be required under the VPHCP.

2. Take/Conservation of the Seven Vernal Pool Species

As described further in Section 5.2, Biological Resources, of this EIR/EIS and Table 3-6, Conservation of Vernal Pools Occupied with Covered Species (Total and % Pools Conserved) after Implementation of the VPHCP, the VPHCP would provide additional conservation (beyond existing conservation) for the following covered species:

- San Diego mesa mint – three additional occupied pools conserved (<1% increase)
- San Diego button-celery – three additional occupied pools conserved (1% increase)
- Riverside fairy shrimp – three additional occupied pools conserved (2% increase)
- San Diego fairy shrimp – 31 additional occupied pools conserved (6% increase)

The VPHCP requires avoidance, minimization, and mitigation for impacts to the seven covered species resulting from covered projects and covered activities (see the Mitigation Framework in Chapter 11.0 of this EIR/EIS). To conserve the existing population at impacted occurrences, salvage of unique genetic material and in-kind restoration would be required as part of the VPHCP for spreading navarretia in the one pool at vernal pool complex NDU 1&2 (Otay Mesa) and the J13 San Diego button-celery population (Appendix C of the VPHCP).

3. Preserve Design and Function

As described above, the VPHCP would result in the addition of lands (275 acres) to the MPHA over existing conservation conditions and include conserved vernal pool areas to the Preserve design. Adding these land to the MHPA would improve the function and overall biological value of the City's existing NCCP (MSCP) preserve by creating a more cohesive vernal pool preserve and minimizing potential fragmentation of vernal pool habitat, including lands suitable for vernal pool restoration (such as the mesa areas on Otay Mesa) into the MHPA Preserve design, and protecting these conserved and potentially restorable areas with long-term management and monitoring guided by the VPHCP for vernal pool habitat and species and the City's existing MSCP for other habitat and species. For lands currently included in the City's MHPA, the management and monitoring requirements in the VPHCP for vernal pool habitat and species would replace those in the City's existing MSCP. The vernal pool management and monitoring would be based on current science and information, including updated location and species distribution information and an adaptive management and monitoring program supported by a secured funding source.

4. Take/Conservation from Management and Monitoring

Overall, the VPHCP would result in no change or an increase in conservation levels for vernal pool habitat and the seven vernal pool species currently covered under the state's NCCP permit.

Where no change occurs, improved management and monitoring (see Chapter 7, Management, Monitoring, and Reporting of the VPHCP) with secured funding (see Chapter 10, Preserve Management and Funding Mechanisms of the VCHCP) would be provided by the City. The management and monitoring program in the VPHCP would replace the Vernal Pool FMP and subsequent policies/regulations that the City has been operating under since the MSCP was approved in 1997 (see Section 3.1.1 of this EIR/EIS). The VPHCP's funding program is considered to be an improvement compared to the existing MSCP, in that resources would be specifically dedicated for management and monitoring of vernal pool habitat and species and would complement existing MSCP requirements for other non-vernal pool species (see VPHCP Section 10.4, Total Amount Required, and Table 10-3) of the VPHCP.

As described in Chapter 7 of the VPHCP, the VPHCP management and monitoring program is based on updated/current location information and adaptive management principles, and is secured by a dedicated funding source. In addition, because the VPHCP is based on a more current inventory and knowledge of vernal pools compared to when the MSCP was approved in 1997, it is not expected that implementation of the VPHCP would result in greater impacts to vernal pool habitat and species from management and monitoring activities than the City's existing NCCP (MSCP) permit.

5. Consistency with City's General Plan and Community Plans

As described above under Issue 1, the VPHCP would not result in a conflict with the City's General Plan. Moreover, as described in Section 8.2.3, Discretionary Actions Required to Implement the VPHCP, of the VPHCP, the City would also amend the Otay Mesa and Kearny Mesa Community Plans to revise the land use maps to include the expanded MHPA boundaries included in the VPHCP. Policies related to the protection, preservation, and long-term management of vernal pool resources consistent with the VPHCP were added to the Otay Mesa Community Plan as part of the 2014 community plan update process. Similar policies that will require consistency with the VPHCP would be added to the Kearny Mesa Community Plan and other relevant community plans as necessary. Specific projects within communities that have been hardlined for development/conservation and are included in the VPHCP and this EIR/EIS analysis are provided in Section 4.1 of the VPHCP. For these reasons, the VPHCP would not result in an inconsistency/conflict with the City's existing state NCCP (MSCP) permits, and the impact would be less than significant.

6. City's MSCP SAP Implementing Regulations (i.e., ESL Regulations and LDM Biology Guidelines)

The VPHCP would provide for the same or better total conservation level for the five vernal pool plants that are currently identified as MSCP Narrow Endemic species compared to the conservation estimates in Table 3-5 of the City's existing MSCP SAP. The City's updated ESL ordinance and wetland deviation process (biologically superior alternative) and Biology Guidelines would be updated to implement the VPHCP. The VPHCP would also replace the existing MSCP FMP and management guidelines for the seven vernal pool species with the management and monitoring program identified in Section 7.0 of the VPHCP. Therefore, even if even these five species would no longer be categorized as MSCP Narrow Endemics, the VPHCP and its implementing regulations would provide the same or better total conservation (beyond existing conservation). As shown in Table 3-6 [Conservation of Vernal Pools Occupied with Covered Species (Total and % Pools Conserved), after Implementation of the VPHCP], the overall conservation levels afforded to these five vernal pool plant species through the VPHCP would be the same or greater than the City's MSCP:

- San Diego mesa mint: 3 additional occupied pools conserved (1% increase)
- San Diego button-celery: 3 additional occupied pools conserved (1% increase)
- Otay Mesa mint: No change
- Spreading navarretia: No change
- California Orcutt grass: No change

Under the City's existing MSCP and implementing regulations (e.g., ESL and Biology Guidelines), the narrow endemic policy requires that impacts to these five vernal pool plant species outside the MHPA be avoided, managed or enhanced and/or transplanted to areas identified for preservation if they cannot be avoided. Unavoidable impacts associated with reasonable use or essential public facilities would need to be minimized and mitigated. Inside the MHPA, the City's MSCP currently requires that narrow endemic species be avoided.

Under the VPCHP, these species could be impacted outside the MHPA, but only if it results in a biologically superior alternative pursuant to wetland deviation process in ESL and required findings, which includes approval by the Wildlife Agencies. The City's existing MSCP requires that they first be avoided, but if unavoidable, then they must be mitigated, which includes transplanting to areas identified for preservation. Therefore, the requirement to avoid these five vernal pool plant species (unless demonstrated to be infeasible) would remain under the VPHCP. Inside the MHPA, these species would have to be avoided as well (unless part of a biologically

superior alternative) under the VPHCP; therefore, the avoidance requirement (unless infeasible) would remain.

The five vernal pool plant species covered under the VPHCP that are currently identified as narrow endemic species in the City's MSCP and implementing regulations (e.g., Biology Guidelines) would be replaced with the standards set forth in the VPHCP and its related implementing regulations (e.g., ESL Wetland Deviations) and required findings that must be made, including approval by the Wildlife Agencies. A biologically superior alternative that includes equivalent or better species overall conservation level would be demonstrated through subsequent environmental review and analysis associated with the specific project that proposes any such wetland deviation. As part of the actions related to the VPHCP, the City's LDM Biology Guidelines have been updated to clarify that conservation measures for the five vernal pool plant species are now covered under the VPHCP, which supersedes the MSCP SAP for vernal pool species (refer to Appendix E of the VPHCP). Therefore, removing the MSCP Narrow Endemic designation from these five vernal pool plant species would not reduce the conservation standard or increase the level of take allowed compared to the City's existing MSCP, and the land use impact would be less than significant.

In conclusion, the VPHCP would result in a net benefit to the existing MSCP for vernal pool habitat and species by expanding the MHPA, providing an increase of vernal pools over existing conditions, increasing the conservation levels for San Diego mesa mint and Riverside fairy shrimp, adding 275 acres to the City's existing MHPA, requiring compensatory mitigation as part of the Mitigation Framework, and providing dedicated/secured funding for VPHCP implementation that is superior to the existing FMP and SAP Section 1.5.11 guidelines. To ensure consistency with local land use plans, the City's community plans would be amended (as necessary) to include VPHCP requirements. It will be necessary for CDFW to approve any required amendment(s) to and/or findings of consistency with the City's existing MSCP SAP, Implementing Agreement, and/or State 2835 NCCP to maintain state coverage for vernal pool habitat and the seven covered vernal pool species addressed in the VPHCP. Replacing the MSCP Narrow Endemic designation for the five vernal plant species with the standards in the VPHCP and ESL Wetland Deviation process (e.g., biological superior alternative) would not reduce the conservation standard or increase the level of take allowed compared to the City's existing MSCP. For these reasons, the VPHCP would not result in an inconsistency/conflict with the City's existing state NCCP (MSCP) permits, and the impact would be less than significant.

<u>Expanded Conservation Alternative</u>

The Expanded Conservation Alternative would encompass more acreage than the Project; however, all of the policies and regulations associated with the VPHCP would be identical. Thus,

the analysis provided for the Project is applicable to this alternative. The increased acreage covered by the Expanded Conservation Alternative would not modify the VPHCP or the policies and regulations associated with implementation. Additionally, acreage added under the Expanded Alternative would be subject to restrictions of the VPHCP; however, most lands that would be incorporated into the VPHCP have existing biological resource constraints, such as vernal pools, wetlands, and/or nonnative grasslands, and would be subject to some level of restriction due to existing environmental regulations, such as the ESL Regulations and wildlife agency permitting under the current scenario. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to an inconsistency/conflict with adopted environmental plans for an area, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's existing MHPA, permitted projects, and planned projects. Ongoing conservation efforts would continue at the same level and no additional restoration requirements or development restrictions would result from continued implementation of the Existing Conservation/No Project Alternative. There would be no modifications to existing environmental plans and vernal pool conservation efforts would continue within the context of the existing policies. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to an inconsistency/conflict with adopted environmental plans for an area, and the impact would be less than significant.

ISSUE 7: *Would the project significantly increase the base flood elevation for upstream properties, or construct in a Special Flood Hazard Area (SFHA) or floodplain/ wetland buffer zone?*

Project

While the Project would not result in the development of buildings or other permanent structures, vernal pool restoration carried out under the VPHCP could potentially involve relatively minor grading of basins and surrounding watershed area to restore the natural topographic and hydrologic functions of the vernal pools (average of grading depth between 3 to 6 inches). Any landform modification would be relatively minor in the overall site drainage patterns and topography of the area and would not be of the magnitude to modify or increase base flood elevations for the site or surrounding areas (see Section 5.6, Hydrology and Water Quality, for more detail regarding flooding).

The recontouring of vernal pool basins and surrounding watersheds would necessitate grading to occur near vernal pool sites, which are commonly within wetland buffer zones. While some construction activities would occur within wetland buffer areas, the purpose of the work would restore proper hydrologic function for the vernal pool system and serve to improve the overall wetland hydrology within the vernal pool basin. Maintenance and monitoring, as well as adaptive management, as required by the VPHCP would ensure the restoration efforts were successful. For these reasons, even though the Project may construct within wetland buffer zones, implementation would not result in a substantial adverse effect related to an increase in the base flood elevation for upstream properties, or to SFHA or floodplain/wetland buffer zone, and the impact would be less than significant.

Expanded Conservation Alternative

The Expanded Conservation Alternative would encompass more acreage than the Project; however, all of the implementation actions associated with the VPHCP would be identical. Thus, the analysis provided for the Project is applicable to this alternative. Similar to the Project, grading for restoration may occur within wetland buffer zones. The increased acreage and vernal pools covered by the Expanded Conservation Alternative may result in more work occurring within wetland buffer areas than the Project. The purpose of work within wetland buffer zones would restore proper hydrologic function for the vernal pool system and serve to improve the overall wetland hydrology within the vernal pool basin. For this reason, even though the Expanded Conservation Alternative may construct within wetland buffer zones, implementation would not result in a substantial adverse effect related to an increase in the base flood elevation for upstream properties, or to an SFHA or floodplain/wetland buffer zone, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's existing policies. Ongoing conservation efforts would continue at the same level and in the same manner. Similar to the Project, grading for restoration may occur within wetland buffer zones. Thus, the analysis provided for the Project is applicable to this alternative. The purpose of work within wetland buffer zones would restore proper hydrologic function for the vernal pool system and serve to improve the overall wetland hydrology within the vernal pool basin. For this reason, even though the Existing Conservation/No Project Alternative may construct within wetland buffer zones, implementation would not result in a substantial adverse effect related to an increase in the base flood elevation for upstream properties, or to an SFHA or floodplain/wetland buffer zone, and the impact would be less than significant.

5.1.5 Mitigation Measures

No significant adverse land use impacts were identified and no mitigation measures are required.

5.1.6 Level of Impact after Mitigation

Project

No significant adverse land use impacts would result from implementation of the Project. Therefore, no mitigation is required, and the impacts would remain less than significant under CEQA and would not be substantially adverse under NEPA.

Expanded Conservation Alternative

No significant adverse land use impacts would result from implementation of the Expanded Conservation Alternative. Therefore, no mitigation is required, and the impacts would remain less than significant under CEQA and would not be substantially adverse under NEPA.

Existing Conservation/No Project Alternative

No significant adverse land use impacts would result from implementation of the Existing Conservation/No Project Alternative. Therefore, no mitigation is required, and the impacts would remain less than significant under CEQA and would not be substantially adverse under NEPA.

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5.2 BIOLOGICAL RESOURCES

This section describes existing biological resources relevant to this analysis (i.e., vernal pools and covered vernal pool species) and associated biological conditions within the VPHCP Plan Area. This section also identifies pertinent biological policies and regulations, and evaluates the potential impacts and effects associated with implementation of the VPHCP and its alternatives. The evaluation presented in this section is based on the biological analysis of vernal pools and covered species included in the VPHCP. The vernal pool data included in this section are consistent with the data presented in the VPHCP, which were derived from a review of historical and recent vernal pool data within the VPHCP Plan Area. Baseline data consist of Beauchamp and Cass (1979), Bauder (1986), City of San Diego (2004), EDAW (2007), 5-year review of species status reports from USFWS (various dates), designated Critical Habitat and the Recovery Plan (USFWS 1998a), review of the City's vernal pool geodatabase (SANDAG 2012) and key ancillary data on species that would contribute to knowledge of its status, and additional data from USFWS and the City since 2004. Citations of source data (e.g., survey reports) for the VPHCP vernal pool database (SANDAG 2012) is available on the Vernal Pool Interactive Map on the City's website, which can be accessed at http://www.sandiego.gov/planning/programs/mscp/vphcp.shtml. The vernal pool data analysis contained within the VPHCP is hereby incorporated by reference.

5.2.1 Affected Environment

Biological Resources Analyzed in the EIR/EIS

Before a determination of the significance of an impact can be made, the presence and relevance of biological resources in the context of the VPHCP must be established. Thus, significance determination for biological resources proceeds in two steps. The first step consists of determining what sensitive biological resources are present and should be evaluated in relation to implementation of the VPHCP. The second step is to determine the sensitivity of identified biological resources in terms of direct and indirect impacts that would result from implementation of the VPHCP.

Pursuant to the Significance Determination Thresholds, existence of any of the following may indicate the presence of sensitive biological resources:

- Lands that have been included in the MHPA as identified in the City MSCP SAP (City of San Diego 1997);
- Wetlands (as defined by the Municipal Code, Section 113.0103);

- Lands outside the MHPA that contain Tier I, Tier II, Tier IIIA, or Tier IIIB Habitats as identified in the City's LDM Biology Guidelines (2012a);
- Lands supporting species or subspecies listed as rare, endangered, or threatened;
- Lands with modeled vernal pool habitat (refer to Appendix C of the VPHCP for details);
- Lands containing habitats with narrow endemic species as listed in the City's LDM Biology Guidelines; and
- Lands containing habitats of covered species as listed in the City's LDM Biology Guidelines and included in the City's MSCP SAP.

Wetlands are a sensitive biological habitat regulated at the federal, state, and local levels. The City's LDM Biology Guidelines defines wetlands as areas characterized by any of the following:

1. All areas persistently or periodically containing naturally occurring *wetland* vegetation communities characteristically dominated by hydrophytic vegetation, including but not limited to salt marsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodlands, riparian scrub, and vernal pools.
2. Areas that have hydric soils or *wetland* hydrology and lack naturally occurring *wetland* vegetation communities because human activities have removed the historic *wetland* vegetation or catastrophic or recurring natural events or processes have acted to preclude the establishment of *wetland* vegetation as in the case of saltpan and mudflats.
3. Areas lacking *wetland* vegetation communities, hydric soils and *wetland* hydrology due to nonpermitted filling of previously existing *wetlands*.
4. Areas mapped as *wetlands* on Map No. C-713 as shown in Chapter 13, Article 2, Division 6 (Sensitive Coastal Overlay Zone).

This definition is intended to apply to naturally occurring wetlands, wetlands created to provide wetland habitat, or from human actions creating open water bodies or altered natural stream courses. Other artificial wetlands created in historically nonwetland areas are not considered wetlands.

Various habitat types are defined as wetlands by the City's LDM Biology Guidelines. Using existing Geographic Information System (GIS) data, it is estimated that approximately 3,500 acres of wetland habitat types are present within San Diego, which includes rivers and streams. The Project proposes development of a comprehensive conservation plan for vernal pools within the VPHCP Plan Area. Chapter 2 provides a discussion of the affected environment

within the VPHCP Plan Area as it relates to vernal pool resources. As part of the adoption of the VPHCP, the City would be granted incidental take of vernal pool species. The VPHCP would not include any other wetland habitats or species. Therefore, the following discussion and analysis focuses only on vernal pool habitat and the seven covered species within the VPHCP Plan Area that would be affected by implementation of the VPHCP.

Summary of Vernal Pools within the VPHCP Plan Area

There are 54 vernal complexes within the VPHCP Plan Area. There are a total of 2,591 mapped vernal pools, including 933 vernal pools within the North VPHCP planning unit, 620 vernal pools in the Central VPHCP planning unit, and 1,038 vernal pool resources in the South VPHCP planning unit (see Figures 2-2 through 2-4). For further information on vernal pools within the VPHCP Plan Area, refer to Chapter 2 of this EIR/EIS.

With the VPHCP Plan Area, there is an estimated 6,726 acres of modeled vernal pool habitat.
In recognition that there could be additional pools that have not been mapped, conservation of and potential impacts to modeled vernal pool habitat within the Plan Area from planned, covered, and future projects were assessed. The model included soils that support vernal pools in the plan area, slope (<12%), and undeveloped land within the plan area (see Appendix C of the VPHCP for further details on the model).

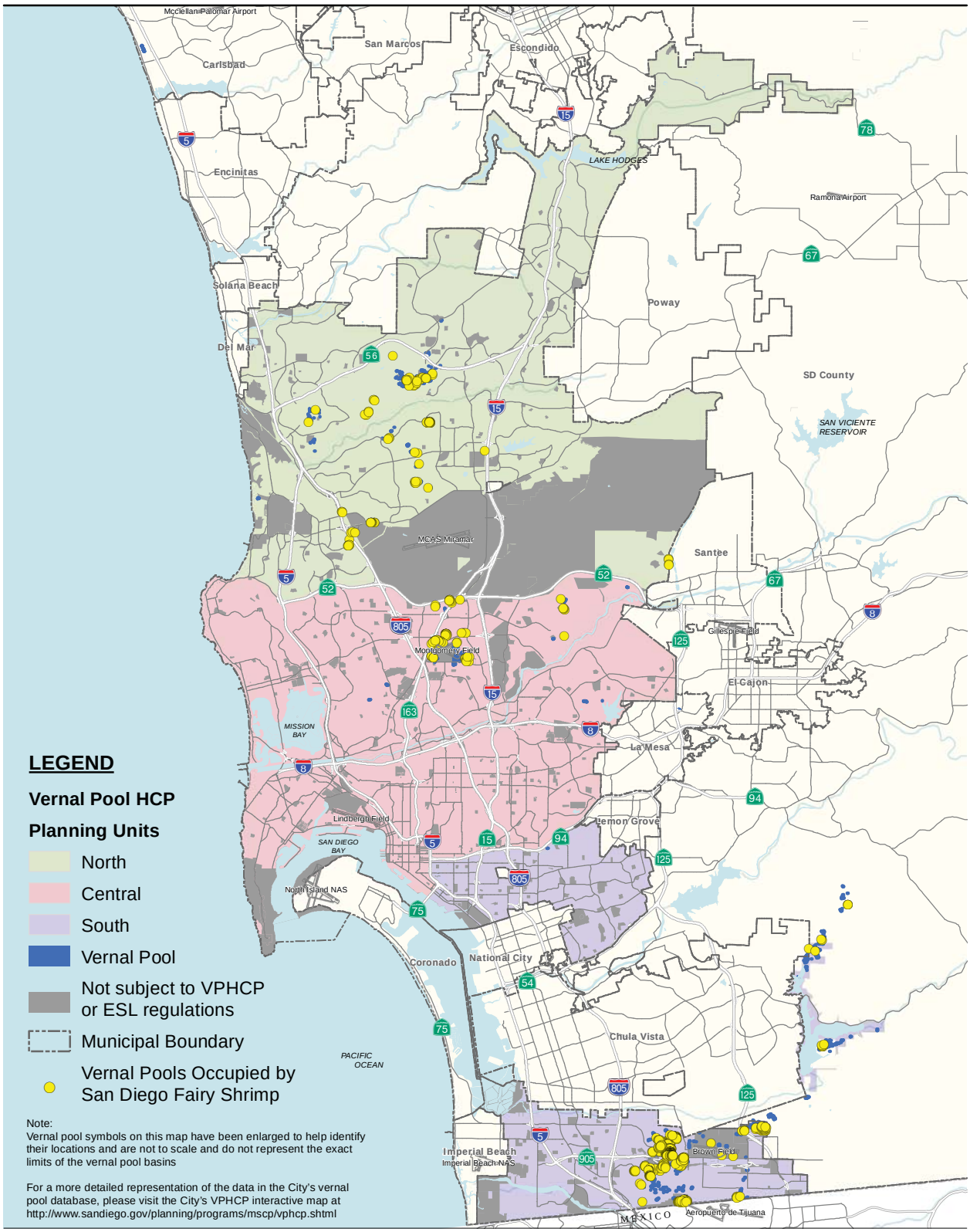
Summary of Covered Species Occurrence within the VPHCP Plan Area

Table 5.2-1 summarizes the total number of vernal pools occupied with each of the seven covered species within the VPHCP Plan Area. The locations of vernal pools occupied by the covered species within the VPHCP Plan Area are illustrated in Figures 5.2-1 through 5.2-7.

Table 5.2-1
Vernal Pools Occupied with Covered Species in VPHCP Plan Area

Covered Species	Total Occupied Pools	Number of Complexes with Occupied Pools
San Diego fairy shrimp	517	35
Riverside fairy shrimp	131	06
San Diego button-celery	732	20
Spreading navarretia	95	08
San Diego mesa mint	337	16
California Orcutt grass	058	03
Otay Mesa mint	369	04

Note: Vernal pools within the VPHCP Plan Area may be occupied by one or more of the covered species.



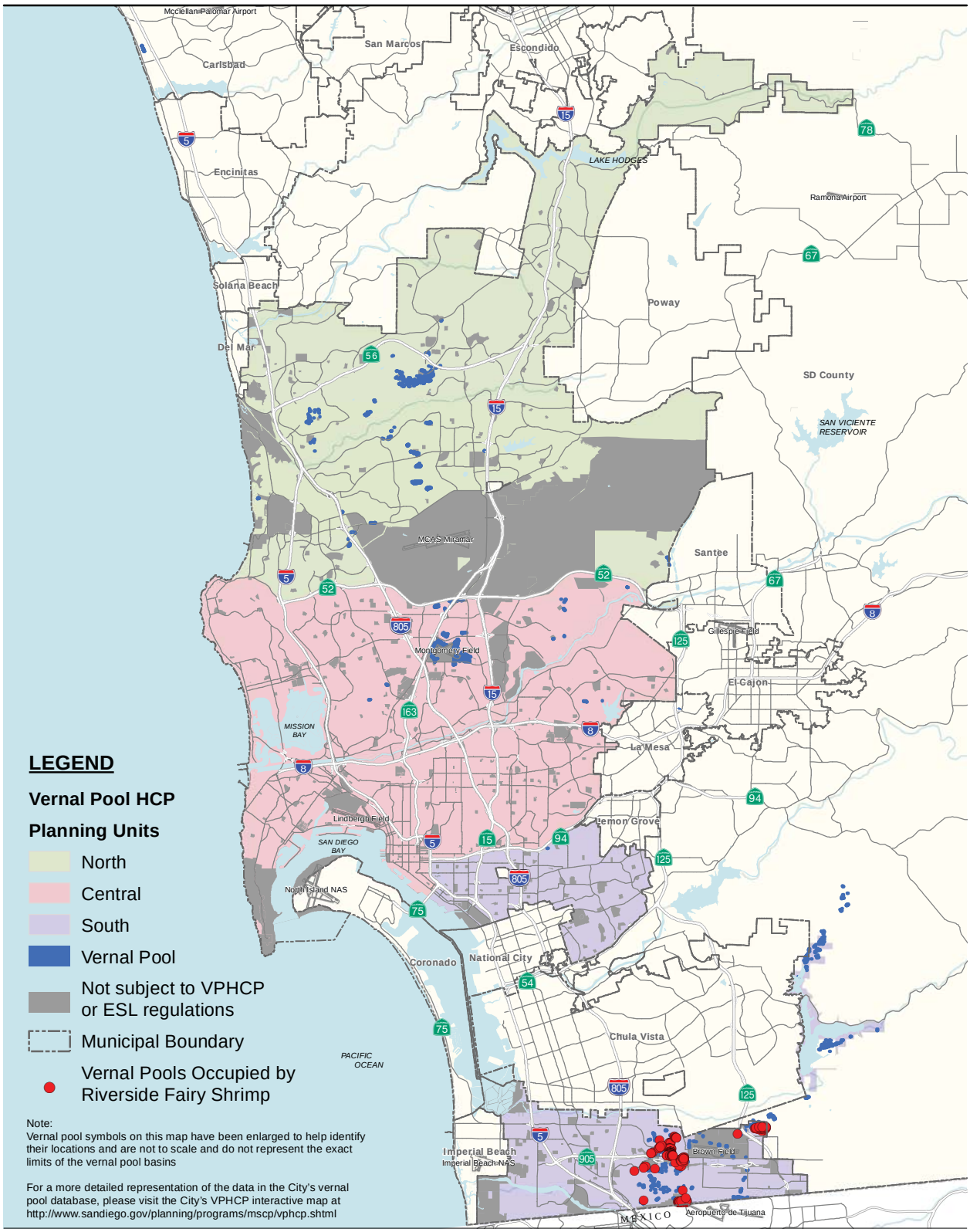
Source: City of San Diego; SANDAG; SanGIS.

5 2.5 0 5 Miles

Scale: 1:316,800; 1 inch = 5 miles

Figure 5.2-1
Location of Vernal Pools Occupied with San Diego Fairy Shrimp in the VPHCP Plan Area

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig5_2_1_SDfairyshrimp_locations.mxd, 7/5/2016, daniel_arellano



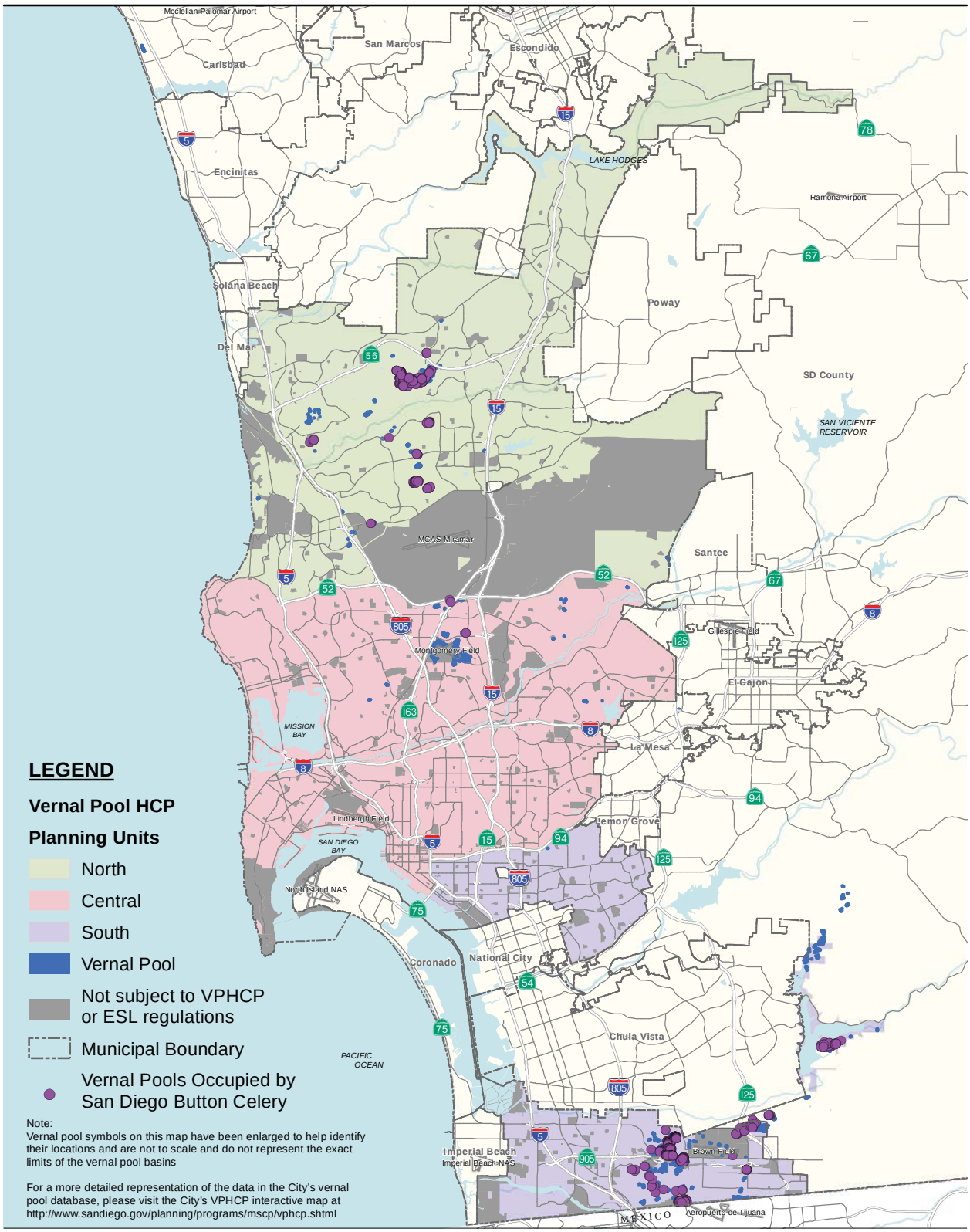
Source: City of San Diego; SANDAG; SanGIS.

5 2.5 0 5 Miles

Scale: 1:316,800; 1 inch = 5 miles

Figure 5.2-2
Location of Vernal Pools Occupied with Riverside Fairy Shrimp in the VPHCP Plan Area

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig5_2_2_RIVfairyshrimp_locations.mxd, 7/5/2016, daniel_arellano



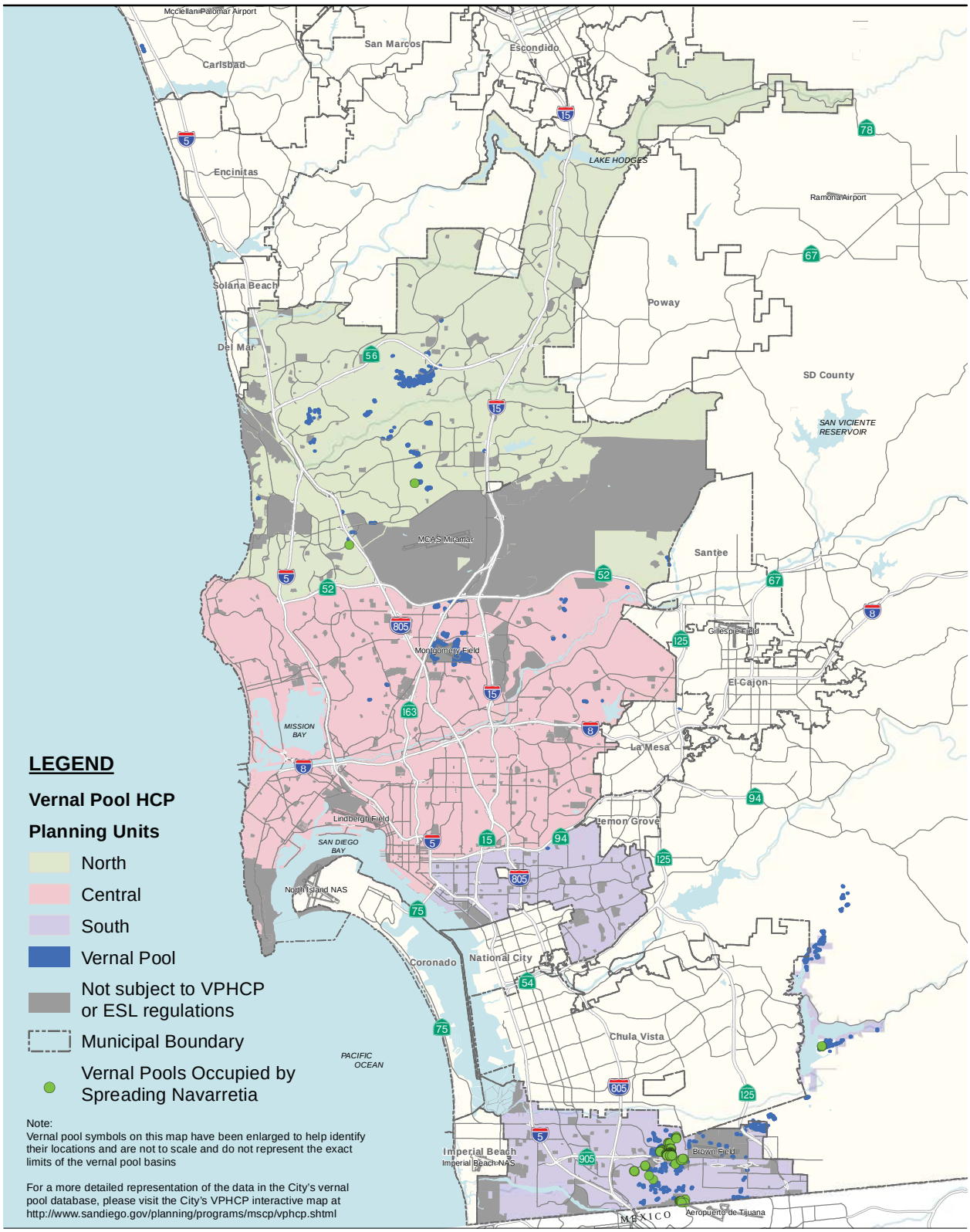
Source: City of San Diego; SANDAG; SanGIS.

5 2.5 0 5 Miles

Scale: 1:316,800; 1 inch = 5 miles

Figure 5.2-3
Location of Vernal Pools Occupied with San Diego Button Celery in the VPHCP Plan Area

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig5_2_3_SDBC_locations.mxd, 7/5/2016, daniel_arellano



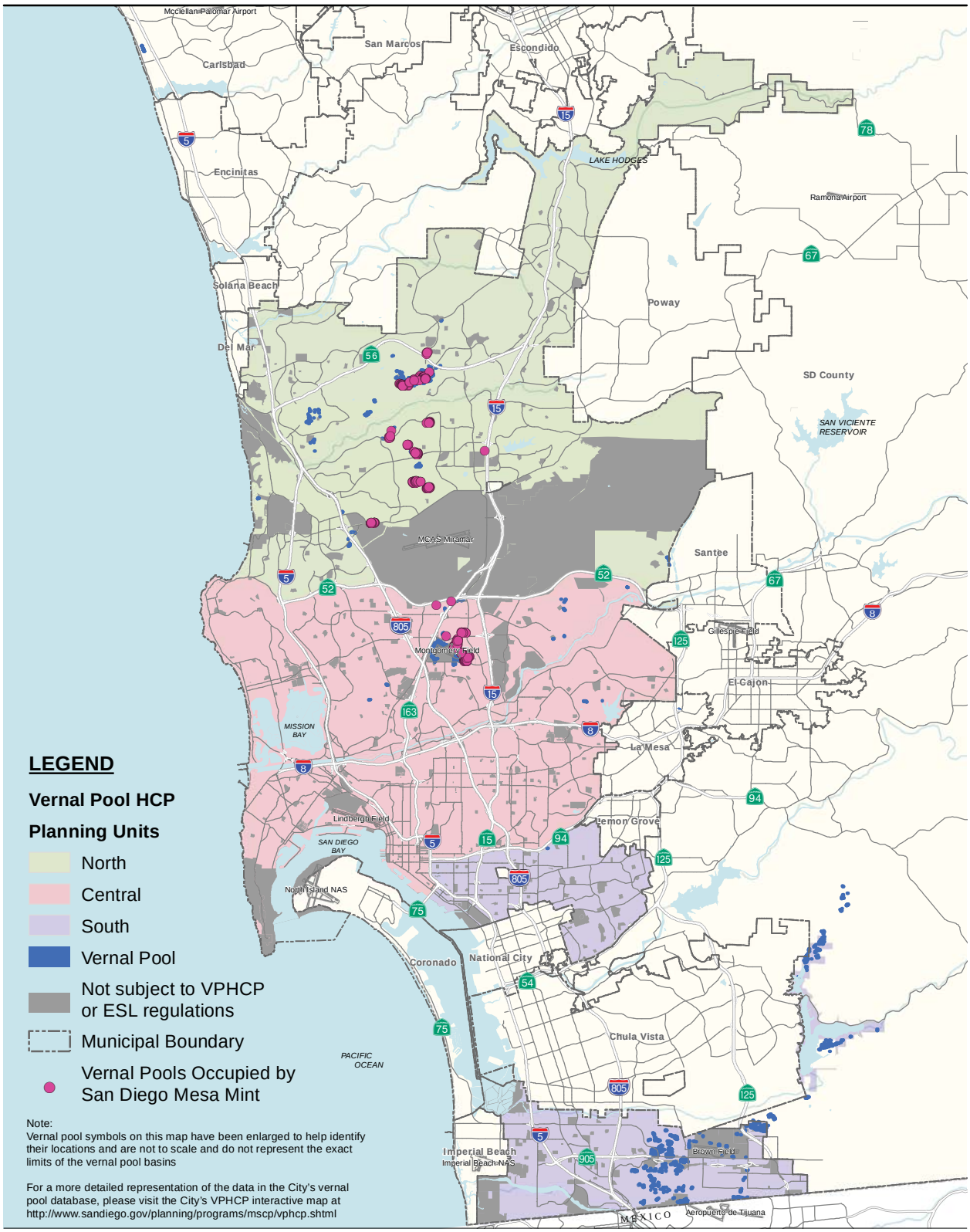
Source: City of San Diego; SANDAG; SanGIS.

5 2.5 0 5 Miles

Scale: 1:316,800; 1 inch = 5 miles

Figure 5.2-4
Location of Vernal Pools Occupied with Spreading Navarretia in the VPHCP Plan Area

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig5_2_4_NAFO_locations.mxd, 7/5/2016, daniel_arellano



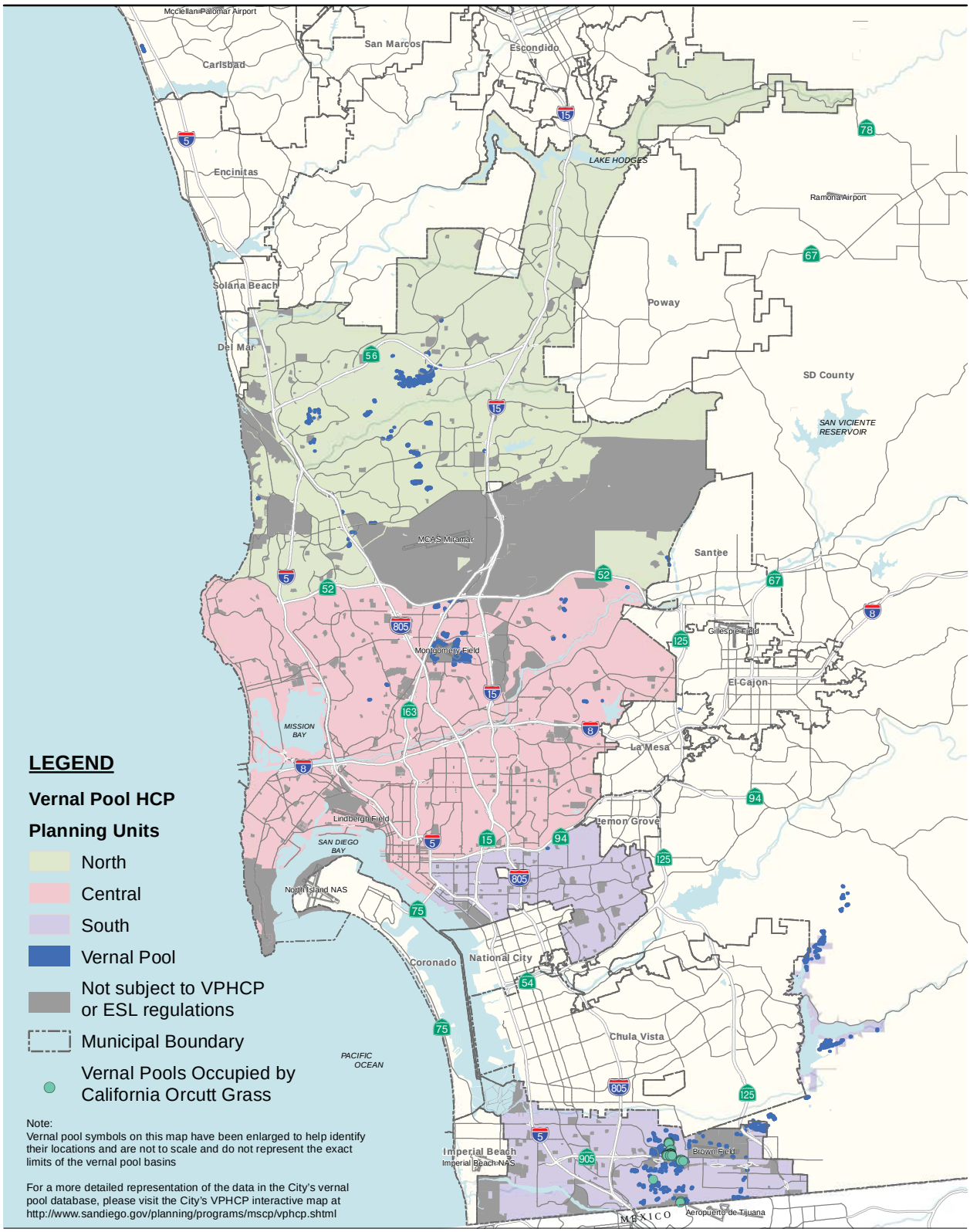
Source: City of San Diego; SANDAG; SanGIS.

5 2.5 0 5 Miles

Scale: 1:316,800; 1 inch = 5 miles

Figure 5.2-5
Location of Vernal Pools Occupied with San Diego Mesa Mint in the VPHCP Plan Area

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig5_2_5_SDMM_locations.mxd, 7/5/2016, daniel_arellano



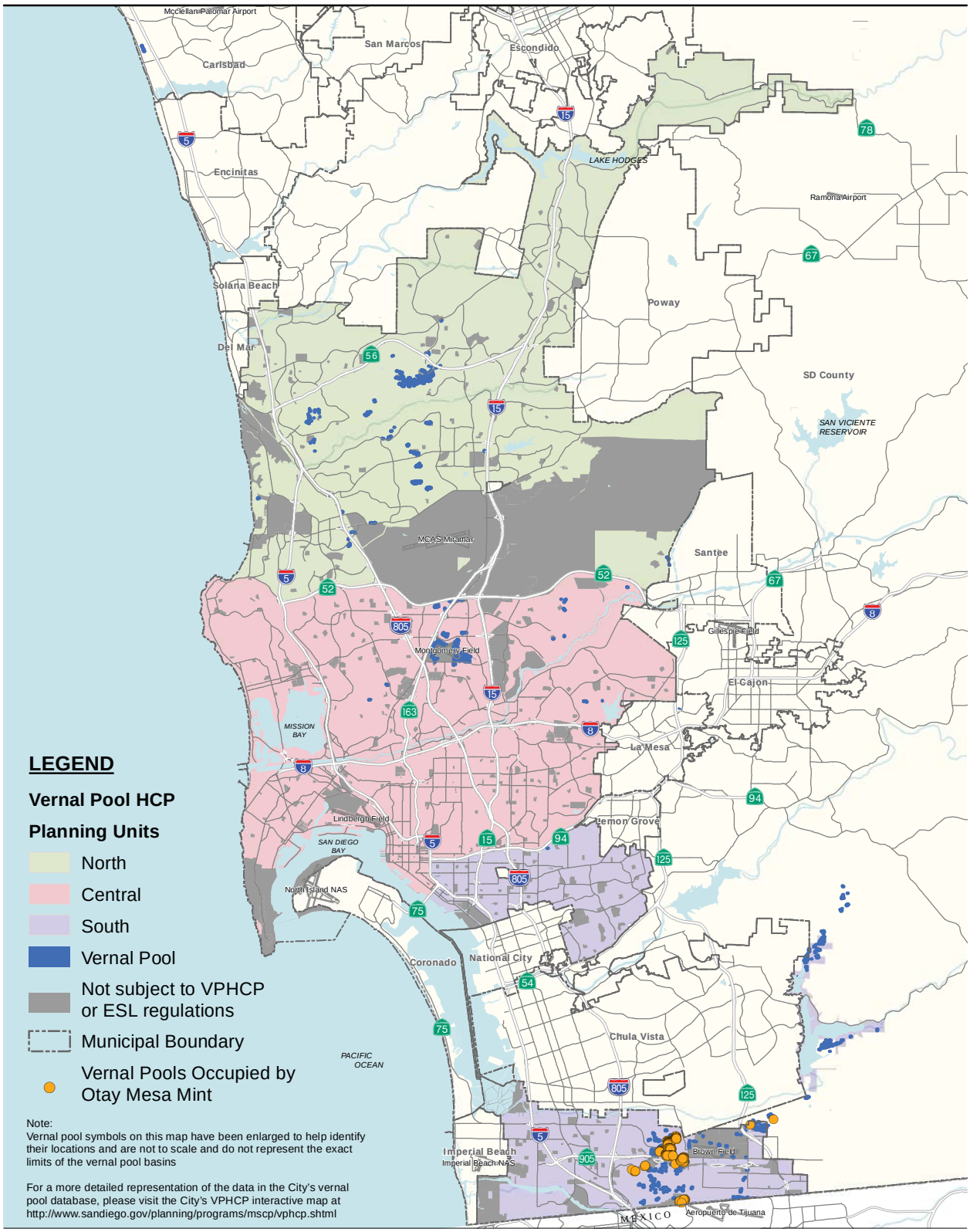
Source: City of San Diego; SANDAG; SanGIS.

5 2.5 0 5 Miles

Scale: 1:316,800; 1 inch = 5 miles

Figure 5.2-6
Location of Vernal Pools Occupied with California Orcutt Grass in the VPHCP Plan Area

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig5_2_6_CAOG_locations.mxd, 7/5/2016, daniel_arellano



Source: City of San Diego; SANDAG; SanGIS.

5 2.5 0 5 Miles

Scale: 1:316,800; 1 inch = 5 miles

Figure 5.2-7
Location of Vernal Pools Occupied with Otay Mesa Mint in the VPHCP Plan Area

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig5_2_7_OTMM_locations.mxd, 7/5/2016, daniel_arellano

Table 5.2-2
Summary of Covered Species Key Information

Covered Species	Federal and State Listing Status	Critical Habitat in VPHCP Plan Area	Key Description Information	Habitat	Life Cycle	Distribution	Status in VPHCP Plan Area
San Diego fairy shrimp	Federally Endangered	Approximately 1,801 acres	• Small aquatic crustacean • Feeds on algae, diatoms, and particulate organic matter	Occurs in vernal pools and other nonvegetated ephemeral (short-lived) pools from 2 to 12 inches in depth in coastal areas of San Diego County, Orange County, and northwestern Baja	• Usually observed January through March • Individuals hatch, mature, and reproduce within 7 to 14 days of rainfall filling a pool, depending on water temperature	Coastal areas of San Diego County, Orange County, and northwestern Baja	Occurs in 517 vernal pools within 35 vernal pool complexes
Riverside fairy shrimp	Federally Endangered	Approximately 804 acres	• Small aquatic crustacean • Feeds on algae and particulate organic matter	Restricted to vernal pools and other nonvegetated ephemeral (short-lived) pools greater than 12 inches in depth in Riverside, Orange, and San Diego counties	• Usually observed January through March • Individuals hatch, mature, and reproduce within 7 to 8 weeks of rainfall filling a pool, depending on water temperature • Cysts (eggs) can withstand temperature extremes and prolonged drying	Riverside, San Diego, and Orange counties	Identified in 131 vernal pools within six vernal pool complexes
San Diego button-celery	Federally Endangered California State Endangered	No designated Critical Habitat	Perennial gray-green herb	Found in almost every type of southern California vernal pool	• Vernal pool obligate and relies on ephemerally wet conditions to reproduce, blooming from April through June • Seems more tolerant of a wider range of vernal pool habitat than most obligate vernal pool species • Can tolerate disturbance factors better than most endemic species	San Diego County at Otay Mesa, Kearny Mesa, Del Mar Mesa, MCAS Miramar, and MCB Camp Pendleton, and in northern Baja California, Mexico	Occurs in 732 vernal pools within 20 vernal pool complexes

Covered Species	Federal and State Listing Status	Critical Habitat in VPHCP Plan Area	Key Description Information	Habitat	Life Cycle	Distribution	Status in VPHCP Plan Area
Spreading navarretia	Federally Threatened	Approximately 628 acres	Annual herb	Known from hardpan, claypan, alkali playas, and alluvial terrace pool complexes	• Pollination and dispersal mechanisms not well known • Blooms in May and June through summer months	Widely disjointed and restricted vernal pool complexes extending from the Santa Clarita region of Los Angeles County, to the western lowlands of Riverside County, through coastal and foothill San Diego County, and south to San Quintin, Baja	Occurs in 95 vernal pools within eight complexes
San Diego mesa mint	Federally Endangered California State Endangered	No designated Critical Habitat	Annual herb	Known from hardpan-type vernal pools in San Diego County	• Dependent on saturated soils of vernal pools • Blooms from May or June through early July • Primarily bee pollinated	Mesas of western San Diego County including Del Mar Mesa, Mira Mesa, Marine Corps Air Station Miramar, Kearny Mesa, and western Tierrasanta	Occurs in 337 vernal pools within 16 vernal pool complexes
California Orcutt grass	Federally Endangered California State Endangered	No designated Critical Habitat	Annual bright gray-green grass	Restricted to vernal pools in southern California	• Flowers from April through July and then sets seed • Adapted to conditions in the wettest, longest lasting portion of vernal pools • Believed to be wind pollinated	Ventura, Los Angeles, Riverside, and San Diego counties	Occurs in 58 vernal pools within three vernal pool complexes
Otay Mesa mint	Federally Endangered California State Endangered	No designated Critical Habitat	Annual herb	Known from claypan-type vernal pools on Otay Mesa	• Dependent on saturated soils of vernal pools • Blooms from May or June through early July • Primarily bee pollinated	Found only in southern San Diego County vernal pools on Otay Mesa	Occurs in 369 vernal pools within four vernal pool complexes All but one of the pools have had some habitat restoration

Table 5.2-2 provides key information for the seven covered species, including the name, listing status, summary of Critical Habitat (if applicable), species description, habitat, lifecycle, distribution, and status within the VPHCP Plan Area. A more detailed depiction of the location of covered species is available on the Vernal Pool Interactive Map on the City's website, which can be accessed at http://www.sandiego.gov/planning/programs/mscp/vphcp.shtml.

5.2.2 Regulatory Framework

In addition to the federal, state, and City conservation planning policies, plans, and regulations described in Section 3.1.1, discussion of policies and plans on lands within the City's jurisdiction is provided in Section 5.1, Land Use, including those related to regulation of biological resources (i.e., the MSCP, MHPA Land Use Adjacency Guidelines, LDM Biology Guidelines, and ESL Regulations). Consistency with federal, state, and City plans and policies regarding potential effects to biological resources from implementation of the VPHCP is described in Section 5.2.4, Environmental Consequences, below.

5.2.3 CEQA Thresholds of Significance

The following thresholds are derived from the City's 2016 Significance Determination Thresholds for the purpose of evaluating potential impacts to biological resources. It is important to note that a biological resource, such as vernal pools, may be more vulnerable to some kinds of development than to others. Sensitivity and/or significance of impacts must be appropriately considered in the context of a proposed project. A significant CEQA impact would occur if the Project would result in:

1. *A substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the MSCP or other local or regional plans, policies or regulations, or by the CDFW or USFWS;*
2. *A substantial impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats or Tier IIIB Habitats as identified in the Biology Guidelines of the Land Development Code or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS;*
3. *A substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pool, riparian, etc.) through direct removal, filing, hydrological interruption, or other means;*
4. *Interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites;*

5. *A conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, either within the MSCP plan area or in the surrounding region;*
6. *Introduction of a land use within an area adjacent to the MHPA that would result in adverse edge effects;*
7. *A conflict with any local policies or ordinances protecting biological resources;*
8. *An introduction of invasive species of plants into a natural open space; and/or*
9. *A biological condition, policy, or natural resource management plan that cannot persist into the long term due to pressures caused by anticipated climate change.*

5.2.4 Environmental Consequences

This section analyzes the adequacy of the Project and alternatives with respect to environmental consequences resulting from implementation of the VPHCP pursuant to the issuance of Section 10(a) of FESA and Section 2835 of the California Fish and Game Code.

This section identifies potential environmental consequences to vernal pools and covered species resulting from covered projects, future projects, and/or covered activities consistent with the VPHCP. It also discusses loss of Critical Habitat for the three species for which USFWS has designated Critical Habitat: spreading navarretia, San Diego fairy shrimp, and Riverside fairy shrimp. The analysis is based on whether a vernal pool or modeled habitat is located within the Preserve or not and does not account for potential impacts from covered activities. There could be minor impacts to individual vernal pools (known or unknown) and/or species from covered activities (e.g., management, trail use) that are not accounted for here because the locations of potential future covered activities are not known at this time.

Direct impacts are assessed quantitatively, while indirect impacts are assessed qualitatively; permanent and temporary impacts are also evaluated based on the definitions below. The biological resources analysis in the VPHCP includes a detailed conservation analysis for vernal pools and covered species from implementation of the VPHCP. A consistency analysis of the VPHCP with the USFWS Recovery Plan for vernal pools (1998b) is also included.

Impacts are results of actions affecting vernal pools and covered species in the VPHCP Plan Area. Impacts can be direct or indirect.

Direct impacts are defined as the removal or alteration of vernal pools and/or covered species populations or occurrences (or portions thereof) as a result of covered projects and future projects or covered activities. Direct impacts are a result of land development and occur at the time and place of project implementation (e.g., grading, ground disturbance, trampling of plants). Direct impacts can be either permanent or temporary (see below).

Indirect impacts are defined by USFWS as "those that are caused by the proposed action and are later in time, but are still reasonably certain to occur" (50 CFR 402.02). Indirect impacts in the context of the VPHCP also include those impacts that occur at the time of the proposed action but beyond the footprint of a project or activity (i.e., beyond the area of direct disturbance). While more difficult to detect and track, indirect impacts can undermine species viability or habitat quality, especially if multiple indirect or direct impacts work cumulatively to impair the species or to degrade the habitat. Indirect impacts can be either temporary or permanent.

Permanent impacts are direct impacts that permanently remove or alter vernal pools as a result of covered projects or covered activities (e.g., land development). Permanent impacts also include indirect impacts to vernal pools that result in a permanent change to vernal pool functions (e.g., development around a vernal pool complex that reduces watershed). Impacts that result in reduction of long-term viability of a covered species occurrence are also considered permanent.

Temporary impacts are impacts resulting from covered projects or covered activities that cause temporary habitat disruption but do not permanently alter landforms, and do not result in permanent habitat loss or negative impacts to vernal pool watersheds (e.g., recontoured vernal pool basins that would be restored).

Given the restriction that development must occur within the least sensitive portion of the site, there is high likelihood that impacts would be significantly less than the "worst-case scenario," which has been provided in this analysis. Public and private parcels that would be added to the MHPA under the VPHCP would retain their development rights. Consistent with the MSCP, City's ESL Regulations, and the Biology guidelines, lands wholly within the MHPA would be allowed 25% development in the least sensitive area and the remainder of the parcel would be conserved via a covenant of easement or dedication to the City (see Section 5.1, Land Use, for more detail). Several of the parcels that would be added to the MHPA have been "hard lined" and have defined conservation and development footprints.

As summarized in Section 3.3.7, the VPHCP includes a Mitigation Framework that provides specific mitigation measures required for implementation of the VPHCP and covered projects and covered activities. Because these measures are required as part of the project, the analysis of

potential impacts assumes implementation of the measures specified in the Mitigation Framework.

Implementation of the VPHCP does not override the necessity for further environmental review for, and impact analysis of, individual actions at the project level (i.e., covered projects, covered activities, and future projects, as described in Chapter 3 of this EIR/EIS). Take authorization for vernal pools would not automatically be granted to individual projects; rather, each discretionary action would be subject to further environmental review and discretionary approval by the City based on a consistency determination with the VPHCP and other state and federal policies, plans, and regulations.

The biological resources impact analysis for the VPHCP was conducted based on the best available data at the time of preparation. Data were compiled from a variety of sources that include the City's 2004 VPI, site-specific vernal pool reports, restoration and enhancement plans, biological reports submitted to the City, and digital geographic information from USFWS. Public input on vernal pool data was also solicited during the public outreach process (see Chapter 1 of this EIR/EIS).

Local site conditions, such as rainfall, likely influence numbers of standing plants and their local distribution (Schiller et al. 2000; Bauder 2000). Annual variability in rainfall can also alter the proportion of ponding in each pool, which can result in variability in species distribution within and among pools given the species' narrow habitat preferences (Bauder 2005). Despite seasonal fluctuations, the potential for finding additional pools with covered plant species within the city is considered low. Therefore, distributional information for the covered plant species within the city is considered accurate and complete for purposes of this impact analysis.

In contrast to the covered plant species, the distributional information for San Diego fairy shrimp is not nearly as accurate and complete for many of the complexes in the city. For some sites where development has been proposed and extensive surveys have been conducted (such as the J13 and J34 complexes in the Otay Mesa area), existing data for shrimp species are relatively accurate. On other sites, surveys for fairy shrimp (protocol or otherwise) have not occurred or data are incomplete. For example, protocol surveys have not been conducted in over 75 pools at Otay Lakes (K5). However, San Diego fairy shrimp are fairly common within nearby vernal pools in San Diego County; therefore, it is likely that San Diego fairy shrimp could occur in some of these pools. Riverside fairy shrimp are much rarer; therefore, the same conclusion cannot be assumed for this species. For purposes of the VPHCP impact analysis, data for Riverside fairy shrimp are considered accurate (i.e., the VPHCP is likely not underestimating the number of vernal pools occupied by Riverside fairy shrimp within the Plan Area). Seasonal variability in ponding as a result of varying rainfall amounts and patterns can also affect shrimp

occupancy in vernal pools from year to year (Bauder 2005; Simovich and Riley 2008). This variability can result in substantial differences in fairy shrimp occupancy data at a site between years. For example, protocol surveys conducted by RECON in 1997 and 1998 on Marine Corps Base Camp Pendleton identified 216 vernal pools on the base as occupied by fairy shrimp (RECON 1998). Base-wide protocol surveys in 2005 identified 279 occupied vernal pools (USFWS 2008a), which is a 29% increase in observed occupancy.

These examples, as well as qualitative assessments and general observations, suggest the possibility that additional San Diego fairy shrimp occurrences are possible in the city and, therefore, distributional data for San Diego fairy shrimp are likely incomplete. It is possible that additional vernal pools with San Diego fairy shrimp may be impacted or conserved within the MHPA than is currently estimated. However, it is likely that more comprehensive surveys have been conducted for vernal pools that would be impacted by development compared to pools that are already conserved or planned for conservation. Detailed surveys (see City Biology Guidelines) are required for development projects to determine impacts and, therefore, more data are available for pools that would be impacted as a result of proposed development projects. For this reason, it is assumed that data related to the impact analysis for San Diego fairy shrimp are generally accurate and complete. Conversely, the conservation of pools occupied by San Diego fairy shrimp within the VPHCP Plan Area is to be underestimated because many pools conserved under existing conditions have not been surveyed. If and when conserved pools are surveyed, it is likely that it would be determined that a higher number of vernal pools occupied with fairy shrimp are conserved under the VPHCP (i.e., conservation of vernal pools occupied by San Diego fairy shrimp is likely higher than estimated in the VPHCP conservation analysis).

ISSUE 1: *Would the project result in a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the MSCP or other local or regional plans, policies or regulations, or by the CDFW or USFWS?*

Project

This section addresses the potential impacts to the seven covered species resulting from implementation of the VPHCP. This includes potential impacts to occupied pools resulting from development of lands outside the MHPA, as well as impacts to occupied pools inside the MHPA resulting from covered projects and covered activities (described in Chapter 4 of the VPHCP). Both direct and indirect impacts to covered species are possible, as discussed below. Implementation of the measures required by the Mitigation Framework is assumed as part of the impact analysis.

Fragmentation and Isolation of Vernal Pool Habitat

The continued existence of the covered species is dependent upon the long-term survival of a functioning vernal pool ecosystem. Although ecological processes in vernal pools may be viewed at relatively small temporal (e.g., weeks to months during wetting and drying cycle) and spatial (e.g., tens of square meters) scales, they are greatly influenced by large landscape scale processes (e.g., hydrology, plant and animal dispersal) (Leidy and White 1998).

Fragmentation and isolation of vernal pools can threaten the important ecological and mutualistic processes that link vernal pools to each other and the surrounding uplands (USFWS 1998). Such ecological and mutualistic processes involve insects that pollinate the vernal pool plants; mammals and birds that disperse flora and fauna between vernal pools; and amphibians that reproduce in vernal pools. Specialized plant-pollinator relationships can be threatened by fragmentation of vernal pools from the surrounding uplands. For example, some solitary bees from the Andrenidae family focus on vernal pool annuals (e.g., *Blennosperma*, *Downingia*, *Lasthenia*, *Limnanthes*) for collecting pollen (Thorp 1990). Except during the blooming period of their host plants, these bees spend most of their lives nesting underground in the adjacent uplands. These bees have a limited range of foraging, which is not surprising since they are small, have limited flight ability, and tend to remain near their natal site (Thorp 1990; Thorp and Leong 1995).

General fragmentation of plant-pollinator systems can have detrimental effects on the visitation rates by pollinators and, ultimately, the seed set produced by the plants (Jennersten 1988). Although few empirical studies exist for southern California, similar plant-insect specialization is likely and may be essential to successful reproduction of certain species (USFWS 1998). Therefore, plants in vernal pools that are isolated from other natural ecosystems may experience reduced pollination and thus produce less seed. Habitat fragmentation further threatens pollination systems by reducing population sizes and thus potentially increasing occurrences of genetic drift, inbreeding depression, and extinction due to demographic stochasticity.

Watershed contiguity augments gene flow in populations already naturally low in variability (Davies 1996) by allowing flooding between pools. Vernal pool organisms are typically defined by the complex in which they occur, in part because gene flow between complexes appears to be extremely low (Fugate 1993; Davies 1996). Isolation of pools, or modification of the natural watershed, potentially compromises gene flow, resulting in a loss of genetic variability and an increased susceptibility to extinction and reduced fitness (Bohonak 2005; Soule 1986).

Similarly, the proximity of vernal pools to upland habitats influences the dispersal of seeds between vernal pools by herbivores, such as rabbits, that can be important vectors of seed

dispersal (Zedler and Black 1992). As they become fragmented and isolated, vernal pools can become unsuitable for avian species that consume and disperse vernal pool fairy shrimp species, which could in turn negatively affect the genetic stability of vernal pool fairy shrimp (Proctor 1964; Krapu 1974; Swanson et al. 1974). Vernal pool preserves should provide adequate upland habitat and/or habitat linkages adjacent to vernal pools to support pollinators, herbivores, and their predators, to prevent overgrazing of vernal pool flora, and avian species.

Preserving small, isolated, fragmented preserves may not sustain the multiscale ecological processes associated with vernal pools (Leidy and White 1998). As such, the scientific community recommends that conservation of vernal pools include the surrounding upland habitats (Bauder 1987; Thorp and Leong 1995, 1998; Hanes and Stromberg 1998; Leidy and White 1998; USFWS 1998). These surrounding upland habitats influence vernal pool hydrology, species composition, and essential interactions between the species that inhabit them. Fragmenting vernal pools from each other can disrupt dispersal and gene flow between populations of vernal pool flora and fauna, increase their vulnerability to stochastic events, and hinder their ability to reestablish after local extinctions. Elimination of predators, which could lead to population increases of herbivores such as burrowing rodents, rabbits, and quail, is an indirect effect resulting from the fragmentation and isolation of vernal pools (USFWS 1998).

The VPHCP, in conjunction with the biologically superior wetland deviation for lands within the MHPA, will allow limited impacts to disturbed, unmanaged vernal pools in exchange for preservation, restoration, and management of vernal pools in a biologically defensible configuration (e.g., substantial connection to biological open space) that helps ensure their long-term viability and supports recovery of the species. Impacts that would occur outside the MHPA would not require a wetland deviation; however, impacts that occur within the MHPA would require a wetland deviation. Therefore, new vernal pool Preserve areas will be designed to have a substantial connection to the MHPA that is expected to minimize the negative effects of fragmentation/isolation by allowing important ecological and mutualistic processes that link vernal pools to each other and the surrounding uplands (USFWS 1998) to continue.

Direct Impacts to Covered Species

A summary of potential direct impacts to covered species is provided in Table 5.2-3. A discussion of impacts for each species is provided below.

Table 5.2-3
Summary of Covered Species Impacts inside and outside MHPA from Development

Covered Species[1]	Total Occupied Pools in VPHCP Plan Area	Total and % Impacted Occupied Pools	Total and % Occupied Pools Impacted outside MHPA	Total and % Occupied Pools Impacted inside MHPA
Otay Mesa mint	369	0 (0%)	0 (0%)	0 (0%)
San Diego mesa mint	337	2(1%)	2 (1%)	0 (0%)
Spreading navarretia	095	1 (1%)	1 (1%)	0 (0%)
San Diego button-celery	732	10 (1%)	10 (1%)	0 (0%)
California Orcutt grass	058	0 (0%)	0 (0%)	0 (0%)
Riverside fairy shrimp	131	0 (0%)	0 (0%)	0 (0%)
San Diego fairy shrimp	517	55 (11%)	52 (10%)	3 (<1%)

[1] Some vernal pools are occupied by more than one covered species. This table does not include impacts from covered activities.

Overall, most of the vernal pools that would be potentially impacted by development both inside and outside the MHPA are low-quality pools, the majority of which occur in disturbed areas and do not support sensitive species. However, some vernal pools that would not be conserved are occupied by one or more covered species (Table 5.2-2). The majority of the occupied pools that would be potentially impacted by development occur outside the MHPA. Three vernal pools occupied by San Diego fairy shrimp would potentially be impacted by development within the MHPA due to the 25% development encroachment allowed per the ESL Regulations. The direct loss of vernal pools that support covered species would require compensatory mitigation as outlined in the Mitigation Framework, to ensure the viability and continued persistence of covered species. A discussion on impacts to, and conservation of, each covered species is provided below.

Land preservation is an important component of the VPHCP; specifically for lands with vernal pool resources that are not currently conserved. A gap analysis for vernal pools was conducted to identify the areas within the VPHCP Plan Area where vernal pools were not adequately protected. Determining the additional areas to add to the MHPA through implementation of the VPHCP, the following approach for conserving vernal pool complexes and covered species populations was considered:

- Conserve complexes occupied with the covered species (75% or 100% conservation level).[2]

[2] The City has designated conservation levels (75 or 100%) for each parcel within the MHPA. The conservation level denotes the portion of a parcel that would be conserved. For example, for a parcel designated with a 75% conservation level, 25% of the parcel is available for development. Development would occur on the least environmentally sensitive area of the parcel, as determined by the City environmental review process.

- Conserve complexes (75% or 100% conservation level) identified in the Recovery Plan (USFWS 1998a) and/or complexes with historical occurrences of the covered species in a configuration as necessary to maintain the viability of covered species populations.
- Conserve areas designated as Critical Habitat for the covered species.

Table 5.2-4 summarizes the conservation of covered species under the VPHCP once additional lands are added to the MHPA, including the total conservation of known occupied pools, as well as the percentage of occupied pools conserved. The increase in conservation of occupied vernal pools from the existing conservation is also shown. Addition of lands to the MHPA through implementation of the VPHCP would result in conservation of 100% of known occupied pools for three of the seven covered species: Otay Mesa mint, San California Orcutt grass, and Riverside fairy shrimp. Therefore, 100% conservation of known occupied pools is afforded to one additional species from the existing conservation (Riverside fairy shrimp). In addition, conservation of occupied vernal pools would increase for three covered species: three additional pools occupied by San Diego button-celery would be conserved (an increase of 1% from the existing conservation), three additional pools occupied by San Diego mesa mint would be conserved (an increase of <1%), and 30 additional pools occupied by San Diego fairy shrimp would be conserved (an increase of 6% from the existing conservation).

Some restoration and enhancement activities (e.g., rut removal and recontouring of vernal pools, soil replacement, removal of nonnative invasive plant species, and planting container plants) in occupied habitat have potential to damage or destroy a small number of covered species. Under these types of activities, there is not only potential for changes in the basic micro-habitat provided in each pool, but it is also possible that cysts and/or seeds could be damaged or destroyed by personnel conducting restoration and enhancement activities. For example, cysts and/or seeds could be covered too deeply by soil when vernal pools are recontoured. To minimize this potential impact, disturbance will be limited to the area that is being enhanced, and soil within areas that are being recontoured will be salvaged and reintroduced to the pool where they were collected following contouring. Additional measures to ensure that temporary impacts associated with restoration and enhancement activities are minimized are included in the VPHCP Mitigation Framework.

Table 5.2-4
Conservation of Vernal Pools Occupied with Covered Species (Total and % Pools Conserved)[1]

	PONU Total Pools in VPHCP Plan Area	PONU Total Pools Conserved	PONU % Pools Conserved	POAB Total Pools in VPHCP Plan Area	POAB Total Pools Conserved	POAB % Pools Conserved	NAFO Total Pools in VPHCP Plan Area	NAFO Total Pools Conserved	NAFO % Pools Conserved	ERAR Total Pools in VPHCP Plan Area	ERAR Total Pools Conserved	ERAR % Pools Conserved	ORCA Total Pools in VPHCP Plan Area	ORCA Total Pools Conserved	ORCA % Pools Conserved	RFS Total Pools in VPHCP Plan Area	RFS Total Pools Conserved	RFS % Pools Conserved	SDFS Total Pools in VPHCP Plan Area	SDFS Total Pools Conserved	SDFS % Pools Conserved
Existing Conservation[1]	369	369	100%	337	332	99%	95	94	99%	732	719	98%	58	58	100%	131	128	98%	517	431	83%
MHPA after VPHCP Implementation	369	369	100%	337	335	99%	95	94	99%	732	722	99%	58	58	100%	131	131	100%	517	462	89%
Additional Conservation Resulting from VPHCP Implementation	**n/a**	**0**	**0**	**n/a**	**3**	**<1%**	**n/a**	**0**	**0**	**n/a**	**3**	**1%**	**n/a**	**0**	**0**	**n/a**	**3**	**2%**	**n/a**	**31**	**6%**

n/a= Not applicable
[1] The existing conservation includes existing conserved lands within the City's MHPA, permitted projects, and planned projects.
[2] Pools and species population conserved is an estimate based on 75% and/or 100% conservation level by vernal pool complex. See Appendix C of the VPHCP for more detail on the conservation analysis for each vernal pool complex in the VPHCP Plan Area. This table does not include impacts from covered activities.

ERAR = San Diego button-celery
NAFO = Spreading navarretia
ORCA = California Orcutt grass
POAB = San Diego mesa mint
PONU = Otay Mesa mint
RFS = Riverside fairy shrimp
SDFS = San Diego fairy shrimp

Overall, the VPHCP would result in conservation of additional covered species beyond the existing conservation (for species that are not already 100% conserved under the existing conservation), resulting in a net benefit to these covered species populations. A summary of conservation for each covered species is provided below. Where complexes occupied by covered species are not conserved under the VPHCP, or where the covered species population within a complex is not conserved, compensatory mitigation would be required as part of the Mitigation Framework. To conserve the existing population at impacted occurrences, salvage of unique genetic material and in-kind restoration would be required.

Otay Mesa Mint

There would be no direct impacts to any of the 369 vernal pools known to be occupied by Otay Mesa mint that occur within the VPHCP Plan Area as a result of covered projects and future projects (Table 5.2-3). All of the 369 vernal pools occupied with Otay Mesa mint (100%) within the VPHCP Plan Area would be conserved in the Preserve through implementation of the VPHCP (Table 5.2-4). In addition, potential habitat that will be restored (as identified in Table 3-8) on Otay Mesa will be added to the Preserve. The VPHCP will also provide additional management and monitoring for this species, beyond existing conservation conditions, through implementation of the VPMMP.

San Diego Mesa Mint

There would be potential for direct impacts to two of the vernal pools known to be occupied with San Diego mesa mint that occur within the VPHCP Plan Area at Montgomery-Gibbs Executive Airport (Table 5.2-3). Mitigation is required for any direct impact to San Diego mesa mint, and must also include the salvage of seed or plants to preserve the population genetics, consistent with the Mitigation Framework (see Chapter 11). Mitigation also would occur in accordance with FAA regulations for Runaway Safety Areas. Three additional vernal pools occupied by San Diego mesa mint would be conserved in the MHPA as a result of implementation of the VPHCP compared to the existing conservation, thereby conserving 335 vernal pools (99%) that are known to support San Diego mesa mint in the VPHCP Plan Area (Table 5.2-4). In addition, potential habitat that could be restored with mitigation or grant funding on Kearny Mesa will be added to the Preserve. The VPHCP will also provide additional management and monitoring for this species, beyond existing conservation conditions, through implementation of the VPMMP.

Spreading Navarretia

One of the 95 vernal pools known to be occupied by spreading navarretia could be directly impacted at the NDU 1&2 site on Otay Mesa (Table 5.2-3). In addition, potential habitat that will

be restored (as identified in Table 3-8) on Otay Mesa and Kearny Mesa will be added to the Preserve through implementation of the VPHCP. Although one vernal pool that supports spreading navarretia would be impacted at the NDU 1&2 site within the J13 complex series on Otay Mesa, two pools are known to support spreading navarretia within this historically recognized J13 population. The other occupied pool would be conserved under the VPHCP. This means that the existing population would be protected at this occurrence (i.e., protection of at least 50% of the population in the complex). Therefore, the potentially unique genetics of spreading navarretia at the J13 complex would be preserved. The remaining 94 vernal pools occupied by spreading navarretia would be conserved under the Project (Table 5.2-4).

Mitigation is required for direct impact to the one pool at the NDU 1&2 complex that supports spreading navarretia, including salvage of potentially impacted spreading navarretia individuals to preserve the population genetics. A restoration plan consistent with the Mitigation Framework that is a part of the Project, which includes restoring vernal pools with the salvaged spreading navarretia (i.e., in-kind restoration), would be required to mitigate for the one impacted pool that supports spreading navarretia. The VPHCP will also provide additional management and monitoring for this species, beyond existing conservation conditions, through implementation of the VPMMP.

San Diego Button-Celery

A maximum of nine of the 732 vernal pools known to be occupied with San Diego button-celery would potentially be directly impacted within the J13 complex series (Table 5.2-3). Three additional vernal pools that support San Diego button-celery would be conserved in the MHPA as a result of implementation of the VPHCP compared to the existing conservation, thereby conserving 722 vernal pools (99%) that support San Diego button-celery in the VPHCP Plan Area (Table 5.2-4). However, of the 11 pools known to support San Diego button-celery within the J13 complex series, only three would be conserved. Because less than 50% of the occupied pools at the J13 complex are conserved, the existing population has not been conserved. In addition, potential habitat that will be restored (as identified in Table 3-8) on Otay Mesa and Kearny Mesa will be added to the Preserve through implementation of the VPHCP. The VPHCP will also provide additional management and monitoring for this species, beyond existing conservation conditions, through implementation of the VPMMP.

To prevent the loss of the unique genetics of the J13 San Diego button-celery population, mitigation for impacted pools would occur consistent with the Mitigation Framework requirements that are part of the Project, including salvage of impacted San Diego button-celery individuals and in-kind restoration. The lands added to the MHPA under the VPHCP are included to accommodate restoration, establishment, and conservation of new populations of San

Diego button-celery in a more biologically defensible configuration (e.g., substantial connection to biological open space) than avoiding them and surrounding them with development. A VPHCP conservation objective is to establish a viable population of San Diego button-celery within J13.

California Orcutt Grass

There would be no direct impacts to any of the 58 vernal pools known to be occupied with California Orcutt grass that occur within the VPHCP Plan Area as a result of covered projects or covered activities (Table 5.2-3). All of the vernal pools occupied with California Orcutt grass within the VPHCP Plan Area would be conserved through implementation of the VPHCP (Table 5.2-4). In addition, potential habitat that will be restored (as identified in Table 3-8) on Otay Mesa will be added to the Preserve through implementation of the VPHCP. The VPHCP will also provide additional management and monitoring for this species, beyond existing conservation conditions, through implementation of the VPMMP.

Riverside Fairy Shrimp

There would be no direct impacts to any of the 131 vernal pools known to be occupied with Riverside fairy shrimp that occur within the VPHCP Plan Area as a result of covered projects or covered activities (Table 5.2-3). All of the vernal pools occupied with Riverside fairy shrimp within the VPHCP Plan Area would be conserved through implementation of the VPHCP. An unquantified number of Riverside fairy shrimp may be harmed during restoration, management, and monitoring activities.

Three additional vernal pools occupied by Riverside fairy shrimp would be conserved in the MHPA as a result of implementation of the VPHCP compared to the existing conservation, thereby conserving all 131 vernal pools (100%) that support Riverside fairy shrimp in the VPHCP Plan Area (Table 5.2-4). In addition, potential habitat that will be restored (as identified in Table 3-8) on Otay Mesa will be added to the Preserve. The VPHCP will also provide additional management and monitoring for this species, beyond existing conservation conditions, through implementation of the VPMMP.

San Diego Fairy Shrimp

Within the VPHCP Plan Area, a total of 517 pools are known to be occupied by San Diego fairy shrimp within 35 complexes. As a result of implementation of the VPHCP, a maximum of 55 vernal pools that support San Diego fairy shrimp would potentially be directly impacted at nine vernal pool complexes (Table 5.2-3).

Thirty-one additional vernal pools that support San Diego fairy shrimp would be conserved in the MHPA as a result of implementation of the VPHCP compared to the existing conservation, thereby conserving 462 vernal pools (89%) known to support San Diego fairy shrimp in the VPHCP Plan Area (Table 5.2-4). The sites where vernal pools occupied by San Diego fairy shrimp would be lost due to development include: Rhodes, Pueblo Lands, NDU 1&2, Bachman, Brown Field, Montgomery-Gibbs Executive Airport, Southview East (Airway Road), and Magnatron. At four complexes with impacted sites (Rhodes, Bachman, Montgomery-Gibbs Executive Airport, Southview East (Airway Road), and Magnatron), more that 50% of the pools occupied by San Diego fairy shrimp are conserved; therefore, the existing population would be conserved at these three complexes. However, at the complexes where the other sites are impacted (Pueblo Lands, NDU 1&2, and Brown Field), fewer than 50% of the pools supporting San Diego fairy shrimp would be conserved. In addition, an unquantified number of San Diego fairy shrimp may be harmed during restoration, management, and monitoring activities.

To conserve the existing population at these occurrences, salvage of unique genetic material (if salvage site is free of versatile fairy shrimp [*Branchinecta lindahli*]) and in-kind restoration would be required. Compensatory mitigation for impacted pools that support San Diego fairy shrimp would occur consistent with the Mitigation Framework requirements that are part of the Project. In addition, potential habitat that could be restored with mitigation or grant funding on Otay Mesa and Kearny Mesa will be added to the Preserve through implementation of the VPHCP. The VPHCP will also provide additional management and monitoring for this species, beyond existing conservation conditions, through implementation of the VPMMP.

For these reasons, the Project would not result in a substantial direct adverse effect on any species identified as a candidate, sensitive, or special-status species, and the direct impact would be less than significant.

Indirect Impacts to Covered Species

A primary potential indirect impact likely to affect covered species is degradation of habitat quality resulting from “edge effects.” Edge effects occur at the interface of conserved and developed lands and may include (but are not limited to) trampling or disturbance from human traffic (foot, bike, vehicle, or equestrian), damage or harassment from pets, spread of invasive exotic plants and/or wildlife, loss of pollinators, increased risk of wildfires, increased runoff, pollution, or other hydrological changes. Edge effects can reduce vernal pool functions and degrade the quality of habitat that supports covered species.

New development projects would require a fuel modification zone (Brush Management Zones 1 and 2) consistent with the City's Municipal Code Brush Management requirements (Section (142.0412). For new development, Brush Management Zone 2 would not be allowed within the MHPA containing vernal pool basins, but may be considered on a case-by-case basis within the associated watershed and buffer with approval from the Wildlife Agencies. The potential for other edge effects from new development would be identified during the development review process and addressed through implementation of the MHPA Land Use Adjacency Guidelines as well as other measures required by the Mitigation Framework. In addition, annual monitoring of the vernal pool Preserve network, as required under the VPHCP, would identify potential edge effects from existing development, such as trespass or invasion of exotic species. Stewardship management and maintenance (i.e., Level 1, as described in Chapter 3 of this EIR/EIS) would address potential edge effects, for example through targeted weed control to eradicate an invasive weed infestation or installing fencing to prevent trespass.

As discussed above, indirect impacts (and potential incidental take), are those that would occur later in time with reasonable certainty. Indirect impacts can be detrimental to vernal pool habitat and covered indirect impacts are much more difficult to track and quantify. Indirect impacts from covered projects and covered activities would be avoided and reduced to the extent feasible through implementation of avoidance and minimization measures as well as the compensatory mitigation measures outlined in the Mitigation Framework. The VPHCP monitoring and management program (summarized in Section 3.3.9 of this EIR/EIS) has been designed to identify indirect impacts so decisions can be made on the appropriate mitigation measures to implement over time.

Through implementation of the mitigation measures identified in the Mitigation Framework, indirect impacts to covered species associated with implementation of the VPHCP would be below a level of significance. Thus, the Project would not result in a substantial indirect adverse effect on any species identified as a candidate, sensitive, or special-status species, and the indirect impact would be less than significant.

Impacts from Restoration, Long-Term Management, and Monitoring

Management and monitoring prescribed under the VPHCP (as summarized in Chapter 3 of this EIR/EIS and discussed in detail in Chapter 7 of the VPHCP) would result in potential direct impacts (e.g., incidental take of covered species) and indirect impacts (e.g., habitat disturbance and trampling from sign and fence installation and repair, use of access trails and roads, monitoring activities, and weed control). Potential direct impacts from maintenance and monitoring are expected to be avoided to the extent feasible through implementation of the VPHCP required avoidance measures that are included as part of the Project (summarized in

Section 3.3.7 and full text included in Chapter 11, Mitigation, Monitoring and Report Program). Direct and indirect impacts to habitat from maintenance and monitoring are expected to be minimal.

Some restoration and enhancement activities (e.g., rut removal and recontouring of vernal pools, soil replacement, removal of nonnative invasive plant species, and planting container plants) in occupied habitat have potential to damage or destroy a small number of covered species. Under these types of activities, there is not only potential for changes in the basic micro-habitat provided in each pool, but it is also possible that cysts and/or seeds could be damaged or destroyed by personnel conducting restoration and enhancement activities. For example, cysts and/or seeds could be covered too deeply by soil when vernal pools are recontoured. To minimize this potential impact, disturbance would be limited to the area that is being enhanced, and soil within areas that are being recontoured would be salvaged and reintroduced to the pool from where they were collected following contouring. Additional measures to ensure that temporary impacts associated with restoration and enhancement activities are minimized are included in the Mitigation Framework.

Consistent with the Vernal Pool Recovery Plan and the VPHCP's overall conservation strategy, impacts to the covered species described above are expected to be to degraded vernal pools with low long-term conservation value and these impacts will be mitigated through restoration, enhancement, preservation, and long-term management and monitoring of vernal pools with long-term conservation value in the MHPA. This conservation strategy will implement specific recovery criteria for covered species identified in Vernal Pool Recovery Plan. Vernal pool restoration and enhancement is expected to reestablish the physical and biotic characteristics of vernal pool habitat such that critical functions are restored. Based on positive data from ongoing monitoring programs, it appears that restoration and enhancement can provide self-sustaining vernal pool ecosystems with clear and significant benefits to vernal pool species, including the seven covered species, especially when seed and cysts translocation occurs from existing (conserved) occupied pools (RECON 2005, EDAW 2010). These benefits, when supplemented by long-term monitoring and management, will reduce threats to the seven covered species and maintain and improve their habitat quality and regional distribution. Overall, implementation of the VPHCP is expected to support the recovery of the seven covered species.

Temporary habitat disturbance during restoration and enhancement activities would ultimately improve ecological function of the site from conditions prior to ground disturbance. Vernal pool management and monitoring activities are expected to stabilize and, in some cases, enhance or restore populations of covered species, resulting in a net biological benefit. For these reasons, the restoration, long-term management, or monitoring associated with the Project would not result in

a substantial adverse effect on any species identified as a candidate, sensitive, or special-status species, and the impact would be less than significant.

Expanded Conservation Alternative

As with the Project, most of the vernal pools that would be potentially impacted by development both inside and outside the MHPA under the Expanded Conservation Alternative are low-quality pools, the majority of which occur in disturbed areas and do not support sensitive species. However, some of the pools do support one or more of the covered species. A summary of potential direct impacts to covered species under the Expanded Conservation Alternative compared to the Project is provided in Table 5.2-5.

Similar to the Project, the Expanded Conservation Alternative would not result in any direct impacts to vernal pools known to support Otay Mesa mint, California Orcutt grass, or Riverside fairy shrimp, and would impact one vernal pool occupied by spreading navarretia and two vernal pools occupied by San Diego mesa mint (Table 5.2-5). The Expanded Conservation Alternative would potentially result in fewer direct impacts to occupied vernal pools than the Project for the following covered species: San Diego button-celery (five fewer occupied pools) and San Diego fairy shrimp (two fewer occupied pools). As with the Project, the Expanded Conservation Alternative would result in overall positive benefits for the covered species by reducing the potential for habitat fragmentation and providing a more comprehensive and cohesive Preserve design, more potentially restorable habitat, and increased conservation of buffer areas.

Table 5.2-5
Comparison of Covered Species Impacts

Alternative	Total and % Pools Occupied Pools Impacted													
	PONU # of Pools	PONU %	POAB # of Pools	POAB %	NAFO # of Pools	NAFO %	ERAR # of Pools	ERAR %	ORCA # of Pools	ORCA %	RFS # of Pools	RFS %	SDFS # of Pools	SDFS %
Project	0	0%	2	1%	1	1%	10	1%	0	0%	0	0%	53	11%
Expanded Conservation Alternative	0	0%	2	1%	1	1%	5	1%	0	0%	0	0%	51	10%

ERAR = San Diego button-celery
NAFO = Spreading navarretia
ORCA = California Orcutt grass
POAB = San Diego mesa mint
PONU = Otay Mesa mint
RFS = Riverside fairy shrimp
SDFS = San Diego fairy shrimp

The majority of the occupied pools that would be potentially impacted by development occur outside the MHPA. Seven vernal pools occupied by San Diego fairy shrimp would potentially be impacted by development within the MHPA due to the 25% development potential of parcels that contain those occupied pools. The direct loss of vernal pools that support covered species would require compensatory mitigation, as required by the Mitigation Framework, to ensure the viability and continued persistence of covered species.

Overall, as with the Project, the Expanded Conservation Alternative would result in conservation of additional covered species beyond existing conservation and the Project (for species that are not already 100% conserved under existing conservation), resulting in a net benefit to these covered species populations. Where complexes occupied by covered species are not conserved under the VPHCP, or where the existing population within a complex is not conserved (see Chapter 5 of the VPHCP for details), compensatory mitigation would be required as part of the Project Mitigation Framework. To conserve the existing population at impacted occurrences, salvage of unique genetic material and in-kind restoration would be required. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse direct effect on any species identified as a candidate, sensitive, or special-status species, and the impact would be less than significant.

Indirect Impacts to Covered Species

The approach for addressing edge effects under the Expanded Conservation Alternative would be the same as for the Project; thus, the analysis for indirect impacts is the same. This alternative would not result in substantial adverse indirect impacts to species identified as a candidate, sensitive, or special-status species, and the impact would be less than significant.

Impacts from Restoration, Long-Term Management, and Monitoring

The approach for management and monitoring of vernal pools and covered species under the Expanded Conservation Alternative would be the same as for the Project; thus, the analysis for impacts from restoration, long-term management, and monitoring is the same. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species, and the impact would be less than significant.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, the City would not have authorization to issue take of vernal pools or vernal pool covered species. The City's existing permit with

CDFW under NCCP requires avoidance of vernal pools. Impacts to vernal pools and species would be evaluated on a project-by-project basis and avoidance, minimization, and compensatory mitigation would be required through the Section 7 or Section 10 process. Existing development restrictions in accordance with the ESL Regulations and mitigation requirements for vernal pools within the MHPA would still apply (i.e., development allowed in 25% of the site in the least sensitive area).

Avoidance, minimization, and compensatory mitigation measures implemented on a project-by-project basis would likely be similar to those required under the Project; however, they would be done in a piece-meal fashion and may preserve areas with little to no long-term conservation value. In addition, projects may choose to avoid all direct impacts to vernal pools. Although the Existing Conservation/No Project Alternative scenario would avoid occupied vernal pools, isolated "postage stamp" vernal pool mitigation sites would not allow for a more cohesive and comprehensive preserve area, as proposed under the Project. Avoided vernal pools may be isolated and surrounded by development, subject to significant edge effects, and render little to no long-term conservation value. In addition, the management and monitoring program included as part of implementation of the VPHCP would not exist, and there would be no city-wide management of vernal pools, likely resulting in more severe indirect impacts, such as edge effects from surrounding development.

Under the Existing Conservation/No Project Alternative, direct impacts to vernal pools and covered species would be avoided, as required by the City's existing permits and regulations. Therefore, no substantial or adverse effects would occur. However, the benefits to the covered species of a cohesive Preserve and comprehensive management and monitoring program would not be achieved under the Existing Conservation/No Project Alternative.

ISSUE 2: *Would the project result in a substantial impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats or Tier IIIB Habitats as identified in the Biology Guidelines of the Land Development Code or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?*

Project

Tier I, II, or III Habitat

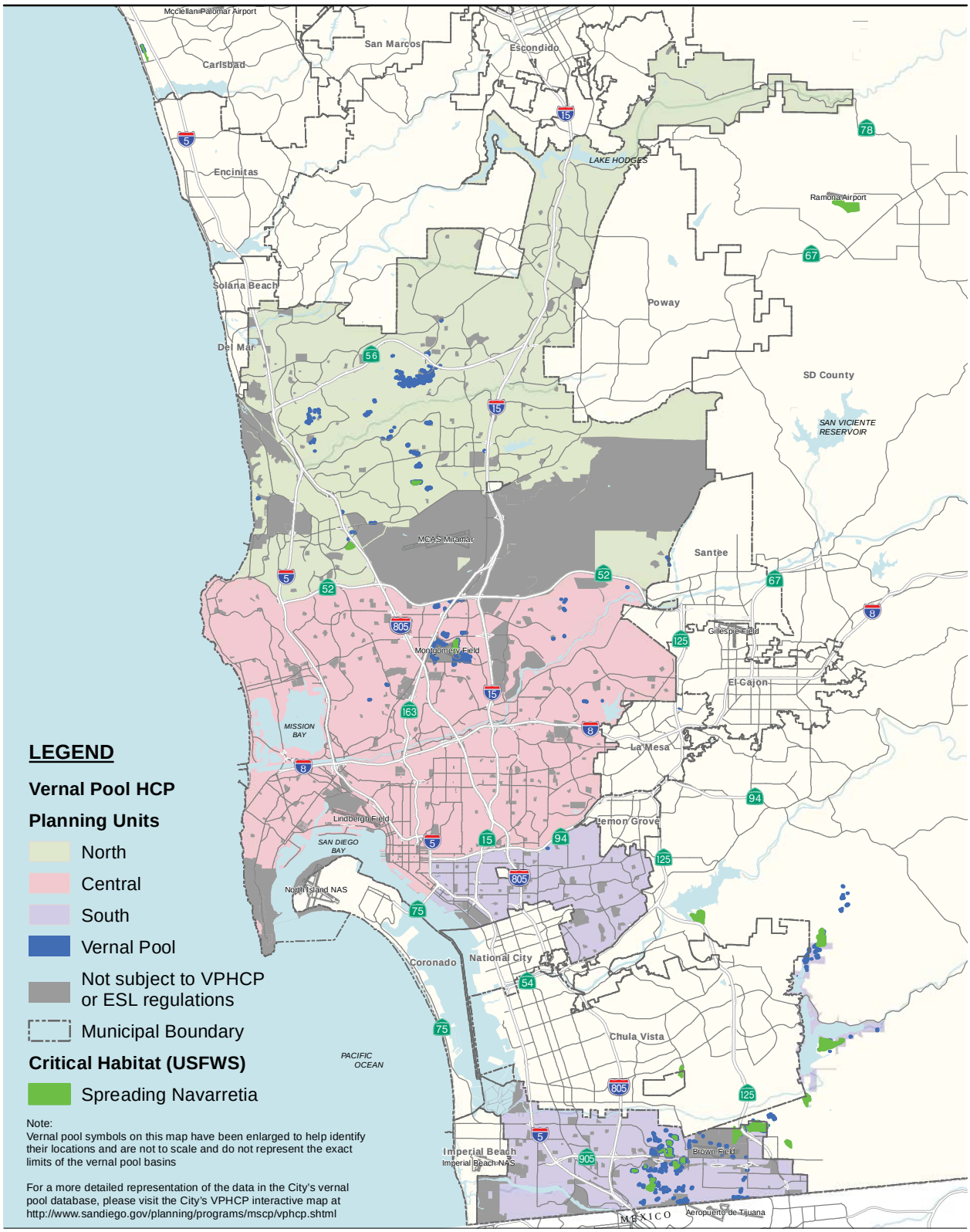
No sensitive upland habitats (i.e., Tier I through Tier IIIB Habitats) as identified in the City's LDM Biology Guidelines would be impacted by the Project, as the VPHCP only includes conservation for vernal pools and would not affect sensitive upland vegetation communities.

Individual vernal pool restoration projects implemented under the VPHCP could involve restoration of upland watershed buffers, including enhancement or restoration of sensitive upland vegetation communities. Vernal pool restoration projects would avoid impacting intact sensitive upland habitats that may occur within restored watersheds areas, and would ultimately result in a net benefit to upland habitats through the management, maintenance, and monitoring program prescribed under the VPHCP.

USFWS Critical Habitat

Sensitive habitat that would be affected by implementation of the VPHCP includes USFWS-designated Critical Habitat for the covered species. Critical Habitat is specific geographic area(s) that contain features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical Habitat has been designated for three of the seven covered species (spreading navarretia, Riverside fairy shrimp, and San Diego fairy shrimp). Table 5.2-6 summarizes the acreage of Critical Habitat for each of the three species that would be conserved within the MHPA under implementation of the VPHCP, as well as acreage that would potentially be impacted by development. Critical Habitat designations within and outside the MHPA are shown for the three species in Figures 5.2-8 (spreading navarretia), 5.2-9 (Riverside fairy shrimp), and 5.2-10 (San Diego fairy shrimp).

As shown in Table 5.2-6, there is a total 6,720 acres of spreading navarretia Critical Habitat, 1,724 acres of Riverside fairy shrimp Critical Habitat, and 2,931 acres of San Diego fairy shrimp Critical Habitat designated for each of these species over the range in which they occur (i.e., there are known occurrences of these species outside the VPHCP Plan Area). Of these acreages, the following amounts of Critical Habitat occur within the VPHCP Plan Area: 628 acres (9% of total designation) of spreading navarretia Critical Habitat, 804 acres (47% of total designation) of Riverside fairy shrimp Critical Habitat, and 1,801 acres (61% of total designation) of San Diego fairy shrimp Critical Habitat. Additional lands containing Critical Habitat would be added to the MHPA through implementation of the VPHCP, when compared to conservation under existing conditions. Once fully implemented, the VPHCP would conserve approximately 4 additional acres of spreading navarretia Critical Habitat from existing conservation, to total 565 acres (90% of the spreading navarretia Critical Habitat within the VPHCP Plan Area). Approximately 16 additional acres of Riverside fairy shrimp Critical Habitat would be conserved over the existing condition, for a total of 740 acres (92% of the Riverside fairy shrimp Critical Habitat within the VPHCP Plan Area). The VPHCP, once fully implemented, would conserve approximately 79 additional acres of San Diego fairy shrimp Critical Habitat over the existing condition, for a total of 1,409 acres (78% of the San Diego fairy shrimp Critical Habitat within the VPHCP Plan Area).



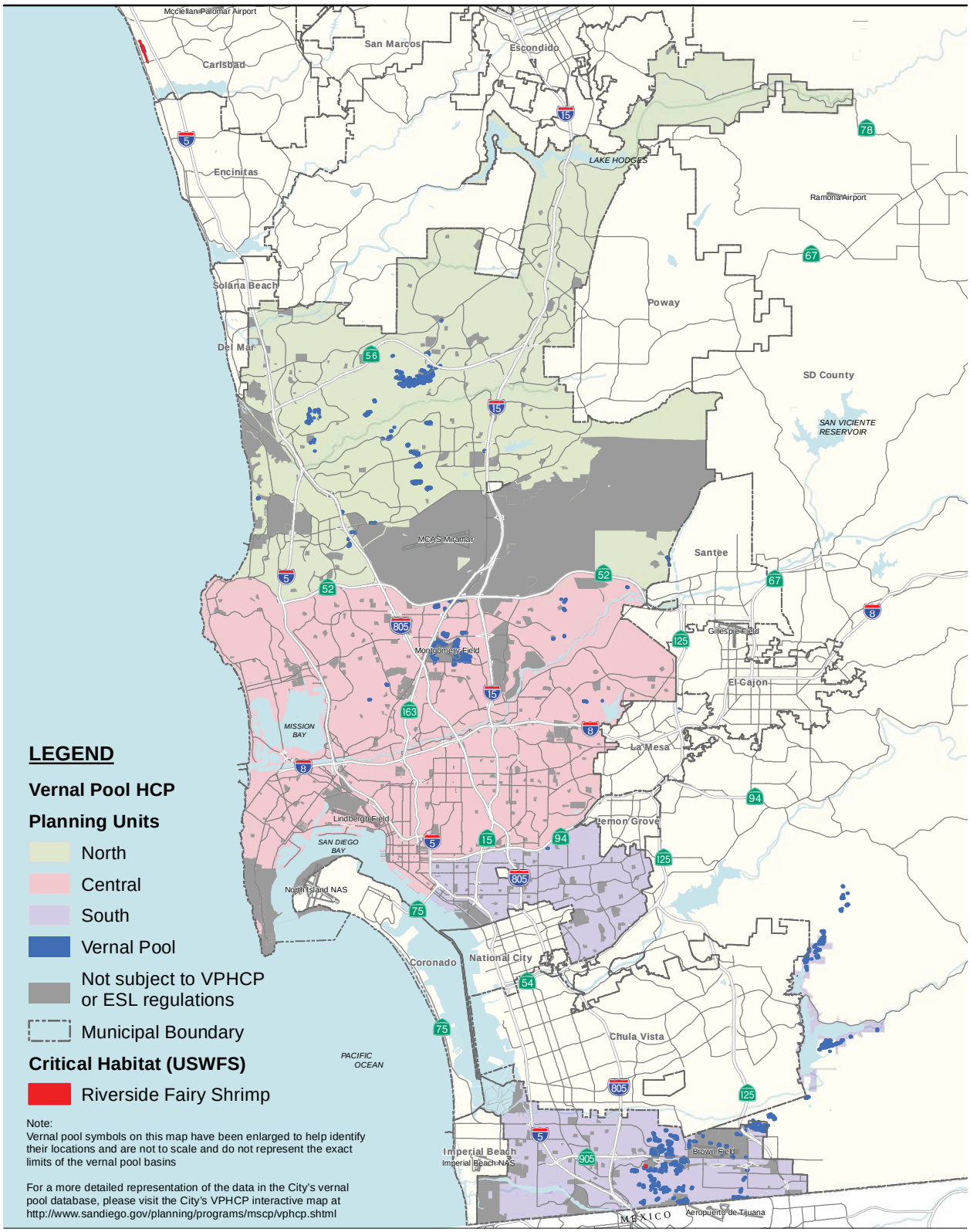
Source: City of San Diego; SANDAG; SanGIS; USFWS.

5 2.5 0 5 Miles

Scale: 1:316,800; 1 inch = 5 miles

Figure 5.2-8
VPHCP Critical Habitat for Spreading Navarretia

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig5_2_8_SpreadingNav_crithab.mxd, 7/5/2016, daniel_arellano



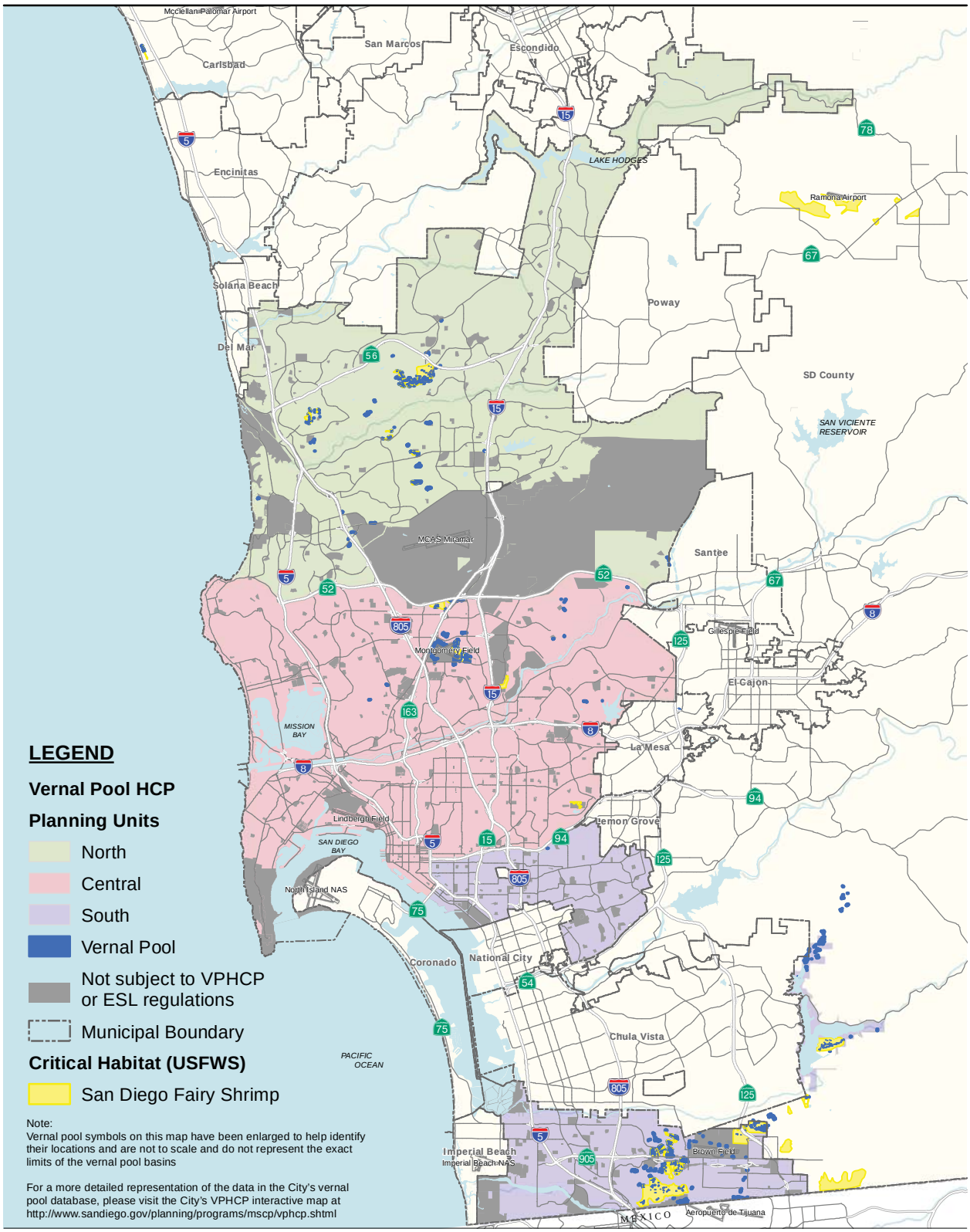
Source: City of San Diego; SANDAG; SanGIS; USFWS.

5 2.5 0 5 Miles

Scale: 1:316,800; 1 inch = 5 miles

Figure 5.2-9
VPHCP Critical Habitat for Riverside Fairy Shrimp

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig5_2_9_RIVfairyshrimp_crithab.mxd, 7/5/2016, daniel_arellano



Source: City of San Diego; SANDAG; SanGIS; USFWS.

5 2.5 0 5 Miles

Scale: 1:316,800; 1 inch = 5 miles

Figure 5.2-10
VPHCP Critical Habitat for San Diego Fairy Shrimp

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig5_2_10_SDfairyshrimp_crithab.mxd, 7/5/2016, daniel_arellano

Table 5.2-6
Summary of Designated Critical Habitat Conservation with Implementation of the VPHCP

	Spreading Navarretia Critical Habitat (Acres)	Riverside Fairy Shrimp Critical Habitat (Acres)	San Diego Fairy Shrimp Critical Habitat (Acres)
Total Critical Habitat Designation (for Species Range, occurs within and outside VPHCP Plan Area)	6,720	1,724	2,931
Total Acres in VPHCP Plan Area (% of Total Species Designation)	628 (9%)	804 (47%)	1,801 (61%)
Existing Critical Habitat Conservation in VPHCP Plan Area (% of Critical Habitat Conserved)	561 (89%)	724 (90%)	1,330 (74%)
Critical Habitat Conserved in MHPA through VPHCP (% of Critical Habitat Conserved)	565 (90%)	740 (92%)	1,409 (78%)
Additional Habitat Conserved with Implementation of the VPHCP (% of Additional Critical Habitat Conserved)	4 (1%)	16 (2%)	79 (4%)
Total Acres Not Conserved (Inside and Outside MHPA)	63	64	392
Acres Inside MHPA[1]	1	53	77
Acres Outside MHPA	62	11	315
% Total Designation Not Conserved	<1%	4%	13%

[1] Based on conservation level of each vernal pool complex with designated Critical Habitat (75% or 100%).
Note: Acreages are rounded so individual acreages may not equal sum of total acreages.

Overall, although some potential loss of Critical Habitat would occur for each of the three covered species (Table 5.2-6), the additional lands to be added to the MHPA are of higher biological value and have more potential for restoration compared to the existing Critical Habitat that would potentially be impacted by development (analyzed on a project-by-project basis). The conserved Critical Habitat within the MHPA would be in a configuration that maintains long-term viability of the VPHCP covered species. Management, maintenance, enhancement, and/or restoration of conserved vernal pool complexes containing Critical Habitat, as described in the VPMMP (see Chapter 7 of the VPHCP), would result in a net biological benefit for all three species and their Critical Habitats.

Consistency with the USFWS Recovery Plan

Consistency with the USFWS Recovery Plan (USFWS 1998a) was analyzed in the VPHCP (see Appendix C of the VPHCP). Appendix F of the USFWS Recovery Plan identifies complexes that are necessary to stabilize the covered species populations. Appendix G of the USFWS Recovery Plan identifies complexes that are necessary to reclassify the covered species populations. It should be noted that additional complexes from those identified in the USFWS Recovery Plan are now known to be occupied by covered species, and the complexes identified in the USFWS

Recovery Plan may not be currently occupied by the covered species, based on the information in the City's vernal pool database (SANDAG 2012). However, USFWS selected these complexes as important for the covered species because the complexes were historically occupied. The Project would provide conservation of vernal pools within the complexes identified in the USFWS Recovery Plan as important to stabilize and reclassify each of the covered species populations. Therefore, the Project is consistent with the USFWS Recovery Plan.

For these reasons, the Project would not result in a substantial adverse effect related to Tier I through Tier IIIB Habitats or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS. The impact would be less than significant.

Expanded Conservation Alternative

Similar to the Project, no sensitive upland habitats (i.e., Tier I through Tier IIIB Habitats) as identified in the City's LDM Biology Guidelines would be impacted under the Expanded Conservation Alternative.

USFWS Critical Habitat

As with the Project, the Expanded Conservation Alternative would conserve additional lands containing Critical Habitat beyond existing conservation conditions, as shown in Table 5.2-7. Under the Expanded Conservation Alternative, 596 acres of spreading navarretia Critical Habitat within the VPHCP Plan Area would be conserved (35 more acres than existing conservation). The Expanded Conservation Alternative would also conserve an additional 18 acres of Riverside fairy shrimp Critical Habitat and 195 acres of San Diego fairy shrimp Critical Habitat (all within the MHPA) beyond the conservation under existing conditions.

As with the Project, although there would be some potential loss of Critical Habitat for each of the three covered species, the additional lands to be added to the MHPA are of higher biological value and potential for restoration compared to the existing Critical Habitat that would potentially be impacted by development. The conserved Critical Habitat within the MHPA would be in a configuration that maintains long-term viability of the VPHCP covered species. Management, maintenance, enhancement, and/or restoration of conserved vernal pool complexes containing Critical Habitat, as described in the VPMMP (see Chapter 7 of the VPHCP), would result in a net biological benefit for all three species and their Critical Habitats.

Table 5.2-7
Comparison of Designated Critical Habitat Conservation between VPHCP and Expanded Conservation Alternative[1]

	Spreading Navarretia Critical Habitat (Acres)	Riverside Fairy Shrimp Critical Habitat (Acres)	San Diego Fairy Shrimp Critical Habitat (Acres)
Critical Habitat Conserved in MHPA through VPHCP	561	724	1,330
Critical Habitat Conserved in MHPA through Expanded Conservation Alternative	596	742	1,526
Additional Total Acres Conserved through Expanded Conservation Alternative	**35**	**18**	**195**

[1] Based on conservation level of each vernal pool complex with designated Critical Habitat (75% or 100%).
Note: Acreages are rounded so individual acreages may not equal sum of total acreages.

Consistency with the USFWS Recovery Plan

The Expanded Conservation Alternative conserves the same complexes as the Project, which are identified in the USFWS Recovery Plan as important to stabilize and reclassify each of the covered species populations (see Appendix C of the VPHCP). Therefore, the Expanded Conservation Alternative is consistent with the USFWS Recovery Plan.

For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to Tier I through Tier IIIB Habitats or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS. The impact would be less than significant.

Existing Conservation/No Project Alternative

Similar to the Project, no sensitive upland habitats (i.e., Tier I through Tier IIIB Habitats) as identified in the City's LDM Biology Guidelines would be impacted under the Existing Conservation/No Project Alternative, as development in the city would proceed under existing conditions.

USFWS Critical Habitat

Table 5.2-6 shows the total acres of Critical Habitat conserved under the Existing Conservation/No Project Alternative (i.e., existing conservation), as well as the percentage of Critical Habitat acres within the overall VPHCP Plan Area that is conserved. Under this alternative, any additional conservation of Critical Habitat for the three covered species with designated Critical Habitat would occur on a project by project basis, which could result in

fragmentation and isolated areas of Critical Habitat, rather than a cohesive Preserve that would be established under the Project.

Consistency with the USFWS Recovery Plan

The USFWS Recovery Plan is intended to protect vernal pools by conserving complexes that are necessary to stabilize the covered species populations (i.e., complexes that are either currently or historically occupied). Under the Existing Conservation/No Project Alternative, not all complexes identified in the USFWS Recovery Plan as important to stabilize and reclassify each of the covered species populations (see Appendix C of the VPHCP) are currently conserved. However, during project-specific consultation with USFWS (Section 7 or Section 10), USFWS would evaluate consistency with the objectives of the Recovery Plan to ensure that vernal pool complexes with current or historic occurrence of the covered species are avoided. Therefore, the Expanded Conservation Alternative is consistent with the objectives of the USFWS Recovery Plan. However, while impacts to complexes occupied by the covered species would be avoided, this alternative does not provide for the net benefit of conservation of additional areas of habitat suitable for restoration of the covered species.

For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to Tier I through Tier IIIB Habitats or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS. The impact would be less than significant.

ISSUE 3: *Would the project result in a substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pool, riparian, etc.) through direct removal, filing, hydrological interruption, or other means?*

Project

This section evaluates the potential impacts to vernal pools as a result of VPHCP implementation. Specifically, it analyzes the potential loss of vernal pools resulting from development of lands outside the MHPA, as well as potential loss of vernal pools inside the MHPA resulting from covered projects and covered activities (described in Chapter 4 of the VPHCP). Both direct and indirect impacts to vernal pools are possible, as discussed below. Impacts to covered species that occupy vernal pools within the VPHCP Plan Area are analyzed under Issue 1 above.

Under the VPHCP, each vernal pool site within a complex has a designated conservation level depending on preservation status (i.e., lands within the MHPA are designated 75% conserved

unless a 100% hardline conservation boundary has been established). Impacts to vernal pools were evaluated based a conservative assumption that maximum development would occur consistent with the conservation levels (e.g., for a parcel wholly within the MHPA that would be 75% conserved, the remaining 25% was assumed impacted by development and 25% of the vernal pool resources on the site were assumed impacted). However, future development within the MHPA would be limited to a 25% encroachment into the least sensitive portion of the parcel and would be required to avoid vernal pools to the maximum extent practicable. Therefore, impacts would most likely be less once the VPHCP is fully implemented. The 100% conservation level has been applied to existing conserved vernal pool sites, as well as hardline conservation areas associated with covered projects.

As shown in Table 5.2-8, a total of 182 pools would potentially be directly impacted by development, including 120 pools impacted outside the MHPA (due to complexes that are 0% conserved) and 62 pools impacted inside the MHPA as a result of covered projects, covered activities, and/or future development necessary to allow reasonable use of property in the MHPA (i.e., within a 75% conservation level area). In addition, approximately 2,303 acres (37%) of modeled vernal pool habitat not be conserved within the VPHCP Plan Area under the Project.

Only one vernal pool complex, KK1 Lake Murray, would not be included in the MHPA. This complex contains one isolated vernal pool and is not occupied by any covered species. The pool is surrounded by active park uses (i.e., ball fields and tennis courts), roads, and single-family homes. No impacts are proposed at this location. However, due to the low quality and isolated nature of the pool, along with the high potential for edge effects, no active management and monitoring activities are proposed for this site. The direct impact to vernal pools resulting from implementation of the VPHCP represents an approximate 7% loss of the total number of vernal pools within the VPHCP Plan Area, totaling 0.6 acres of basin surface area.

Impact to vernal pools and/or modeled habitat from covered activities is expected be minimal (e.g. small in size) and predominately occur within disturbed areas. Maintenance and use of roads, easements, and trails that cross the Preserve as well as inspection and repair of utility corridors could have small impacts to modeled vernal pool habitat. The VPHCP includes avoidance and minimization measures that should further limit potential impacts to individual basins from these activities.

Maintenance and monitoring prescribed in the VPMMP (Chapter 7 and Appendix D of the VPMMP) could also result in potential direct impacts (e.g., incidental take of covered species) and indirect impacts (e.g., habitat disturbance and trampling from sign and fence installation and repair, use of access trails and roads, monitoring activities, and weed control). Potential direct

Table 5.2-8
Summary of Vernal Pools Impacts in VPHCP Plan Area (Project vs Existing)

	Total Number of Complexes in VPHCP Plan Area	Number of Complexes Not in MHPA	Total Number of Pools in VPHCP Plan Area	Total Pools Impacted by Development Based on Conservation Level[1]	Pools Impacted by Development outside MHPA (0% Conservation)	Pools Impacted by Development inside MHPA (Based on Conservation Level)[1]	Total Surface Area of Pools Impacted Based on Conservation Level[1] (Acres)	Total Acreage of Modeled Vernal Pool Habitat Not Conserved
Project	54	1	2,591	182	120	62	7.6	3,974
Existing Conservation	54	9	2,591	408	392	16	10.4	3,797

[1]Pools and species population conserved is based on 75% or 100% conservation level by vernal pool complex. The conservation level denotes the portion of a parcel that would be conserved. For example, for a parcel designated with a 75% conservation level, 25% of the parcel is available for development. Development would occur on the least environmentally sensitive area of the parcel, as determined by the City environmental review process. This tables does not include impacts from covered activities.

impacts from maintenance and monitoring are expected to be avoided to the extent feasible through implementation of the avoidance measures identified in Chapter 5. Direct and indirect impacts to habitat from maintenance and monitoring are expected to be minimal. Temporary habitat disturbance during management, monitoring, restoration and enhancement activities will be minimal and these activities will ultimately improve ecological function of the site from conditions prior to ground disturbance. Therefore, no permanent impacts from restoration, long-term management, or monitoring are anticipated.

While the total loss of vernal pools is a relatively low percentage, with only 7% of vernal pools impacted within the VPHCP Plan Area (182 total pools; 120 outside the MHPA and 62 inside the MHPA) and only approximately one-third of those occupied with covered species (as discussed under Issue 1 above), the loss is substantial with respect to the remaining vernal pool habitat in the southern California region. It is estimated that over 90% of the pools that once occurred in southern California have already been lost, so any loss of vernal pool habitat must be evaluated in that context.

The City's ESL Regulations and LDM Biology Guidelines require no net loss of vernal pool habitat (i.e., all impacts will be offset with restoration and enhancement of an equal or greater acreage of habitat). Therefore, any direct impacts to vernal pools within the VPHCP Plan Area would be mitigated consistent with these regulations. A wetland deviation would only be required for impacts to vernal pools that occur inside the MHPA. If impacts occur outside the MHPA and the project is consistent with the VPHCP, a wetland deviation would not be required. Compensatory mitigation for all impacts, inside and outside the MHPA, would be required as part of the VPHCP Mitigation Framework implementation.

The VPHCP would add additional public and private lands to the City's existing MHPA to meet the goals and objectives for the covered species. Specifically, additional lands would be added in the following community planning areas: Otay Mesa, Kearny Mesa, Mira Mesa, and Navajo. Once these additional lands are added, the MHPA would conserve a total of 2,472 vernal pools within 53 vernal pool complexes (Table 5.2-9). Approximately 93% of the vernal pools within the VPHCP Plan Area would be conserved under implementation of the VPHCP. In addition, 3,974 acres of modeled vernal pool habitat would be conserved.

Implementation of the VPHCP would increase conservation from existing conservation conditions by adding 273 vernal pools (2.8 additional acres of basin area) within nine additional complexes, as well as 177 acres of modeled vernal pool habitat, to the MHPA. This is an approximately 9% increase in conservation of vernal pools and 3% increase in modeled vernal pool habitat from existing conservation.

Table 5.2-9
Additional Conservation from Implementation of the VPHCP

	Number of Complex Series in the VPHCP Plan Area	Number of Complex Series Conserved	Total Number of Pools in VPHCP Plan Area	Number of Pools inside Existing Conserved Areas	Number of Pools Conserved Based on Conservation Level[2]	% of Total Pools in VPHCP Plan Area Conserved	Acreage of Pools Conserved	Acreage of Modeled Vernal Pool Habitat Conserved
Existing Conservation[1]	54	45	2,591	2,199	2,183	84%	34.7	3,797
MHPA after VPHCP Implementation	54	53	2,591	2,472	2,409	93%	37.5	3,974
Additional Conservation Resulting from VPHCP Implementation	N/A	8	N/A	273	226	9%	2.8	177

N/A = not applicable
[1]The existing conservation includes conserved lands within the City's existing MHPA, permitted projects, and planned projects.
[2]Pools and species population conserved is an estimate based on 75% or 100% conservation level by vernal pool complex. See Appendix C of the VPHCP for more detail on the conservation analysis for each vernal pool complex in the VPHCP Plan Area.

Indirect impacts to vernal pools may also occur as a result of development of upland watersheds surrounding vernal pool habitat. Modification of upland watersheds, such as altering topography by removing or filling soil, can disrupt natural hydrologic flow necessary for vernal pools to fill and pond. Altering watershed hydrology can impact covered species that occupy vernal pools (e.g., by reducing the ponding capacity of the basins). The VPHPC Mitigation Framework requires that impacts to upland watershed associated with vernal pools be avoided to maintain natural hydrological flows. Project-specific environmental review would include evaluation of impacts to watersheds and associated vernal pool resources and demonstrate consistency with the avoidance and minimization measures identified in the VPHPC Mitigation Framework.

In summary, direct impacts to mostly low-quality vernal pools as well as impacts to associated upland watershed would be mitigated through compliance with the City's ESL Regulations and compensatory mitigation that would be required by the VPHCP Mitigation Framework. Implementation of the VPHCP would conserve more vernal pools than are currently conserved under existing conditions, and would create a more cohesive and comprehensive Preserve area for vernal pools than currently exists. The preservation, maintenance, management, and (where needed) enhancement or restoration of vernal pools and associated watershed, as prescribed under the VPHCP, would provide an overall net benefit to the City's vernal pool resources.

A key component of the VPHCP is the restoration of degraded vernal pools throughout the Plan Area. Vernal pool restoration would involve relatively minor grading for recontouring or restoration of vernal basins to a more natural state, thus benefiting sensitive vernal pool habitat and associated covered species by improving hydrological and ecological function.

For these reasons, the Project would not result in a substantial adverse effect related to wetlands through direct removal, filling, hydrological interruption, or other means, and the impact would be less than significant.

<u>Expanded Conservation Alternative</u>

Table 5.2-10 shows the potential direct impacts to vernal pools under the Expanded Conservation Alternative. As shown, a total of 131 pools would potentially be directly impacted by development, and 2,135 acres of modeled vernal pool habitat would not be conserved. While 51 vernal pools would potentially be impacted by development inside the MHPA, 80 vernal pools would be impacted outside the MHPA under the Expanded Conservation Alternative as a result of the addition of lands to the Preserve (shown in Figures 2-2 through 2-4). As with the Project, only one vernal pool complex, KK1 Lake Murray, would not be included in the MHPA. This complex contains one isolated vernal pool and is not occupied by any covered species. The pool

Table 5.2-10
Summary of Vernal Pools Impacts (Expanded Conservation Alternative vs Existing Conservation)

Alternative	Total Number of Complexes Conserved	Number of Complexes Not in the MHPA	Total Number of Pools Conserved[1]	Total Pools Impacted by Development[1]	Pools Impacted by Development outside Preserve (0% Conservation)	Pools Impacted by Development inside Preserve[1]	Total Surface Area of Pools Impacted (Acres)	Total Acreage of Modeled Vernal Pool Habitat Not Conserved
Expanded Conservation Alternative	54	1	2,460	131	80	51	7.1	2,135
Existing Conservation	45	9	2,183	408	392	16	10.4	2,479

[1] Pool conservation and impacts are estimated based on 75% or 100% conservation level by vernal pool complex. This table does not include impacts from covered activities.

is surrounded by active park uses (i.e., ball fields and tennis courts), roads, and single-family homes. No impacts are proposed at this location. However, due to the low quality and isolated nature of the pool, along with the high potential for edge effects, no active management and monitoring activities are proposed for this site. This complex has only one vernal pool, which is not occupied by any covered species. The direct impact to vernal pools resulting from implementation of the Expanded Conservation Alternative represents an approximate 5% loss of the total number of vernal pools within the VPHCP Plan Area, totaling 7.1 acres of basin surface area. In addition, 2,135 acres of modeled vernal pool habitat would not be conserved.

Compared to existing conservation conditions, the Expanded Conservation Alternative would conserve 2,460 vernal pools, which is 277 more vernal pools (11%) than conserved under existing conservation (and 3.3 additional acres of basin area) as shown in Table 5.2-11. The Expanded Conservation Alternative would also conserve an addition 345 acres of modeled vernal pool habitat (5% increase), compared to existing conservation.

In summary, direct impacts under the Expanded Conservation Alternative would occur to mostly low-quality vernal pools and would be mitigated through compliance with the City's ESL Regulations, as well as through compensatory mitigation that would be required by the VPHCP Mitigation Framework. Implementation of the VPHCP under the Expanded Conservation Alternative would conserve more vernal pools and modeled vernal pool habitat than currently conserved under existing conditions. The Expanded Conservation Alternative would create a more cohesive and comprehensive Preserve area for vernal pools than existing conservation. The preservation, maintenance, management, and (where needed) enhancement or restoration of vernal pools, as prescribed under the VPHCP, would provide an overall net benefit to the City's vernal pool resources.

For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to wetlands through direct removal, filling, hydrological interruption, or other means, and the impact would be less than significant.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, development projects would require an individual take permit from USFWS for potential impacts to vernal pools and covered species (either Section 7 or Section 10, depending on if a federal nexus exists). Impacts to vernal pools would be mitigated on a project-by-project basis. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to wetlands through direct removal, filling, hydrological interruption, or other means, and the impact would be less than significant.

Table 5.2-11
Additional Conservation from Implementation of the Expanded Conservation Alternative

	Number of Complex Series in the VPHCP Plan Area	Number of Complex Series Conserved	Total Number of Pools in VPHCP Plan Area	Number of Pools inside Existing Conserved Areas	Number of Pools Conserved Based on Conservation Level[2]	% of Total Pools in VPHCP Plan Area Conserved	Acreage of Pools Conserved	Acreage of Modeled Vernal Pool Habitat Conserved
Existing Conservation[1]	54	45	2,591	2,199	2,183	84%	34.7	3,797
MHPA after Expanded Conservation Alternative	54	53	2,591	2,511	2,460	95%	38.0	4,142
Additional Conservation Resulting from Expanded Conservation Alternative	N/A	8	n/a	312	277	11%	3.3	345

N/A = not applicable
[1] The existing conservation includes conserved lands within the City's existing MHPA, permitted projects, and planned projects.
[2] Pools and species population conserved is an estimate based on 75% or 100% conservation level by vernal pool complex. See Appendix C of the VPHCP for more detail on the conservation analysis for each vernal pool complex in the VPHCP Plan Area. This table does not include impacts from covered activities.

However, the Existing Conservation/No Project Alternative scenario would likely result in isolated vernal pool mitigation sites, and would not allow for creation of a more cohesive and comprehensive Preserve area as proposed under the Project. In addition, the management and monitoring program included as part of implementation of the VPHCP would not exist, and there would be no city-wide management of vernal pools.

ISSUE 4: *Would the project interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites?*

Project

One of the primary objectives of the City's MSCP SAP is to identify and maintain a preserve system that allows for animals and plants to exist at both the local and regional levels. The MSCP SAP has identified large blocks of native habitat having the ability to support a diversity of plant and animal life known as "core biological resource areas." "Linkages" between these core areas provide for wildlife movement. These lands have been determined to provide the necessary habitat quality, quantity, and connectivity to sustain the unique biodiversity of the San Diego region.

Wildlife corridors have been identified within some locations containing vernal pool resources, such as Del Mar Mesa, Carmel Mountain, Mission Trails Regional Park, and Lopez Ridge. These locations are within the MHPA and are owned and managed by the City. The additional lands that would be added to the MHPA would further enhance opportunity for wildlife movement within these areas.

The VPHCP would be compatible with the MSCP SAP, and would provide for increased management and monitoring within the vernal pool complexes located in the MHPA, including where wildlife corridors occur. Management would also include weeding and restoration activities (if needed), which would provide for restored hydrological function and increased quality of habitat. Management and restoration of vernal pools would also increase ponding opportunities for resident and migratory wildlife species.

For these reasons, the Project would not result in a substantial adverse effect related to interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites. The impact would be less than significant.

Expanded Conservation Alternative

While the Expanded Conservation Alternative would add additional lands to the MHPA beyond what would be added under the Project, these lands do not occur within known wildlife corridors. However, the additional lands would improve opportunity for wildlife movement within conserved habitat. As with the Project, the Expanded Conservation Alternative would be compatible with the MSCP SAP, and would provide for increased management and monitoring within the vernal pool complexes located in the MHPA, including where wildlife corridors occur. Management would also include weeding and restoration activities (if needed), which would provide for restored hydrological function and increased quality of habitat. Management and restoration of vernal pools would also increase ponding opportunities for resident and migratory wildlife species.

For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites. The impact would be less than significant.

Existing Conservation/No Project Alternative

While the Existing Conservation/No Project Alternative would not add additional lands to the MHPA, conservation of lands where existing wildlife corridors and linkage occur would remain. Wildlife movement identified in the MSCP SAP would continue to be maintained and no element of the alternative would interfere with or restrict wildlife movement or corridor functions. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites. The impact would be less than significant.

ISSUE 5: *Would the project result in a conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, either within the MSCP plan area or in the surrounding region?*

Project

MSCP

For the purpose of EIR/EIS analysis with the City's existing state NCCP permit, the existing conservation analysis represents existing conditions under which the City's still operates under its valid state NCCP (MSCP) permit (see Sections 1.2 and 3.1.1) and, therefore, serves as the basis for the quantitative aspects of this programmatic-level analysis. Land use considerations specific to the MSCP and NCCP permit are evaluated in Section 5.1, Land Use, under Issue 6.

To evaluate consistency with the state's existing NCCP permit at the programmatic level, changes to any of the following four issues were considered:

1. Take/conservation of vernal pool habitat;
2. Take/conservation of the seven vernal pool species;
3. Preserve design and function; and,
4. Take/conservation from management and monitoring activities

1. Take/Conservation of Vernal Pool Habitat

Implementation of the VPHCP would provide additional conservation of vernal pools beyond current conservation within the City's existing MHPA, permitted projects, and planned projects (i.e., existing conservation), by adding lands to the MHPA that contain valuable vernal pool resources. A shown in Table 3-5 (Conservation of Vernal Pools after Implementation of the VPHCP), the VPHCP would result in an overall increase in vernal pool acreage compared to the existing MSCP. The VPHCP would conserve an additional eight vernal pool complexes within the Plan Area through addition of lands to the MHPA, and conserve an additional 273 pools (9% more), totaling 2.8 acres of basin area, over what is currently conserved under the existing conservation (i.e., existing City MSCP permit). Expansion of the MHPA would result in additional conservation of vernal pools, covered species, and critical habitat for the covered species beyond existing conservation (for a total of 2,591 vernal pools located within a total of 54 vernal pool complexes, see Table 5.2-11). The VPHCP adds lands to the existing MHPA that include vernal pools, as well as associated watershed, habitat buffers, and adjacent uplands to meet the tenets of appropriate and functional reserve design, as guided by USFWS (USFWS 2000). In addition to conserving extant vernal pools, implementation of the VPHCP would result in the addition of lands to the MPHA that are suitable for vernal pool restoration (such as the mesa areas on Otay Mesa). The VPHCP would expand the MHPA by 275 acres to include restoration of vernal pools and associated populations of covered species (per the goals and

objectives of the VPHCP) to enhance the biological value of the MHPA and create a more cohesive vernal pool Preserve that minimizes potential fragmentation of vernal pool habitat.

As shown in Table 5.2-8, a total of 182 pools would potentially be directly impacted by development, including 120 pools impacted outside the MHPA (due to complexes that are 0% conserved) and 62 pools impacted inside the MHPA as a result of covered projects, covered activities, and/or future development necessary to allow reasonable use of private property in the MHPA (i.e., within a 75% conservation level area). One complex, KK1 Lake Murray, would be completely impacted by development. This complex has only one vernal pool, which is not occupied by any covered species. The direct impact to vernal pools resulting from implementation of the VPHCP represents an approximate 7% loss of the total number of vernal pools within the VPHCP Plan Area, totaling 2.8 acres of basin surface area. However, most of the vernal pools that would be impacted both inside and outside the MHPA are low quality pools, the majority of which occur in disturbed areas, such as roads and ditches. Some are moderate quality with relatively high diversity, and 67 occurrences of one or more of the covered species would be potentially impacted by development. The direct loss of moderate quality vernal pools that support covered species would, to a limited degree, negatively affect the persistence of the affected covered species. Direct impacts to low quality pools would not affect the continued persistence of covered species, because the low quality habitat in disturbed pools is unlikely to support covered species. In addition, Table 5.2-8 [Summary of Vernal Pool Impacts in VPHCP Plan Area (Project vs. Existing)] shows that the overall loss of vernal pool surface areas would be reduced from 10.4 to 7.6 acres and the total pools impacted by development would be reduced from 16% to 7% compared to the existing MSCP.

Since the MSCP was adopted in 1997, over 400 new pools have been found within the City (both inside and outside the MHPA). The Project would result in the addition of 273 vernal pools, totaling 2.8 acres of additional basin area, to the MHPA (Table 3-5). Table 5.2-8 shows that the VPHCP would potentially allow more impacts to vernal pools within the MHPA (62 pools) than compared to the existing conservation (16 pools) on a proportional basis because more vernal pools would be included in the MHPA (within a 75% conservation level, unless they occur on a hardline 100% conservation area). Of the 273 pools that would be added to the MHPA, 31 vernal pools (11%) are occupied with San Diego fairy shrimp. Further, the overall impacts to vernal pool surface area and percent of pools impacted would decrease compared to existing conservation (Table 3-5). Impacts to vernal pools found since the MSCP was adopted would be mitigated consistent with the VPHCP Mitigation Framework to ensure the long-term conservation of the seven vernal pool species. The level of impact to vernal pools under the VPHCP (93% conservation or 7% impacted) would be less than that anticipated for all vernal pools under the original MSCP (88% conservation or %12 impacted). The impacts and corresponding mitigation for each of the vernal pools that would be lost to development under the VPHCP have been

specifically reviewed by the Wildlife Agencies. If vernal pool restoration and/or enhancement are required by a covered project as compensatory mitigation to offset impacts to lower quality resources, it would be guided by the Mitigation Framework (See Section 5.3 of the VPHCP).

2. Take/Conservation of the Seven Vernal Pool Species

As shown in Table 3-6 [Conservation of Vernal Pools Occupied with Covered Species (Total and % Pools Conserved), after Implementation of the VPHCP], the VPHCP would result in conservation of 100% of occupied pools for three of the seven covered species, including Otay Mesa mint, California, Orcutt grass, and Riverside fairy shrimp. Therefore, 100% conservation is afforded to one additional species from existing conservation (Riverside fairy shrimp). The VPHCP would provide additional conservation (beyond existing conservation) for the seven vernal pool species as follows:

- *Otay Mesa mint*: No change.
- *San Diego mesa mint*: 3 additional occupied pools conserved (<1% increase)
- *Spreading navarretia*: No change.
- *San Diego button-celery*: 3 additional occupied pools conserved (1% increase)
- *California Orcutt grass*: No change.
- *Riverside fairy shrimp*: 3 additional occupied pools conserved (2% increase)
- *San Diego fairy shrimp*: 31 additional occupied pools conserved (6% increase)

The addition of lands to the MHPA through implementation of the VPHCP would result in 100% conservation for Riverside fairy shrimp, which would be an increase compared to the existing MSCP. In addition, conservation of occupied vernal pools would increase for San Diego button-celery, San Diego mesa mint, and San Diego fairy shrimp over the existing MSCP, as noted above. For San Diego button-celery, the VPHCP includes a requirement that the J13 population in Otay Mesa (near the Handler site) would be successfully relocated (under a Wildlife Agency-approved restoration plan) prior to any impact to retain genetics, be consistent with the existing MSCP anticipated loss of this species (2%) and effectively achieve a no-net loss of this species on Otay Mesa.

Table 3-6 of the EIR/EIS provides a summary of potential direct impacts to covered species from implementation of the VPHCP, which is summarized below.

- *Otay Mesa mint*: No direct impacts to any of the 369 vernal pools occupied by Otay Mesa mint that occur within the VPHCP Plan Area.

- *San Diego mesa mint*: Direct impacts to two of the 337 vernal pools occupied with San Diego Mesa mint (less than 1%) that occur within the VPHCP Plan Area at Montgomery-Gibbs Executive Airport. Mitigation is required for any direct impact to San Diego mesa mint, and must also include the salvage of seed or plants to preserve the population genetics.
- *Spreading navarretia*: One of the 95 vernal pools that support spreading navarretia could be directly impacted at the NDU 1&2 site on Otay Mesa. The NDU 1&2 site is part of the J13 complex that was historically recognized as a single spreading navarretia population (Bauder 1986). Mitigation is required for any direct impact to spreading navarretia, and must also include the salvage of seed or plants to preserve the population genetics.
- *San Diego button-celery*: A maximum of ten of the 732 vernal pools supporting San Diego button-celery (1.4%) will potentially be directly impacted within the J complex series, located at the J 13 within the NDU 1&2 site (two occupied pools impacted) and South Otay J13 South complex (seven occupied pools impacted), and J35 complex within the Brown Field site (one occupied pool impacted). The population of San Diego button-celery in the J13 complex series was historically recognized as a single population (Bauder 1986). Mitigation for any direct impacts to San Diego button-celery, and must also include the salvage of seed or plants to preserve the population genetics. As described above, the VPHCP includes a requirement that the impacted populations of San Diego button-celery at complexes J13 and J35 population in Otay Mesa be successfully relocated prior to any impact to retain genetics, be consistent with the existing MSCP anticipated loss of this species (2%), and effectively achieve a no-net loss of this species on Otay Mesa.
- *California Orcutt grass*: No direct impacts to any of the 58 vernal pools occupied with California Orcutt grass that occur within the VPHCP Plan Area.
- *Riverside fairy shrimp*: No direct impacts to any of the 131 vernal pools occupied with Riverside fairy shrimp that occur within the VPHCP Plan Area.
- *San Diego fairy shrimp*: A maximum of 55 vernal pools that support San Diego fairy shrimp will potentially be directly impacted. Mitigation is required for any direct impacts to San Diego fairy shrimp. Where appropriate, the salvage of shrimp cysts may also be required to conserve the potentially unique genetics of impacted populations.

As described in Section 3.3.3 (Covered Projects and Covered Activities), the VPHCP includes a Mitigation Framework that requires avoidance, minimization, and mitigation for impacts to the seven covered species resulting from covered projects and covered activities. Where complexes occupied by covered species are not conserved under the VPHCP, or where the covered species

population within a complex is not conserved, compensatory mitigation would be required as part of the Mitigation Framework. To conserve the existing population at impacted occurrences, salvage of unique genetic material and in-kind restoration would be required as part of the VPHCP as follows:

- *Spreading Navarretia:* As part of the VPHCP, mitigation is required for direct impact to the one pool at the NDU 1&2 complex that supports spreading navarretia, including salvage of potentially impacted spreading navarretia individuals to preserve the population genetics. A restoration plan consistent with the Mitigation Framework that is a part of the Project, which includes restoring vernal pools with the salvaged spreading navarretia (i.e., in-kind restoration), would be required to mitigate for the one impacted pool that supports spreading navarretia.
- *San Diego Button-Celery:* As part of the VPHCP, to prevent the loss of the unique genetics of the San Diego button-celery populations in Otay Mesa within the J13 and J35 complexes, and to be consistent with the existing MSCP anticipated loss of this species (2%), mitigation for impacted pools would occur consistent with the Mitigation Framework requirements that are part of the Project, including salvage of impacted San Diego button-celery individuals and in-kind restoration (under a Wildlife Agency-approved restoration plan). The lands added to the MHPA under the VPHCP are included to accommodate restoration, establishment, and conservation of new populations of San Diego button-celery within J13.

3. Preserve Design and Function

As described above, the VPHCP would result in the addition of lands (275 acres) to the MPHA over existing conditions. Adding this land to the MHPA would improve the function of the City's existing NCCP (MSCP) preserve by now including conserved vernal pool areas to the MSCP preserve design, providing lands that are suitable for vernal pool restoration (such as the mesa areas on Otay Mesa) into the Preserve design, and protecting these conserved and potentially restorable areas with long-term management and monitoring guided by the VPHCP for vernal pool habitat and species and the City's existing MSCP for other habitat and species. For lands that are currently included in the City's MHPA, the management and monitoring requirements in the VPHCP for vernal pool habitat and species would replace those in the City's existing MSCP. The restoration of vernal pools and associated populations of covered species for lands currently in the MHPA and for the 275 acres to be added to the MHPA would enhance the biological value of the overall MHPA by creating a more cohesive vernal pool preserve, minimizing potential fragmentation of vernal pool habitat and providing better connections to increase genetic flow of organisms. This larger vernal pool-inclusive MHPA and management

and monitoring would be based on current science and information, including updated location and species distribution information and an adaptive management and monitoring program supported by a secured funding source.

If vernal pool restoration and/or enhancement is required by a covered project as compensatory mitigation to offset impacts to lower quality resources, it would be guided by the Mitigation Framework (See Section 5.3 of the VPHCP), which includes a requirement that the project proponent posts a performance bond or letter of credit with the City for grading, planting, irrigation, and 5 years of maintenance and monitoring of vernal pool mitigation (including a 20% contingency to be added to the total costs). At the end of the 5-year restoration/enhancement period, the mitigation site must be at a Level 1 status. The bond or letter of credit is to guarantee the successful implementation of the mitigation construction, maintenance and monitoring. As described in Section 8.2 (MHPA Preserve Assembly) of the VPHCP, project proponents will be required to fund permanent management and monitoring of conserved lands consistent with Chapter 7 (Management, Monitoring, and Reporting) of the VPHCP and the City's Draft VPMMP (Appendix D of the VPHCP) that will ensure that the site is maintained in Level 1 status. In addition, all lands conserved as part of the development entitlement process would be dedicated in fee to the City or placed within a Covenant of Easement with the Wildlife Agencies named as third-party beneficiaries. As described in Section 8.2.2 (Implementation within Existing Conserved Lands) of the VPHCP, the City will continue to manage their lands consistent with the standards and requirements of the MSCP SAP. In addition, for the vernal pool complexes within the MHPA, the City will provide management, monitoring, and reporting consistent with Chapter 7 of the VPHCP and will implement the City's VPMMP (Appendix D of the VPHCP). Existing resource/land management plans will be updated to reflect the vernal pool management and monitoring requirements per the schedule included in the VPMMP.

In summary, the VPHCP would result in no overall change or increase in conservation levels for the seven vernal pool species currently covered under the state's permit. Where no change occurs, improved management with secured /committed funding would be provided by the City as part of the VPHCP would be provided by the City (See Chapter 7, Management, Monitoring, and Reporting and Chapter 10, Preserve Management and Funding Mechanisms, of the VPHCP). Compared to the existing MSCP, this would be an improvement in that funding would be specifically allocated and tied to vernal pools and the subject seven species. Moreover, the VPHCP would result in a net benefit even if there would be no increase in conservation levels or acreage due to better, improved monitoring and management with dedicated/secured funding.

4. Take/Conservation from Management and Monitoring

The management and monitoring program in the VPHCP would replace the Vernal Pool Framework Management Plan and subsequent policies/regulations that the City has been operating under since the MSCP was approved in 1997 (See Section 3.1.1 of this EIR/EIS). As described in Chapter 7.0 of the VPHCP, the VPHCP management and monitoring program is based on updated/current location information, adaptive management principles, and is secured by a dedicated funding source. In addition, because the VPHCP is based on a more current inventory and knowledge of vernal pools compared to when the MSCP was approved in 1997, it is not expected that implementation of the VPHCP would result in greater impacts to vernal pool habitat and species from management and monitoring activities than the City's existing NCCP (MSCP) permit.

Overall, the VPHCP would result in no change or an increase in conservation levels for vernal pool habitat and the seven vernal pool species currently covered under the state's NCCP permit.

Where no change occurs, improved management and monitoring (See Chapter 7, Management, Monitoring, and Reporting of the VPHCP) with secured funding (See Chapter 10, Preserve Management and Funding Mechanisms of the VPHCP) would be provided by the City. The VPHCP's funding program is considered to be an improvement compared to the existing MSCP, in that resources would be specifically dedicated for management and monitoring of vernal pool habitat and species and would complement existing MSCP requirements for other non-vernal pool species [See VPHCP Section 10.4, Total Amount Required, and Table 10-3, VPMMP Implementation Costs ($2014) for Life of the Project (31 Years); Total One-Time Costs and Annual Ongoing Costs] of the VPHCP.

In conclusion, the VPHCP would result in a net benefit to the existing MSCP for vernal pool habitat and species by expanding the MHPA, providing an increase of 273 pools (totaling 2.8 acres of basin area) over existing conditions by increasing the conservation levels for two of the vernal pool species (San Diego mesa mint and Riverside fairy shrimp); adding 275 acres to the City's existing MHPA to improve preserve design and function; providing improved monitoring and adaptive management measures for vernal pools based on improved science; and, including dedicated/secured funding for VPHCP implementation. In addition, specific requirements for the J13 and J35 San Diego button-celery populations in Otay Mesa and spreading navarretia at the NDU 1&2 complex to ensure no net loss of acreage and maintenance of current population size and genetics have been included as a requirement of the VPHCP. As also discussed in Section 5.1, Land Use, the VPHCP is consistent and compatible with the City's MSCP SAP and also provides additional conservation by adding lands to the MHPA and funding a more specific and comprehensive management and monitoring plan. Approval of the Project or alternatives would

continue to ensure project consistency with the MSCP SAP as future requests for development are proposed. All future development projects would be subject to CEQA review and would be required to comply with the regulations, policies, and standards outlined in the MSCP SAP, LDC, and the City's Biology Guidelines. Future projects would also be required to comply with the VPHCP, VPHCP Mitigation Framework, VPMMP, funding requirements, and MSCP Implementing Agreement. Where complexes occupied by covered species are not conserved under the VPHCP, or where the covered species population within a complex is not conserved, compensatory mitigation would be required as part of the Mitigation Framework.

For these reasons, the Project would not result in a substantial adverse effect related to a conflict with the provisions of an adopted HCP; NCCP; or other approved local, regional, or state HCP, either within the MSCP SAP area or in the surrounding region, and impacts to the City's existing MSCP and related state NCCP (MSCP) authorizations for vernal pool species would be less than significant.

Expanded Conservation Alternative

Under the Expanded Conservation Alternative, the VPHCP document would be essentially the same, with the exception of the additional MHPA lands that would conserve additional vernal pool resources. Due to the similarities, the analysis above for the Project applies. As with the Project, the Expanded Conservation Alternative would be consistent and compatible with the City's MSCP SAP.

For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to a conflict with the provisions of an adopted HCP; NCCP; or other approved local, regional, or state HCP, either within the MSCP plan area or in the surrounding region, and the impact would be less than significant.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, the VPHCP would not be implemented so the MSCP SAP would remain the primary city-wide conservation plan.

For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to a conflict with the provisions of an adopted HCP; NCCP; or other approved local, regional, or state HCP, either within the MSCP plan area or in the surrounding region, and the impact would be less than significant.

ISSUE 6: *Would the project result in the introduction of a land use within an area adjacent to the MHPA that would result in adverse edge effects?*

Project

The VPHCP would be a city-wide comprehensive plan for the preservation, restoration, management, and monitoring of vernal pool resources, including the seven covered species. The Project would add additional sensitive vernal pool resource land to the MHPA. The VPHCP would not introduce new or additional land uses adjacent to the MHPA beyond those already contemplated under the City's existing MSCP SAP. The VPHCP would increase conserved areas within the MHPA.

Development projects within or adjacent to the MHPA would be required to demonstrate consistency with existing land use plans and policies, including the existing MSCP SAP, through a project-level environmental review. This interface between development and native habitat, including vernal pools, may cause indirect impacts associated with drainage, toxics, lighting, noise, barriers/access, invasives, brush management, and grading/land development.

The VPHCP would require inclusion of the following modifications to the MSCP Land Use Adjacency Guidelines for projects within and adjacent to the areas preserved under the VPHCP:

- Drainage: All new areas of development within and adjacent to the MHPA must not drain into the Preserve. All development and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials, and other elements that might degrade or harm the natural environment or ecosystem processes within the MHPA. This can be accomplished through a variety of methods, including natural detention basins, grass swales, or mechanical trapping devices.
- Toxics: Land uses, such as recreational and agricultural, that use chemicals or generate by-products such as manure, that are potentially toxic or would impact wildlife, sensitive species, habitats, or water quality, need to incorporate measures to reduce impacts caused by the application or drainage of such materials into the MHPA. Such measures should include drainage/detention basins, swales, or holding areas with noninvasive grasses or wetland-type vegetation to filter out toxic materials.
- Herbicide: All herbicide and pesticide use shall be under the direction of a licensed pest control advisor and shall be applied by a licensed applicator, under the supervision of a vernal pool restoration specialist. Glyphosate-based herbicides, such as RoundUp or Aquamaster, shall be applied on all areas that have been dethatched. Herbicide shall only be applied when wind speed is less than 5 miles per hour, and spray nozzles shall be of a

design to maximize the size of droplets, to reduce the potential for drift of herbicide to nontarget plants. A 10-foot buffer shall be maintained between concentrations of any sensitive plant species. Application of herbicide shall not occur if rain is projected within 24 hours of the scheduled application. When vernal pools are ponding or close to saturation, only hand herbicide application (i.e., saturated glove technique) shall be used in and around the edges of pools by specially trained herbicide applicators under the direct supervision of the vernal pool restoration specialist. When vernal pools are not ponding or close to saturation, herbicide may be sprayed but applicators must stay at least 3 feet from the edge of the pools.

- Barriers: New development adjacent to the MHPA would be required to provide barriers along the Preserve boundaries to direct public access to appropriate locations.
- Invasives: No invasive, nonnative plant species shall be introduced into the MHPA.
- Brush Management: Brush Management Zone 1 activities would be considered an impact and such activities would be limited to a project's development footprint. Brush Management Zone 2 activities would be allowed within the MHPA, <u>but not within the vernal pool basins.</u>
- Grading/Land Development: Manufactured slopes associated with land development shall be included within the development footprint for projects within and adjacent to the MHPA.

Implementation of the MHPA Land Use Adjacency Guidelines would be required to address potential indirect impacts on land development within or adjacent to the additional lands added to the MHPA via the VPHCP. No new mitigation measures and/or permit conditions for indirect impacts would be required with adoption of the VPHCP. If mitigation occurs within the hardline preserve areas, no additional buffer beyond the hardline would be required.

For these reasons, the Project would not result in a substantial adverse effect related to the introduction of a land use within an area adjacent to the MHPA that would result in adverse edge effects, and the impact would be less than significant.

<u>Expanded Conservation Alternative</u>

Under the Expanded Conservation Alternative, implementation of the VPHCP document would be essentially the same, with the exception of the additional lands that would be added to the MHPA to conserve additional vernal pool resources. Due to the similarities, the analysis above for the Project applies. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to the introduction of a land use within an area

adjacent to the MHPA that would result in adverse edge effects, and the impact would be less than significant.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, the MHPA would remain the same and no additional land uses would be introduced beyond those already contemplated under the City's existing MSCP SAP. Due to the similarities, the analysis above for the Project applies. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to the introduction of a land use within an area adjacent to the MHPA that would result in adverse edge effects, and the impact would be less than significant.

ISSUE 7: *Would the project conflict with any local policies or ordinances protecting biological resources?*

Project

The purpose of the ESL Regulations is to protect and preserve environmentally sensitive lands and the viability of the species supported by those lands. The regulations are intended to ensure that development occurs in a manner that protects the overall quality of the resources and the natural and topographic character of the area. See Section 5.1, Land Use, of this EIR/EIS for an expanded discussion on the City's ESL Regulations and LDM Biology Guidelines.

The Project includes an amendment to the City's ESL Regulations and the LDM Biology Guidelines to include the VPHCP and to add specific direction on vernal pool mitigation, such as directing mitigation to occur within the MHPA, which would provide clarification and consistency within the documents and would not conflict with local policies or ordinances protecting biological resources. The amended ESL Regulations and LDM Biology Guidelines are included as Appendix E of the VPHCP.

In this case, the Project is the biologically superior option because it would conserve additional significant vernal pool resources and would include the adoption of the VPMMP and associated necessary funding. In addition, the VPHCP would establish a cohesive vernal pool Preserve that is managed and monitored programmatically and comprehensively, maintaining the genetic integrity of key populations. The VPHCP would conserve interconnected, high-quality vernal pool habitat city-wide, rather than a fragmented, "postage stamp" preserve system that could result from addressing vernal pool impacts on a project-by-project basis. For these reasons, the Project would be considered biologically superior per the ESL Regulations and impacts to low-quality wetland resources would be allowable.

The VPHCP would be consistent with the purpose of the ESL Regulations to protect and preserve environmentally sensitive lands and the viability of the species.

For these reasons, the Project would not result in a substantial adverse effect related to a conflict with local policies or ordinances protecting biological resources, and the impact would be less than significant.

As part of the Project, the MHPA boundary would be adjusted in select locations within Montgomery-Gibbs Executive Airport, as described in Section 3.4 and shown in Figure 3-1. The purpose of the BLA would be to adjust the MHPA to include locations of vernal pools with higher habitat value and additional pools that support endangered vernal pool species. While certain areas with vernal pool resources would be removed from the MHPA as part of the BLA, the BLA would result in an overall net gain of higher-quality vernal pool acreage, number of pools occupied with San Diego fairy shrimp, and improved biological value.

Adjustments to the MHPA boundaries can be made without amending the MSCP or SAP if the adjustment would result in the same or higher biological value of the Preserve. The determination of the biological value of the proposed boundary line change is to be made by the City in concurrence with the Wildlife Agencies. Section 5.4.2 of the MSCP Plan provides six factors for the comparison of biological value. Those factors are listed below with discussion of how the Project BLA would result in biologically increased value.

- *Effects on significantly and sufficiently conserved habitat (i.e., the exchange maintains or improves the conservation, configuration, or status of significantly or sufficiently conserved habitats)*

  The BLA would result in removal of five vernal pools from the MHPA (Table 3-4). However, the BLA would add vernal pools and surrounding habitat into the MHPA that have increased occupation by sensitive vernal pool resources and a higher habitat value. The net result of the BLA would be an additional 13 acres of habitat and 10 vernal pools occupied by San Diego fairy shrimp added to the MHPA (Table 3-4). The acreage proposed for addition in the MHPA through the BLA would include vernal pools with better hydrologic function and provide increased connectivity and better configuration of the vernal pool habitat located within the MHPA. While some lower quality vernal pools would be excluded from the MHPA, the addition of higher-quality pools would result in a net increase of high-quality conserved habitat and resources and allow for improved ability to restore, enhance, and maintain this high-quality vernal pool habitat and effects would be beneficial. Compensatory mitigation for impacts to the five vernal pools excluded from the MHPA would be required as part of the VPHCP Mitigation

Framework. Mitigation in the form of restoration and/or enhancement would occur within the reconfigured MHPA Preserve.

- *Effects to covered species (i.e., the exchange maintains or increases the conservation of covered species)*

  The proposed BLA would add into the MHPA a total of 10 vernal pools occupied with San Diego fairy shrimp as shown in Table 3-4. While one vernal pool occupied with San Diego mesa mint would be excluded from the MHPA, there would be a net gain of 13 acres of habitat suitable for restoration and enhancement of vernal pools, including establishment of additional pools with San Diego mesa mint. The overall net gain of conservation of pools occupied with covered species would be a beneficial effect of the BLA. Further, the improved configuration of the adjusted MHPA provides a more cohesive Preserve design at Montgomery-Gibbs Executive Airport. Compensatory mitigation for impacts to the five vernal pools excluded from the MHPA, including one pool occupied with San Diego mesa mint, would be required as part of the VPHCP Mitigation Framework. Mitigation in the form of restoration and/or enhancement would occur within the reconfigured MHPA Preserve.

- *Effects on habitat linkages and function of preserve areas (i.e., the exchange maintains or improves habitat linkages or wildlife corridor).*

  The MHPA BLA would not affect habitat linkages or wildlife corridors. In fact, the acreage proposed for addition in the MHPA through the BLA would include vernal pools with better hydrologic function and providing increased connectivity and better configuration of the vernal pool habitat located within the MHPA. The vernal pool acreage that would be conserved within the MHPA boundaries as part of the BLA would be subject to restoration, enhancement, and maintenance, but these activities would not modify or interfere with wildlife movement throughout the local area.

- *Effects on preserve configuration and management (i.e., the exchange results in similar or improvement management efficiency and/or protection for biological resources).*

  The increased acreage that would be included within the MHPA as a result of the BLA would be subject to the VPHCP VPMMP. The preservation, maintenance, management, and enhancement or restoration of vernal pools, as prescribed under the VPHCP, are designed to restore, enhance, and maintain vernal basins to a more natural state, thus benefiting sensitive vernal pool habitat and associated covered species by improving hydrological and ecological function. This would provide an overall net benefit to the City's vernal pool resources.

- *Effects on ecotones or other conditions affecting species diversity (i.e., the exchange maintains topographic and structural diversity and habitat interfaces of the Preserve)*

  The increased acreage that would be included within the MHPA as a result of the BLA includes a net increase of pools occupied with sensitive vernal pool species (i.e., San Diego fairy shrimp) and their conservation would aid in maintaining species diversity of vernal pool resources in the region. The increased acreage would also be subject to the VPHCP Management and Monitoring Program, which would work to improve biological function and quality of the vernal pools that could lead to an increase in native flora and fauna diversity. Thus, conditions affecting species diversity would be maintained and improved by the BLA.

- *Effects to species of concern not on the covered species list (i.e., the exchange does not significantly increase the likelihood that an uncovered species will meet the criteria for listing under either federal or state Endangered Species Acts)*

  The inclusion of selected high-quality vernal pool resources in exchange for the exclusion of lower-quality acreage in the MHPA would not result in adverse effects to non-covered species in the area. As described throughout this section, impacts to other species are not anticipated and would not decrease the likelihood of a non-covered species' survival. The improved habitat connectivity would provide a net benefit to the overall ecosystem, including non-covered species.

Based on the analysis of the six factors for the comparison of biological value of the land that would be exchanged as part of the BLA, it is concluded that the adjustment would result in a higher biological value of the Preserve. Thus, there is no requirement to amend the MSCP or SAP and the BLA would not conflict with the regulations and requirements of the MSCP, SAP, MSCP Implementing Agreement, or MHPA.

<u>Expanded Conservation Alternative</u>

Under the Expanded Conservation Alternative, the VPHCP document would be essentially the same as under the Project, with the exception of the additional MHPA lands that would conserve additional vernal pool resources. Due to the similarities, the analysis above for the Project applies. The Expanded Conservation Alternative would be consistent with the purpose of the ESL Regulations to protect and preserve environmentally sensitive lands and the viability of the species supported by those lands.

For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to a conflict with local policies or ordinances protecting biological resources, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would not require any amendments, but future projects would be required to demonstrate compliance with the City's ESL Regulations and LDM Biology Guidelines. These projects would also require take authorization through an individual Section 7 or Section 10(a) permit. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to a conflict with local policies or ordinances protecting biological resources, and the impact would be less than significant.

ISSUE 8: *Would the project result in an introduction of invasive species of plants into a natural open space?*

Project

Implementation of the VPHCP includes adoption of the VPMMP, which requires control of invasive plants within the vernal pool complexes managed within the Plan Area. Therefore, implementation of the VPHCP would help prevent the spread of invasive plant species within the MHPA through strict compliance with, and implementation of, the MHPA Land Use Adjacency Guidelines, which requires that no invasive, nonnative plant species shall be introduced into the MHPA. With implementation of the MHPA Land Use Adjacency Guidelines, introduction of invasive species or plants into or adjacent to the MHPA would be precluded.

For these reasons, the Project would not result in a substantial adverse effect related to the introduction of invasive species of plants into a natural open space, and the impact would be less than significant.

Expanded Conservation Alternative

As with the Project, introduction of invasive species or plants into or adjacent to the MHPA would be precluded under the Expanded Conservation Alternative due to the requirements of the MHPA Land Use Adjacency Guidelines and invasive species control required under implementation of the VPMMP. The Expanded Conservation Alternative would conserve more area than the Project, and thus would have a beneficial effect on control of invasive species due to management and monitoring requirements for the additional preserved land.

Due to the similarities, the analysis above for the Project applies. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to the introduction of invasive species of plants into a natural open space, and the impact would be less than significant.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, no new vernal pool lands would be added to the MHPA and existing conserved lands would continue to be managed consistent with the MSCP. Any new development would be required to implement the MHPA Land Use Adjacency Guidelines. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to the introduction of invasive species of plants into a natural open space, and the impact would be less than significant.

ISSUE 9: *Would the project result in a biological condition, policy, or natural resource management plan that cannot persist into the long term due to pressures caused by anticipated climate change?*

Project

The VPHCP acknowledges that climate change is a scenario that could affect how vernal pools and the associated covered species persist over time. The VPHCP conservation measures and management directives take into account pressures anticipated by climate change; accordingly, the VPHCP incudes preventative measures and planned responses to address future conditions that may result from climate change. This approach is referred to as robust decision making and focuses on managing for a range of future conditions. A robust decision-making approach is more useful when considering climate change as it may result in a range of various conditions, rather than an adaptive management approach, which tends to focus on meeting specific conditions that can be difficult to approach or may not happen (Stein et al. 2014).The VPHCP anticipates that the following pressures are the mostly likely to affect vernal pools and covered species resulting from climate change:

- Drought
- Increased fire (frequency and/or area burned)
- Weed invasion

Drought is a cyclical weather phenomenon that is beyond human control. Drought is not uncommon in southern California, and it is a phenomenon to which vernal pool habitats and

vernal pool species have, of necessity, adapted over time through development of seed and cyst banks.

Indirect impacts to covered species from drought may include a reduction in basin ponding time and/or frequency, thereby reducing species viability and reproduction potential. The potential for drought to impact vernal pool plant and crustacean species increases with the length of a drought.

To address drought, in coordination with the Wildlife Agencies, conservation of existing species populations will be implemented through collection of seed and shrimp cysts for storage and possible future reintroduction at a time deemed appropriate by the City and the Wildlife Agencies.

Climate change could also influence fire frequency within the VPHCP Plan Area. Fire occurrence in California has been correlated with drought, moisture availability, and biomass (fuel) accumulation (Lenihan et al. 2003). Although climate change models predict different climate scenarios, many predict a drier and warmer climate, which would result in more frequent or longer drought periods. An increase in drought frequency or longevity has the potential to increase fire frequency. For purposes of addressing changed circumstances in the VPHCP, it is assumed that fire occurrence frequency and area burned will increase by 25% by 2050.

Drought induced by climate change may also indirectly result in increased weed invasion in native habitats, including vernal pools and surrounding watersheds. Weed invasion is likely following a fire event. A reduction in native plant populations as a result of drought could lead to invasion of drought-tolerant invasive plant species.

Conservation measures in the VPHCP are not sufficient and comprehensive enough on their own to prevent the effects of climate change on vernal pool resources. However, certain risks associated with climate change can be minimized with preventative measures, which are summarized below.

The City's LDC has adopted Fire Safety and Brush Management Guidelines to reduce the risk of fire and create defensible space between structures and potential fuel sources (e.g., native vegetation). This defensible space slows down the fire, giving fire safety personnel time to stage and protect structures. In addition, during major wildfires, fuel breaks and backfires are often used to proactively fight fires. Preventative measures to reduce the likelihood of and harm from a single fire in the Preserve are included in the adaptive management provisions in the VPMMP. In addition, such measures would be more specifically identified in the site-specific Resource Management Plans (that would be developed for each vernal pool site under the VPMMP

framework), which would include a comprehensive strategy for reducing risks of negative effects wildfire, including preventative actions and planning for fire suppression activities in advance. The VPHCP contains extensive preventative actions to monitor and manage exotic species both within the vernal pool basin areas and in the surrounding uplands. In addition, as site-specific Resource Management Plans are developed, they would identify specific actions to monitor, reduce, and/or eliminate such species. Invasive species would be monitored annually along with the conditions of the complex and the status of the covered plant species. Methods to promote native species cover (thereby reducing potential for invasion of nonnatives) include weed control, seed bank enhancement and/or restoration, and installation of container plants.

Because the VPHCP adequately identifies the threats and pressures on vernal pool resources associated with anticipated climate change and provides minimization and preventative measures to alleviate the risks to vernal pool resources to the extent feasible (as summarized above), the Project would not result in a substantial adverse effect related to a biological condition, policy, or natural resource management plan that cannot persist into the long term due to pressures caused by anticipated climate change. The impact would be less than significant.

Expanded Conservation Alternative

The Expanded Conservation Alternative would include the same minimization and preventative measures as the Project to address potential risks to vernal pool resources resulting from anticipated climate change. Due to the similarities, the analysis above for the Project applies. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to a biological condition, policy, or natural resource management plan that cannot persist into the long term due to pressures caused by anticipated climate change. The impact would be less than significant.

Existing Conservation/No Project Alternative

Under the Existing Conservation /No Project Alternative, no measures would be implemented to address potential risks to vernal pool resources associated with climate change. It is assumed that risks to vernal pool resources would potentially be addressed on a project-by-project basis, as applicable, as part of the future development review process. Therefore, the Existing Conservation /No Project Alternative would not result in a substantial adverse effect related to a biological condition, policy, or natural resource management plan that cannot persist into the long term due to pressures caused by anticipated climate change. The impact would be less than significant.

5.2.5 Mitigation Measures

Project

The VPHCP includes covered activities and covered projects (see Chapter 3 of this EIR/EIS) that would be allowed in accordance with the Section 10(a) permit issued as part of the Project. The Project's Mitigation Framework includes avoidance and minimization measures that would be implemented, as applicable, under the VPHCP. Any impacts to vernal pool resources associated with the covered activities and covered projects, including incidental take of listed species, would be mitigated in accordance with the VPHCP Mitigation Framework compensatory mitigation requirements.

After implementation of the VPHCP, including the required avoidance, minimization, and compensatory mitigation measures in the Mitigation Framework, no significant adverse impacts to biological resources are anticipated and therefore no mitigation measures are required.

Expanded Conservation Alternative

As with the Project, no significant adverse impacts to biological resources have been identified under the Expanded Conservation Alternative and no mitigation measures are required.

Existing Conservation /No Project Alternative

As with the Project, no significant adverse impacts to biological resources have been identified under the Existing Conservation/No Project Alternative and no mitigation measures are required.

5.2.6 Level of Impact after Mitigation

Project

No significant adverse biological impacts would result from implementation of the VPHCP.

Expanded Conservation Alternative

No significant adverse biological impacts would result from implementation of the Expanded Conservation Alternative.

Existing Conservation/No Project Alternative

No significant adverse biological impacts would result from implementation of the Existing Conservation/No Project Alternative.

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5.3 AIR QUALITY

This section describes existing air quality conditions in the Project area. This section also summarizes applicable air quality regulations, and analyzes potential short-term construction and long-term operational air quality impacts of the Project and alternatives. Model calculations are included in Appendix C.

5.3.1 Affected Environment

Air quality is defined by the concentration of pollutants in relation to their impact on human health. Concentrations of air pollutants are determined by the rate and location of pollutant emissions released by pollution sources, and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, and sunlight. Therefore, ambient air quality conditions within the local air basin are influenced by such natural factors as topography, meteorology, and climate, in addition to the amount of air pollutant emissions released by existing air pollutant sources.

Climate, topography, and meteorology influence regional and local ambient air quality. Southern California is characterized as a semiarid climate, although it contains three distinct zones of rainfall that coincide with the coast, mountain, and desert. The Project is located in San Diego in the south coastal portion of San Diego County, and within the San Diego Air Basin (SDAB). The SDAB is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountain ranges to the east. The topography in the SDAB region varies greatly, from beaches on the west, to mountains and then desert to the east.

The climate of the SDAB is characterized by warm, dry summers and mild winters. One of the main determinants of its climatology is a semipermanent high-pressure area in the eastern Pacific Ocean. This high-pressure cell maintains clear skies for much of the year. When the Pacific High moves southward during the winter, this pattern changes, and low-pressure storms are brought into the region, causing widespread precipitation. During fall, the region often experiences dry, warm easterly winds, locally referred to as Santa Ana winds, which raise temperatures and lower humidity, often to less than 20%.

A dominant characteristic of spring and summer is night and early morning cloudiness, locally known as the marine layer. Low clouds form regularly, frequently extending inland over the coastal foothills and valleys. These clouds usually dissipate during the morning, and afternoons are generally clear.

A common atmospheric condition known as a temperature inversion affects air quality in the SDAB. During an inversion, air temperatures get warmer rather than cooler with increasing height. Inversion layers are important for local air quality, because they inhibit the dispersion of pollutants and result in a temporary degradation of air quality. The pollution potential of an area is largely dependent on a combination of winds, atmospheric stability, solar radiation, and terrain. The combination of low wind speeds and low-level inversions produces the greatest concentration of air pollutants. On days without inversions, or on days of winds averaging over 15 miles per hour, the atmospheric pollution potential is greatly reduced.

Criteria Pollutants

Individual air pollutants at certain concentrations may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation. Six air pollutants have been identified by the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) as being of concern both on a nation-wide and statewide level: ozone; carbon monoxide (CO); nitrogen dioxide (NO_2); sulfur dioxide (SO_2); lead; and particulate matter (PM), which is subdivided into two classes based on particle size: PM equal to or less than 10 micrometers in diameter (PM_{10}) and PM equal to or less than 2.5 micrometers in diameter ($PM_{2.5}$). Because the air quality standards for these air pollutants are regulated using human health and environmentally based criteria, they are commonly referred to as “criteria air pollutants.”

<u>Ozone</u>

Ozone is the principal component of smog and is formed in the atmosphere through a series of reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_X) in the presence of sunlight. ROG and NO_X are called precursors of ozone. NO_X includes various combinations of nitrogen and oxygen, including nitric oxide (NO), NO_2, and others. Ozone is a principal cause of lung and eye irritation in the urban environment. Significant ozone concentrations are usually produced only in the summer, when atmospheric inversions are greatest and temperatures are high. ROG and NO_X emissions are both considered critical in ozone formation.

<u>Carbon Monoxide</u>

CO is a colorless and odorless gas that, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. Relatively high concentrations are typically found near crowded intersections and along heavily used roadways carrying slow-moving traffic. Even under most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within a relatively short distance (300 to 600 feet)

of heavily traveled roadways. Vehicle traffic emissions can cause localized CO impacts, and severe vehicle congestion at major signalized intersections can generate elevated CO levels, called “hot spots,” which can be hazardous to human receptors adjacent to the intersections.

Nitrogen Dioxide

NO_2 is a product of combustion and is generated in vehicles and in stationary sources, such as power plants and boilers. It is also formed when ozone reacts with NO in the atmosphere. As noted above, NO_2 is part of the NO_X family and is a principal contributor to ozone and smog generation.

Sulfur Dioxide

SO_2 is a combustion product, with the primary source being power plants and heavy industries that use coal or oil as fuel. SO_2 is also a product of diesel engine combustion. SO_2 in the atmosphere contributes to the formation of acid rain.

Lead

Lead is a highly toxic metal that may cause a range of human health effects. Previously, the lead used in gasoline anti-knock additives represented a major source of lead emissions to the atmosphere. EPA began working to reduce lead emissions soon after its inception, issuing the first reduction standards in 1973. Lead emissions have significantly decreased due to the near elimination of leaded gasoline use.

Particulate Matter

PM is a complex mixture of extremely small particles and liquid droplets. PM is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. Natural sources of PM include windblown dust and ocean spray. The size of PM is directly linked to the potential for causing health problems. EPA is concerned about particles that are 10 micrometers in diameter or smaller because these particles generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Health studies have shown a significant association between exposure to PM and premature death. Other important effects include aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems, such as heart attacks and irregular heartbeat (EPA 2007). Individuals particularly sensitive to fine particle exposure include older adults,

people with heart and lung disease, and children. As previously discussed, EPA groups PM into two categories, which are described below.

$PM_{2.5}$. Fine particles, such as those found in smoke and haze, are $PM_{2.5}$. Sources of fine particles include all types of combustion activities (motor vehicles, power plants, wood burning, etc.) and certain industrial processes. $PM_{2.5}$ is also formed through reactions of gases, such as SO_2 and NO_X, in the atmosphere. $PM_{2.5}$ is the major cause of reduced visibility (haze) in California.

PM_{10}. PM_{10} includes both fine and coarse dust particles; the fine particles are $PM_{2.5}$. Coarse particles, such as those found near roadways and dusty industries, are larger than 2.5 micrometers and smaller than 10 micrometers in diameter. Sources of coarse particles include crushing or grinding operations and dust from paved or unpaved roads. Control of PM_{10} is primarily achieved through the control of dust at construction and industrial sites, the cleaning of paved roads, and the wetting or paving of frequently used unpaved roads.

Toxic Air Contaminants

In addition to criteria pollutants, both federal and state air quality regulations also focus on toxic air contaminants (TACs), also known as hazardous air pollutants. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in ambient air; however, their high toxicity may pose a threat to public health even at low concentrations. Most TACs originate from human-made sources, including on-road mobile sources, off-road mobile sources (e.g., construction equipment), area sources (e.g., dry cleaners), and stationary sources (e.g., factories and refineries).

TACs can be separated into carcinogens and noncarcinogens based on the nature of the effects associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Any exposure to a carcinogen poses some risk of contracting cancer. Noncarcinogens differ in that a safe level of exposure is assumed below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

Particulate exhaust emissions from diesel-fueled engines (diesel PM) were identified as a TAC by ARB in 1998. Diesel engines tend to produce a much higher ratio of fine particulates than other types of internal combustion engines. The fine particles that make up diesel PM tend to penetrate deep into the lungs and the rough surfaces of these particles makes it easy for them to bind with other toxins within the exhaust, thus increasing the hazards of particle inhalation. Long-term exposure to diesel PM is known to lead to chronic, serious health problems, including

cardiovascular disease, cardiopulmonary disease, and lung cancer. The majority of the estimated local health risk from TACs is from diesel PM.

Ambient Air Quality Standards

Health-based air quality standards have been established for these criteria pollutants by EPA at the national level and by ARB at the state level. These standards were established to protect the public with a margin of safety from adverse health impacts due to exposure to air pollution. California has also established standards for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. A brief description of each criteria air pollutant is provided below along with the most current monitoring station data and attainment designations for the Project study areas. Table 5.3-1 presents the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS).

Both EPA and ARB use ambient air quality monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. An "attainment" designation for an area signifies that pollutant concentrations did not exceed the established standard. In contrast to attainment, a "nonattainment" designation indicates that a pollutant concentration has exceeded the established standard. Finally, an unclassified designation indicates that insufficient data exist to determine attainment or nonattainment. In addition, the California designations include a subcategory of nonattainment-transitional, which is given to nonattainment areas that are progressing and nearing attainment.

The SDAB is an attainment area for the NAAQS for all criteria air pollutants except ozone, and meets the CAAQS for all criteria air pollutants except ozone, PM_{10}, and $PM_{2.5}$ (ARB 2015). The SDAB is currently classified as a state nonattainment area for ozone, PM_{10}, and $PM_{2.5}$ (ARB 2015).

5.3.2 Regulatory Framework

EPA, under the provisions of the Clean Air Act (CAA), requires each state with regions that have not attained the NAAQS to prepare a State Implementation Plan (SIP), detailing how these standards are to be met in each local area. The SIP is a legal agreement between each state and the federal government to commit resources to improving air quality. It serves as the template for conducting regional and project-level air quality analysis. The SIP is not a single document, but a compilation of new and previously submitted attainment plans, emissions reduction programs, district rules, state regulations, and federal controls.

Table 5.3-1
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [a]	National Standards [b]	
		Concentration [c]	Primary [c,d]	Secondary [c,e]
Ozone	1 hour	0.09 ppm (180 μg/m^3)	–	Same as primary standard
	8 hours	0.070 ppm (137 μg/m^3)	0.075 ppm (147 μg/m^3)	
Respirable particulate matter (PM_{10})[f]	24 hours	50 μg/m^3	150 μg/m^3	Same as primary standard
	Annual arithmetic mean	20 μg/m^3	–	
Fine particulate matter ($PM_{2.5}$) [f]	24 hours	–	35 μg/m^3	Same as primary standard
	Annual arithmetic mean	12 μg/m^3	12 μg/m^3	15 μg/m
Carbon monoxide (CO)	8 hours	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	None
	1 hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
	8 hours (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
Nitrogen dioxide (NO_2) [g]	Annual arithmetic mean	0.030 ppm (57 μg/m^3)	0.053 ppm (100 μg/m^3)	Same as primary standard
	1 hour	0.18 ppm (339 μg/m^3)	100 ppb (188 μg/m^3)	None
Sulfur dioxide (SO_2) [h]	Annual Arithmetic Mean	–	0.030 ppm (for certain areas) [h]	–
	24 hours	0.04 ppm (105 μg/m^3)	0.14 ppm (for certain areas) [h]	–
	3 hours	—	–	0.5 ppm (1,300 μg/m^3)
	1 hour	0.25 ppm (655 μg/m^3)	75 ppb (196 μg/m^3)	–
Lead [i,j]	30-day average	1.5 μg/m^3	–	–
	Calendar quarter	–	1.5 μg/m^3 (for certain areas) [j]	Same as primary standard
	Rolling 3-month average	–	0.15 μg/m^3	
Visibility-reducing particles [k]	8 hours	See footnote j	No national standards	
Sulfates	24 hours	25 μg/m^3		
Hydrogen sulfide	1 hour	0.03 ppm (42 μg/m^3)		
Vinyl chloride [i]	24 hours	0.01 ppm (26 μg/m^3)		

Notes: mg/m^3 = milligrams per cubic meter; ppb = parts per billion; ppm = parts per million; μg/m^3 = micrograms per cubic meter

[a] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility-reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standards.

[c] Concentration expressed first in the units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25 degrees Celsius and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and reference pressure of 760 torr; (ppm) in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[e] National Secondary Standards: The levels of air quality necessary to protect public welfare from any known or anticipated adverse effects of a pollutant.

[f] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 μg/m^3 to 12.0 μg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/m^3, as was the annual secondary standard of 15 μg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[g] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards the units can be converted from 100 ppb to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. To directly compare the 1-hour national standard to the California standard, the units can be converted to ppm. In this case, the national standard of 75 ppb is identical of 0.075 ppm.

[i] ARB has identified lead and vinyl chloride as contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[j] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 μg/m^3 as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved.

[k] In 1989, ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and the "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: ARB 2013

General Conformity Rule

General conformity requirements were adopted by Congress as part of the CAA Amendments and were implemented by EPA regulations in the November 30, 1993, Federal Register (40 CFR Sections 6, 51, and 93: "Determining Conformity of General Federal Actions to State or Federal Implementation Plans; Final Rule"). General conformity requires that all federal actions conform to the SIP as approved or promulgated by EPA, by either determining that the action is exempt from the General Conformity Rule requirements, or subject to a formal conformity determination.

The purpose of the general conformity program is to ensure that actions taken by the federal government do not undermine state or local efforts to achieve and maintain NAAQS. 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 with respect to location and quantity. Direct emissions occur at the same time and place as the action. Indirect emissions are reasonably foreseeable emissions that may occur later in time and/or are farther removed from the action; they are subject to conformity if the federal agency can practicably control them and maintain control through a continuing program responsibility.

The process to evaluate General Conformity for a proposed federal action involves an applicability analysis, conformity determination, and review. According to EPA guidance, the federal agency must apply the applicability requirements found at 40 CFR Section 93.153(b) to the federal action to evaluate whether, on a pollutant-by-pollutant basis, a determination of General Conformity is required. If the regulating federal agency determines that the General Conformity regulations do not apply to the federal action, no further analysis or documentation is required.

Analysis required by the General Conformity Rule focuses on the net increase in emissions compared to ongoing historical conditions. Existing SIPs are presumed to have accounted for routine, ongoing federal agency activities. Conformity analyses are further limited to those direct and indirect emissions over which the federal agency has responsibility and control. General Conformity analyses are not required to analyze emissions sources that are beyond the responsibility and control of the federal agency. Conformity determinations are not required to address emissions that are not reasonably foreseeable or reasonably quantifiable.

State Standards

ARB is the lead agency for developing the SIP in California. Local air districts and other agencies prepare Air Quality Attainment Plans or Air Quality Management Plans (AQMPs), and

submit them to ARB for review, approval, and incorporation into the applicable SIP. ARB also maintains air quality monitoring stations throughout the state in conjunction with local air districts. Data collected at these stations are used by ARB to classify air basins as being in attainment or nonattainment with respect to each pollutant and to monitor progress in attaining air quality standards.

The California CAA requires that each area exceeding the CAAQS for ozone, CO, SO_2, and NO_2 must develop a plan aimed at achieving those standards. The California Health and Safety Code Section 40914 requires air districts to design a plan that achieves an annual reduction in district-wide emissions of 5% or more, averaged every consecutive 3-year period. To satisfy this requirement, the local air districts have to develop and implement air pollution reduction measures, which are described in their AQMPs, and outline strategies for achieving the CAAQS for any criteria pollutants for which the region is classified as nonattainment.

ARB has established emission standards for vehicles sold in California and for various types of equipment. California gasoline specifications are governed by both state and federal agencies. During the past decade, federal and state agencies have imposed numerous requirements on the production and sale of gasoline in California. ARB has also adopted control measures for diesel PM and more stringent emissions standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators).

TACs in California are regulated primarily through the Tanner Air Toxics Act (Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act (Chapter 1252, Statutes of 1987). Assembly Bill (AB) 1807 sets forth a formal procedure for ARB to designate substances as TACs. Research, public participation, and scientific peer review must occur before ARB can designate a substance as a TAC. The Air Toxics Hot Spots Information and Assessment Act requires that TAC emissions from stationary sources be quantified and compiled into an inventory according to criteria and guidelines developed by ARB, and if directed to do so by the local air district, a health risk assessment (HRA) must be prepared to determine the potential health impacts of such emissions.

Local Standards

In San Diego County, the San Diego Air Pollution Control District (SDAPCD) is the agency responsible for the administration of federal and state air quality laws, regulations, and policies. Included in SDAPCD's tasks are monitoring of air pollution, preparation of the SIP for the SDAB, and promulgation of rules and regulations. The SIP includes strategies and tactics to be used to attain the federal ozone standard in the county. The SIP elements are taken from the Regional Air Quality Strategy (RAQS), the SDAPCD plan for attaining the state ozone standard,

which is more stringent than the federal ozone standard. The rules and regulations include procedures and requirements to control the emission of pollutants and to prevent adverse impacts.

SDAPCD rules relevant to the Project include:

- Regulation IV: Prohibitions; Rule 50: Visible Emissions. Prohibits the generation of particulate matter emissions that exceed the visible emissions threshold.
- Regulation IV: Prohibitions; Rule 51: Nuisance. Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property.
- Regulation IV: Prohibitions; Rule 55: Fugitive Dust. Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site.

The Project is required to demonstrate compliance with the above rules by incorporating reduction measures into project specifications and field procedures.

5.3.3 CEQA Thresholds of Significance

The following thresholds are derived from the City's 2016 Significance Determination Thresholds for the purpose of evaluating potential air quality impacts, which are based primarily on achieving regulatory compliance. A significant impact would occur if the Project would:

1. *Conflict with or obstruct implementation of the applicable air quality plan;*
2. *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
3. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);*
4. *Expose sensitive receptors to substantial pollutant concentrations;*
5. *Exceed 100 pounds per day of PM_{10} dust; or*
6. *Create objectionable odors affecting a substantial number of people.*

SDAPCD has not developed quantitative significance thresholds for CEQA projects. However, the City has established recommended thresholds of significance for regional pollutant emissions as shown in Table 5.3-2 and these were used to analyze the impacts of the Project.

Table 5.3-2
Regional Pollutant Emission Screening Level Thresholds of Significance

	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$[1]	Lead
Pounds per hour	–	25	100	25	–	–	–
Pounds per day	137	250	550	250	100	55	3.2
Tons per year	15	40	100	40	15	10	0.6

[1]Threshold for $PM_{2.5}$ from South Coast Air Quality Management District
ROG = reactive organic gases; NO_X = oxides of nitrogen; SO_X = sulfur oxides; CO = carbon monoxide; PM = particulate matter; PM_{10} = PM equal to or less than 10 micrometers in diameter; $PM_{2.5}$ = PM equal to or less than 2.5 micrometers in diameter
– = No threshold proposed
Source: City of San Diego 2011a

General conformity *de minimis* thresholds are appropriate thresholds to be used for determining NEPA significance. The total annual emissions of attainment pollutants, as well as the emissions of nonattainment/maintenance pollutants (analyzed for General Conformity) from project maintenance and restoration activities, would be compared against the *de minimis* levels for the attainment status of these pollutants. The applicable *de minimis* thresholds for the Project emissions generated in the SDAB are shown in Table 5.3-3.

Table 5.3-3
Applicable General Conformity/NEPA Significance Thresholds

Pollutant	*De minimis* Emission Threshold (tons/year)
CO	100
NO_X	100
ROG	100
SO_X	100
PM_{10}	100
$PM_{2.5}$	100

CO = carbon monoxide; ROG = reactive organic gases; NO_X = oxides of nitrogen; SO_X = sulfur oxides; PM_{10} = PM equal to or less than 10 micrometers in diameter; $PM_{2.5}$ = PM equal to or less than 2.5 micrometers in diameter
Source: 40 CFR Part 93

Project impact significance under CEQA and NEPA, respectively, was determined by comparing the daily emissions for the Project and each alternative to the City's significance thresholds identified above and the annual emissions to the General Conformity *de minimis* thresholds. Project alternatives with the potential to generate emissions exceeding the thresholds would have a significant impact or adverse effect on air quality. If the Project alternative's emissions exceed the significance criteria, mitigation measures are available, depending on the nature of the air quality impact.

5.3.4 Environmental Consequences

ISSUE 1: *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

Project

Air quality plans describe air pollution control strategies to be implemented by a city, county, or regional air district. The primary purpose of an air quality plan is to bring an area that does not attain federal and state air quality standards into compliance with those standards pursuant to the requirements of the CAA and California CAA.

Air quality planning efforts are based on analysis and forecasts of air pollutant emissions throughout the entire region. The regional air quality plan for San Diego County is SDAPCD's RAQS, which is also the applicable portion of the SIP (SDAPCD 2009). The RAQS was developed pursuant to California CAA requirements and identifies feasible emissions control measures to provide expeditious progress toward attaining the state ozone standard in San Diego County.

Projects that are consistent with the assumptions used in development of the applicable air quality plan are considered to not conflict with or obstruct the attainment of the air quality levels identified in the plan. Emission forecasts rely on projections of vehicle miles traveled by the Metropolitan Planning Organizations (MPOs), such as SANDAG, and population, employment, and land use projections made by local jurisdictions during development of the area and general plans.

The Project would comply with all SDAPCD rules and regulations and would not develop a land use that would result in a net increase in long-term operational emissions. For these reasons, the Project would not result in a substantial adverse effect related to a conflict with or obstruction of implementation of the applicable air quality plan, and the impact would be less than significant.

Expanded Conservation Alternative

Similar to the Project, the Expanded Conservation Alternative would comply with all SDAPCD rules and regulations and would not develop a land use that would result in a net increase in long-term operational emissions. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to a conflict with or obstruction of implementation of the applicable air quality plan, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's existing MHPA, permitted projects, and planned projects. Since no increase in activities would occur, the Existing Conservation/No Project Alternative would be consistent with the assumptions used in development of the RAQS. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to a conflict with or obstruction of implementation of the applicable air quality plan, and the impact would be less than significant.

ISSUE 2: *Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Project

Monitoring, maintenance, and restoration activities associated with implementation of the VPHCP could result in criteria pollutant emissions generated by sources such as off-road equipment and construction worker commutes. Annual monitoring results would determine the appropriate Management Level (e.g., Level 1, 2, or 3) for each vernal pool complex that is managed under the VPMMP. Each Management Level would result in specific required management actions (see Chapter 3 of this EIR/EIS for a summary and Chapter 7 of the VPHCP for more detail). Level 1 maintains existing habitat conditions and assumes that access patrol visits would occur annually, at a minimum, at each site, or more frequently (e.g., monthly, weekly) as deemed appropriate by the City and Wildlife Agencies. Level 2 stabilizes habitat conditions and includes all Level 1 activities, plus some additional enhancement activities such as topographic reconstruction; dethatching; focal vernal pool weed control; and seed collection, bulking, and redistribution. Level 3 restores habitat conditions and includes all Level 1 activities, plus some additional restoration activities, such as pool restoration, topographic reconstruction, dethatching, focal vernal pool weed control, general weed control, and seed reintroduction container plant production/installation.

It is not possible to accurately estimate the specific daily or annual activity that would occur with monitoring and restoration activities. However, for informational purposes only, this analysis provides a conservative estimate of criteria pollutant emissions associated with the additional acreage that would be conserved with the VPHCP. This conservative scenario assumes that management and monitoring would occur at all Level 1, 2, and 3 complexes simultaneously in a given year. In reality, activities at Level 2 and Level 3 complexes would only occur for a 3- or 5-year period, respectively, and would most likely not be performed within the same time frame (i.e., implementation priority would be based on availability of funding and resources). Once all

complexes reach a Level 1 status, construction equipment would generally not be utilized (unless a vernal pool complex becomes degraded over time and requires further enhancement or restoration). The only emissions associated with Level 1 activities would be from field vehicles used during monitoring and small equipment used for maintenance, such as a line trimmer (i.e., weed whacker).

Construction-related emissions associated with typical construction activities were modeled using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2. CalEEMod allows the user to enter project-specific construction information, such as types, number, and horsepower of construction equipment, and number and length of off-site motor vehicle trips. Vehicle fleet characteristics and data specific to San Diego County or specific to the Project were used in place of CalEEMod defaults, where available.

Daily activity was assumed to involve driving and small equipment used for monitoring of Level 1 complexes, as well as off-road equipment and construction workers performing enhancement and restoration activities at Level 2 and 3 locations. Given that exhaust emissions rates of the construction equipment fleet in California are expected to decrease over time as stricter standards take effect, construction emissions were estimated using the earliest calendar year when monitoring and restoration activities could occur (i.e., 2016) to generate conservative estimates. If construction were to occur in later years, advancements in engine technology, retrofits, and turnover in the equipment fleet would be anticipated to result in lower levels of emissions. Therefore, using the earliest year of construction provides the most conservative estimate of construction emissions.

As shown in Table 5.3-4, construction emissions for the Project would result in maximum daily emissions of approximately 0.33 pounds of ROG, 3 pounds of NO_X, 2 pounds of CO, 0.003 pounds of SO_2, 0.27 pounds of PM_{10}, and 0.22 pounds of $PM_{2.5}$. Additional modeling assumptions and details are provided in Appendix C.

As shown in Table 5.3-4, construction-generated emissions of ROG, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ would not exceed applicable daily thresholds established by the City. In addition, the estimated annual emissions associated with the Project would be less than the General Conformity *de minimis* thresholds. Restoration activities would be required to follow the SDAPCD Rules and Regulations.

Table 5.3-4
Estimated Daily and Annual Maintenance and Restoration Emissions

	ROG	NO_X	CO	SO_2	PM_{10} [1]	$PM_{2.5}$ [1]
Maximum Daily Emissions (lbs/day)	0.33	3.02	2.27	0.003	0.27	0.22
Threshold of Significance (lbs/day)	137	250	550	250	100	55
Significant Impact?	No	No	No	No	No	No
Maximum Annual Construction Emissions (tons/year)	0.04	0.39	0.30	0.0004	0.04	0.03
General Conformity de minimis Threshold (tons/year)	100	100	100	100	100	100
Significant Impact?	No	No	No	No	No	No

ROG = reactive organic gases; NO_X = oxides of nitrogen; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = PM equal to or less than 10 micrometers in diameter; $PM_{2.5}$ = PM equal to or less than 2.5 micrometers in diameter
[1] PM_{10} emissions shown include the sum of PM with aerodynamic diameter 0 to 2.5 microns and PM with aerodynamic diameter 2.5 to 10 microns.
Source: Estimated by AECOM in 2015

The VPHCP does not authorize covered projects and covered activities; rather, it provides avoidance, minimization, and compensatory mitigation requirements as part of the VPHCP Mitigation Framework for covered projects and covered activities that would result in incidental take of vernal pool resources. Conservation and mitigation measures for covered projects consistent with the VPHCP have been or would be specified as conditions of approvals. In addition, development projects not included on the covered projects list would be required to analyze their biological impacts and conservation compared to the requirements and conditions of the VPHCP. The Project does not include City approval of planned development projects; rather, subsequent environmental is review is necessary for individual development projects. Emissions associated with covered projects and future development projects (and associated mitigation measures, where applicable) would be required to be analyzed during the subsequent project-level CEQA and NEPA (where applicable) environmental review process (including demonstrating consistency with emissions projections and mitigation identified in the current City General Plan).

At the time of that analysis, the impact of the future projects on criteria pollutant emissions would be determined. The Programmatic EIR (City of San Diego 2008b) for the City's General Plan states that the City's process for the evaluation of discretionary projects includes environmental review and documentation pursuant to CEQA as well as an analysis of those projects for consistency with the goals, policies, and recommendations of the General Plan. The Programmatic EIR found that, in general, implementation of federal, state, and local regulations as well as General Plan policies would preclude or reduce air quality impacts. However, it was possible that, for certain projects, adherence to the regulations may not adequately protect air quality, and such projects would require additional measures to avoid or reduce significant air quality impacts. The Programmatic EIR contains a Mitigation Framework, which states that, for projects that may exceed daily construction emissions established by the City, Best Available Control Measures would be incorporated to reduce construction emissions to below daily emission standards established by the City and future projects may be required to buffer sensitive

receptors from air pollution sources through the use of landscaping, open space, and other separation techniques. See General Plan policies CE-F.1 through CE-F.7.

As demonstrated above, the emissions-producing activities associated with the Project are primarily limited to restoration required in the VPHCP. Because of the scale of restoration activities (i.e., typically requiring one light-duty vehicle and/or a few pieces of off-road equipment), it is unlikely that the significance thresholds would be exceeded. For these reasons, the Project would not result in a substantial adverse effect related to a violation of any air quality standard or contribute substantially to an existing or projected air quality violation, and the impact would be less than significant.

Expanded Conservation Alternative

Similar to the Project, monitoring and restoration activities for the Expanded Conservation Alternative would result in criteria pollutant emissions generated by sources such as off-road equipment and construction worker commutes. Emissions associated with covered projects and future development projects (and associated mitigation measures, where applicable) would require subsequent project-level CEQA and NEPA (where applicable) analysis.

As discussed above with the Project, a typical year of activities would not exceed the City's CEQA thresholds and would be less than the General Conformity *de minimis* thresholds under NEPA. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to a violation of any air quality standard or contribute substantially to an existing or projected air quality violation, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's existing MHPA, permitted projects, and planned projects. Since no increase in activities would occur under the No Project Alternative, criteria pollutant emissions would also not increase. Due to improved emission standards, emissions would be anticipated to be lower in future years. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to a violation of any air quality standard or contribute substantially to an existing or projected air quality violation, and the impact would be less than significant.

ISSUE 3: *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable*

federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

Project

The cumulative analysis focuses on whether a specific project would result in a cumulatively considerable increase in emissions. By its very nature, air pollution is largely a cumulative impact. A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects. The thresholds of significance are relevant to whether a project's individual emissions would result in a cumulatively considerable incremental contribution to the existing cumulative air quality conditions. If a project's emissions would be less than established threshold levels, the project would not be expected to result in a considerable incremental contribution to the significant cumulative impact. As discussed above, the net increase in emissions from the Project, compared to existing conditions would not result in the generation of criteria air pollutant emissions that exceed the City's CEQA thresholds or the General Conformity *de minimis* thresholds under NEPA. For these reasons, the Project would not result in a substantial adverse effect related to a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard, and the impact would be less than significant.

Expanded Conservation Alternative

Similar to the Project, monitoring and restoration activities for the Expanded Conservation Alternative could result in criteria pollutant emissions generated by sources such as off-road equipment and construction worker commutes. As discussed above, the net increase in emissions over existing conditions would not result in the generation of criteria air pollutant emissions that exceed any of the City thresholds or the General Conformity *de minimis* thresholds under NEPA. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard, and the impact would be less than significant.

Existing Conservation/No Project Alternative

Since no increase in activities would occur under the Existing Conservation/No Project Alternative, criteria pollutant emissions would also not increase. It is anticipated that emissions would be lower in future years due to improved emissions standards. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect

related to a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard, and the impact would be less than significant.

ISSUE 4: *Would the project expose sensitive receptors to substantial pollutant concentrations?*

Project

The greatest potential for TAC emissions would originate from diesel PM emissions associated with off-road equipment operations. The only emissions associated with Level 1 activities would be from field vehicles used during monitoring and small equipment used for maintenance, such as a line trimmer (i.e., weed whacker). In addition, Level 2 or 3 restoration activities would usually require one light-duty vehicle and/or a few pieces of off-road equipment.

According to the Office of Environmental Health Hazard Assessment (OEHHA), HRAs that determine the health risks associated with exposure of residential receptors to TAC emissions should be based on a 30-year exposure period (CSPB 2015). However, HRAs should be limited to the period/duration of activities associated with the emissions activity. Monitoring and restoration activities would likely occur at a location for days or weeks. Because the Project would only require a few pieces of off-road equipment that would be used for a relatively short time period, monitoring and restoration activities would not be anticipated to expose sensitive receptors to substantial TAC concentrations. For these reasons, the Project would not result in a substantial adverse effect related to the exposure of sensitive receptors to substantial pollutant concentrations, and the impact would be less than significant.

Expanded Conservation Alternative

Similar to the Project, the Expanded Conservation Alternative would only require a few pieces of off-road equipment that would be used for a relatively short time period. Therefore, monitoring and restoration activities would not be anticipated to expose sensitive receptors to substantial TAC concentrations. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to the exposure of sensitive receptors to substantial pollutant concentrations, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's existing MHPA, permitted projects, and planned projects. Since no increase in activities would occur under the Existing Conservation/No Project Alternative, TAC

emissions would also not increase. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to the exposure of sensitive receptors to substantial pollutant concentrations, and the impact would be less than significant.

ISSUE 5: *Would the project exceed 100 pounds per day of PM_{10} dust?*

Project

Construction grading and demolition dust accounts for 30% of all PM_{10} emissions in the SDAB (City of San Diego 2011a). Road dust from paved and unpaved roads, accounts for 47% of all PM_{10} emissions (City of San Diego 2011a). The Project would generate PM_{10} emissions from monitoring and restoration activities, including on-road motor vehicles. As indicated in Table 5.3-4, PM_{10} emissions were estimated at 0.27 pounds per day. In addition, the Project would comply with SDAPCD Regulation IV, Rule 55 for Fugitive Dust emissions. For these reasons, the Project would not exceed 100 pounds per day of PM_{10} dust, and the impact would be less than significant.

Expanded Conservation Alternative

PM_{10} emissions for the Expanded Conservation Alternative were estimated at a maximum of 0.27 pounds per day, as the scale and type of restoration activities would be similar as under the Project scenario. In addition, the Expanded Conservation Alternative would comply with SDAPCD Regulation IV, Rule 55 for Fugitive Dust emissions. For these reasons, the Expanded Conservation Alternative would not exceed 100 pounds per day of PM_{10} dust, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's MHPA, permitted projects, and planned projects. Since no increase in activities would occur under the No Project Alternative, PM_{10} emissions would also not increase. For these reasons, the Existing Conservation/No Project Alternative would not exceed 100 pounds per day of PM_{10} dust, and the impact would be less than significant.

ISSUE 6: *Would the project create objectionable odors affecting a substantial number of people?*

Project

Sources that may emit odors during maintenance and restoration activities include exhaust from diesel construction equipment, which could be considered offensive to some individuals. Odors from these sources would be localized and generally confined to the immediate area surrounding the Project site. The Project would use typical construction techniques. Odors from off-road equipment and on-road vehicles would be typical of most construction sites and would be temporary in nature. For these reasons, the Project would not result in a substantial adverse effect related to the creation of objectionable odors affecting a substantial number of people, and the impact would be less than significant.

Expanded Conservation Alternative

Similar to the Project, the Expanded Conservation Alternative may emit odors from diesel construction equipment during maintenance and restoration activities. The Expanded Conservation Alternative would use typical construction techniques. Odors from off-road equipment and on-road vehicles would be typical of most construction sites and would be temporary in nature. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to the creation of objectionable odors affecting a substantial number of people, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's MHPA, permitted projects, and planned projects. Since no increase in activities would occur under the Existing Conservation/No Project Alternative, odors would also not increase. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to the creation of objectionable odors affecting a substantial number of people, and the impact would be less than significant.

5.3.5 Mitigation Measures

No significant adverse air quality impacts were identified and no mitigation measures are required.

5.3.6 Level of Impact after Mitigation

Project

No significant adverse air quality impacts would result from implementation of the Project. Therefore, no mitigation is required, and the impacts would remain less than significant under CEQA and would not be substantially adverse under NEPA.

Expanded Conservation Alternative

No significant adverse air quality impacts would result from implementation of the Expanded Conservation Alternative. Therefore, no mitigation is required, and the impacts would remain less than significant under CEQA and would not be substantially adverse under NEPA.

Existing Conservation/No Project Alternative

No significant adverse air quality impacts would result from implementation of the Existing Conservation/No Project Alternative. Therefore, no mitigation is required, and the impacts would remain less than significant under CEQA and would not be substantially adverse under NEPA.

5.4 GREENHOUSE GAS (GHG) EMISSIONS

This section provides background information, affected environment, and regulatory context that apply to the key issues pertaining to GHG emissions for the Project. The GHG emissions calculations are provided in Appendix C.

5.4.1 Affected Environment

The City of San Diego is currently a source of anthropogenic GHG emissions, with emissions generated by vehicular traffic and by energy use, water use, and solid waste disposal practices of existing development. The following are GHGs that are widely accepted as the principal contributors to human-induced global climate change:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)

Emissions of CO_2 are byproducts of fossil fuel combustion. CH_4 is the main component of natural gas and is associated with agricultural practices and landfills. N_2O is a colorless GHG that results from industrial processes, vehicle emissions, and agricultural practices.

GHG Emission Sources

GHG emissions contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, electric utility, residential, commercial, and agricultural categories. Emissions of CO_2 are byproducts of fossil fuel combustion, and CH_4, a highly potent GHG, is the primary component in natural gas and is associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural practices and soil management.

For purposes of accounting for and regulating GHG emissions, sources of GHG emissions are grouped into emission categories. ARB identifies the following main GHG emission categories that account for most anthropogenic GHG emissions generated within California:

- *Transportation:* On-road motor vehicles, recreational vehicles, aviation, ships, and rail
- *Electric Power:* Use and production of electrical energy
- *Industrial:* Mainly stationary sources (e.g., boilers and engines) associated with process emissions

- *Commercial and Residential:* Area sources, such as landscape maintenance equipment, fireplaces, and consumption of natural gas for space and water heating
- *Agriculture:* Agricultural sources that include off-road farm equipment; irrigation pumps; crop residue burning (CO_2); and emissions from flooded soils, livestock waste, crop residue decomposition, and fertilizer volatilization (CH_4 and N_2O)
- *High Global Warming Potential (GWP):* Refrigerants for stationary and mobile-source air conditioning and refrigeration, electrical insulation (e.g., SF_6), and various consumer products that use pressurized containers
- *Recycling and Waste:* Waste management facilities and landfills; primary emissions are CO_2 from combustion and CH_4 from landfills and wastewater treatment

GHG Emissions Inventory

California

California produced 459 million metric tons (MMT) of CO_2e in 2012. Combustion of fossil fuel in the transportation category was the single largest source of California's GHG emissions in 2012, accounting for 36% of total GHG emissions in the state. The transportation category was followed by the electric power category (including in-state and out-of-state sources), which accounts for 21% of total GHG emissions in California, and the industrial category, which accounts for 19% of the state's total GHG emissions (ARB 2014b).

City of San Diego

The City of San Diego Climate Action Plan (CAP) includes a quantitative inventory of GHG emissions for the baseline year of 2010 and a projection of emissions for 2020 and 2035. The most recent GHG inventory for the year 2010 estimated the total emissions at 13.0 MMT CO_2e per year (City of San Diego 2015). Transportation is the largest emissions sector, accounting for approximately 55% of total emissions. Energy consumption is the next largest source of emissions, at 40% of the total. Accounting for future population and economic growth, the City estimates that GHG emissions will increase to approximately 14.1 MMT CO_2e in 2020 and 16.7 MMT CO_2e in 2035.

The CAP includes City-specific targets to reduce GHGs by 2020 and 2035, helping to achieve statewide 2020 and 2030 targets, and putting the City on the trajectory of meeting its share of the 2050 statewide target. The City's reduction targets are 11.0 MMT CO2e in 2020, 7.8 MMT of CO2e in 2030, and 6.5 MMT of CO2e in 2035.

5.4.2 Regulatory Framework

Federal

EPA is the federal agency responsible for implementing the federal CAA. The Supreme Court of the United States ruled on April 2, 2007, that CO_2 is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs.

Greenhouse Gas Findings under the Federal Clean Air Act

On December 7, 2009, EPA signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industries or other entities, this action was a prerequisite to finalizing EPA's Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles. On May 7, 2010, the final Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards were published in the Federal Register. The emissions standards will require model year 2016 vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, which is equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. On August 28, 2012, the National Highway Traffic Safety Administration (NHTSA) and EPA issued a joint Final Rulemaking requiring additional federal GHG and fuel economy standards for model year 2017 through 2025 passenger cars and light-duty trucks.

In addition to the standards for light-duty vehicles, NHTSA and EPA adopted complementary standards to reduce GHG emissions and improve the fuel efficiency of heavy-duty trucks and buses on September 15, 2011. These standards together form a comprehensive heavy-duty

national program for all on-road vehicles rated at a gross vehicle weight at or above 8,500 pounds for model years 2014 through 2018 (EPA 2011). The standards will phase in with increasing stringency in each model year from 2014 through 2018. The President has directed the NHTSA and EPA to develop and issue the next phase of heavy-duty vehicle fuel efficiency and GHG standards by March 2016.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, EPA published the Final Mandatory Greenhouse Gas Reporting Rule (Reporting Rule) in the Federal Register. The Reporting Rule requires reporting of GHG data and other relevant information from fossil fuel and industrial GHG suppliers, vehicle and engine manufacturers, and all facilities that would emit 25,000 million tons (MT) or more of CO_2e per year. Facility owners are required to submit an annual report with detailed calculations of facility GHG emissions on March 31 for emissions from the previous calendar year. The Reporting Rule also mandates recordkeeping and administrative requirements to enable EPA to verify the annual GHG emissions reports.

Council on Environmental Quality Guidance

On August 1, 2016, the Council on Environmental Quality (CEQ) released final guidance for federal agencies on considering the impacts of GHG emissions in NEPA reviews. This guidance supersedes the draft GHG and climate change guidance released by CEQ in 2010 and 2014. The final guidance applies to all proposed federal agency actions, including land and resource management actions. This guidance explains that agencies should consider both the potential effects of a proposed action on climate change, as indicated by its estimated GHG emissions, and the implications of climate change for the environmental effects of a proposed action. The guidance recommends that agencies quantify a proposed agency action's projected direct and indirect GHG emissions, taking into account available data and GHG quantification tools that are suitable for the proposed agency action.

State

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California CAA.

Assembly Bill 1493 and Advanced Clean Car Program

AB 1493 (Pavley) required ARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to

automobiles and light trucks beginning with model year 2009. In June 2009, the EPA Administrator granted a CAA waiver of preemption to California. This waiver allowed California to implement its own GHG emissions standards for motor vehicles beginning with model year 2009 through 2016.

ARB's Advanced Clean Cars Program builds on efforts to improve fuel economy and reduce GHG emissions for passenger vehicles and light-duty trucks. The standards were developed in coordination with the federal government and combine fuel economy and GHG emissions. In January 2012, ARB approved a new fuel economy and emissions-control program for model years 2017 through 2025 (Pavley II). On August 28, 2012, NHTSA and EPA issued a final rulemaking for fuel-economy and GHG standards for model year 2017 through 2025 passenger vehicles and light-duty trucks. The federal standards adopted are considered appropriate for California and create a single national program for manufacturers that addresses both fuel economy standards and GHG emissions. The Advanced Clean Cars Program also includes the low emission vehicle (LEV) III amendments to the LEV regulations and Zero Emission Vehicle Program. The Zero Emission Vehicle Program is designed to achieve California's long-term emission reduction goals by requiring manufacturers to offer for sale specific numbers of the very cleanest cars available.

Executive Order S-3-05

Executive Order (EO) S-3-05, signed in June 2005, proclaimed that California is vulnerable to the impacts of climate change. EO S-3-05 declared that increased temperatures could reduce the Sierra Nevada's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emissions targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80% below the 1990 level by 2050.

Assembly Bill 32

In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.). AB 32 further details and puts into law the mid-term GHG reduction target established in EO S-3-05: reduce GHG emissions to 1990 levels by 2020. AB 32 also identifies ARB as the state agency responsible for the design and implementation of emissions limits, regulations, and other measures to meet the target.

In December 2008, ARB adopted its *Climate Change Scoping Plan* (Scoping Plan), which contains the main strategies California will implement to achieve the required GHG reductions

required by AB 32 (ARB 2008). The Scoping Plan also includes ARB-recommended GHG reductions for each emissions sector of California's GHG inventory. ARB further acknowledges that decisions about how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emissions sectors.

ARB is required to update the Scoping Plan at least once every 5 years to evaluate progress and develop future inventories that may guide this process. ARB approved the first update to the Climate Change Scoping Plan: Building on the Framework in June 2014 (ARB 2014a). The Scoping Plan update includes a status of the 2008 Scoping Plan measures and other federal, state, and local efforts to reduce GHG emissions in California, and potential actions to further reduce GHG emissions by 2020.

Executive Order S-1-07

EO S-1-07, signed in 2007, proclaims that the transportation sector is the main source of GHG emissions in California, at more than 40% of statewide emissions. EO S-1-07 establishes a goal that the carbon intensity of transportation fuels sold in California should be reduced by a minimum of 10% by 2020. ARB adopted the low carbon fuel standard (LCFS) on April 23, 2009. ARB approved the re-adoption and updated LCFS in 2015, effective January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted.

Senate Bill 97

Senate Bill (SB) 97 required the Governor's Office of Planning and Research to develop recommended amendments to the CEQA Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires MPOs to adopt a Sustainable Communities Strategy or an Alternative Planning Strategy, which will prescribe land use allocation in that MPO's Regional Transportation Plan. On September 23, 2010, ARB adopted regional GHG targets for passenger vehicles and light trucks for 2020 and 2035 for the 18 MPOs in California. If MPOs do not meet the GHG reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.

ARB is required to update the regional GHG targets at least every 8 years and may revise them every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is planning to revise the 2035 GHG targets for the four largest MPOs, including SANDAG, San Diego's MPO.

Local Standards

San Diego Air Pollution Control District

In San Diego County, SDAPCD is the agency responsible for protecting public health and welfare through the administration of federal and state air quality laws and policies. SDAPCD currently has no regulations relative to GHG emissions. However, some rules and regulations that address criteria pollutants may also have a benefit for GHG emissions.

City of San Diego

General Plan

The City adopted an updated General Plan in 2008. The following policies contained in the Conservation Element of the General Plan are applicable to the Project:

- CE-A.2. Reduce the City's carbon footprint. Develop and adopt new or amended regulations, programs, and incentives as appropriate to implement the goals and policies set forth in the General Plan to:
    - Create sustainable and efficient land use patterns to reduce vehicular trips and preserve open space;
    - Reduce fuel emission levels by encouraging alternative modes of transportation and increasing fuel efficiency;
    - Improve energy efficiency, especially in the transportation sector and buildings and appliances;
    - Reduce the Urban Heat Island effect through sustainable design and building practices;
    - Reduce waste by improving management and recycling programs.
- CE-A.8. Reduce construction and demolition waste in accordance with Public Facilities Element, Policy PF-I.2, or by renovating or adding on to existing buildings, rather than constructing new buildings.
- CE-A.11. Implement sustainable landscape design and maintenance.

- Strategically plant deciduous shade trees, evergreen trees, and drought tolerant native vegetation, as appropriate, to contribute to sustainable development goals.
- Reduce use of lawn types that require high levels of irrigation.
- Minimize the use of landscape equipment powered by fossil fuels.
- Implement water conservation measures in site/building design and landscaping.
- Encourage the use of high efficiency irrigation technology, and recycled site water to reduce the use of potable water for irrigation. Use recycled water to meet the needs of development projects to the maximum extent feasible.

Climate Action Plan

As discussed above, the City of San Diego adopted a CAP in December 2015 (City of San Diego 2015). The CAP quantifies GHG emissions; establishes reduction targets for 2020 and 2035; identifies strategies and measures to reduce GHG levels; and provides guidance for monitoring progress on an annual basis. The City of San Diego CAP identifies a comprehensive set of goals and actions, including ordinances, policies, resolutions, programs, and incentives, that the City can use to reduce GHG emissions.

5.4.3 CEQA Thresholds of Significance

The following thresholds are derived from the City's 2016 Significance Determination Thresholds for the purpose of evaluating potential impacts to greenhouse gas emissions. A significant CEQA impact would occur if the Project would:

1. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment; or*
2. *Conflict with the Climate Action Plan or another applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

The City's CAP was adopted in December 2015, and in July 2016, the City adopted the CAP Consistency Checklist (Checklist) to provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA. The Checklist contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the CAP are achieved. If a project is determined, through the use of the Checklist, to be in compliance with the CAP, the project may rely on the CAP for the cumulative impacts analysis of GHG emissions, and is not required to perform further analysis.

The CEQ guidance explains that agencies should consider both the estimated GHG emissions and the implications of climate change for the environmental effects of a proposed action. According to CEQ guidance, agencies should not limit themselves to calculating a proposed action's emissions as a percentage of sector, nationwide, or global emissions in deciding whether or to what extent to consider climate change impacts under NEPA. When considering GHG emissions and their significance, agencies should use appropriate tools and methodologies for quantifying GHG emissions and comparing GHG quantities across alternative scenarios (CEQ (2016). Therefore, the NEPA analysis is based on the emissions reporting limit as required by the Mandatory Greenhouse Gas Reporting Rule. If the Project exceeds 25,000 MT CO_2e per year, the Project would have a substantial adverse effect on the environment.

5.4.4 Environmental Consequences

ISSUE 1: *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment?*

Project

The VPHCP is a comprehensive planning program designed to create, manage, and monitor a vernal pool ecosystem Preserve within the city. Because there is no physical development associated with the VPHCP, its implementation would not result in direct climate change impacts. Covered projects and covered activities would require separate project-level environmental review. The VPHCP does not authorize covered projects and covered activities; rather, it provides avoidance, minimization, and compensatory mitigation requirements through the Mitigation Framework for covered projects and covered activities that would result in incidental take of vernal pool resources.

Conservation measures for covered projects consistent with the VPHCP have been or would be included as conditions of project approval. In addition, development projects not included on the covered projects list would be required to analyze their biological impacts and conservation compared to the requirements and conditions of the VPHCP. Emissions associated with those projects and conservation measures would be required to be analyzed during the CEQA and NEPA (where applicable) environmental review process. At the time of that analysis, the impact of the future projects on GHG emissions would be determined.

However, monitoring, maintenance, and restoration activities associated with implementation of the VPHCP could result in GHG exhaust emissions generated by sources such as off-road equipment, haul trucks, and construction worker commutes.

Annual monitoring results would determine the appropriate Management Level (e.g., Level 1, 2, or 3) for each vernal pool complex that is managed under the VPMMP. Each Management Level would result in specific required management. Level 1 maintains existing habitat conditions and assumes that access patrol visits would occur annually, at a minimum, at each site, or more frequently (e.g., monthly, weekly) as deemed appropriate by the City and Wildlife Agencies. Level 2 stabilizes habitat conditions and includes all Level 1 activities, plus some additional enhancement activities such as topographic reconstruction; dethatching; focal vernal pool weed control; and seed collection, bulking, and redistribution. Level 3 restores habitat conditions and includes all Level 1 activities, plus some additional restoration activities, such as pool restoration, topographic reconstruction, dethatching, focal vernal pool weed control, general weed control, and seed reintroduction container plant production/installation.

Because it is not possible to accurately estimate the specific activity that would occur with future monitoring and restoration activities each year of VPHCP implementation, for informational purposes only, this analysis provides a conservative estimate of GHG emissions for a year of activities associated with the additional acreage that would be conserved with the VPHCP. This conservative scenario assumes that management and monitoring would occur at all Level 1, 2, and 3 complexes simultaneously in a given year. In reality, activities at Level 2 and Level 3 complexes would only occur for a 3- or 5-year period, respectively, and would most likely not be performed within the same time frame (i.e., implementation priority would be based on availability of funding and resources). Once all complexes reach a Level 1 status, construction equipment would generally not be utilized (unless a vernal pool complex becomes degraded over time and requires further enhancement or restoration). The only emissions associated with Level 1 activities would be from field vehicles used during monitoring and small equipment used for maintenance, such as a line trimmer (i.e., weed whacker).

Construction-related emissions associated with typical construction activities were modeled using CalEEMod, Version 2013.2.2. CalEEMod allows the user to enter project-specific construction information, such as types, number, and horsepower of construction equipment, and number and length of off-site motor vehicle trips. Vehicle fleet characteristics and data specific to San Diego County or specific to the Project were used in place of CalEEMod defaults, where available.

Daily activity was assumed to involve driving and small equipment used for monitoring of Level 1 complexes, as well as off-road equipment and construction workers performing enhancement and restoration activities at Level 2 and 3 locations. Assuming that the level of activity occurred for 5 days per week for an entire year, the annual GHG emissions for the additional conservation activities associated with the VPHCP would be approximately 37 MT CO_2e per year. The total GHG emissions would not exceed the NEPA threshold of 25,000 $MTCO_2e$ per year.

Restoration activities would be required to follow the SDAPCD Rules and Regulations. At this time, the City has not adopted policies or recommended performance measures to address specific GHG emission reductions related to construction or restoration activities. Because of the scale of these restoration activities (e.g., usually requiring one light-duty vehicle and/or a few pieces of off-road equipment), it is unlikely that GHG emissions would be significant.

For these reasons, the Project would not result in a substantial adverse effect related to the generation of GHG emissions, either directly or indirectly, that may have a significant effect on the environment, and the impact would be less than significant.

Expanded Conservation Alternative

Similar to the Project, monitoring and restoration activities for the Expanded Conservation Alternative could result in GHG exhaust emissions generated by sources such as off-road equipment, haul trucks, and construction worker commutes. Emissions associated with development projects and conservation measures would be required to be analyzed during the CEQA and NEPA (where applicable) environmental review process. At the time of that analysis, the impact of the future projects on GHG emissions would be determined.

As discussed above with the Project, a typical year of activities (approximately 37 MT CO_2e per year) would be well below the NEPA threshold of 25,000 MT CO_2e per year even with the additional pools and acreage included in the Expanded Conservation Alternative (Appendix C). Restoration activities would be required to follow the SDAPCD Rules and Regulations. Because of the scale of these restoration activities (e.g., usually requiring one light-duty vehicle and/or a few pieces of off-road equipment), it is unlikely any thresholds or screening criteria would be exceeded.

For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to the generation of GHG emissions, either directly or indirectly, that may have a significant effect on the environment, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's existing MHPA, permitted projects, and planned projects. The conservation values would remain the same under the Existing Conservation/No Project Alternative. Since no increase in activities would occur under the No Project Alternative, GHG emissions would also not increase. Due to improved emission standards, emissions would be

anticipated to be lower in future years. For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to the generation of GHG emissions, either directly or indirectly, that may have a significant effect on the environment, and the impact would be less than significant.

ISSUE 2: *Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Project

The City adopted a CAP in December 2015. The CAP quantifies GHG emissions; establishes reduction targets for 2020 and 2035; identifies strategies and measures to reduce GHG levels; and provides guidance for monitoring progress on an annual basis. The CAP identified strategies and measures to meet GHG reduction targets of 15% below a 2010 baseline for 2020 and 50% below baseline in 2035. The City subsequently adopted the Checklist to provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA.

Step 1 of the CAP Consistency Checklist requires the project, in this case the VPHCP, to assess its consistency with existing General Plan and Community Plan land use and zoning designations. As discussed in Section 5.1, Land Use, the VPHCP is consistent with the environmental goals and policies of the General Plan, Community Plan, and MSCP. Step 2 of the CAP Consistency Checklist only applies to development projects that involve permits that would require a certificate of occupancy from the Building Official or projects comprised of one and two family dwellings or townhouses as defined in the California Residential Code and their accessory structures. Conservation of open space areas does not require a certificate of occupancy, and thus, by demonstrating land use consistency, the VPHCP has demonstrated consistency with the CAP through the CAP Consistency Checklist.

Furthermore, the VPHCP would be consistent with relevant CAP strategies, specifically Strategy 5: Climate Resiliency. Climate Resiliency is defined as the ability of a system to absorb disturbance while undergoing change and still retain essentially the same function and identify as before. The intent of the strategy is to develop flexible programs, policies, and processes to accommodate unexpected events and shocks and continue to function effectively (City of San Diego 2015). The VPHCP is consistent with Strategy 5, Climate Resiliency and implements this strategy by first restoring or maintaining the proper hydrologic and ecologic function of the vernal pools so that they have improved ability to withstand or adapt to climate change disturbance, such as increased drought. By improving the overall health and function of the individual vernal pools and the larger interconnected vernal pool complexes, those resources

would be better equipped to tolerate and recover from potential climate-related disturbance such as prolonged drought or increased wildland fires. Then, ongoing monitoring, maintenance, and mitigation designed for flexibility dependent on the specific conditions and needs of each site would allow adaptive actions as needed in the future for long-term success.

The CEQ guidance states that agencies should consider the implications of climate change for the environmental effects of a proposed action. Climate change can affect the environment of a proposed action in a variety of ways. Climate change can increase the vulnerability of a resource, ecosystem, human community, or structure, which would then be more susceptible to climate change and other effects and result in a proposed action's effects being more environmentally damaging. Drought, increased fire, and weed invasion associated with climate change could increase risks to vernal pools and covered species. However, the VPHCP (Chapter 9) includes preventative measures and planned responses to minimize certain risks associated with climate change.

As discussed earlier, the Project has demonstrated consistency with the CAP through the CAP Consistency Checklist and would not conflict with existing California legislation that has been adopted to reduce statewide GHG emissions. For these reasons, the Project would not result in a substantial adverse effect related to a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and the impact would be less than significant.

Expanded Conservation Alternative

Similar to the Project, the Expanded Conservation Alternative would be required to comply with applicable regulations, including the City's CAP. The VPHCP includes preventative measures and planned responses to minimize certain risks associated with climate change. For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and the impact would be less than significant.

Existing Conservation/No Project Alternative

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's existing MHPA, permitted projects, and planned projects. Applicable regulations, including those developed as measures in the ARB Scoping Plan update and the City's CAP, would continue to apply to the No Project Alternative. Since no increase in activities would occur under the Existing Conservation/No Project Alternative, GHG emissions would also not increase. For these reasons, the Existing Conservation/No Project Alternative

would not result in a substantial adverse effect related to a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and the impact would be less than significant.

5.4.5 Mitigation Measures

No significant adverse GHG emission impacts were identified and no mitigation measures are required.

5.4.6 Level of Impact after Mitigation

Project

No significant adverse GHG emission impacts would result from implementation of the Project. Therefore, no mitigation is required, and the impacts would remain less than significant under CEQA and would not be substantially adverse under NEPA.

Expanded Conservation Alternative

No significant adverse GHG emission impacts would result from implementation of the Expanded Conservation Alternative. Therefore, no mitigation is required, and the impacts would remain less than significant under CEQA and would not be substantially adverse under NEPA.

Existing Conservation/No Project Alternative

No significant adverse GHG emission impacts would result from implementation of the Existing Conservation/No Project Alternative. Therefore, no mitigation is required, and the impacts would remain less than significant under CEQA and would not be substantially adverse under NEPA.

5.5 HISTORICAL RESOURCES

This section describes historical resources within the VPHCP Plan Area's area of potential effects (APE). This section also identifies pertinent policies and regulations governing historical resources and evaluates the impacts and effects associated with implementation of the Project and its alternatives on such resources. This evaluation is based on archival research and data on-file at the South Coastal Information Center (SCIC) at San Diego State University, information from the Native American Contact Program, and analysis of regional environmental factors.

5.5.1 Affected Environment

Prehistory

The prehistoric cultural sequence in San Diego County is generally thought of in three basic periods: the Paleoindian, locally characterized by the San Dieguito complex; the Archaic, characterized by the cobble and core technology of the La Jollan and Pauma complexes; and the Late Prehistoric, marked by the appearance of ceramics, small arrow points, and cremation burial practices. Late Prehistoric materials found in southern San Diego County, known as Yuman I and Yuman II, are believed to represent the ancestral Kumeyaay.

Paleoindian Period

In San Diego County, the Paleoindian period is represented by the San Dieguito complex, as identified by Rogers (1929, 1939, 1945) and Warren (1966, 1968; Warren et al. 1993). The earliest well-documented sites in the San Diego area belonging to the San Dieguito complex are thought to be older than 9,000 years (Warren 1967). Related materials, sometimes called the Lake Mojave complex, have been found in the Mojave Desert and in the Great Basin (e.g., Campbell et al. 1937; Warren and Ore 1978). Diagnostic artifact types and categories associated with the San Dieguito complex include scraper planes, choppers, scraping tools, crescentics, and elongated bifacial knives, as well as Silver Lake, Lake Mojave, and leaf-shaped projectile points (Rogers 1939; Warren 1967). Like the Lake Mojave complex, the San Dieguito complex is thought to represent an early emphasis on generalized hunting. There are few or no milling implements in most San Dieguito components. In areas adjacent to the coast, many Paleoindian period sites have probably been covered by rising sea levels since the end of the Pleistocene. In more inland regions, alluvial sedimentation in valley areas may have covered these materials. The stable mesa landforms in the region, the abundance of appropriate lithic material, and soil column exposures along areas such as the San Dieguito River have made the foothills an important area for Paleoindian research.

Archaic Period

The Archaic period (8000 to 1500 years before present [B.P.]) brought a shift toward a more generalized economy and an increased emphasis on seed resources, small game, and shellfish. The local cultural manifestations of the Archaic period are called the La Jollan complex along the coast and the Pauma complex inland (True 1958). Pauma complex sites lack the shell that dominates many La Jollan complex site assemblages. The La Jollan tool assemblage is dominated by rough, cobble-based choppers and scrapers, as well as slab and basin metates. There has been considerable debate about whether San Dieguito and La Jollan patterns might represent the same people using different environments and subsistence techniques, or whether they are separate cultural patterns (e.g., Bull 1983; Gallegos 1987; Warren et al. 1993). However, there seems to have been some reorientation in settlement from coastal sites to inland settings during the latter portion of this period in what is now northern San Diego County. This appears at approximately 4,000 years ago and is thought to relate to the final phases of Holocene sea level rise and resultant siltation of the formerly productive coastal lagoons in what is now northern San Diego County. Conversely, there appears to be no significant silting in Mission Bay and San Diego Bay, and no reduction in settlement along the coast south of Mission Bay (Gallegos 1987; Warren et al. 1993).

Late Prehistoric Period

The Late Prehistoric period (1500 B.P. to 200 B.P.) is characterized by higher population densities and elaborations in social, political, and technological systems. Economic systems diversified and intensified during this period with the continued elaboration of trade networks, the use of shell-bead currency, and the appearance of more labor-intensive but effective technological innovations. Subsistence is thought to have focused on acorns and grass seeds, with small game serving as a primary protein resource and big game as a secondary resource. Fish and shellfish were also secondary resources, except in areas immediately adjacent to the coast where they assumed primary importance (Bean and Shipek 1978; Sparkman 1908). The settlement system was characterized by seasonal villages where people used a central-based collecting subsistence strategy. Artifactual material is characterized by the presence of arrow shaft straighteners, pendants, *comales* (heating stones), Tizon Brownware pottery, ceramic figurines reminiscent of Hohokam styles, ceramic “Yuman bow pipes,” ceramic rattles, miniature pottery vessels, various cobble-based tools (e.g., scrapers, choppers, hammerstones), bone awls, manos and metates, and mortars and pestles. The arrow-point assemblage is dominated by the Desert Side-notched series, but the Cottonwood series and the Dos Cabazas Serrated type also occur. Late Prehistoric materials found in southern San Diego County, known as Yuman I and Yuman II, are believed to represent the ancestral Kumeyaay.

Ethnohistory

The Ethnohistoric period, sometimes referred to as the ethnographic present, commences with the earliest European arrival in what is now San Diego and continued through the Spanish and Mexican periods and into the American period. The founding of Mission San Diego de Alcalá in 1769 brought about profound changes in the lives of the Kumeyaay. The coastal Kumeyaay died from introduced diseases or were brought into the mission system. Earliest accounts of Native American life in what is now San Diego were recorded as a means to salvage scientific knowledge of native lifeways. These accounts were often based on limited interviews or biased data collection techniques. Later researchers and local Native Americans began to uncover and make public significant contributions in the understanding of native culture and language. These studies have continued to the present day, and involve archaeologists and ethnographers working in conjunction with Native Americans to address the continued cultural significance of sites and landscapes across San Diego County. The Kumeyaay are the identified Most Likely Descendants for all Native American human remains found within San Diego.

The Kumeyaay had a hunting and gathering economy based primarily on various plant resources. Grass seeds were probably the primary food, supplemented by various other seeds such as sage (*Salvia* spp.), sagebrush (*Artemisia californica*), lamb's quarters (*Chenopodium album*), and pine nuts (Pinus sp.). Small game was a major source of protein, but deer were hunted as well. Coastal bands ate a great deal of fish, taking them with lines, nets, and bows and arrows. Balsas or reed boats were used (Kroeber 1925; Luomala 1978). Shellfish and other littoral resources also were important to coastal people. Settlements were moved to areas where wild foods were in season. For example, inland bands might move into desert areas in the spring to gather agave (*Agave deserti*), then to higher-altitude areas in the fall to gather acorns (Cline 1984). Coastal bands lived in semipermanent villages focused on more seasonally stable inshore and littoral resources. However, they still often travelled to what is now Torrey Pines and La Rumarosa (in northern Baja California) to harvest pine nuts, and to Cuyamaca and Mount Laguna for acorns (Shipek 1970).

Villages and campsites were generally located in areas where water was readily available, preferably on a year-round basis. The San Diego, Tijuana, and Otay Rivers provided important resources for local inhabitants, not only as a reliable source of water, but also as a major transportation corridor through the region. *Kosaii* (also known as *Cosoy* or *Kosa'aay*) was a major coastal village located near the mouth of the San Diego River (Gallegos et al. 1998; Kroeber 1925). Although the actual location of the village is unknown, Bancroft (1884) reported that a site called *Cosoy/Kosaii/Kosa'aay* by the Native Americans was in the vicinity of what is now Presidio Hill and Old Town. Several investigations have identified possible locations for the

village of *Cosoy/Kosaii/Kosa'aay* (Clement and Van Bueren 1993), but the actual site has never been found.

The village of *La Rinconada* was located near Mission Bay and Rose Creek. It is believed to have been occupied for over 3,000 years, from the Archaic period until historic times (Garcia-Herbst 2009). Recorded as CA-SDI-5017, *La Rinconada* was originally documented by Malcom Rogers in 1929 as two sites: SDM-W-150 and SDM-W-152. Rogers excavated four trenches at the site and encountered a subsurface midden that ranged in thickness from 30 to 91 centimeters. He also documented several cobble hearths and house pits in the site.

In southeast San Diego, the village of *Las Choyas* (CA-SDI-17203) has been identified through ethnographic and archaeological studies. The village is visible both on a map created by Don Juan Pantoja in 1782 and on a sketch map of the port of San Diego in 1849 (Vargas 2000; AECOM 2015). CA-SDI-17203, a CRHR-eligible site, was originally recorded as site SDM-W-193 near the mouth of Las Chollas Creek and the surrounding area by Malcolm Rogers in the 1930s (Rogers n.d.). The site contained hearth features and a shell midden at a depth of 7 feet. Radiocarbon dates from the shell samples ranged from 2100 to 950 +/-220 B.P., indicating a Late Prehistoric occupation of the site.

Ystagua (CA-SDI-4513, CA-SDI-4609, CA-SDI-5443), a NRHP-listed site, is located just inland from the coast near the mouth of Peñasquitos Creek in present-day Sorrento Valley. The site today has been impacted by construction of homes and the railroad, but extensive intact midden deposits are known to exist throughout the site. Lithic tools, ceramics, shell beads, trade beads, bone tools, faunal bone, are just some of the artifacts that have been documented at *Ystagua*. Human remains have also been encountered and the site has a high level of cultural sensitivity (RBF Consulting 2009).

Kroeber (1925) and Trafzer and Carrico (Trafzer and Carrico 1992) indicate that a native village, *Millejo*, was located somewhere inland from the coast in the vicinity of the lower San Tijuana River Valley. The village of *Millejo*, possibly recorded as CA-SDI-10669, has not been clearly documented and no surface evidence of the site exists; however, numerous smaller sites have been documented within the river valley (Gross and Robbins-Wade 2008). Shipek believes that the village site could possibly be buried by alluvial soils deposited by the flooding episodes in 1895 and 1916 (Shipek 1976).

Several additional large villages have been documented in San Diego through ethnographic accounts and archaeological investigations in the area. These include *Nipaquay*, located near present-day Mission San Diego de Alcala (Kyle 1996); *El Corral*, located near present-day

Mission Gorge; Santee Greens, located in present-day eastern Santee (Berryman 1981); and El Capitan, now covered by the El Capitan Reservoir (Pourade 1961).

History

Cultural activities within San Diego County between the late 1700s and the present can be divided into three major periods: the Spanish Period (1769–1821), the Mexican Period (1821–1848), and the American Period (1848–present). Each historic period is discussed below.

Spanish Period (1769–1821)

The Spanish period represents a time of European exploration and settlement. Dual military and religious contingents established the San Diego Presidio and the Mission San Diego de Alcala. The mission system used Native American labor to build the infrastructure needed for European settlement. By about 1821, the traditional lifeways were disrupted and Native American populations were tied economically to the missions. In addition to providing new construction methods and architectural styles, the mission system introduced horses, cattle, and other agricultural goods and implements to the area. The cultural systems and institutions established by the Spanish continued to influence the region beyond 1821, when California came under Mexican rule.

Mexican Period (1821–1848)

The Mexican period retained many of the Spanish institutions and laws; however, in 1834, the mission system was secularized. This allowed for increased Mexican settlement, but it also meant that many Native Americans were dispossessed. After secularization, large tracts of land were granted to individuals and families, and a rancho system was established. The land was used primarily for grazing cattle (Pourade 1961). Cattle ranching dominated the agricultural activities and the development of the hide and tallow trade within the United States increased during the early part of this period. The Pueblo of San Diego was established at this time, and Native American influence greatly declined. The Mexican period ended when Mexico ceded California to the United States after the Mexican-American War (1846–1848).

American Period (1848–present)

Very early in the American period, gold was discovered in California. Few Mexican ranchos remained intact because of land claim disputes. Development of the railroads opened up much of the country to settlement. The homestead system encouraged American settlement beyond the coastal plain. The growth and decline of communities occurred in response to an increasing and

shifting population, fostering a "boom and bust" cycle. As early as 1868, San Diego was promoted as a natural sanitarium, and many people suffering from tuberculosis came to the area seeking a cure in the moderate climate.

Cultural, Historical, and Tribal Cultural Resources Definitions

Cultural resources are districts, buildings, sites, structures, areas of traditional use, or objects that represent the physical evidence of human activities. According to the City's Historical Resources Guidelines, cultural resources can be divided into three categories: archaeological resources (prehistoric and historic), architectural resources, and traditional cultural resources (herein after referred to as tribal cultural resources).

- Archaeological resources include prehistoric and historic locations or sites where human actions have resulted in detectable changes to the area. This can include changes in the soil, as well as the presence of physical cultural remains. Prehistoric site types expected within the Project area include lithic scatters, habitation sites, and ceramic scatters. Historic archaeological resources are those that are more than 50 years old and post-date European contact. These resources may include refuse scatters and dumps, remnants of farms or ranches, camps or temporary settlements, cairns, transportation routes, and utility or water conveyance features.
- Architectural resources are elements of the environment constructed by humans and that are over 50 years of age. Included are standing buildings; dams; bridges; and other residential, commercial, and industrial structures.
- Traditional cultural properties are resources associated with beliefs and cultural practices of a living culture, subculture, or community. These beliefs and practices must be rooted in the group's history and be important in maintaining the cultural identity of the group. Archaeological sites; locations of events; sacred places; and resource areas, including hunting or gathering areas, may be traditional cultural properties.

Cultural resources in the State of California are recognized as non-renewable resources that require management to assure their benefit to present and future Californians. The CEQA Guidelines Section §15064.5 designates significant cultural resources as "historical resources". The CEQA, Public Resources Code 21084.1 and CEQA Guidelines, California Code of Regulations Title 14 Section 15064.5 specifically define a "historical resource" as follows:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (14 CCR Section 15064.5[a][1]).

2. A resource included in a local register of historical resources or identified as significant in a historical resources survey shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant (14 CCR Section 15064.5[a][2]).
3. Any object, building, structure, site area, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record (14 CCR Section 15064.5[a][3]). Generally, a cultural resource shall be considered by the lead agency to be "historically significant" if the resource meets the eligibility criteria for listing on the CRHR, including the following:
    a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
    b. Is associated with the lives of persons important in our past;
    c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
    d. Has yielded, or may be likely to yield, information important in prehistory or history.

Under 14 CCR Section 15064.5(a)(4), a resource may also be considered a "historical resource" at the discretion of the lead agency.

Additionally, a significant archaeological resource may be a "unique archaeological resource," defined in PRC §21083.2(g) as:

> An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> 1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information,
> 2. Has a special and particular quality such as being the oldest of its type or the best available example of its type, or

3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In 2015, Assembly Bill 52 established a new category of resources in CEQA called Tribal cultural resources (Public Resources Code § 21074) which are further defined as either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

   (a) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
   (b) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

   (a) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
   (b) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

Section 106 (54 USC 306108) of the National Historic Preservation Act (NHPA) of 1966, as amended, and its implementing regulations (36 CFR Part 800) require Federal agencies to take into account the effects of their undertakings on NRHP-eligible cultural resources, designated "historic properties". To be eligible for the NRHP, a historic property must be significant at the local, state, or national level under one or more of the following four lettered criteria. Eligible properties are those:

A. That are associated with events that have made a significant contribution to the broad patterns of our history;

B. That are associated with the lives of persons significant in our past;

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and/or

D. That have yielded or may be likely to yield, information important in prehistory or history.

All historical resources or historic properties eligible for listing in either the CRHR or NRHP must retain integrity, which is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling and association. It must also be judged with reference to the particular criteria under which a resource is proposed for nomination.

Area of Potential Effects

The APE for the VPHCP Plan Area was defined based upon the direct and indirect effects that could occur as a result of implementation of the Project and/or Project alternatives. Typically, the APE for archaeological resources is defined by the proposed ground disturbance area(s), or areas of potential direct effects. For architectural resources, the APE is often defined more broadly to include areas of potential indirect visual, auditory, or atmospheric effects. Therefore, the VPHCP Plan Area APE includes the preserved vernal pool complexes and areas where covered activities will occur within the VPHCP Plan Area with a ¼-mile buffer, to ensure that direct effects on archaeological or tribal cultural resources, as well as indirect effects on architectural resources, are addressed.

Archaeological Resources Analyzed in the EIR/EIS

The archival records search of cultural resources on file at the SCIC identified a total of 47 previously recorded archaeological resources within the APE, 46 are prehistoric resources and one is a multicomponent site with both prehistoric and historic components (Table 5.5-1). No architectural resources were identified in the APE. Of the 47 archaeological resources, only six overlap with vernal pools with restoration potential and may be directly impacted by Project activities. These six archaeological resources, are P-37-006941, -007604, -008645, -009541, -014292, and -026734, are discussed below.

Table 5.5-1
Archaeological Resources within or adjacent to VPHCP Plan Area APE*

Site Number	Age	Type	Description	Location
P-37-006941	Prehistoric	Lithic scatter	A large lithic scatter with localized lithic concentrations and habitation areas.	Within
P-37-007604	Prehistoric	Temporary camp	1035 by 520 meter temporary camp with five discrete loci.	Within
P-37-008645	Prehistoric	Lithic scatter	20 by 20 meter low-density scatter of flaked stone tools, cores, and debitage	Within
P-37-009541	Prehistoric	Temporary camp	200 by 100 meter temporary camp with flaked stone and groundstone artifacts, cores, hammerstones, and debitage	Within
P-37-014292	Prehistoric	Habitation site	Small habitation site consisting of flaked stone and groundstone tools, cores, and debitage	Within
P-37-026734	Prehistoric	Lithic scatter	25 by 15 meter scatter of flaked stone tools, cores, hammerstones and debitage	Within
P-37-007857	Prehistoric	Lithic scatter	420 by 140 meter sparse scatter of flaked stone tools and debitage	Adjacent
P-37-008644	Prehistoric	Lithic scatter	1100 by 60 meter low density scatter of flaked stone tools and debitage	Adjacent
P-37-010185	Prehistoric	Temporary camp	250 y 134 meter temporary camp with two discrete loci. Artifacts include groundstone, flaked tools, debitage, and faunal remains. Hearths and subsurface midden deposits are present.	Adjacent
P-37-010192	Prehistoric	Temporary camp	280 by 150 meter temporary camp with groundstone, flaked stone tools, cores, debitage and shell	Adjacent
P-36-010196	Prehistoric	Temporary camp	149 by 37 meter temporary camp containing a scatter of lithic debitage and shell scatter, with a milling feature.	Adjacent
P-37-010250	Prehistoric	Temporary camp	150 by 95 meter dispersed temporary camp with debitage, flaked stone tools, and groundstone	Adjacent
P-37-010512	Prehistoric	Lithic scatter	427 by 61 meter low density scatter of lithic debitage and a few flaked stone tools.	Adjacent
P-37-010514	Prehistoric	Lithic scatter	366 by 137 meter, moderate-density lithic scatter with a high tool to debitage ratio.	Adjacent
p-37-010617	Prehistoric	Lithic scatter	165 by 80 meter low density scatter of flaked stone tools, cores, and debitage	Adjacent
P-37-010620	Prehistoric	Habitation site	Habitation site with debitage, groundstone, flaked stone tools, shell, charcoal and midden deposits. Two distinct loci present; Locus A measures 140 by 70 meter, and Locus B is 150 by 80 meters.	Adjacent
P-37-010748	Prehistoric	Lithic scatter	950 by 300 meter scatter of more than 100 flaked stone tools, cores, hammerstones and debitage	Adjacent
P-37-010805	Prehistoric	Lithic scatter	50 by 20 meter scatter of flaked stone tools, cores, and debitage	Adjacent
P-37-010807	Prehistoric	Lithic scatter	10 by 10 meter scatter of debitage	Adjacent
P-37-010810	Prehistoric	Lithic scatter	20 by 10 meter scatter of flaked stone tools and debitage	Adjacent
P-37-011281	Prehistoric	Lithic scatter	250 by 125 meter scatter of lithic tools and debitage	Adjacent
P-37-011283	Prehistoric	Lithic scatter	30 by 15 meter scatter of lithic tools and debitage	Adjacent

Site Number	Age	Type	Description	Location
P-37-014257	Prehistoric	Lithic scatter	80 by 35 meter sparse scatter of debitage and cores	Adjacent
P-37-014286	Multicomponent	Refuse scatter/lithic scatter	70 by 70 meter site with both historic and prehistoric components. Historic aspect is location of Dillon Ranch Complex and consists of a scatter of wood, metal, bone, brick, plaster, ceramics, and glass. The prehistoric aspect of site is a sparse scatter of flakes and cores	Adjacent
P-37-014340	Prehistoric	Artifact scatter	20 by 75 meter scatter of groundstone and lithic artifacts	Adjacent
P-37-014343	Prehistoric	Lithic scatter	60 by 10 meter sparse scatter of flakes and cores with a dense concentration at the north end of site.	Adjacent
P-37-014350	Prehistoric	Lithic scatter	10 by 10 meter flaking station/lithic raw material prospect	Adjacent
P-37-014351	Prehistoric	Lithic scatter	50 by 10 meter sparse scatter of flaked stone tools and debitage	Adjacent
P-37-014354	Prehistoric	Lithic scatter	45 by 15 meter lithic raw material prospect that consists of a sparse scatter of flakes and cores	Adjacent
P-37-014355	Prehistoric	Lithic scatter	5 by 7.5 meter raw material prospect that consists of a single core and five flakes	Adjacent
P-37-014138	Prehistoric	Isolate	One quartzite flake	Adjacent
P-37-014516	Prehistoric	Isolate	Two flakes; quartzite and metasedimentary	Adjacent
P-37-014518	Prehistoric	Isolate	Two quartzite cores	Adjacent
P-37-014662	Prehistoric	Lithic scatter	20 by 5 meter scatter of tested cobbles and a core	Adjacent
P-37-014926	Prehistoric	Isolate	One core and one unifacial scraper	Adjacent
P-37-014970	Prehistoric	Isolate	Informal metavolcanic test core and a bifacial shaped granite mano	Adjacent
P-37-014972	Prehistoric	Isolate	One quartzite flake	Adjacent
P-37-014980	Prehistoric	Isolate	One metavolcanic flake	Adjacent
P-37-014981	Prehistoric	Isolate	One core and a quartzite flake	Adjacent
P-37-019277	Prehistoric	Lithic and shell scatter	85 by 125 meter scatter of flaked stone tools and debitage with a 2 by 2 meter shell scatter	Adjacent
P-37-025213	Prehistoric	Artifact scatter	30 by 66 meter moderate-density scatter of groundstone and flaked stone tools and debitage	Adjacent
P-37-025214	Prehistoric	Lithic scatter	44 by 16 meter scatter of debitage	Adjacent
P-37-026729	Prehistoric	Lithic scatter	30 by 12 meter scatter of flaked stone tools and debitage	Adjacent
P-37-026730	Prehistoric	Lithic scatter	150 by 90 meter scatter of flaked stone tools, debitage, and a single mano	Adjacent
P-37-026731	Prehistoric	Lithic scatter	50 by 35 meter scatter of flaked stone tools and debitage	Adjacent
P-37-026732	Prehistoric	Lithic scatter	160 by 45 meter scatter of flaked stone tools and debitage	Adjacent
P-37-026736	Prehistoric	Lithic scatter	60 by 25 meter scatter of flaked stone tools and debitage	Adjacent

*Note: subject to Native American consultation, some archaeological resources may also be considered tribal cultural resources.

P-37-006941

Site P-37-006941 was originally recorded by Carillo in 1979 as a series of thin lithic scatters (Loci A, C, D, and E; Locus B was recorded as a single flake). In 1983, RBR & Associates revisited the site for the California Terrace Project. Loci B, C, and E were not relocated; however, dense artifact concentrations containing groundstone, flaked stone tools, cores, debitage, bone, and shell/midden were found at Loci A and D, and two new loci were discovered (F and G) (Van Wormer 1983). RBR & Associates conducted testing at Loci A, D, and F in 1987, after which Loci A and F were identified as not significant and a data recovery program was conducted for Locus D (Robbins-Wade et al. 1987). As part of the Otay Mesa Road Widening Project, seventeen more loci (Locus H through X) were located in 1995 and testing was conducted at Locus H. Although a large number and variety of artifacts were recovered, the area was thoroughly disturbed by agricultural use and Locus H was determined not significant (Kyle et al. 1996). Lastly, Locus G and Y were determined not significant as a result of the Route 905 testing program of 1996 (Kyle et al. 1997). In summary: Loci A, D, F, G, H, and Y have been determined not significant, Locus B, C, and E were never relocated, and the remaining loci were recommended not eligible based on surface observations. This site has not been evaluated for the NRHP.

P-37-007604

Site P-37-007604 was first recorded by Riggan in 1979 as an isolated hammerstone/chopper. During the 1983 California Terraces Project survey, RBR & Associates revisited the area and observed a large temporary camp with five discrete loci (A through E) containing flakes, cores, scrapers, choppers, manos, hammerstones, and midden deposits (Winterrowd and Van Wormer 1983). RBR & Associates returned in 1987 to conduct testing at Loci A, B, D, and E, and determined that all four loci were not significant (Robbins-Wade et al 1987). The most recent site update occurred in 1995, during which lithics and historic material were observed south of Locus E and a light lithic scatter was observed 100 meters east of Locus E; the recorders suggested that these resources may be an extension of site P-37-007604 (Kyle and Tift 1995). Site P-37-007604 has not been formally evaluated for the NRHP.

P-37-008645

Site P-37-008645 was originally recorded in 1980 as a sparse 20-by-20 meter artifact scatter (Apple 1980). ASM Affiliates revisited the site in 1990 and relocated a low density surface scatter consisting of a chopper, core, and five flakes. A testing program resulted in the recovery of a single flake subsurface and the site was evaluated as not significant (Cook 1990). Gallegos

& Associates revisited P-37-008645 in 2003 and observed no change in site conditions. This site has not been formally evaluated for the NRHP.

P-37-009541

Site P-37-009541 was recorded in 1982 as a temporary campsite consisting of groundstone and flaked-stone artifacts scattered over a 200-by-100 meter area (Theskem 1982). Over one-hundred flakes and debitage, ten cores, three hammerstones, two scrapers, one chopping tool, eight bifacial manos, and one possible metate fragment were observed. Agricultural disturbance of approximately 40 percent of the site was noted. Site P-37-009541 has not been formally evaluated for the CRHR or the NRHP.

P-37-014292

Site P-37-14292 was recorded in 1995 as a probable habitation site, possessing both groundstone and lithic artifacts. Two cores, five core/tools, 13 pieces of debitage, and a single semi-portable metate were recorded in an area of heavy off-road vehicle activity. Most of the site components were noted in trails and it is likely the area had experienced agricultural use in the past (Tift et. al. 1995). Site P-37-014292 has not been formally evaluated for the CRHR or the NRHP.

P-37-026734

P-37-026734 was first noted in December 2004 at the intersection of two unnamed dirt roads. Six tools, one edge-modified flake, three split cobble cores, and 14 pieces of debitage were observed over a 60-by-40 meter area. The site was flagged and gridded in preparation for a follow-up testing program. The testing program did not occur until February 2005, and much of the southern portion of the site could not be relocated during attempted surface collection. Testing, however, resulted in numerous positive shovel test pits (STPs), several of which in the southern portion of the site contained artifacts at a depth greater than ten centimeters. Because of the inability to relocate the additional surface artifacts, the site boundaries officially recorded for P-37-026734 encompass only the northernmost 25-by-15 meter area and do not include the subsurface deposits (Bouscaren 2005). P-37-026734 was evaluated as not significant (Mason and Bouscaren 2005). This site has not been formally evaluated for the NRHP.

Native American Contact Program

In addition to analyzing archival data on file at the SCIC, a Native American Contact Program has been initiated with local tribes and tribal representatives to identify any tribal cultural resources, including traditional cultural properties, considered significant to the local Native

American community. On March 14, 2016, letters were mailed to 14 individuals as shown in the communications log presented in Table 5.5-2. Five responses have been received to date and are summarized in Table 5.5-2.

Table 5.5-2
Native American Contact Program Communications Log

Affiliation	Name/Title	Date of Contact	Discussion
Native American Heritage Commission (NAHC)		3/7/2016 3/9/2016	Request letter sent via email. Received results of Sacred Lands search and Native American contact list via fax.
Sycuan Band of the Kumeyaay Nation	Cody Martinez, Chairperson	3/14/2016	Initial letter sent via USPS.
Viejas Band of Kumeyaay Indians	Robert Welch, Sr., Chairperson	3/14/2016 4/5/2016 4/14/2016	Initial letter sent via USPS. Response letter received via email requesting the cultural report. Email reply sent informing Tribe a cultural report has not been completed and directed them to City for questions and concerns.
Campo Band of Mission Indians	Ralph Goff, Chairperson	3/14/2016	Initial letter sent via USPS.
Jamul Indian Village	Erica Pinto, Chairperson	3/14/2016	Initial letter sent via USPS.
Pala Band of Mission Indians	Shasta Gaughen, THPO	3/14/2016 4/21/2016	Initial letter sent via USPS. Response letter received indicating that the project is within Pala's Traditional Use Area and the Tribe would like to be kept in the informational loop.
Pauma Band of Luiseno Indians	Randall Majel, Chairperson	3/14/2016 3/29/2016	Initial letter sent via USPS. Response email received indicating that the San Pasqual Valley is their area of concern. The Tribe is aware of cultural resources in the Valley and recommends additional studies to identify the locations of the sites. They also request that sites are protected as the project moves forward.
Soboba Band of Luiseno Indians	Rosemary Morillo, Chairperson	3/14/2016	Initial letter sent via USPS.
Kwaaymii Laguna Band of Mission Indians	Carmen Lucas	3/14/2016	Initial letter sent via USPS.
Rincon Band of Mission Indians	Bo Mazzetti, Chairperson	3/14/2016 3/28/2016	Initial letter sent via USPS. Response letter received indicating the Project area was not within the Luiseno Traditional Territory; however, the Tribe has concerns for impacts to historic and cultural resources and recommends contacting closer tribes.

Affiliation	Name/Title	Date of Contact	Discussion
San Luis Rey Band of Mission Indians	Tribal Council	3/14/2016	Initial letter sent via USPS.
Pechanga Band of Mission Indians	Mark Macarro, Chairperson	3/14/2016	Initial letter sent via USPS.
La Jolla Band of Luiseno Indians	Thomas Rodrigues, Chairperson	3/14/2016	Initial letter sent via USPS.
Iipay Nation of Santa Ysabel	Virgil Perez, Chairperson	3/14/2016	Initial letter sent via USPS.
	Clinton Linton, Director of Cultural Resources	3/14/2016 3/22/2016 4/28/2016	Initial letter sent via USPS. Response letter received requesting a follow-up call to discuss the many resources Mr. Linton is aware of in the Project area. Mr. Linton indicated that future consultation with the City will be required to ensure protection of the many resources within the Project area. He also requested that Native American monitors are present for subsequent investigations, and to be kept in the informational loop.

The Pala Band of Mission Indians indicated that the Project is within Pala's Traditional Use Area and that they would like to be kept informed about the project. The Pauma Band of Luiseno Indians responded that the San Pasqual Valley is their area of concern and that they are aware of many resources in the Valley. Pauma recommends additional studies to identify the resources and also requests that sites located are protected as the Project moves forward. Clinton Linton, Director of Cultural Resources for the Iipay Nation of Santa Ysabel, indicated that numerous resources are located within the Project area. Upon further discussion, Mr. Linton understands that individual restoration activities are unknown at this time and that future consultation with the City will be required to ensure the protection of cultural resources within the Project area. Mr. Linton requested that Native American monitors be present for subsequent surveys and would like to be notified with Project updates and information as it becomes available. The Rincon Band of Mission Indians indicated that the Project area is not within their Traditional Territory; however, they have concerns for impacts to cultural resources and recommend contacting tribes closer to the area. Finally, the Viejas Band of the Kumeyaay Nation requested the Project's Cultural Report to make appropriate recommendations. The Tribe was informed that a technical report has not been completed to date; however, if they have specific questions or concerns they may contact the City through formal consultation efforts as required by Senate Bill 18.

5.5.2 Regulatory Framework

Federal

Federal regulations applicable to historic properties include NEPA, Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (16 United States Code [U.S.C.] 470 et seq., 36 CFR Part 800); the Archaeological Resources Protection Act, as amended (16 U.S.C. 470aa et seq.); Protection and Enhancement of the Cultural Environment (EO 11593); Indian Sacred Sites (EO 13007); Consultation and Coordination with Indian Tribal Governments (EO 13175); and the Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001).

Section 106 of the NHPA, as amended (16 U.S.C. 470 et seq.), requires federal agencies to take into account the effects of their actions proposed on historic properties eligible for inclusion in the NRHP and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings. An undertaking is defined as a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including those carried out by or on behalf of a federal agency; those carried out with federal financial assistance; those requiring a federal permit, license, or approval; and those subject to state or local regulation administered pursuant to a delegation or approval by a federal agency. The issuance of an ITP is an undertaking subject to Section 106 of the NHPA. Federal agencies are responsible for initiating Section 106 review and completing the steps in the process that are outlined in the regulations. Under Code of Federal Regulations (36 CFR) Part 800.8, all federal agencies are specifically required to coordinate compliance with Section 106 and the National Environmental Policy Act (NEPA) process.

State

State regulations applicable to historical resources include CEQA, California PRC Sections 5024.1, 21084.1, and 21083.2 addressing the CRHR; the California Health and Safety Code Section 7050.5(b) regarding the discovery of human remains; California Native American Graves Protection and Repatriation Acts Sections 8010-8011, and Senate Bill 18.

Senate Bill 18 requires cities and counties to contact and consult with California Native American tribes prior to amending or adopting any general plan or specific plan, or designating land as open space. The adoption of the VPHCP will include amendments to the City's General Plan, and the Otay Mesa and Kearny Mesa Community Plans, thus triggering SB 18. On January 25, 2012, the City sent Notice letters to twelve local tribes notifying them that an EIR/EIS was being prepared for this Project and giving tribes 90 days to request consultation. No responses

have been received to date. Since the Notice of Preparation was filed prior to July 1, 2015, Assembly Bill 52 does not apply to this project.

Local

The City of San Diego's Historic Preservation Element of the General Plan provides guidance on archaeological and historic site preservation in San Diego and sets a series of goals for the City for the preservation of historic resources, the first of which is to preserve significant historical resources. These goals are realized through implementation of policies that encourage the identification and preservation of historical resources. Policies HP-A.1 through HP-A.5 are associated with the overall identification and preservation of historical resources. This includes policies to provide for comprehensive historic resource planning and integration into citywide planning documents, such as the VPHCP being analyzed within this EIR/EIS. These policies also focus on coordinated planning and preservation of tribal resources, promoting the relationship with Kumeyaay/Diegueño tribes. Historic Preservation policies HP-B.1 through HP-B.4 address the benefits of historical preservation planning and the need for incentivizing maintenance, restoration, and rehabilitation of designated historical resources.

The City's Historical Resources Regulations (codified in the San Diego Municipal Code as Chapter 11, Article 3, Division 1, §143.0201-143.0280), were adopted in January 2000 and provide a balance between sound historic preservation principles and the rights of private property owners. The Regulations have been developed to implement applicable local, state, and federal policies and mandates. Included in these are the City's General Plan, CEQA, and Section 106 of the National Historic Preservation Act of 1966. Compliance with the Historical Resources Regulations begins with the determination of the need for a site- specific survey for a project in accordance with the City's Land Development Manual – Historical Resources Guidelines (City of San Diego 2001).

These Guidelines, as they relate to mitigation measures, are described in Section 5.5.4 below.

5.5.3 CEQA/NEPA Thresholds of Significance

Federal, state, and local criteria have been established for the determination of historical resource significance. The following thresholds are derived from the City's 2016 Significance Determination Thresholds for the purpose of evaluating CEQA significance. A resource that is not listed in, or determined to be eligible for listing in, the CRHR, not included in a local register of historic resources, or not deemed significant in a historical resource survey may nonetheless be historically significant for purposes of CEQA. The City's determination of significance of

impacts on historical, unique archaeological resources, or tribal cultural resources is based on the criteria found in Section 21074 and Section 15064.5 of the State CEQA Statutes and Guidelines.

A significant CEQA impact would occur if the Project would:

1. *Result in any alteration, including adverse physical or aesthetic effects, and/or destruction of a prehistoric or historic building (including an architecturally significant building), structure, object, or site;*
2. *Result in any impact to existing religious or sacred uses within the potential impact area; and/or,*
3. *Result in the disturbance of any human remains, including those interred outside of dedicated cemeteries.*

CEQA Guidelines Appendix G also requires consideration of Tribal Cultural Resources when determining if a significant impact would occur if a Project would:

4. *Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*

    a) *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or*

    b) *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

A significant impact under Section 106 of the NHPA would occur if the Project would:

5. *Result in any alteration, directly or indirectly, of any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.*

5.5.4 Environmental Consequences

ISSUE 1: *Would the project result in any alteration, including adverse physical or aesthetic effects, and/or destruction of a prehistoric or historic building (including an architecturally significant building), structure, object, or site?*

Project

Cultural resources may potentially be affected by ground disturbing activities related to restoration undertaken as part of the VPHCP (i.e., topographical recontouring). Table 5.5-3 lists the cultural sensitivity of the 28 vernal pools sites within 20 vernal pool complexes with restoration potential. Of the 28 vernal pool sites, five overlap with a known archaeological resource. The other 23 vernal pool sites do not overlap with any recorded resources; however, known archaeological resources are located nearby. Cultural sensitivity levels for each vernal pool complex were rated low, moderate, or high based on the results of the records search, the Native American Contact Program, and regional environmental factors. Sensitivity ratings may be adjusted based on the amount of disturbance that has occurred, which may have previously impacted archaeological resources.

A low sensitivity rating indicates that few or no previously recorded resources were identified within the vernal pool complex. Resources at this level would not be expected to be complex, with little to no site structure or artifact diversity. The potential for encountering additional resources in such areas would be low.

A moderate sensitivity rating indicates that some previously recorded resources were identified within the vernal pool complex. These are more complex resources, consisting of more site structure, diversity of feature types, and diversity of artifact types. The potential for encountering additional resources in such areas would be moderate.

Areas identified as having high sensitivity include those in which the records search identified several previously recorded resources within the vernal pool complex. These resources may range from moderately complex to highly complex, with more defined living areas or specialized work space areas and a large breadth of features and artifact assemblages. The potential for encountering additional resources in such areas would be high. No vernal pool complexes were given a high cultural sensitivity rating.

Table 5.5-3
Cultural Sensitivity of Vernal Pools with Restoration Potential

Vernal Pool Complex ID	Complex Cultural Sensitivity	Vernal Pool Site Name	Cultural Resources Within Vernal Pool	Cultural Resource CRHR Eligibility	Cultural Resource NRHP Eligibility
H 1-10, 13-15, 18-26	Low	Del Mar Mesa (City/County)	None	N/A	N/A
I 12	Low	Pueblo Lands	None	N/A	N/A
J 11 E	Low	Slump Block Pools	None	N/A	N/A
J 11 W	Low	J 11W	None	N/A	N/A
J 12	Low	J 12	None	N/A	N/A
J 13 E	Low	South Otay J 13E	None	N/A	N/A
J 13 N	Low	NDU 1 & 2	None	N/A	N/A
J 13 N	Low	South Otay 1 acre (City)	None	N/A	N/A
J 13 S	Low	Bachman	None	N/A	N/A
J 13 S	Low	NDU 1 & 2	None	N/A	N/A
J 13 S	Low	South Otay J 13S	37-026734	Not significant (Mason and Buscharen 2005)	Unevaluated
J 14	Low	Anderprises (City)	None	N/A	N/A
J 14	Low	Bachman	None	N/A	N/A
J 14	Low	Brown Field Basins	None	N/A	N/A
J 14	Low	Handler	None	N/A	N/A
J 16-18	Low	Goat Mesa	None	N/A	N/A
J 16-18	Low	Wruck Canyon	None	N/A	N/A
J 2	Moderate	Clayton Parcel	37-014292	Unevaluated	Unevaluated
J 2	Moderate	Clayton Parcel	37-007604	Not significant (Robbins-Wade et al 1987)	Unevaluated
J 2	Moderate	St. Jerome's	37-014292	Unevaluated	Unevaluated
J 2	Moderate	St. Jerome's	37-006941	Not significant (Robbins-Wade et al. 1987; Kyle et al. 1996; Kyle et al. 1997)	Unevaluated
J 20-21	Low	La Media ITS	None	N/A	N/A
J 21	Low	La Media Swale South	None	N/A	N/A
J 28 E	Low	La Media Swale North	None	N/A	N/A
J 34	Moderate	Bachman	37-008645	Not significant (Cook 1990)	Unevaluated
J 34	Moderate	Bachman	37-009541	Unevaluated	Unevaluated
J 36	Moderate	Southview	37-009541	Unevaluated	Unevaluated
N 5-6	Low	Montgomery-Gibbs Executive Airport	None	N/A	N/A
N 7	Low	Serra Mesa Library	None	N/A	N/A
Q 2	Low	Mission Trails Regional Park	None	N/A	N/A
U 15	Low	SANDER	None	N/A	N/A

As depicted in Table 5.5-3, seventeen vernal pool complexes were given a low cultural sensitivity rating. Sixteen of these vernal pool complexes were rated low because no previously recorded cultural resources were identified within the complexes. Vernal pool complex J 13 S is considered to have low cultural sensitivity because the lithic scatter within this complex

(37-026734) does not have site structure or artifact density and has been evaluated as not significant (Mason and Buscaran 2005).

Three vernal pool complexes, J 2, J 32, and J 36, are considered to have moderate cultural sensitivity because they overlap with several archaeological resources and/or the archaeological resource(s) present is complex in nature (Table 5.5-4). Vernal pool complex J 2 overlaps with three archaeological resources: a large lithic scatter (37-006941), a temporary camp with a diversity of artifacts and midden deposits (37-007604), and a habitation site with both lithic and groundstone artifacts (37-014292). Vernal pool complex J 32 contains two archaeological resources: a sparse lithic scatter (37-008645) and a temporary camp (37-009541) of over 100 surficial artifacts. Finally, vernal pool complex J 36 contains a large lithic scatter (37-009541). Although 37-006941, 37-007604, and 37-008645 have been determined not eligible; 37-009541 and 37-014292 have not been formally evaluated for inclusion in the CRHR. Thus, Project activity at vernal pool complexes J 2, J 32, and J 36 may have the potential to adversely impact eligible historical resources.

For these reasons, the ground disturbing activities associated with the Project have the potential to cause a substantially adverse and significant impact to prehistoric and historic archaeological resources.

Table 5.5-4
Moderate Cultural Sensitivity Vernal Pool Complexes and Potentially Affected Resources

Vernal Pool Complex ID	Complex Cultural Sensitivity	Vernal Pool Name	Cultural Resource Within Vernal Pool	Cultural Resource CRHR Eligibility	Cultural Resource NRHP Eligibility
J 2	Moderate	Clayton Parcel	37-014292	Unevaluated	Unevaluated
J 2	Moderate	Clayton Parcel	37-007604	Not significant (Robbins-Wade et al 1987)	Unevaluated
J 2	Moderate	St. Jerome's	37-014292	Unevaluated	Unevaluated
J 2	Moderate	St. Jerome's	37-006941	Not significant (Robbins-Wade et al. 1987; Kyle et al. 1996; Kyle et al. 1997)	Unevaluated
J 34	Moderate	Bachman	37-008645	Not significant (Cook 1990)	Unevaluated
J 34	Moderate	Bachman	37-009541	Unevaluated	Unevaluated
J 36	Moderate	Southview	37-009541	Unevaluated	Unevaluated

Expanded Conservation Alternative

Potential impacts to historical resources as a result of the Expanded Conservation Alternative would be similar to the Project; however, the Expanded Conservation Alternative includes an additional vernal pool complex with two vernal pool sites. Table 5.5-5 lists the cultural sensitivity of the additional vernal pool complex.

Table 5.5-5
Cultural Sensitivity of Added Vernal Pools in Expanded Conservation Alternative

Vernal Pool Complex ID	Cultural Sensitivity	Vernal Pool Site Name	Cultural Resources Within Vernal Pool Site	Cultural Resources Adjacent
J13N	Low	South Otay 1 acre (Private)*	None	37-025213
				37-025214

*Two vernal pools sites are associated with this name

The additional vernal pool complex present in the Expanded Conservation Alternative has a low cultural sensitivity rating; however, as discussed above for the Project, potential impacts to archaeological resources could still occur in vernal pool complexes J 2, J 32, and J 36 as a result of the Expanded Conservation Alternative.

For these reasons, the Expanded Conservation Alternative has the potential to cause a substantially adverse and potentially significant impact to historical resources.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, the City would not be allowed take of the seven covered species and would not conduct activities within the vernal pools. No ground-disturbing activities would occur within the VPHCP Plan Area APE, and no historical resources would be disturbed. Vernal pool restoration projects would be evaluated individually on a project-by-project basis and subject to review in accordance with CEQA and the City's Historical Resources Regulations.

For these reasons, the Existing Conservation/No Project Alternative would result in no substantial adverse effects and no impacts to historical resources.

ISSUE 2: *Would the project result in any impact to existing religious or sacred uses within the potential impact area?*

Project

No religious or sacred sites have been identified within the VPHCP Plan Area APE.

For this reason, the Project would have no impact to existing religious or sacred uses within the potential impact area.

Expanded Conservation Alternative

No religious or sacred sites have been recorded within the Expanded Conservation Alternative, which includes the same area covered by the VPHCP Plan Area APE.

For this reason, the Expanded Conservation Alternative would have no impact to existing religious or sacred uses within the potential impact area.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, the City would not be allowed take of the seven covered species and would not conduct activities within the vernal pools. No ground-disturbing activities would occur within the VPHCP Plan Area APE, and no religious or sacred sites would be disturbed.

For this reason, the Existing Conservation/No Project Alternative would have no impact to existing religious or sacred uses within the potential impact area.

ISSUE 3: *Would the project result in the disturbance of any human remains, including those interred outside of dedicated cemeteries?*

Project

No human remains, including those interred outside of dedicated cemeteries, have been recorded within the VPHCP Plan Area APE.

As of the date of this document, there is no evidence indicating the possible presence of human remains within the Project APE; however, there is a potential to encounter unknown human remains during ground-disturbing activities conducted as part of the Project.

For these reasons, the ground disturbing activities associated with the Project have the potential to cause a substantially adverse and significant impact to unknown human remains.

Expanded Conservation Alternative

No human remains, including those interred outside of dedicated cemeteries, have been recorded within the Expanded Conservation Alternative, which includes the same area as the VPHCP Plan Area APE.

As of the date of this document, there is no evidence indicating the possible presence of human remains within the Project APE; however, there is a potential to encounter unknown human remains during ground-disturbing activities conducted as part of the Expanded Conservation Alternative.

For these reasons, the ground disturbing activities associated with the Expanded Conservation Alternative have the potential to cause a substantially adverse and significant impact to unknown human remains.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, the City would not be allowed take of the seven covered species and would not conduct activities within the vernal pools. No ground-disturbing activities would occur within the VPHCP Plan Area APE, and no human remains would be disturbed.

For this reason, the Existing Conservation/No Project Alternative would have no impact to human remains, including those interred outside of dedicated cemeteries.

ISSUE 4: *Would the project result in a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.?*

Project

Tribal cultural resources may potentially be affected by ground disturbing activities related to restoration undertaken as part of the VPHCP (i.e., topographical recontouring) and areas where covered activities would occur. As described under Issue 1, Table 5.5-3 lists the cultural sensitivity of the 28 vernal pools sites within 20 vernal pool complexes with restoration potential. Of the 28 vernal pool sites, five overlap with a known archaeological resource. The other 23 vernal pool sites do not overlap with any recorded resources; however, known archaeological resources are located nearby. Cultural sensitivity levels for each vernal pool

complex were rated low, moderate, or high based on the results of the records search, the Native American Contact Program, and regional environmental factors. For the purpose of this analysis, archaeological resources could also be or contain tribal cultural resources as defined above. As such, Project activity at vernal pool complexes within or adjacent to areas identified in Cultural Resources Issue 1 as having high or moderate sensitivity may have the potential to adversely impact tribal cultural resources and eligible historical resources.

For these reasons, the ground disturbing activities associated with the Project have the potential to cause a substantially adverse and significant impact to tribal cultural resources.

ISSUE 5: *Would the project result in any alteration, directly or indirectly, of any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association? (36 CFR § 800.5(a)(1)).*

Resources within the vernal pool complexes are currently unevaluated for National Register eligibility and additional evaluation will be required to determine eligibility for inclusion prior to the start of restoration efforts and in areas where covered activities will occur. As such, ground disturbing activities associated with the Project have the potential to cause a substantially adverse and significant impact to a historic property.

5.5.5 Mitigation Measures

Project

The following mitigation would be required for vernal pool complexes with moderate cultural sensitivity levels to reduce impacts to historical, archaeological or tribal cultural resources and the disturbance of human remains to a less than significant level under CEQA.

> **Mitigation Measure HIST-1:**
> Prior to issuance of any permit for a future development project implemented in accordance with the VPHCP Plan area that could directly affect an archaeological or Tribal Cultural Resource, the City shall require the following steps be taken to determine (1) the presence of archaeological resources and (2) the appropriate mitigation for any significant resources that may be impacted by a development activity. Sites may include residential and commercial properties, privies, trash pits, building foundations, and industrial features representing the contributions of people from diverse socioeconomic and ethnic backgrounds. Sites may also include resources associated with prehistoric Native American activities.

INITIAL DETERMINATION

The environmental analyst will determine the likelihood for a project site to contain historical resources by reviewing site photographs and existing historic information (e.g., Archaeological Sensitivity Maps; the Archaeological Map Book; and the City's "Historical Inventory of Important Architects, Structures, and People in San Diego"), and may conduct a site visit. If there is any evidence that the site contains archaeological or Tribal Cultural Resources, then an archaeological evaluation consistent with the City Guidelines would be required. All individuals conducting any phase of the archaeological evaluation program must meet professional qualifications in accordance with the City Guidelines.

STEP 1:

Based on the results of the Initial Determination, if there is evidence that the site contains historical resources, preparation of a historic evaluation is required. The evaluation report would generally include background research, field survey, archaeological testing, and analysis. Before actual field reconnaissance would occur, background research is required, which includes a records search at the SCIC at San Diego State University and the San Diego Museum of Man. A review of the Sacred Lands File maintained by the Native American Heritage Commission must also be conducted at this time. Information about existing archaeological collections should also be obtained from the San Diego Archaeological Center and any tribal repositories or museums.

In addition to the records searches mentioned above, background information may include examining primary sources of historical information (e.g., deeds and wills), secondary sources (e.g., local histories and genealogies), Sanborn Fire Maps, and historic cartographic and aerial photograph sources; reviewing previous archaeological research in similar areas, models that predict site distribution, and archaeological, architectural, and historical site inventory files; and conducting informant interviews. The results of the background information would be included in the evaluation report.

Once the background research is complete, a field reconnaissance must be conducted by individuals whose qualifications meet the standards outlined in the City Guidelines. Consultants are encouraged to employ innovative survey techniques when conducting enhanced reconnaissance, including remote sensing, ground-penetrating radar, and other soil resistivity techniques as determined on a case-by-case basis. Native American participation is required for field surveys when there is likelihood that the project site contains prehistoric archaeological resources or traditional cultural properties. If, through background research and field surveys, historical resources are identified, then an

evaluation of significance, based on the City's Guidelines must be performed by a qualified archaeologist.

STEP 2:
Where a recorded archaeological site or Tribal Cultural Resource (as defined in the Public Resources Code) is identified, the City would be required to initiate consultation with identified California Indian tribes pursuant to the provisions in Public Resources Code Section 21080.3.1 and 21080.3.2., in accordance with Assembly Bill 52. It should be noted that during the consultation process, tribal representative(s) will be involved in making recommendations regarding the significance of a Tribal Cultural Resource which also could be a prehistoric archaeological site. A testing program may be recommended which requires reevaluation of the proposed project in consultation with the Native American representative, which could result in a combination of project redesign to avoid and/or preserve significant resources and mitigation in the form of data recovery and monitoring (as recommended by the qualified archaeologist and Native American representative). The archaeological testing program, if required shall include evaluating the horizontal and vertical dimensions of a site; the chronological placement, site function, artifact/ecofact density and variability, and presence/absence of subsurface features; and research potential. A thorough discussion of testing methodologies, including surface and subsurface investigations, can be found in the City Guidelines. Results of the consultation process will determine the nature and extent of any additional archeological evaluation of changes to the proposed project.

The results from the testing program will be evaluated against the Significance Thresholds found in the City Guidelines. If significant historical resources are identified within the APE, the site may be eligible for local designation. However, this process would not proceed until such time that the tribal consultation has been concluded and an agreement is reached (or not reached) regarding significance of the resource and appropriate mitigation measures are identified. When appropriate, the final testing report must be submitted to Historical Resources Board staff for eligibility determination and possible designation. An agreement on the appropriate form of mitigation is required prior to distribution of a draft environmental document. If no significant resources are found, and site conditions are such that there is no potential for further discoveries, then no further action is required. Resources found to be nonsignificant as a result of a survey and/or assessment will require no further work beyond documentation of the resources on the appropriate Department of Parks and Recreation (DPR) site forms, and inclusion of results in the survey and/or assessment report. If no significant resources are found, but results of the initial evaluation and testing phase indicates there is still a potential for

resources to be present in portions of the property that could not be tested, then mitigation monitoring is required.

STEP 3:
Preferred mitigation for historical resources is to avoid the resource through project redesign. If the resource cannot be entirely avoided, all prudent and feasible measures to minimize harm shall be taken. For archaeological resources where preservation is not an option, a Research Design and Data Recovery Program is required, which includes a Collections Management Plan for review and approval. When Tribal Cultural Resources are present and cannot be avoided, appropriate and feasible mitigation will be determined through the tribal consultation process and incorporated into the overall data recovery program where applicable, or project specific mitigation measures shall be developed and incorporated into the project. The data recovery program will also incorporate any agreements regarding curation or repatriation of Tribal Cultural Resources as defined during the consultation process. The data recovery program shall be based on a written research design and is subject to the provisions as outlined in CEQA Section 21083.2. The data recovery program must be reviewed and approved by the City's Environmental Analyst prior to distribution of a draft CEQA document and shall include the results of the tribal consultation process. Archaeological monitoring may be required during building demolition and/or construction grading when significant resources are known or suspected to be present on a site, but cannot be recovered prior to grading due to obstructions such as existing development or dense vegetation.

A Native American observer must be retained for all subsurface investigations, including geotechnical testing and other ground-disturbing activities, whenever a Native American Traditional Cultural Property, Tribal Cultural Resource, or archaeological site located on City property or within the APE of a City project would be impacted. In the event that human remains are encountered during data recovery and/or a monitoring program, the provisions of PRC Section 5097 must be followed. These provisions will be outlined in the Mitigation Monitoring and Reporting Program (MMRP) included in a subsequent project-specific environmental document. The Native American monitor shall be consulted during the preparation of the written report, at which time he/she may express concerns about the treatment of sensitive resources. If the Native American community requests participation of an observer for subsurface investigations on private property, the request shall be honored.

STEP 4:
Archaeological Resource Management reports shall be prepared by qualified professionals as determined by the criteria set forth in Appendix A of the City

Guidelines. The discipline shall be tailored to the resource under evaluation. In cases involving complex resources, such as Traditional Cultural Properties, Tribal Cultural Resources, rural landscape districts, sites involving a combination of prehistoric and historic archaeology, or historic districts, a team of experts will be necessary for a complete evaluation.

Specific types of historical resource reports are required to document the methods (see Section III of the City Guidelines) used to determine the presence or absence of historical resources; to identify the potential impacts from proposed development and evaluate the significance of any identified historical resources; to document the appropriate curation of archaeological collections (e.g., collected materials and the associated records); in the case of potentially significant impacts to historical resources, to recommend appropriate mitigation measures that would reduce the impacts to below a level of significance; and to document the results of mitigation and monitoring programs, if required.

Archaeological Resource Management reports shall be prepared in conformance with the California Office of Historic Preservation's Archaeological Resource Management Reports: Recommended Contents and Format (see Appendix C of the City Guidelines), which will be used by Environmental staff in the review of archaeological resource reports. Consultants must ensure that archaeological resource reports are prepared consistent with this checklist. This requirement will standardize the content and format of all archaeological technical reports submitted to the City. A confidential appendix must be submitted (under separate cover) with historical resources reports for archaeological sites, Traditional Cultural Properties or Tribal Cultural Resources containing the confidential resource maps and records search information gathered during the background study. In addition, a Collections Management Plan shall be prepared for projects that result in a substantial collection of artifacts, and must address the management and research goals of the project and the types of materials to be collected and curated based on a sampling strategy that is acceptable to the City. Appendix D of the City Guidelines (Historical Resources Report Form) may be used when no archaeological resources were identified within the project boundaries.

STEP 5:

For Archaeological Resources: All cultural materials, including original maps, field notes, non-burial-related artifacts, catalog information, and final reports recovered during public and/or private development projects, must be permanently curated with an appropriate institution, one that has the proper facilities and staffing for ensuring research access to the collections consistent with state and federal standards, unless otherwise determined during the tribal consultation process. In the event that a prehistoric and/or

historic deposit is encountered during construction monitoring, a Collections Management Plan would be required in accordance with the project MMRP. The disposition of human remains and burial-related artifacts that cannot be avoided or are inadvertently discovered is governed by state (i.e., AB 2641 and California Native American Graves Protection and Repatriation Act of 2001) and federal (i.e., Native American Graves Protection and Repatriation Act) law, and must be treated in a dignified and culturally appropriate manner with respect for the deceased individual(s) and their descendants. Any human bones and associated grave goods of Native American origin shall be turned over to the appropriate Native American group for repatriation.

Arrangements for long-term curation for all recovered artifacts must be established between the applicant/property owner and the consultant prior to the initiation of the field reconnaissance. When Tribal Cultural Resources are present, or non-burial-related artifacts associated with Tribal Cultural Resources are suspected to be recovered, the treatment and disposition of such resources will be determined during the tribal consultation process. This information must then be included in the archaeological survey, testing, and/or data recovery report submitted to the City for review and approval. Curation must be accomplished in accordance with the California State Historic Resources Commission's Guidelines for the Curation of Archaeological Collection (dated May 7, 1993) and, if federal funding is involved, 36 CFR 79 of the Federal Register. Additional information regarding curation is provided in Section II of the City Guidelines.

To resolve adverse effects to historic properties, USFWS will delegate its authority under Section 106 of the NHPA to the City through a statewide agreement with the SHPO for their activities.

Expanded Conservation Alternative

Mitigation Measure HIST-1 as described under the Project would also be required for the Expanded Conservation Alternative.

Existing Conservation/No Project Alternative

There are no impacts from the Existing Conservation/No Project Alternative, and no mitigation is required.

5.5.6 Level of Impact after Mitigation

Project

With implementation of Mitigation Measure HIST-1, potential impacts to archaeological or tribal cultural resources from implementation of the Project would be reduced to below a level of significance under CEQA and effects to historic properties would not be substantially adverse under NEPA.

Expanded Conservation Alternative

With implementation of Mitigation Measure HIST-1, potential impacts to archaeological or tribal cultural resources from implementation of the Expanded Conservation Alternative would be reduced to below a level of significance under CEQA and effects to historic properties would not be substantially adverse under NEPA.

Existing Conservation/No Project Alternative

No adverse effects to archaeological or tribal cultural resources would result from the Existing Conservation/No Project Alternative. Therefore, no mitigation is required, and the impact would remain less than significant under CEQA and effects to historic properties would not be substantially adverse under NEPA.

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5.6 HYDROLOGY AND WATER QUALITY

This section describes existing environmental conditions, policies, and regulations related to hydrology and water quality that are relevant for the Project. An evaluation of the environmental consequences on water resources associated with the implementation of the Project and alternatives is provided.

5.6.1 Affected Environment

Watersheds

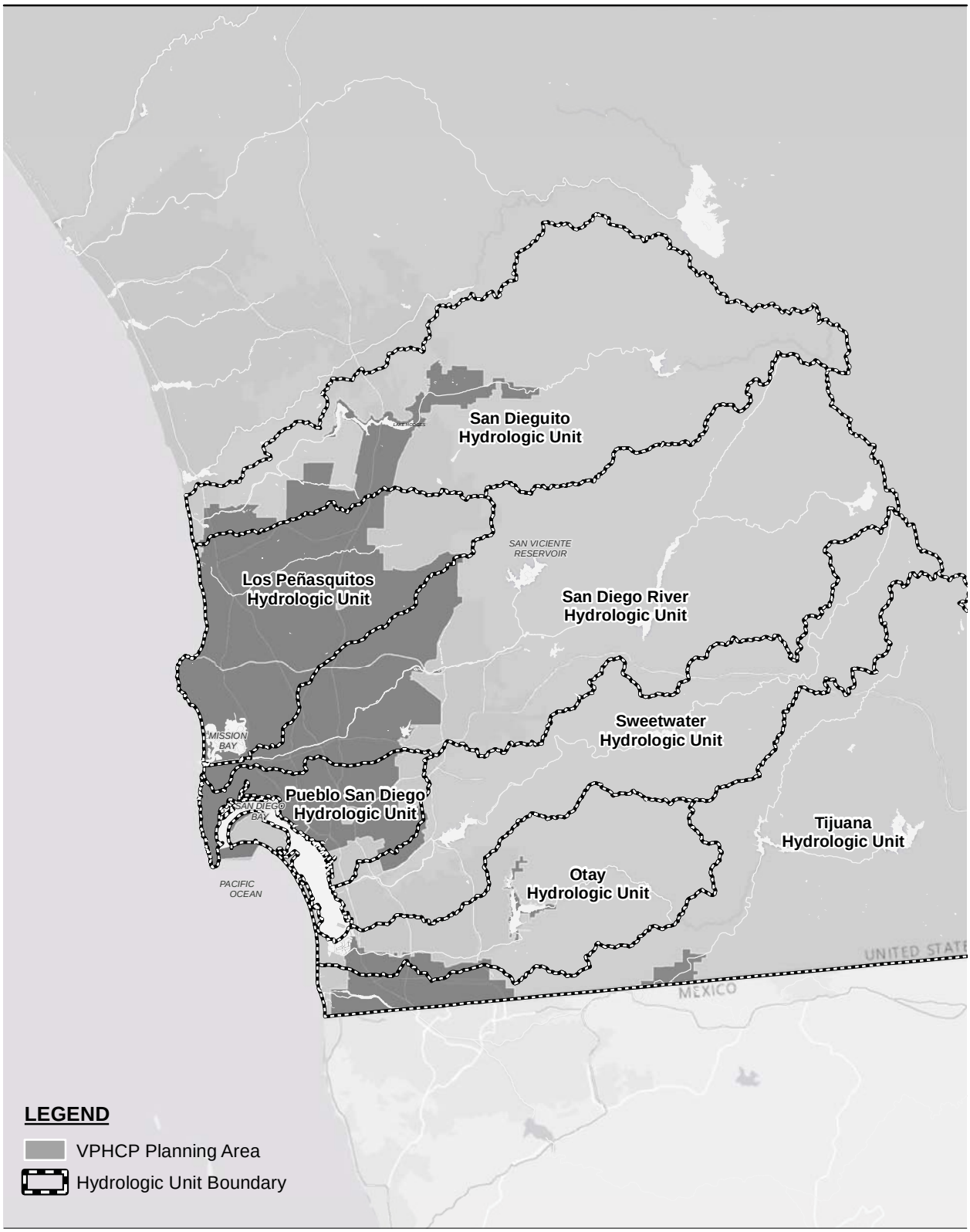
The VPHCP Plan Area spans across portions of the city and lies within seven watersheds, which are described below. They are the San Dieguito, Los Peñasquitos, San Diego River, Pueblo, Sweetwater, Otay, and Tijuana watersheds (Figure 5.6-1). Table 5.6-1 below provides information concerning each watershed and contaminants known to affect the water quality within the watershed.

Table 5.6-1
VPHCP Watersheds

Watershed	Hydrologic Unit	Major Water Bodies	Clean Water Act 303 (d) List	Major Impacts	Constituents of Concern	Sources/ Activities
San Dieguito	905.11 - 905.54	San Dieguito River, San Dieguito Lagoon, and Lake Hodges	Color, manganese, pH; eutrophic; fecal coliform, dissolved oxygen, phosphorus, indicator bacteria, TDS, chloride, sulfates	Surface water quality degradation, habitat degradation and loss, sediment, invasive species, eutrophication, and flooding	Coliform bacteria, TDS, nutrients, petroleum chemicals, toxics, and trash	Urban runoff, agricultural runoff, mining operations, sewage spills, and sand mining
Los Peñasquitos	906.10 - 906.50	Los Peñasquitos Creek, Los Peñasquitos Lagoon, Rose Creek, Tecolote Creek, Mission Bay, Miramar Reservoir	Phosphate, TDS, sediment/siltation, eutrophic, lead, indicator bacteria, sediment toxicity, cadmium, copper, phosphorous, toxicity, turbidity, z7inc	Surface water quality degradation, beach closures, sedimentation, habitat degradation and loss, invasive species, eutrophication	Indicator bacteria, nutrients, trace metals, toxics, and sediment	Urban runoff, sewage spills, dredging, and landfill leachate

Watershed	Hydrologic Unit	Major Water Bodies	Clean Water Act 303 (d) List	Major Impacts	Constituents of Concern	Sources/ Activities
San Diego River	907.11 - 907.43	San Diego River, El Capitan Reservoir, San Vincente Reservoir, Lake Murray, Boulder Creek, Santee Lakes	Color, manganese, pH, eutrophic, fecal coliform, dissolved oxygen, pH, phosphorus, TDS, indicator bacteria, fecal coliform, low dissolved oxygen, chloride, pH (high), sulfates	Surface water quality degradation, habitat degradation and loss, sediment, invasive species, eutrophication, and flooding	Coliform bacteria, TDS, nutrients, petroleum chemicals, toxics, and trash	Urban runoff, agricultural runoff, mining operations, sewage spills, and sand mining
Pueblo	908.10 - 908.32	Chollas Creek, Paleta Creek, and San Diego Bay	Copper, indicator bacteria, lead, zinc, benthic community effects, sediment toxicity, mercury, PCBs, chlordane, lindane/HCH, PAH	Surface water quality degradation, habitat degradation, sediment toxicity in San Diego Bay, and sewer overflows	Trace metals, toxic substances, and coliform bacteria	Urban runoff
Sweetwater	909.11 – 909.35	Sweetwater River, Sweetwater Reservoir, Loveland Reservoir and San Diego Bay	Loveland Reservoir: aluminum, manganese, dissolved oxygen; San Diego Bay Shoreline (Chula Vista Marina): copper; Sweetwater Reservoir: dissolved oxygen	Surface and groundwater quality degradation, habitat degradation and loss, and invasive species	Coliform bacteria, trace metals and other toxics	Agricultural and urban runoff
Otay	910.10 - 910.37	Upper and Lower Otay Reservoirs, Otay River, San Diego Bay	Color, iron, manganese, nitrogen, ammonia (total ammonia), pH (high), PCBs, phosphorus, turbidity, copper	Surface water quality degradation, reduced ground water recharge, sedimentation, habitat degradation and loss, flood control, and invasive species	Coliform bacteria, trace metals, and other toxic constituents	Urban runoff, agricultural runoff, resource extraction, septic systems, marinas and boating activities
Tijuana	911.11 - 911.85	Tijuana Estuary, Tijuana River, Cottonwood Creek, Pine Valley, Campo Creek, Barrett Lake, Lake Moreno	Color, manganese, pH, indicator bacteria, enterococcus, phosphorus, turbidity, eutrophic, low dissolved oxygen, pesticides, solids, synthetic organics, trace elements, trash, lead, nickel, thallium	Surface water quality degradation, trash, sedimentation, eutrophication, habitat degradation and loss, flooding, erosion, and invasive species	Freshwater: coliform bacteria, nutrients, trace metals, pesticides, miscellaneous toxics, low dissolved oxygen, and trash Groundwater: TDS, nitrates, petroleum, MTBE, and solvents	Urban runoff, sewage spills, industrial discharges, agricultural, orchards, livestock, domestic animals, and septic systems

HCH = hexachlorocyclohexane; MTBE = methyl tertiary-butyl ether; PAH = polycyclic aromatic hydrocarbon; PCB = polychlorinated biphenyl; TDS = total dissolved solids
Source: Project Clean Water 2015



Source: City of San Diego; SANDAG; SanGIS; Esri; NHD.

9 4.5 0 9 Miles

Scale: 1:570,240; 1 inch = 9 miles

Figure 5.6-1
Hydrologic Units in the VPHCP Plan Area

Path: P:\2013\60309570_CitySD_VPHCP\900-CAD-GIS\920 GIS\922_Maps\ReportFigs\Fig5_6_1_Watersheds.mxd, 7/5/2016, daniel_arellano

San Dieguito Watershed

The San Dieguito Watershed is a rectangular-shaped area of approximately 350 square miles. It includes the San Dieguito River and its tributaries, along with Santa Ysabel and Santa Maria creeks. The unit contains two reservoirs — Lake Hodges and Sutherland — and a smaller facility, the San Dieguito Reservoir. The unit contains one coastal lagoon, the San Dieguito Slough, located at the mouth of the San Dieguito River, which forms the northerly edge of the City of Del Mar. The lagoon is normally closed off from the ocean by a sandbar.

Los Peñasquitos Watershed

The Los Peñasquitos Watershed is a triangular-shaped area of approximately 170 square miles, extending from Poway on the east to San Diego's La Jolla community on the west. There are no substantial streams in this unit although it is drained by numerous creeks. Miramar Reservoir, a storage facility, contains imported Colorado River water. The unit contains two coastal lagoons, Los Peñasquitos and Mission Bay. Small finger canyons drain into three main creeks (Carmel Valley Creek, Los Peñasquitos Creek, and Carroll Canyon Creek) that lead into Los Peñasquitos Lagoon and ultimately the Pacific Ocean near the northerly boundary of the City. Mission Bay and the mouth of the San Diego River form a 4,000-acre aquatic park known as Mission Bay Park. Water quality within Mission Bay generally is lower than that of the coastal ocean water due to the poor flushing characteristics of the bay and the input of nutrient material from storm runoff. Annual precipitation in the unit ranges from less than 8 inches along the ocean to 18 inches inland. Poway and La Jolla are among population centers.

San Diego River Watershed

The San Diego Watershed is a long, triangular-shaped area of approximately 440 square miles drained by the San Diego River. El Capitan, San Vicente, Cuyamaca, Lake Jennings, and Lake Murray reservoirs are the major storage facilities. San Vicente Reservoir, Murray Reservoir, and Lake Jennings Reservoir store mainly Colorado River water, whereas El Capitan Reservoir mainly stores local runoff and some Colorado River water. Cuyamaca Reservoir stores only local runoff. Much of the impounded water is used to serve population centers, including a portion of the San Diego metropolitan area and the communities of El Cajon, Santee, Lakeside, Alpine, and Julian. Annual precipitation ranges from less than 11 inches at the coast to about 35 inches around Cuyamaca and El Capitan Reservoir.

Pueblo San Diego Watershed

The Pueblo San Diego Watershed is a triangular-shaped area of about 60 square miles with no substantial stream system. Although not necessarily a major stream system, the Pueblo San Diego Watershed consists of a group of relatively small local creeks and pipe conveyances,

including Chollas Creek and Paleta Creek, which present important water quality challenges. It is bordered to the north by the watershed of the San Diego River and on the south, in part, by that of the Sweetwater River. The primary population center is the City of San Diego. The unit is relatively dry with an annual precipitation of less than 11 inches to 13 inches. San Diego Bay lies offshore of this unit. The bay is approximately 13 miles long and varies from ½ to 1½ miles in width.

Sweetwater San Diego Bay Watershed

The Sweetwater Watershed is an elongated northeasterly trending strip with an area of about 230 square miles. It is traversed along its length by the Sweetwater River. The Sweetwater Watershed includes part of National City and Chula Vista. Much of the Sweetwater Watershed is occupied by undeveloped lands in the Cleveland National Forest, Cuyamaca Rancho State Park, and the unincorporated communities of Pine Valley, Descanso, Alpine, and the Viejas Indian Reservation. The annual precipitation varies from less than 11 inches at the coast to about 35 inches inland.

Otay Watershed

The Otay Watershed is a club-shaped area of approximately 160 square miles. The stream system traversing the area is the Otay River and its tributaries. The Lower Otay Reservoir is the terminus of the second San Diego Aqueduct. The Otay Watershed area includes part of Chula Vista and part San Diego, as well as part of Imperial Beach in the coastal area and the inland unincorporated community of Dulzura upstream. The annual precipitation generally increases landward from the coast and varies from less than 11 to 19 inches.

Tijuana Watershed

The Tijuana Watershed is a triangular-shaped area that is drained by Cottonwood and Campo creeks, which are tributaries to the Tijuana River. It covers an area of approximately 470 square miles and lies mainly in the mountain-valley section. The Tijuana Hydrologic Unit (HU) is arbitrarily divided by the U.S./Mexican border. Surface water quality has been adversely affected by runoff coming across the border from Mexico. Ground water quality has been affected by seawater intrusion and waste discharges in both the U.S. and Mexico. The unit's coastal lagoon is the Tijuana Estuary, which occupies approximately 2,000 acres and is generally open to the ocean but is influenced by pollution from Mexico that is transported by the Tijuana River. Runoff is captured by Morena Reservoir and Barrett Lake on Cottonwood Creek. Much of the unit is sparsely populated on the U.S. side, with the populated areas ranging from San Diego's San Ysidro community to the small unincorporated community of Campo. Annual precipitation

varies from less than 11 inches near the coast to more than 25 inches farther inland near Laguna Mountain.

Receiving Waters

Within San Diego, surface receiving waters include rivers and watercourses, reservoirs, bays, estuaries, and the Pacific Ocean. Rivers and bays include the San Diego River, San Dieguito River, Los Peñasquitos Creek, Otay River, Chollas Creek, Sweetwater River, Tijuana River, San Diego Bay, and Mission Bay. Reservoirs and other water bodies within the City include San Dieguito Lagoon, Los Peñasquitos Lagoon, Lakes Hodges, Lake Murray, Lower and Upper Otay Reservoirs, Miramar Reservoir, Chollas Heights Reservoir, and Morena Reservoir. In addition to these water bodies, there are numerous other creeks and channels located throughout the city.

Surface Drainage

Drainages within the seven watersheds that encompass the VPHCP area are generally from east to west and extend from the interior foothills and mountains to the coast, outletting in the coastal lagoons, marshes, bays, or created channels before flowing to the Pacific Ocean. Wetlands associated with the drainages or smaller seasonally wet depressions are located throughout the city, including foothills and inland valleys, mesas, and coastal areas. Surface streams in these regions are predominantly intermittent, flowing only during periods of high rainfall. In addition, much of the area is steeply sloped, leading to potentially high rainfall runoff rates and flood hazards.

Storm Water Flows and Collection System

The surface hydrology within San Diego has been modified because of urbanization. Primarily in response to flood risks and the need to convey storm flows, a storm water conveyance system has been developed throughout the city. The system of drainage is referred to as the Municipal Separate Storm Sewer System, also known as MS4, and it is separate from the sewage system. The MS4 conveys water from storm flows through man-made storm drains or channels and drainages to receiving waters such as rivers, creeks, reservoirs, bays, or the Pacific Ocean.

Surface runoff during storm events is directly affected by absorption rates (i.e., the time required for pervious ground to absorb water flows), the rate of surface runoff (the rate at which unabsorbed water flows to receiving waters), and drainage patterns. Because of its increase in impervious surfaces, urbanization generally decreases the area available for absorption and increases the volume and rates of surface runoff. Increased surface runoff may result in increased erosion and siltation of uplands and natural water courses, which may result in adverse environmental impacts. Increased runoff also increases the potential for flood damages.

Increases of impervious surfaces also increase the potential for water pollution because pollutants carried in urban water flows are not filtered out as they would be by soils and vegetation under natural conditions. Increased levels of pollutants can be detrimental to aquatic habitats.

100-Year Floodplain

While the city's numerous canyons and valleys compose an efficient natural drainage system that results in a low ratio of floodplain area to total land area, there are areas that experience flooding during heavy rains (City of San Diego 2008a). These areas are referred to as 100-year floodplains and are subject to possible major flooding events. The 100-year floodplain is defined as the land predicted to flood during a 100-year storm (also referred to as a base flood), which has a 1% statistical chance of occurring in any given year (FEMA 2015). The land area inundated by the base flood is identified as the SFHA where the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program's (NFIP) floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies (FEMA 2015). The NFIP aims to reduce the impact of flooding on private and public structures through the use of development regulations within the SFHA (FEMA 2015).

5.6.2 Regulatory Framework

Regulations exist at local, state, and federal levels that guide the development and enforcement of codes to protect water resources. These regulations include, but are not limited to, those summarized below.

Federal

Clean Water Act 1972

The Clean Water Act (CWA) is the primary federal law dealing with surface water quality control and protection of beneficial uses of the nation's waters, including lakes, rivers, aquifers, and coastal areas. The purpose of the CWA is to provide guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters through prevention and elimination of pollution. The CWA applies to discharges of pollutants into waters of the U.S. The CWA establishes a framework for regulating storm water discharges from municipal, industrial, and construction activities under the National Pollutant Discharge Elimination System (NPDES). Under the CWA, municipalities across the nation are issued Municipal NPDES permits. In California, the State Water Resources Control Board (SWRCB) administers the NPDES program. The following CWA sections are most relevant to this analysis.

- Section 303(d) of the CWA requires states to adopt water quality standards for all surface waters in the United States. Water quality standards consist of designated beneficial uses (e.g., wildlife habitat, agriculture supple, fishing etc.) for a particular water body, along with water quality criteria necessary to support those uses. Water quality criteria are prescribed concentrations or levels of constituents—such as lead, suspended sediment, and fecal coliform bacteria—or narrative statements that represent the quality of water that supports a particular use. Section 303(d) requires states to identify streams whose water quality is "impaired" (affected by the presence of pollutants or contaminants) and to establish the Total Maximum Daily Load (TMDL) or the maximum quantity of a particular constituent that a water body can assimilate without experiencing adverse effect (EPA 2012). The SWRCB and the applicable Regional Water Quality Control Board (RWQCB) are responsible for implementing and ensuring compliance with the provisions of the CWA.

- Section 401 of the CWA requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. obtain a state certification that the discharge complies with other provisions of the CWA. The SWRCB administers the certification program within California through its nine RWQCBs.

- Section 402 of the CWA establishes the NPDES permit program to regulate the discharge of pollutants from point sources. The CWA defines point sources of water pollutants as "any discernable, confined, and discrete conveyance" that discharges or may discharge pollutants. These are sources from which wastewater or storm water is transmitted in some type of conveyance (pipe and channel) to a water body and are classified as municipal or industrial. Municipal point sources consist primarily of domestic treated sewage and processed water, including municipal sewage treatment plant outfalls and storm water conveyance system outfalls. These outfalls contain harmful substances that are emitted directly into waters of the U.S. Without a permit, the discharge of pollutants from point sources into navigable waters of the U.S. is prohibited. NPDES permits require regular water quality monitoring. Assessments must be completed to ensure compliance with the permit standards.

- Section 404 of the CWA establishes a permit program, administered by USACE, regulating discharge of dredged or fill materials into waters of the U.S., including wetlands. Activities in waters of the U.S. that are regulated under this program include fills for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. CWA Section 404 permits are issued by USACE.

Executive Order 11988, Floodplain Management

EO 11988 requires federal agencies to avoid to the extent possible development in floodplains; to reduce hazard and risk associated with floods; to minimize the impact of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial value of the floodplain. Local zoning is generally used to regulate construction in potentially hazardous floodplains. Since the City was certified as a participant in the NFIP in July 1976, construction without required engineered flood protection has not been permitted.

National Flood Insurance Act 1968

The National Flood Insurance Act of 1968 established the NFIP. The NFIP is a federal program administered by the Flood Insurance Administration of FEMA. It enables individuals who have property within the 100-year floodplain to purchase insurance against flood losses. Community participation and eligibility, flood hazard identification, mapping, and floodplain management aspects are administered by state and local programs and support directorate within FEMA. FEMA works with the states and local communities to identify flood hazard areas and publishes a flood hazard boundary map of those areas. Floodplain mapping is an ongoing process as such maps must be regularly updated for both major rivers and tributaries, as land uses and development patterns change.

State

State Water Resources Control Board

The SWRCB has jurisdiction over water resources throughout California. Created by the State Legislature in 1967, the SWRCB protects water quality by setting statewide policy, coordinating and supporting RWQCB efforts, and reviewing petitions that contest RWQCB actions. There are nine RWQCBs that exercise rulemaking and regulatory activities by basins. Region 9 consists of most of San Diego County, and parts of Orange and Riverside counties, and is governed by the San Diego RWQCB.

The mission of the San Diego RWQCB is to develop and enforce water quality objectives and implement plans that will best protect the City's waters while recognizing the City's local differences in climate, topography, geology, and hydrology. San Diego lies within the San Diego Basin Planning Area as defined in the San Diego Basin Water Quality Control Plan (1994, as amended in 2011), referred to as the "Basin Plan." The San Diego RWQCB Basin Plan designates beneficial uses for water bodies in the San Diego region, and establishes water quality objectives and implementation plans to protect those beneficial uses. Typical constituents of

concern throughout the region's surface water bodies include phosphorous, manganese, sedimentation/siltation, and pH, among many others.

SWRCB Construction General Permit, 2012-0006-DWQ

This permit covers construction activities that disturb 1 or more acres of land that could impact hydrologic resources. Under the terms of the permit, the applicant must file a complete and accurate NOI with the SWRCB, must implement applicable best management practices (BMPs), and must develop a Storm Water Pollution Prevention Plan (SWPPP). Information to be included in the SWPPP consists of site maps, existing and proposed buildings, lots, roadways, storm water collection and discharge points, topography before and after construction, and drainage patterns across the project site.

Porter-Cologne Water Quality Control Act 1969

The Porter-Cologne Water Quality Control Act is the primary state law that establishes California's legal and regulatory framework for water quality control. The Porter-Cologne Water Quality Control Act is embodied in the California Water Code, which authorizes the SWRCB to implement the provisions of the federal CWA. California is divided into nine regions governed by RWQCBs. The RWQCBs implement and enforce provisions of the California Water Code and the CWA under oversight of the SWRCB. San Diego is located within the purview of the San Diego RWQCB (Region 9). The Porter-Cologne Act also provides for the development and periodic review of Water Quality Control Plans (Basin Plans) that designate beneficial uses of California's major rivers and groundwater basins and establish water quality objectives for those waters.

Local

San Diego RWQCB Order Number R9-2013-0001, NPDES Permit Number CAS0109266

Under the authority prescribed by the CWA amendments and NPDES permit regulations, the RWQCB issued Order Number R9-2013-001 to the 18 cities in San Diego County, the County of San Diego, San Diego County Regional Airport Authority, and the Port of San Diego. Order Number R9-2013-001, commonly called the "Municipal Permit," requires all affected jurisdictions to prepare Jurisdictional Runoff Management Plans (JRMPs). In February 2015, Order No. R-9-2015-0001 amended Order No. R9-2013-001 to add Orange County copermittees and made other revisions. In November 2015, Order No. R9-2015-0100 was adopted and further amended Order No. R9-2013-0001 to extend coverage to Riverside County copermittees and made other revisions. The order requires that JRMPs must address land use planning for new

development and redevelopment, existing development, construction, illicit discharge detection and elimination, education programs and public participation, assessment of the effectiveness of programs, and fiscal analysis. The permit also requires the copermittees to collaborate on the development of a Water Quality Improvement Plan (WQIP) for each watershed management area that addresses high-priority storm water quality issues.

Due to the poor water quality of storm water runoff from urban conveyance systems, the City requires that construction and post-construction storm water BMPs be utilized for all new development. The Municipal Permit requires the City to implement regulations for the provision of storm water BMPs for development projects. An NPDES permit is a means of ensuring proper BMPs during construction (through preparation of a SWPPP or a Water Pollution Prevention Control Plan that would be required for some smaller tasks). Examples of structural BMPs that could be employed to address a proposed increase in impervious surfaces and prevent increases in runoff rates and volumes that could cause erosion and sedimentation include:

- Infiltration detention basins
- Infiltration trenches
- Permeable pavement
- Placement of riprap dissipaters and filter blanket material at all storm drain discharge points
- Vegetative swales and filter strips
- Sand filters
- Dry flow weather flow separation and treatment
- Constructed wetlands

BMPs can also include nonstructural methods, such as controlling litter and waste disposal practices, buffer strip and riparian zone preservation, minimization of disturbance and imperviousness, and maximization of open space.

City of San Diego Jurisdictional Runoff Management Program

As indicated, the Municipal Permit required that the City develop a JRMP for the lands under their jurisdiction. The JRMP describes how the City plans to protect and improve the water quality of the surface waters (bays, rivers, and the ocean) in compliance with the Municipal Permit. The document also describes how the City incorporates storm water BMPs into land use planning, development review and permitting, the City's Capital Improvement Program, and the execution of construction contracts.

Water Quality Improvement Plans

The City has participated in the development of six WQIPs that cover high-priority storm water quality issues found in watershed management areas at least partially within the City. The watershed management areas addressed are San Dieguito, Los Peñasquitos, Mission Bay/La Jolla, San Diego River, San Diego Bay (comprising the Otay, Pueblo San Diego, and Sweetwater HUs), and Tijuana. The WQIPs identify and prioritize water quality-related issues that are potentially related to discharges from the municipal storm drain systems within these watershed management areas. In addition to providing baseline data and characterization of the water quality impairments, these plans provide action plans explaining how the copermittees will implement strategies through their JRMPs and work together to improve water quality of discharges from the MS4s and receiving waters. WQIPs also emphasize an adaptive process to achieve water quality improvements.

City of San Diego Storm Water Standards Manual

In 2003, and updated in 2016, as part of the Municipal Code, the City published Storm Water Standards – A Manual for Construction & Permanent Storm Water Best Management Practices Requirements (City of San Diego 2016), which is the reference document for all of the storm water issues encountered in development, including BMPs. Before preparing a drainage study, the Storm Water Requirements Applicability Checklist is completed. This checklist is used to determine the priority level of the project. Projects in the city likely would require Priority Project Permanent Storm Water BMPs and High Priority Construction Storm Water BMPs. The Applicability Checklist among other things is used to determine if a Water Quality Technical Report and permanent structural treatment is required. BMPs appropriate to the characteristics of each project proposed for development would be employed to reduce pollutants available for transport or to reduce the amount of pollutants in runoff prior to discharge to a surface water body.

The update of the City Storm Water Standards Manual required by the current MS4 Permit was updated in February 2016. Part 1, Best Management Practices (BMP) Design Manual for Permanent Site Design, Storm Water Treatment & Hydromodification, is to comply with the Regional MS4 Permit regulating post-construction storm water discharges on-site. Part 2, Construction BMP Standards, is to comply with the Regional MS4 Permit and State Water Resources Control Board General Permit regulating construction-phase storm water discharges. Part 3, Alternative Compliance Program, is to comply with the Regional MS4 Permit regulating post-construction storm water discharges off-site (City of San Diego 2016).

Point Source Permits

The RWQCB regulates most point source discharges of water through the issuance of Waste Discharge Requirements and NPDES permits. Compliance with these permits requires self-monitoring and reporting to the RWQCB by each individual discharger. All applicable dischargers are required to comply with the conditions of these permits.

Construction Permits

Construction in San Diego is subject to the requirements of erosion control in the City's Stormwater Management and Discharge Control Ordinance (Section 43.0301), and is also required to comply with the CWA. Conformance with the CWA is established through compliance with the requirements of the SWRCB NPDES General Permit No. CAS000002. For this permit, as discussed above, the SWRCB issued Order 2009-0009-DWQ (as amended by 2010-0014-DWQ and 2012-006-DWQ), Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction Activity. To comply with the permit, the applicant for a construction permit must file a complete and accurate NOI with the SWRCB. Compliance requires conformance with applicable BMPs and development of a SWPPP and monitoring program plan. When construction is completed, the applicant must file a Notice of Termination with the SWRCB.

City of San Diego Drainage Design Manual

This manual, which is included as an appendix to the Land Development Manual (which is part of the LDC), provides a guide for designing drainage and drainage-related facilities for development projects in the city.

San Diego County Hydrology Manual

This manual provides uniform procedures for preparing flood and storm water analyses within San Diego County. It provides guidance for policies and procedures designed to standardize hydrology studies for projects within the county.

San Diego County Drainage Design Manual

This manual provides design standards and procedures regarding the development of storm water drainage and flood management facilities in San Diego County. The standards and procedures provide jurisdictions with guidance in the selection, design, construction, and maintenance of flood management and storm water drainage facilities in the county.

5.6.3 CEQA Thresholds of Significance

The following thresholds are derived from the City's 2016 Significance Determination Thresholds for the purpose of evaluating potential hydrologic and water quality-related impacts. A significant CEQA impact would occur if the Project would:

1. *Result in increased flooding on- or off-site;*
2. *Result in decreased aquifer recharge or extraction of water from an aquifer that would cause a net deficit in the aquifer volume or a reduction in the local groundwater table;*
3. *Grade, clear, or grub more than 1.0 acre of land, especially into slopes over a 25% grade, and would drain into a sensitive water body or stream; and/or*
4. *Result in modifications to existing drainage patterns so there may be significant impacts on environmental resources.*
5. *Result in substantial increase in pollutant discharge to receiving waters and increase discharge of identified pollutants to an already impaired water body; and/or*
6. *Impact local and regional water quality, including groundwater.*

5.6.4 Environmental Consequences

This section identifies potential environmental consequences to hydrology and water quality that would result from the Project and alternatives. The direct and indirect impacts to hydrology and water quality are assessed qualitatively. This qualitative analysis is conducted from a region-wide standpoint as the VPHCP spans across the San Diego region and water resource systems are naturally interconnected.

ISSUE 1: *Would the project result in increased flooding on- or off-site?*

Project

As part of the overall management of vernal pools and the seven covered species, implementation of management and monitoring activities described in the VPHCP would occur. The VPHCP includes regular monitoring of the vernal pool complexes to assess the status and need for complex-specific management action. The VPHCP includes maintenance, monitoring, and restoration (where needed based on monitoring observations) of the vernal pool hydrological network (i.e., inlet and outlet features) and water storage (maximum depth within +/-10% of baseline) functions.

Vernal pool restoration carried out under the VPHCP could potentially involve relatively minor grading of basins and the surrounding watershed area to restore the natural topographic and

hydrologic functions of the vernal pools (average of grading depth between 3 and 6 inches). Grading efforts, though critical for vernal pool function, would be relatively minor in the overall site drainage patterns and topography of the area and would not be of the magnitude to modify or induce on-site or off-site flood flows. In fact, per the requirements for vernal pool restoration outlined in the VPHCP, restoration projects would be required to maintain on-site hydrology and hydrologic function (see all requirements of the Mitigation Framework in Chapter 11, Mitigation Monitoring and Reporting Program).

The natural surface water storage function of vernal pools is defined as the capacity of the vernal pool wetlands complex to capture and store precipitation falling on the basin and catchment area (SDSU 2011). Water held in depression storage, that is, in cracks, grooves, and depressions on the surface, such as vernal pools, is unavailable for runoff (Barnes et al. 2002). Moisture is stored within the depression as free water on the surface and/or in the surface and subsurface soils of the pool, swale(s) connecting pools, and adjacent uplands (SDSU 2011). Water moves into and out of the basin by defined inlets and outlets and/or to and from the soil of the associated swales and adjacent uplands (SDSU 2011). The management activities outlined in the VPHCP would serve to maintain or restore these natural topographic characteristics of vernal pools that allow for water retention and thus prevent or reduce off-site flooding.

Although vernal pools are typically associated with claylike impervious subsoils, the VPHCP would protect pervious top soils within and adjacent to the vernal pools and associated upland watershed. Pervious soils allow for the free passage of water through porous soils into the groundwater column. Vernal pools often become full through the perched water table below ground that has become saturated from surrounding pervious soils. Thus, the maintained, improved, or restored proper hydrologic function of the vernal pools, allowing them to absorb water from saturated surrounding soils, would also serve to minimize flooding potential both on-site and off-site by keeping water compounded in the pools as opposed to the water flooding the site or leaving the site as runoff.

In comparison to natural or vegetated areas where storm water either collects in pool depressions or saturates the ground, storm water runoff flows quickly off of developed urban landscapes, which have high levels of impervious surfaces. Impervious urban surfaces consist of land cover such as paved streets, driveways, sidewalks, etc., which water cannot penetrate. Runoff is defined as water that flows over the surface of the land when rainfall is not able to infiltrate into the topsoil, either because the topsoil is already infiltrated or because the soil is already saturated. Replacement of naturally vegetated habitat, such as vernal pools, with flat impermeable urban surfaces increases the volume of runoff and heightens flooding events (Barnes 2002). No element of the VPHCP would create new impervious surfaces that could generate increased runoff or flood risk. Covered projects and covered activities that could result

in the creation of impervious surfaces would be evaluated during the subsequent project-specific environmental review.

The intent of the VPHCP is to maintain or restore vernal pools to their natural hydrologic functions, which ultimately would serve to reduce and avoid flooding as described in the analysis above. Therefore, implementation of the Project would not result in a substantial adverse effect related to increased flooding on-site or off-site. The potential impact would be less than significant.

Expanded Conservation Alternative

The Expanded Conservation Alternative adds additional lands to the MHPA, beyond those added under the VPHCP. Table 3-9 summarizes the additional conservation of vernal pools that would be provided under implementation of the Expanded Conservation Alternative through addition of lands to the MHPA. The Expanded Conservation Alternative would conserve an additional eight vernal pool complexes within the Plan Area, and conserve an additional 277 pools (11% more), totaling 3.3 acres of basin area, than what is currently conserved under the existing conservation. The Expanded Conservation Alternative includes the same elements of the Project as described above, including conservation strategies, monitoring and management, and implementation. The analysis provided under the Project describing how the proper function of vernal pools helps to reduce flooding impacts and the fact that the minor grading associated with vernal pool restoration would not substantially alter drainage patterns in a way that could influence flooding would also be applicable to this alternative as the actions associated with this alternative are similar to the Project but expanded to additional areas. The additional areas included in the Expanded Conservation Alternative would receive the same benefits from maintained and improved vernal pools relative to flooding. No element of the Expanded Conservation Element would create new impervious surfaces that could generate increased runoff or flood risk.

Thus, the Expanded Conservation Alternative would not result in a substantial adverse effect related to an increase in flooding on-site or off-site. The potential impact would be less than significant.

Existing Conservation/No Project Alternative

Under the Existing /No Project Alternative, conditions would continue as they are related to local flooding conditions. However, no additional vernal pool maintenance or restoration would occur to improve hydrologic conditions and reduce flooding risk on-site or off-site. The Existing Conservation/No Project Alternative would not create new impervious surfaces that could generate increased runoff or flood risk. While no positive benefits related to vernal pool water

retention and flood minimization would result with implementation of this alternative, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to an increase in flooding on-site or off-site, and the impact would be less than significant.

ISSUE 2: *Would the project result in decreased aquifer recharge or extraction of water from an aquifer that would cause a net deficit in the aquifer volume or a reduction in the local groundwater table?*

Project

The VPHCP does not include actions that result in decreased aquifer recharge or would extract water from an aquifer. In California, vernal pools generally have ‘‘top-down’’ hydrology, with water collecting in the basins and creating a locally perched water table above a soil horizon (Zedler 2003). The perched water table develops because of infiltration from the basins. Vernal pools are generally hydrologically connected, such that water flows over the surface from one vernal pool to another. As a result, vernal pools depend more on precipitation than groundwater as their water source (California Wetlands Monitoring Workgroup 2013). Given rainfall patterns and amounts typical for southern California, the direct precipitation into the pools is by far the most important source of water to the vernal pools (Hanes et al. 1990). Thus, the maintenance or restoration of vernal pools would not result in the extraction of groundwater to fill the pools. Additionally, no element of the VPHCP would necessitate the use of groundwater for implementation. The VPHCP does not include any actions that would create new impervious surfaces that could interfere with water absorption and decreased aquifer recharge.

For these reasons, the Project would not result in a substantial adverse effect related to decreased aquifer recharge or extraction of water from an aquifer that would cause a net deficit in the aquifer volume or a reduction in the local groundwater table. The potential impact would be less than significant.

Expanded Conservation Alternative

The Expanded Conservation Alternative adds additional lands to the MHPA, beyond those added under the VPHCP. The Expanded Conservation Alternative includes the same elements of the Project as described above in the Project analysis, including conservation strategies, monitoring and management, and implementation. Due to the similarities between the Project and the Expanded Conservation Alternative, the analysis of groundwater impacts is the same. The expanded area of coverage resulting in maintenance or restoration of vernal pools would not result in the extraction of groundwater to fill the pools. No element of the Expanded Conservation Alternative implementation would necessitate the use of groundwater for

implementation or create new impervious surfaces that could interfere with water absorption and decreased aquifer recharge.

Thus, the additional lands added in the Expanded Conservation Alternative would not result in a substantial adverse effect related to decreased aquifer recharge or extraction of water from an aquifer that would cause a net deficit in the aquifer volume or a reduction in the local groundwater table. The potential impact would be less than significant.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, the recharge rate of aquifers or the extraction of water from an aquifer would continue as is. No element of the Existing Conservation/No Project Alternative implementation would necessitate the use of groundwater for implementation or create new impervious surfaces that could interfere with water absorption and decreased aquifer recharge. Thus, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to decreased aquifer recharge or extraction of water from an aquifer that would cause a net deficit in the aquifer volume or a reduction in the local groundwater table. The potential impact would be less than significant.

ISSUE 3: *Would the project grade, clear, or grub more than 1.0 acre of land, especially into slopes over a 25% grade, and would drain into a sensitive water body or stream?*

Project

The VPHCP would include restoration of degraded vernal pools throughout the Plan Area. As described under Issue 1 above, restoration of vernal pools could potentially involve relatively minor grading. It is possible that more than 1 acre of land could be graded in one location for vernal pool restoration and recontouring. However, grading work would serve the purpose of creating proper hydrologic function for the vernal pool system. Thus, the minor grading work associated with vernal pool restoration would not result in degraded drainage; rather, it would improve hydrologic function of the vernal pool complex.

Additionally, vernal pools within the VPHCP Plan Area are not located within slopes over a 25% grade. Grading necessary for vernal pool restoration would typically average 3 to 6 inches in depth and would not create or modify slopes over a 25% grade. Where applicable, a grading permit would be obtained from the City for vernal pool restoration projects and a SWPPP would be implemented. The required SWPPP BMPs, such as erosion control measures (e.g., straw wattles), and minimization measures included in the VPHCP Mitigation Framework, such as prohibiting grading during the rainy season, would prevent drainage into a sensitive water body

or stream and potentially significant impacts on stream hydrology. Therefore, while some minor grading associated with vernal pool restoration is anticipated, no effects to stream hydrology would occur.

For these reasons, the Project would not result in a substantial adverse effect related to grading, clearing, or grubbing more than 1 acre of land, especially into slopes over a 25% grade, and draining into a sensitive water body or stream. The potential impact would be less than significant.

Expanded Conservation Alternative

Due to the similarities between the Project and the Expanded Conservation Alternative, the analysis under Issue 3 is the same. It is possible that more than an acre of land could be graded in one location for vernal pool restoration and recontouring, which would serve to create proper hydrologic function for the vernal pool system. Thus, the minor grading work associated with vernal pool restoration would not result in degraded drainage; rather, improved hydrologic function of the vernal pool complex would occur. Grading necessary for vernal pool restoration would not create or modify slopes over a 25% grade. Implementation of SWPPP BMPs and minimization measures related to grading outlined in the VPHCP (where applicable) would prevent impacts to stream hydrology.

For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to grading, clearing, or grubbing more of than 1 acre of land, especially into slopes over a 25% grade, and draining into a sensitive water body or stream. The potential impact would be less than significant.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, grading related to vernal pool restoration projects would continue to occur on a project-by-project basis. The analysis for the Project is essentially equivalent for vernal pool restoration projects that would be implemented under the Existing Conservation/No Project Alternative. Therefore, Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to grading, clearing, or grubbing of more than 1 acre of land, especially into slopes over a 25% grade, that would drain into a sensitive water body or stream. The potential impact would be less than significant.

ISSUE 4: *Would the project result in modifications to existing drainage patterns such that there may be significant impacts on environmental resources?*

Project

A key component of the VPHCP is the restoration of degraded vernal pools throughout the Plan Area. As described under Issue 1, vernal pool restoration would involve relatively minor grading. Modification to existing drainage patterns would involve minor grading for recontouring or restoration of vernal pools and basins to the natural state, thus benefiting sensitive vernal pool habitat and associated covered species.

The VPHCP requires qualitative monitoring of each complex managed under the VPHCP to determine what level of modification to existing drainage patterns needs to occur. The qualitative monitoring of each vernal pool assesses a series of conditions and threats that include topographic disturbance, which may require modifications to existing drainage patterns. Each applicable vernal pool complex would be monitored for topographic disturbance or altered hydrology from vehicle damage, illegal trespass, or other landscape-damaging impacts. The qualitative assessment of topographic disturbance will evaluate the following:

- Pool integrity and hydrologic function
- Shape and size of the disturbance and the overall pool
- Depth and duration of ponding
- Need for hand work or mechanical equipment for repairs
- Need for watershed analysis and/or microtopographic plans

As a result of the overall assessment, project-specific vernal pool restoration and enhancement plans would be developed. Each plan would be consistent with the general requirements outlined in the City's LDM Biology Guidelines to minimize impacts associated with the vernal pool restoration process. Per the requirements for vernal pool restoration outlined in the VPHCP, restoration projects would be required to maintain on-site hydrology and hydrologic function as part of the Mitigation Framework. The VPHCP requires that the vernal pool restoration plan include the following information and conditions to minimize impacts to existing drainage patterns:

- Grading plans that show the watersheds of extant vernal pools, and overflow pathways that hydrologically connect the restored pools in a way that mimics natural vernal pool complex topography/hydrology.
- A hydraulic analysis that shows each proposed vernal pool and its watershed, and hydrologic connection between the pools.

Because any grading or land modification conducted for the purposes of vernal pool restoration or maintenance would be fairly minimal and in accordance with the grading plan developed for correct hydrology and natural topography in association with a hydraulic analysis, the restored pools and their modified watersheds would not substantially or negatively impact drainage patterns of the area. Grading modifications would not be of the extent or magnitude such that the resulting drainage patterns would impact other environmental resources.

For these reasons, the Project would not result in a substantial adverse effect related to modifications to existing drainage patterns such that there may be significant impacts on environmental resources. The potential impact to existing drainage patterns would be less than significant.

Expanded Conservation Alternative

The Expanded Conservation Alternative adds additional lands to the MHPA beyond those added under the VPHCP. The Expanded Conservation Alternative includes the same elements of the Project, including conservation strategies, monitoring and management, and requirements for vernal pool restoration projects that would involve minor grading. As described for the Project, the Expanded Conservation Alternative would also require that vernal pool restoration plans include grading plans demonstrating that the watersheds and hydrological connections mimic the natural vernal pool complex topography/hydrology, and that a hydraulic analysis shows a connection between the vernal pool and its watershed.

Due to the similarities between the Project and the Expanded Conservation Alternative, the analysis is the same. Because any grading would be fairly minimal and in accordance with the grading plan developed for correct hydrology and natural topography, the restored pools and their modified watersheds would not substantially or negatively impact drainage patterns of the area. These grading modifications would not be of the extent or magnitude such that the resulting drainage patterns would impact other environmental resources.

Therefore, the additional lands added in the Expanded Conservation Alternative would not result in a substantial adverse effect related to modifications to existing drainage patterns such that there may be significant impacts on environmental resources, and the impact would be less than significant.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, vernal pool restoration projects would continue to be implemented on a project-by-project basis. Grading would be evaluated on a

project-by-project basis, and would be subject to the same requirements for vernal pool restoration as the Project (i.e., grading plans that show the watersheds and hydrological connections mimic the natural vernal pool complex topography/hydrology and a hydraulic analysis prepared showing connections between vernal pools and watersheds). Therefore, as with the Project, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to modifications to existing drainage patterns such that there may be significant impacts on environmental resources. The potential impact would be less than significant.

ISSUE 5: *Would the project result in substantial increase in pollutant discharge to receiving waters and increase discharge of identified pollutants to an already impaired water body?*

Project

As described in Section 5.6.1, Affected Environment, the VPHCP lies within seven watersheds: the Otay, Los Peñasquitos, Pueblo, San Diego River, San Dieguito, Sweetwater, and Tijuana watersheds. Multiple receiving surface water bodies within the seven watersheds are listed on the 303(d) list of Water Quality Impaired Segments as detailed in Table 5.6-1. Vernal pools are considered hydrologically isolated as they often do not connect to other water bodies or streams (Pennsylvania Natural Heritage Program 2015). Vernal pools are on level ground and are surrounded by hillocks, known as mima mounds, in which water fills the indentations between and naturally filters through the soil (California Wetlands Monitoring Workgroup 2013). In comparison, impervious urban surfaces allow for the accumulation of many types of pollutants along their surfaces. These pollutants are subsequently conveyed into water bodies during storm events, ultimately contributing to pollutant loading of already impaired water bodies.

Implementation of the VPHCP would not result in an increase of pollutants caused by actions associated with the VPHCP. Common constituents of concern with TMDLs throughout the region's surface water bodies include phosphorous, manganese, and pH, among others. Potential sources of contaminants associated with the VPHCP include herbicide use for weed control and use of equipment (e.g., skip loader) during grading for restoration projects. The use of herbicides for weed control would only be permitted consistent with state and county regulations, and (as stated in the requirements for restoration projects under the VPHCP) herbicides would not be applied within 24 hours of a forecasted rain event (30% chance or greater). Thus, the use of herbicide for weed control would not result in substantial discharge to the region's surface water bodies. Implementation of SWPPP BMPs and minimization measures for vernal pool restoration projects outlined in the VPHCP (where applicable) would prevent pollutant discharge during grading activities.

Additionally, sedimentation is a common constituent of concern in many of the watersheds and impaired water bodies. The VPHCP restoration and maintenance efforts would minimize grading, require erosion control BMPs (where applicable), and conform to natural topographic features during pool restoration so as not to cause a substantial increase of erosion that could lead to sedimentation/siltation of receiving water bodies. The grading and recontouring would serve to improve the hydrologic function of the site to appropriately capture on-site water in the vernal pool systems. Additionally, revegetation and plantings associated with the restoration activities would serve to minimize erosion potential and sedimentation by covering exposed soils. Maintenance and restoration activities would also be required to comply with the City's ESL Regulations, further minimizing potential for pollutant discharge. Thus, the VPHCP would not substantially contribute to pollutant loading of sedimentation or other constituents of concern known to pollute the region's surface water bodies.

Based on the analysis above, the Project would not result in a substantial adverse effect related to an increase in pollutant discharge to receiving waters and increase discharge of identified pollutants to an already impaired water body. The potential impact would be less than significant.

Expanded Conservation Alternative

Due to the similarities between the Project and the Expanded Conservation Alternative, the analysis is the same. The Expanded Conservation Alternative would not result in a substantial discharge of chemicals and elements known to pollute the region's surface water bodies. Restoration and maintenance efforts would minimize grading and conform to natural topographic features during pool restoration so as not to cause a substantial increase of erosion that could lead to sedimentation/siltation of receiving water bodies. Revegetation would serve to further reduce erosion and sedimentation potential. As a result, the Expanded Conservation Alternative would not substantially contribute to pollutant loading of sedimentation or other constituents of concern known to pollute the region's surface water bodies.

Thus, the Expanded Conservation Alternative would not result in substantial adverse effect related to an increase in pollutant discharge to receiving waters and increase discharge of identified pollutants to an already impaired water body. The potential impact would be less than significant.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project conditions, vernal pool restoration projects would continue to be implemented on a project-by-project basis. Grading for restoration and use of

herbicides for weed control would be subject to the same federal, state, and local regulations as the Project, and (where applicable) would require a SWPPP and associated BMPs to prevent pollutant discharge. Herbicide use for weed control would require approval from CDFW and USFWS, and herbicide application would still be regulated by the state (i.e., no application 24 hours prior to a rain event). For these reasons, there would be no actions that result in increased pollutant discharge. Thus, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to an increase in pollutant discharge to receiving waters and increase discharge of identified pollutants to an already impaired water body. The potential impact would be less than significant.

ISSUE 6: *Would the project impact local and regional water quality, including groundwater?*

Project

The VPHCP would restore vernal pools to their natural hydrological functions, which would serve to improve water quality due to the natural bio-filtration processes that would result. The VPHCP includes measures that avoid and minimize impacts to local and regional water quality, including groundwater, including the regulation of herbicide use (i.e., no application within 24 hours of a rain event) and requirements for minimizing erosion control and pollutant discharge during grading activities (i.e., SWPPP BMPs). No additional actions associated with implementation of the VPHCP would lead to the substantial increase of water pollution. The analysis provided under ISSUE 5 provides further description of water quality protection.

For these reasons, the Project would not result in a substantial adverse effect related to an impact on local and regional water quality, including groundwater, and the potential impact would be less than significant.

Expanded Conservation Alternative

Due to the similarities between the Project and the Expanded Conservation Alternative, the analysis is the same. For the reasons described above under the Project analysis, implementation of the Expanded Conservation Alternative would not lead to the substantial increase of water pollution.

Thus, the Expanded Conservation Alternative would not result in a substantial adverse effect related to an impact on local and regional water quality, including groundwater, and the potential impact would be less than significant.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project conditions, vernal pool restoration projects would be implemented on a project-by-project basis. Activities implemented under the VPHCP that could potentially affect water quality, including grading for restoration and use of herbicides for weed control, would be subject to the same federal, state, and local regulations as the Project, and (where applicable) would require a SWPPP and associated BMPs to prevent pollutant discharge. Herbicide use for weed control would still be regulated by the state (i.e., no application 24 hours prior to a rain event). For these reasons, there would be no actions that result in degradation of water quality. Thus, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect to local or regional water quality, and the potential impact would be less than significant.

5.6.5 Mitigation Measures

No significant adverse hydrology and water quality impacts were identified for the Project or alternatives and no mitigation measures are required.

5.6.6 Level of Impact after Mitigation

Project

No significant adverse hydrology and water quality impacts would result from implementation of the Project. Therefore, no mitigation is required, and the impact would remain less than significant under CEQA and would not be substantially adverse under NEPA.

Expanded Conservation Alternative

No significant adverse water quality and hydrology impacts would result from implementation of the Expanded Conservation Alternative. Therefore, no mitigation is required, and the impact would remain less than significant under CEQA and would not be substantially adverse under NEPA.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, no significant adverse water quality and hydrology impacts would occur. Therefore, no mitigation is required, and the impact would remain less than significant under CEQA and would not be substantially adverse under NEPA.

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5.7 ENVIRONMENTAL JUSTICE

This section presents an evaluation of Project impacts with regard to environmental justice populations. Under CEQA, the focus of an EIR is primarily on potential changes to the "physical conditions," which include land, air, water, flora, fauna, population, housing, noise, and objects of historic or aesthetic significance (PRC Section 21060.5; CCR Title 14 Section 15358(b) and Section 15382); environmental justice considerations are typically not included. However, those actions subject to federal approval requiring compliance with NEPA are required to evaluate the potential for project components to result in disproportionately high or adverse effects on low-income or minority populations, using as a model the analytical methods prescribed in federal EO 12898, as well as the regulations promulgated by CEQ. Any NEPA document must also consider potential disproportionate environmental health and safety risks to children in order to comply with relevant federal EOs.

To satisfy NEPA requirements, the environmental justice assessment is focused on the potential of the Project to result in disproportionately high and adverse effects in low-income, minority, and child populations, as defined below. The analysis of the cultural, social, economic, health, and environmental effects that these populations may sustain relative to the rest of society is referred to as "environmental justice." The purpose of an analysis of environmental justice issues is to better ensure equity for these populations when an action or program could create such effects. "Equity" in this case means that these groups do not bear a disproportionate burden of the adverse environmental and health consequences of an action relative to the potential benefits.

5.7.1 Affected Environment

To provide a localized environmental justice context for the Project, this section presents information on population and income in the Project area for populations that reside within the areas contiguous with parcels that would be subject to the VPHCP (i.e., lands currently within the MHPA or that would be added to the MHPA via implementation of the VPHCP).

To meet the specific intent of EOs 12898 and 13045, it is necessary to consider the age, minority, and economic status of the population in those areas contiguous with the Project parcels. To allow for a subsequent evaluation of potential disproportionate impacts to these populations, it is necessary to compare the same type of demographic and income information for the local jurisdiction and the larger region. Therefore, the data provide information on population, age, race/ethnicity, and poverty status for the area around the VPHCP parcels compared to the City and County of San Diego.

Census tracts are the standard localized units of land-based analysis for these types of data. The parcels that would be subject to the VPHCP are contiguous with 189 census tracts. These census tracts are listed in Table 5.7-1. Some tracts contain all or portions of more than one parcel and some parcels straddle two or more census tracts.

Table 5.7-1
Census Tracts Contiguous with VPHCP Parcels

1.00	30.03	80.02	83.46	87.01	96.04	148.04	170.46
2.01	30.04	81.01	83.47	87.02	97.03	148.05	170.47
2.02	31.09	81.02	83.48	89.01	97.04	166.05	170.49
4.00	31.11	82.00	83.50	89.02	97.05	166.06	170.50
5.00	31.12	83.01	83.53	90.00	97.06	166.12	170.56
6.00	31.14	83.03	83.54	91.02	98.01	169.01	171.10
7.00	31.15	83.06	83.55	91.03	98.05	169.02	172.00
11.00	32.01	83.07	83.59	91.04	99.01	170.10	173.06
15.00	34.01	83.10	83.61	91.06	100.01	170.15	204.01
19.00	36.01	83.11	83.62	92.01	100.09	170.19	204.04
20.01	36.02	83.12	83.63	92.02	100.14	170.20	207.06
20.02	42.00	83.13	83.64	93.01	100.15	170.22	207.09
25.01	43.00	83.24	83.65	93.04	101.03	170.29	207.10
25.02	54.00	83.27	83.66	93.05	101.04	170.30	208.01
26.02	56.00	83.28	85.01	93.06	101.07	170.32	208.07
27.03	65.00	83.29	85.02	94.00	101.09	170.33	211.00
27.05	68.01	83.30	85.04	95.02	101.10	170.34	213.02
27.10	68.02	83.33	85.05	95.04	102.00	170.35	213.03
27.11	72.00	83.35	85.09	95.05	131.03	170.37	213.04
28.01	74.00	83.39	85.10	95.06	132.05	170.39	215.00
28.03	75.01	83.40	85.11	95.07	132.06	170.42	219.00
29.04	76.00	83.41	85.12	95.09	133.08	170.43	
29.05	77.02	83.43	85.13	95.11	133.14	170.44	
30.01	78.00	83.44	86.00	96.03	134.19	170.45	

Source: U.S. Census Bureau 2015

The data presented in this section for census tracts, City, and County of San Diego are from the U.S. Census 2010 100% survey or the U.S. Census American Community Survey 2009-2013 5-Year Estimates, depending on data availability. Table 5.7-2 presents relevant environmental justice information for the census tracts.

Table 5.7-2
Environmental Justice Statistics for Census Tracts
Contiguous with VPHCP Parcels

Census Tract	Population	Under Age 18		Minority		Economic Population	Low-Income	
		Number	Percent	Number	Percent		Number	Percent
1.00	3,029	549	18.1%	415	13.7%	2,706	99	3.7%
2.01	1,801	236	13.1%	342	19.0%	2,067	74	3.6%
2.02	4,208	479	11.4%	1,026	24.4%	4,529	130	2.9%
4.00	3,669	215	5.9%	1,225	33.4%	3,375	584	17.3%
5.00	2,722	211	7.8%	695	25.5%	2,686	254	9.5%
6.00	3,108	182	5.9%	954	30.7%	2,886	305	10.6%
7.00	3,754	200	5.3%	1,031	27.5%	3,877	510	13.2%
11.00	3,098	376	12.1%	1,367	44.1%	3,297	562	17.0%
15.00	3,934	621	15.8%	1,844	46.9%	3,813	570	14.9%
19.00	2,939	368	12.5%	762	25.9%	3,052	397	13.0%
20.01	3,354	513	15.3%	590	17.6%	3,285	103	3.1%
20.02	2,559	416	16.3%	759	29.7%	2,636	399	15.1%
25.01	5,504	1,737	31.6%	4,863	88.4%	5,555	1,321	23.8%
25.02	6,264	1,781	28.4%	4,809	76.8%	6,061	1,233	20.3%
26.02	4,450	1,588	35.7%	4,051	91.0%	4,046	1,221	30.2%
27.03	6,900	1,758	25.5%	5,021	72.8%	7,016	1,023	14.6%
27.05	4,300	1,091	25.4%	3,599	83.7%	4,204	403	9.6%
27.10	4,228	1,440	34.1%	3,898	92.2%	3,873	957	24.7%
27.11	3,200	1,128	35.3%	2,428	75.9%	3,065	396	12.9%
28.01	3,068	161	5.2%	1,061	34.6%	2,053	1,084	52.8%
28.03	5,370	865	16.1%	2,927	54.5%	5,295	888	16.8%
29.04	7,316	504	6.9%	3,032	41.4%	5,072	2,400	47.3%
29.05	4,022	705	17.5%	1,932	48.0%	4,310	1,025	23.8%
30.01	4,226	1,215	28.8%	3,953	93.5%	3,861	900	23.3%
30.03	5,062	1,198	23.7%	3,789	74.9%	5,244	914	17.4%
30.04	4,940	1,608	32.6%	4,614	93.4%	5,415	1,397	25.8%
31.09	3,358	673	20.0%	3,165	94.3%	3,435	404	11.8%
31.11	6,183	1,936	31.3%	5,944	96.1%	6,920	2,044	29.5%
31.12	4,574	1,303	28.5%	4,237	92.6%	4,237	713	16.8%
31.14	3,341	821	24.6%	3,212	96.1%	3,532	175	5.0%
31.15	6,454	1,813	28.1%	5,930	91.9%	6,862	1,364	19.9%
32.01	4,932	1,520	30.8%	3,949	80.1%	5,557	1,008	18.1%
34.01	6,065	1,459	24.1%	4,990	82.3%	6,424	612	9.5%
36.01	3,250	1,189	36.6%	3,155	97.1%	2,924	1,362	46.6%
36.02	3,079	1,070	34.8%	2,985	96.9%	3,577	1,451	40.6%
42.00	5,673	938	16.5%	2,124	37.4%	6,028	771	12.8%
43.00	3,665	543	14.8%	1,234	33.7%	3,714	200	5.4%
54.00	7,435	289	3.9%	2,088	28.1%	7,567	917	12.1%
56.00	4,463	241	5.4%	1,545	34.6%	3,516	251	7.1%
65.00	2,569	180	7.0%	925	36.0%	2,651	609	23.0%
68.01	2,503	290	11.6%	701	28.0%	2,355	341	14.5%
68.02	5,032	824	16.4%	2,014	40.0%	5,646	795	14.1%
72.00	5,493	791	14.4%	733	13.3%	3,944	204	5.2%
74.00	6,590	1,012	15.4%	1,394	21.2%	6,293	843	13.4%
75.01	4,040	366	9.1%	830	20.5%	3,841	386	10.0%
76.00	5,607	307	5.5%	822	14.7%	4,563	1,233	27.0%

Census Tract	Population	Under Age 18		Minority		Economic Population	Low-Income	
		Number	Percent	Number	Percent		Number	Percent
77.02	3,849	213	5.5%	733	19.0%	3,477	433	12.5%
78.00	5,724	1,217	21.3%	2,164	37.8%	5,500	657	11.9%
80.02	2,522	389	15.4%	308	12.2%	2,344	145	6.2%
81.01	4,009	575	14.3%	687	17.1%	3,624	410	11.3%
81.02	3,395	814	24.0%	464	13.7%	3,157	113	3.6%
82.00	3,022	256	8.5%	420	13.9%	2,658	191	7.2%
83.01	3,094	467	15.1%	498	16.1%	2,631	196	7.4%
83.03	3,446	571	16.6%	629	18.3%	3,294	189	5.7%
83.06	2,997	540	18.0%	601	20.1%	3,422	401	11.7%
83.07	3,794	663	17.5%	906	23.9%	3,749	260	6.9%
83.10	5,392	1,026	19.0%	1,135	21.0%	5,328	491	9.2%
83.11	2,884	637	22.1%	503	17.4%	2,817	20	0.7%
83.12	3,629	509	14.0%	661	18.2%	3,652	164	4.5%
83.13	2,225	477	21.4%	483	21.7%	2,182	59	2.7%
83.24	6,600	1,239	18.8%	1,154	17.5%	6,890	163	2.4%
83.27	5,775	1,438	24.9%	1,763	30.5%	5,908	192	3.2%
83.28	5,162	1,717	33.3%	1,841	35.7%	4,986	401	8.0%
83.29	6,347	1,242	19.6%	2,360	37.2%	6,210	992	16.0%
83.30	5,668	1,679	29.6%	2,156	38.0%	5,402	110	2.0%
83.33	13,748	4,674	34.0%	5,902	42.9%	13,681	730	5.3%
83.35	10,541	3,338	31.7%	5,341	50.7%	11,168	154	1.4%
83.39	1,853	135	7.3%	1,014	54.7%	1,936	568	29.3%
83.40	8,988	1,039	11.6%	4,727	52.6%	9,445	1,998	21.2%
83.41	7,614	416	5.5%	4,211	55.3%	7,314	2,459	33.6%
83.43	4,587	599	13.1%	2,644	57.6%	5,106	1,876	36.7%
83.44	3,462	731	21.1%	956	27.6%	3,648	564	15.5%
83.46	4,615	977	21.2%	2,555	55.4%	5,308	141	2.7%
83.47	6,358	1,396	22.0%	4,054	63.8%	6,568	408	6.2%
83.48	5,259	1,050	20.0%	3,705	70.5%	5,230	247	4.7%
83.50	6,493	1,365	21.0%	4,890	75.3%	6,445	329	5.1%
83.53	5,048	1,097	21.7%	3,087	61.2%	5,270	656	12.4%
83.54	5,972	1,423	23.8%	3,948	66.1%	6,214	224	3.6%
83.55	3,365	824	24.5%	2,474	73.5%	3,894	341	8.8%
83.59	3,975	700	17.6%	2,736	68.8%	3,657	491	13.4%
83.61	2,642	255	9.7%	1,061	40.2%	2,837	1,197	42.2%
83.62	3,141	369	11.7%	1,105	35.2%	3,580	754	21.1%
83.63	4,921	398	8.1%	3,311	67.3%	4,868	1,500	30.8%
83.64	4,992	427	8.6%	2,275	45.6%	5,114	1,488	29.1%
83.65	2,979	816	27.4%	1,424	47.8%	3,008	82	2.7%
83.66	5,881	1,738	29.6%	3,022	51.4%	6,194	237	3.8%
85.01	5,271	1,035	19.6%	1,429	27.1%	5,545	706	12.7%
85.02	6,241	1,217	19.5%	2,342	37.5%	6,279	608	9.7%
85.04	6,021	1,146	19.0%	2,135	35.5%	5,439	540	9.9%
85.05	5,605	1,027	18.3%	2,414	43.1%	5,965	453	7.6%
85.09	6,647	1,333	20.1%	2,979	44.8%	6,784	808	11.9%
85.10	6,626	1,168	17.6%	3,401	51.3%	6,884	1,035	15.0%
85.11	2,633	360	13.7%	1,282	48.7%	2,921	487	16.7%
85.12	4,193	794	18.9%	1,064	25.4%	4,364	329	7.5%
85.13	2,691	469	17.4%	663	24.6%	2,961	212	7.2%
86.00	6,864	1,892	27.6%	5,515	80.3%	6,738	1,629	24.2%

Census Tract	Population	Under Age 18		Minority		Economic Population	Low-Income	
		Number	Percent	Number	Percent		Number	Percent
87.01	3,361	1,076	32.0%	1,832	54.5%	3,458	383	11.1%
87.02	5,206	1,183	22.7%	2,656	51.0%	4,261	461	10.8%
89.01	4,805	633	13.2%	2,292	47.7%	4,825	1,181	24.5%
89.02	2,221	141	6.3%	705	31.7%	2,146	251	11.7%
90.00	3,861	864	22.4%	2,491	64.5%	3,641	833	22.9%
91.02	3,537	462	13.1%	1,454	41.1%	3,636	838	23.0%
91.03	3,679	586	15.9%	788	21.4%	3,475	284	8.2%
91.04	2,775	491	17.7%	519	18.7%	2,871	164	5.7%
91.06	3,882	281	7.2%	1,145	29.5%	1,880	190	10.1%
92.01	5,014	1,735	34.6%	3,013	60.1%	5,141	544	10.6%
92.02	4,428	743	16.8%	1,627	36.7%	4,556	288	6.3%
93.01	4,164	809	19.4%	2,037	48.9%	4,912	497	10.1%
93.04	7,944	579	7.3%	3,253	40.9%	8,090	1,049	13.0%
93.05	4,488	647	14.4%	1,823	40.6%	4,666	600	12.9%
93.06	5,589	1,052	18.8%	2,430	43.5%	6,215	687	11.1%
94.00	5,028	903	18.0%	2,044	40.7%	1,982	118	6.0%
95.02	3,659	769	21.0%	1,361	37.2%	4,115	201	4.9%
95.04	5,914	1,757	29.7%	2,103	35.6%	6,249	149	2.4%
95.05	6,442	1,348	20.9%	2,121	32.9%	6,574	418	6.4%
95.06	4,258	1,014	23.8%	1,404	33.0%	4,115	261	6.3%
95.07	3,369	617	18.3%	1,142	33.9%	3,739	111	3.0%
95.09	4,136	448	10.8%	1,505	36.4%	3,756	233	6.2%
95.11	4,427	2,360	53.3%	2,298	51.9%	4,391	623	14.2%
96.03	4,533	404	8.9%	1,904	42.0%	4,709	671	14.2%
96.04	3,179	621	19.5%	1,055	33.2%	3,162	330	10.4%
97.03	3,446	655	19.0%	801	23.2%	3,371	180	5.3%
97.04	5,750	1,042	18.1%	1,615	28.1%	5,794	211	3.6%
97.05	3,652	755	20.7%	1,075	29.4%	3,206	255	8.0%
97.06	6,996	1,243	17.8%	1,528	21.8%	6,830	463	6.8%
98.01	4,894	862	17.6%	1,264	25.8%	4,710	398	8.5%
98.05	4,715	970	20.6%	1,111	23.6%	5,267	205	3.9%
99.01	626	10	1.6%	188	30.0%	32	0	0.0%
100.01	4,097	1,036	25.3%	3,599	87.8%	3,824	229	6.0%
100.09	6,693	2,276	34.0%	6,489	97.0%	6,771	1,666	24.6%
100.14	17,679	4,084	23.1%	14,788	83.6%	14,593	844	5.8%
100.15	2,803	937	33.4%	2,665	95.1%	2,784	632	22.7%
101.03	5,569	1,568	28.2%	4,731	85.0%	6,753	1,046	15.5%
101.04	3,217	712	22.1%	2,156	67.0%	3,406	202	5.9%
101.07	6,498	1,700	26.2%	5,690	87.6%	6,670	813	12.2%
101.09	4,595	1,256	27.3%	4,206	91.5%	4,462	727	16.3%
101.10	7,298	2,137	29.3%	6,429	88.1%	7,384	1,297	17.6%
102.00	6,800	1,351	19.9%	3,221	47.4%	6,537	1,314	20.1%
131.03	2,668	751	28.1%	2,343	87.8%	2,649	687	25.9%
132.05	2,381	769	32.3%	2,189	91.9%	1,980	414	20.9%
132.06	6,544	1,691	25.8%	5,646	86.3%	6,759	1,847	27.3%
133.08	3,731	1,107	29.7%	3,381	90.6%	4,208	408	9.7%
133.14	14,837	5,012	33.8%	11,853	79.9%	16,090	579	3.6%
134.19	7,922	2,612	33.0%	5,986	75.6%	8,591	422	4.9%
148.04	4,351	638	14.7%	1,155	26.5%	3,834	434	11.3%
148.05	4,328	708	16.4%	1,624	37.5%	4,433	700	15.8%

Census Tract	Population	Under Age 18		Minority		Economic Population	Low-Income	
		Number	Percent	Number	Percent		Number	Percent
166.05	7,339	1,464	19.9%	1,945	26.5%	7,381	461	6.2%
166.06	3,388	787	23.2%	926	27.3%	3,660	257	7.0%
166.12	6,143	1,484	24.2%	1,420	23.1%	5,999	518	8.6%
169.01	6,909	1,710	24.8%	1,526	22.1%	6,864	283	4.1%
169.02	2,341	610	26.1%	967	41.3%	2,467	308	12.5%
170.10	3,152	821	26.0%	859	27.3%	2,793	117	4.2%
170.15	7,295	1,503	20.6%	2,286	31.3%	7,623	575	7.5%
170.19	5,883	749	12.7%	830	14.1%	6,226	183	2.9%
170.20	3,694	854	23.1%	615	16.6%	3,447	164	4.8%
170.22	5,316	1,232	23.2%	1,409	26.5%	5,159	255	4.9%
170.29	8,823	2,344	26.6%	2,111	23.9%	8,174	335	4.1%
170.30	17,064	5,062	29.7%	7,764	45.5%	18,091	514	2.8%
170.32	13,593	4,376	32.2%	6,495	47.8%	13,017	283	2.2%
170.33	4,694	1,132	24.1%	2,098	44.7%	4,864	327	6.7%
170.34	4,747	1,203	25.3%	1,901	40.0%	4,875	429	8.8%
170.35	2,354	664	28.2%	1,228	52.2%	2,697	806	29.9%
170.37	5,880	1,421	24.2%	2,713	46.1%	5,465	520	9.5%
170.39	6,921	1,757	25.4%	3,119	45.1%	7,385	168	2.3%
170.42	7,869	2,517	32.0%	3,781	48.0%	8,139	230	2.8%
170.43	5,535	1,522	27.5%	2,878	52.0%	5,686	187	3.3%
170.44	5,570	1,803	32.4%	2,451	44.0%	5,951	196	3.3%
170.45	2,790	926	33.2%	1,102	39.5%	2,795	23	0.8%
170.46	3,678	860	23.4%	1,204	32.7%	3,872	189	4.9%
170.47	4,021	1,100	27.4%	1,014	25.2%	3,847	63	1.6%
170.49	2,919	812	27.8%	1,073	36.8%	3,022	466	15.4%
170.50	3,068	712	23.2%	1,241	40.4%	2,894	98	3.4%
170.56	4,144	896	21.6%	1,796	43.3%	4,111	297	7.2%
171.10	10,622	3,321	31.3%	2,898	27.3%	10,898	1,706	15.7%
172.00	4,146	562	13.6%	388	9.4%	4,207	69	1.6%
173.06	2,818	515	18.3%	403	14.3%	2,759	97	3.5%
204.01	2,369	383	16.2%	318	13.4%	2,418	132	5.5%
204.04	5,070	1,083	21.4%	2,107	41.6%	5,426	799	14.7%
207.06	6,286	1,384	22.0%	1,643	26.1%	6,321	456	7.2%
207.09	8,007	2,106	26.3%	3,025	37.8%	8,311	848	10.2%
207.10	1,749	333	19.0%	450	25.7%	1,687	57	3.4%
208.01	5,230	1,126	21.5%	989	18.9%	5,269	367	7.0%
208.07	2,599	505	19.4%	574	22.1%	2,208	162	7.3%
211.00	7,589	1,971	26.0%	3,450	45.5%	6,439	1,829	28.4%
213.02	7,361	1,095	14.9%	3,556	48.3%	4,646	890	19.2%
213.03	8,981	2,390	26.6%	4,113	45.8%	8,789	488	5.6%
213.04	2,616	565	21.6%	805	30.8%	2,564	92	3.6%
215.00	8,846	3,140	35.5%	3,218	36.4%	8,813	183	2.1%
219.00	6,816	497	7.3%	4,266	62.6%	1,787	389	21.8%
San Diego – City	1,307,402	279,368	21.4%	717,700	54.9%	1,286,036	200,777	15.6%
San Diego – County	3,095,313	724,168	23.4%	1,595,266	51.5%	3,057,308	441,648	14.4%

Note: Shaded fields indicate values in excess of the County of San Diego regional value; these tracts are considered to contain environmental justice populations for the purpose of this analysis.
Source: U.S. Census Bureau 2011, 2014

As shown, the total population within the census tracts of the study area ranges from 626 in tract 99.01 to 17,679 in tract 100.14. The proportion of children (persons under age 18) in San Diego County is 23.4%, with 70 of the 189 census tracts in the study area exhibiting a larger proportion. The census tract with the highest proportion of children residents is 95.11, located along Interstate 15, south of Aero Drive.

The minority population includes those who self-identify as Black, Asian, Native American, Native Hawaiian or Other Pacific Islander, "some other race," "two or more races," or Hispanics of any race. Per CEQ guidance, a geographic area with a minority population (i.e., 50.0% or more minority residents) should be considered environmental justice population, regardless of the demographics of the surrounding geography. Based on this threshold, 60 census tracts within the study area are considered environmental justice populations. The census tract with the greatest proportion of minority residents is 36.01, located in the Barrio Logan area.

The low-income threshold for the study area is 14.4%, based on the rate seen in San Diego County. As a point of reference, the low-income threshold for a family of four with two children in 2014 was $24,008 according to the U.S. Census (U.S. Census 2015). Based on this threshold, 59 census tracts within the study area are considered environmental justice populations. The census tract with the greatest proportion of low-income residents is 28.01, located near San Diego State University.

With regard to minority and low-income data for those private parcel owners whose lands would be incorporated into the VPHCP as part of the Project, no publicly available dataset exists that details this information.[3] However, public scoping comments, comments on previously published environmental documents associated with the establishment of the VPHCP, and feedback from internal stakeholders have suggested that many potentially affected private parcels are owned by minorities. Secondary data identifying private parcel landowners with historically Latino and/or Asian surnames have been suggested to strengthen this suggestion. While not quantifiable, this environmental justice analysis assumes that there is a disproportionate number of minority private parcel landowners potentially affected by the Project, providing for a conservative analysis in response to public comment.

[3] Children are excluded from this part of the description of the affected environment because it is assumed that children cannot be owners of private property except under unique conditions and, even then, cannot convey or make contracts related to real estate without an adult custodian.

5.7.2 Regulatory Framework

Executive Order 12898

EO 12898 applies to federal agencies (Section 1-101). This order requires federal agencies to identify and address any disproportionate environmental or health impacts that federal actions or programs create on minority and low-income populations. Two specific provisions of EO 12898 provide further guidance to federal agencies.

Section 1-103 of the order requires that each federal agency develop an agency-specific environmental justice strategy, defining how the agency will identify disproportionate adverse effects on minority and low-income populations, and attempt to avoid those effects. Section 2-2 of the order requires that federal agencies should perform their actions and programs in a manner that neither excludes minority and low-income populations from relevant participation in the action or program nor denies those groups the benefits of the action. The CEQ guidance for performing environmental justice analysis as part of the NEPA process (CEQ 1997) offers useful definitions for this section.

Council on Environmental Quality Guidance

CEQ publishes a guidance document that provides useful definitions and methods relevant to environmental justice analysis (CEQ 1997:25–26). This guidance indicates that federal agencies shall identify low-income populations as follows (CEQ 1997:25):

> *Low-income populations in an affected area should be identified with the annual statistical poverty thresholds from the Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty. In identifying low-income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect.*

Minority individuals and populations are defined as:

> *Minority: Individual(s) [are] members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.*

> *Minority population: Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. In identifying minority communities, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a geographically dispersed/transient set of individuals (such as migrant workers or Native American), where either type of group experiences common conditions of environmental exposure or effect. The selection of the appropriate unit of geographic analysis may be a governing body's jurisdiction, a neighborhood, census tract, or other similar unit that is to be chosen so as to not artificially dilute or inflate the affected minority population. A minority population also exists if there is more than one minority group present and the minority percentage, as calculated by aggregating all minority persons, meets one of the above-stated thresholds* (CEQ 1997:25).

These definitions thus provide specific ways to implement environmental justice analysis by defining the relevant study populations.

Executive Order 13045

On April 21, 1997, President Clinton signed EO 13045, Protection of Children from Environmental Health Risks and Safety Risks (62 Fed. Reg. 19885 (1997)). For the purposes of the analysis, children are defined as all people under the age of 18. The policy of the EO states that:

> A growing body of scientific knowledge demonstrates that children may suffer disproportionately from environmental health risks and safety risks. These risks arise because: children's neurological, immunological, digestive, and other bodily systems are still developing; children eat more food, drink more fluids, and breathe more air in proportion to their body weights than adults; children's size and weight may diminish their protection from standard safety features; and children's behavior patterns may make them more susceptible to accidents because they are less able to protect themselves. Therefore, to the extent permitted by law and appropriate, and consistent with the agency's mission, each Federal agency:
>
> (a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and
>
> (b) ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

California Government Code Amendments (Various)

Various California Assembly and Senate Bills have been passed related to environmental justice and how specific state agencies should conduct their activities in a nondiscriminatory manner. Many of these bills are focused on hazardous materials, wastewater, groundwater, and solid waste management and are not relevant for the analysis here.[4] However, SB 115 does define environmental justice as the "fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" (Government Code Section 65040.12[e]).

5.7.3 CEQA Thresholds of Significance

The requirement for analysis of environmental justice is mandated through NEPA. NEPA requires consideration of "economic" and "social" effects (40 CFR Section 1508.8), but CEQA does not contain a similar requirement; thus, there are no specific CEQA thresholds applicable to this analysis.

For NEPA evaluation purposes, the CEQ guidance provides a framework for determining if a project would result either in disproportionately high and adverse human health effects or in disproportionately high and adverse environmental effects (CEQ 1997:26–27). The CEQ guidance provides an explanation of the nature of each impact. Disproportionately high and adverse human health and environmental effects occur when:

- Human health effects are significant when measured by risk or rates of incidence, or above generally accepted norms;
- There are significant ecological, cultural, economic, or social impacts to a minority population, low-income population, or Native American tribe that are associated with impacts on the natural or physical environment;
- The risk or rate of hazard exposure or incidence of sociocultural impact sustained by a minority population (including Native American tribes) or low-income population is significant and appreciably exceeds the exposure or incidence sustained by the general population; or
- Health effects or sociocultural impacts would occur in a minority population, low-income population, or Native American tribe affected by multiple or cumulative exposures from the environmental hazard.

[4] A full list of California legislation related to environmental justice can be found at http://www.calepa.ca.gov/EnvJustice/Legislation/.

Based on the CEQ guidance and explanation of potential environmental justice impacts, the following section analyzes the potential for two impact issue classes with regard to environmental justice impacts:

1. Human health and environmental safety impacts resulting from implementation of the Project; and
2. Land use impacts resulting from implementation of the Project.

To be evaluated here, a human health, environmental safety, or land use impact would have to remain significant after implementation of all feasible mitigation measures to result in disproportionately high and adverse effects on minority, low-income, or child populations.

5.7.4 Environmental Consequences

ISSUE 1: *Would the project result in a disproportionately high and adverse impact on environmental justice populations with regard to human health and environmental safety impacts?*

Project

To comply with EOs 12898 and 13045, this EIR/EIS analysis process included gathering demographic and income information from the U.S. Census Bureau to identify areas of low-income, high minority, and/or high children populations in areas contiguous with those parcels identified for inclusion in the VPHCP that would potentially be exposed to impacts.

As discussed in Section 5.7.1, Affected Environment, multiple census tracts with high proportions of low-income, minority, and children residents are located contiguous with parcels to be included in the VPHCP, suggesting that there are nearby communities of concern with regard to disproportionate environmental and human health impacts. However, as demonstrated through the analysis sections of this EIR/EIS (Sections 5.1 through 5.6), the Project would not have a significant impact on environmental or human health. Thus, despite the presence of environmental justice populations in areas contiguous with parcels within the Preserve, no substantial adverse impacts would be present to accrue disproportionately to an environmental justice population.

For these reasons, the Project would not result in a substantial adverse effect related to disproportionately high and adverse impacts on environmental justice populations with regard to human health and environmental safety.

Expanded Conservation Alternative

Under the Expanded Conservation Alternative, the impacts on human health and environmental safety would be similar or the same as under the Project as demonstrated through the analysis sections of this EIR/EIS (Sections 5.1 through 5.6).

For this reason, the Expanded Conservation Alternative would not result in a substantial adverse effect related to disproportionately high and adverse impacts on environmental justice populations with regard to human health and environmental safety.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, less than significant impacts on human health and environmental safety would occur as demonstrated through the analysis sections of this EIR/EIS (Sections 5.1 through 5.6).

For this reason, the Existing Conservation/No Project Alternative_would not result in a substantial adverse effect related to disproportionately high and adverse impacts on environmental justice populations with regard to human health and environmental safety.

ISSUE 2: *Would the project result in a disproportionately high and adverse impact on environmental justice population with regard to land use impacts?*

Project

To comply with EOs 12898 and 13045, this EIR/EIS analysis process included gathering demographic and income information from the U.S. Census Bureau to identify areas of environmental justice populations in areas contiguous with those parcels identified for inclusion in the VPHCP that would potentially be exposed to impacts.

However, the specific land use impact is associated with private property rights associated with future land development on private parcels; these impacts would accrue to private land owners. No publicly available datasets exist that tabulate the race/ethnicity and/or annual income level/poverty status of private land owners that can be used to specifically identify the environmental justice population of private land owners. Thus, as mentioned in Section 5.7.3, to provide for a conservative analysis, it is assumed that a disproportionate number of private parcels affected by the Project are owned by minorities and that there are communities of concern with regard to high and adverse impact on land use or private property rights.

As discussed in Section 5.1, Land Use, however, the Project would not have a significant impact on land use or private property rights. In many ways, the Project would establish limits on private development within these parcels; the process of which would be similar under existing conditions as well as the Project. In fact, private developers may find the streamlining of regulatory compliance under the Project to be a benefit. Additionally, contingent upon the availability of funds and willing sellers, owners of private parcels included in the VPHCP may have their lands acquired by the City or others by purchase, or by nonfiscal methods such as land exchanges and private mitigation banks. Thus, despite an assumed presence of a disproportionate number of minority private land owners involved in the Project, no substantial impacts are present to accrue disproportionately to an environmental justice population.

For these reasons, the Project would not result in a substantial adverse effect related to disproportionately high and adverse impacts on environmental justice populations with regard to land use.

Expanded Conservation Alternative

Under the Expanded Conservation Alternative, the impacts on land use would be largely the same as under the Project. Thus, even though the Expanded Conservation Alternative would result in the inclusion of an additional 3.7 acres of land generally within the Otay Mesa area that would include private properties, the increased coverage would not result in different or substantially increased land use impacts that could accrue disproportionately to an environmental justice population.

For these reasons, the Expanded Conservation Alternative would not result in a substantial adverse effect related to disproportionately high and adverse impacts on environmental justice populations with regard to land use.

Existing Conservation/No Project Alternative

Under the Existing Conservation/No Project Alternative, less than significant impacts on land use would occur and property development restrictions currently in place, such as those associated with the MHPA or ESL Regulations, would continue. Private property owners would continue to be subject to all existing development regulations permitting processes that are applicable to parcels with vernal pool resources.

For these reasons, the Existing Conservation/No Project Alternative would not result in a substantial adverse effect related to disproportionately high and adverse impacts on environmental justice populations with regard to land use.

5.7.5 Mitigation Measures

No substantial adverse environmental justice effects were identified and no mitigation measures are required.

5.7.6 Level of Impact after Mitigation

Project

No adverse environmental justice effects would result from implementation of the Project. Therefore, no mitigation is required, and the impact would not be substantially adverse under NEPA.

Expanded Conservation Alternative

No adverse environmental justice effects would result from implementation of the Expanded Conservation Alternative. Therefore, no mitigation is required, and the impact would not be substantially adverse under NEPA.

Existing Conservation/No Project Alternative

No adverse environmental justice effects would result from implementation of the Existing Conservation/No Project Alternative. Therefore, no mitigation is required, and the impact would not be substantially adverse under NEPA.

CHAPTER 6.0
COMPARISON OF ALTERNATIVES

This chapter includes a comparison of the environmental consequences resulting from the Project, Expanded Conservation Alternative, and Existing Conservation/No Project Alternative based on the analysis of the affected environment in Chapter 5, Environmental Consequences. Both CEQA and NEPA require analysis of a reasonable range of alternatives. Accordingly, this EIR/EIS analyzes alternatives that feasibly meet the project objectives (as described in Section 3.2, Project Purpose and Objectives), along with a no project/no action alternative.

The CEQA Guidelines (14 CCR Section 15126.6) require that an EIR present a range of reasonable alternatives to the project, or to the location of the project, that would feasibly attain most of the basic project objectives but would avoid or substantially lessen any significant effects of the project. Section 15126.6 of the CEQA Guidelines also requires an evaluation of the comparative merits of the alternatives. An EIR is not required to consider alternatives that are infeasible. NEPA (40 CFR Section 1502.14[a]) requires that an EIS explore and evaluate a range of reasonable alternatives to the project. Alternatives that were considered, but eliminated, are discussed in Section 3.5 of this EIR/EIS.

6.1 SUMMARY OF THE EFFECTS OF THE PROJECT AND ALTERNATIVES

Table 6-1 summarizes the environmental consequences resulting from implementation of the Project for each of the issues areas evaluated in the affected environment, as well as cumulative effects. A comparison of the two alternatives for each issue area is also provided. The alternatives have either generally the same effect as the Project, have a greater effect than the Project, or the effect is less than the Project. The effect of an alternative can be less or greater than the Project, but still be considered less than significant.

Where the effects of the two alternatives are generally equivalent to the Project, as detailed in Chapter 5, Environmental Consequences, further comparison is not warranted. Where the effects are substantially different than the Project, either less than or greater, a comparison of the alternatives is provided below.

Table 6-1
Comparison of Alternatives

Affected Environment (Section of EIR/EIS)	Environmental Consequences after Mitigation		
	Project	Expanded Conservation Alternative	Existing Conservation/ No Project Alternative
Land Use (Section 5.1)	LS/B	=	<
Biological Resources (Section 5.2)	LS/B	=	>
Air Quality (Section 5.3)	LS	=	=
Greenhouse Gas (GHG) Emissions (Section 5.4)	LS	=	=
Historical Resources (Section 5.5)	LS	=	<
Hydrology and Water Quality (Section 5.6)	LS/B	=	=
Environmental Justice (Section 5.7)	LS	=	=

LS – Effect is less than significant after mitigation (if mitigation is required), per the analysis in Chapter 5
B – Beneficial effect (the Project or alternative would result in a net benefit to the affected environment)
= – Effect of the alternative is equivalent or similar to the Project effect (including any beneficial effects)
> – Effect is greater than the Project effect (but still may be less than significant per the analysis in Chapter 5)
< – Effect is less than the Project effect (even if the Project effect is less than significant per the analysis in Chapter 5)

6.2 COMPARISON OF ALTERNATIVES ENVIRONMENTAL EFFECTS AND BENEFITS

6.2.1 Land Use

As described in Section 5.1, Land Use, the Project and Expanded Conservation Alternative would generally result in similar land use issues, as all of the policies and implementation activities associated with the VPHCP impacts would be identical.

The Existing Conservation/No Project Alternative would result in continued conservation of vernal pools within the City's MHPA and would not necessitate the modification of existing land use and environmental documents. Additionally, no new development restrictions would result from continued implementation of the Existing Conservation/No Project Alternative, as would occur on parcels added to the MPHA under the Project and Expanded Conservation Alternative (parcels wholly added to the MHPA would be 75% conserved, 25% developable).

However, the Existing Conservation/No Project Alternative would not provide additional preservation, restoration, and management of sensitive vernal pool resources in a cohesive Preserve and, thus, would not advance efforts to achieve planning goals or policies related to protection of vernal pools and the seven covered species.

Under the Project and Expanded Conservation Alternative, a regulatory advantage may result from implementation of the VPHCP as both public and private property owners would likely benefit

from the issuance of take permits to local authorities that would streamline the permit process and clearly define project mitigation requirements for future projects. The streamlined process may allow for more timely completion of projects and greater efficiency in land development. Thus, public and private applicants may find the streamlining of regulatory mechanisms under the Project beneficial. In addition, land owners may benefit from the potential option of selling their land for use as a mitigation bank (for vernal pools and/or other sensitive resources, such as burrowing owl habitat).

The Expanded Conservation Alternative would reduce industrial development potential in the Kearny Mesa Community Plan Area. Although the expanded area does not contain vernal pool resources, it is designated as critical habitat for the San Diego fairy shrimp per the USFWS. This alternative would also further reduce residential and industrial development potential in the Otay Mesa Community Planning area, and would require an additional amendment to the Community Plan. In particular, the uses within the Southwest Village Specific Plan Area would be greatly reduced, including density planned for the area. With a decrease in density, the Otay Mesa community would in turn experience a loss of housing, new park acreage, commercial and employment opportunities, and funding potential for infrastructure improvements, including roads (i.e. contribution towards Development Impact Fees [DIF] and Facilities Benefit Assessment [FBA]).

6.2.2 Biological Resources

As detailed in Section 5.2, Biological Resources, no substantial adverse effects were identified for the Project or Expanded Conservation Alternative and impacts were all identified as less than significant. Although the Project and alternatives would not result in significant impacts to biological resources (after implementation of the VPHCP Mitigation Framework at the project level), differences in the level of conservation would result from each independent alternative relative to the others.

The Expanded Conservation Alternative would conserve the same number of vernal pool complexes when compared to the Project (eight more than under Existing Conservation/No Project Alternative), but would result in overall fewer direct impacts to vernal pools (Table 6-2). The Expanded Conservation Alternative would conserve an additional 51 vernal pools in the VPHCP Plan Area when compared to the Project and 277 more vernal pools than the Existing Conservation/No Project Alternative (conservation of 2% and 11% more vernal pools, respectively). An additional 0.5 acre and 3.3 acres of basin area would be conserved under the Expanded Conservation Alternative when compared to the Project and Existing Conservation/No Project Alternative, respectively.

Table 6-2
Comparison of Vernal Pool Impacts by Alternative

Alternative	Total Number of Complexes Conserved	Number of Complexes Outside MHPA	Total Number of Pools Conserved[1]	Total Pools Impacted by Development[1]	Pools Impacted by Development outside Preserve (0% Conservation)	Pools Impacted by Development inside Preserve[1]	% Total\ Pools Impacted by Development	Total Surface Area of Pools Impacted (Acres)
Project	53	1	2,409	182	120	63	7%	7.5
Expanded Conservation Alternative	53	1	2,460	131	80	51	5%	7.1
Existing Conservation/ No Project Alternative	45	9	2,183	408	392	16	16%	10.4

[1]Pools conserved are based on 75% or 100% conservation level by vernal pool complex.

Under the Expanded Conservation Alternative, all 628 acres of spreading navarretia Critical Habitat within the VPHCP Plan Area would be conserved (51 more acres than the Project and 53 more acres than the Existing Conservation/No Project Alternative). The Project would conserve 11 additional acres of Riverside fairy shrimp Critical Habitat and 100 acres of San Diego fairy shrimp Critical Habitat beyond the Existing Conservation/No Project Alternative while the Expanded Conservation Alternative would also conserve an additional 14 acres of Riverside fairy shrimp Critical Habitat and 143 acres of San Diego fairy shrimp Critical Habitat beyond the conservation levels provided under the Project.

The Project and Expanded Conservation Alternative would create a more cohesive and comprehensive Preserve area for vernal pools than the Existing Conservation/No Project Alternative. In addition, the VPHCP would establish a consistent management and monitoring program for the conserved vernal pools under the Project and Expanded Conservation Alternative. The preservation, maintenance, management, and (where needed) enhancement or restoration of vernal pools, as prescribed under the VPHCP, would provide an overall net benefit to the City's vernal pool resources. The benefit of a cohesive vernal pool Preserve network on and comprehensive management and monitoring program would not be achieved under the Existing Conservation/No Project Alternative.

6.2.3 Air Quality

As detailed in Section 5.3, Air Quality, implementation of the Project or any of the alternatives would involve minimal activities that would generate air pollutants, and no substantial adverse effects or significant impacts were identified. The difference in air pollutant generation between the Project and alternatives is nominal and does not warrant further comparison.

6.2.4 Greenhouse Gas Emissions

As detailed in Section 5.4, Greenhouse Gas (GHG) Emissions, implementation of the Project or any of the alternatives would involve minimal activities that would generate GHG emissions and no substantial adverse effects or significant impacts were identified. The differences in GHG emissions generation between the Project and alternatives is nominal and does not warrant further comparison.

6.2.5 Historical Resources

As detailed in Section 5.5, Historical Resources, the Project and the Expanded Conservation Alternative both have the potential to impact historical, archaeological, or tribal cultural resources and unknown human remains due to the ground disturbance that would result with

implementation. The difference in the amount of ground disturbance between the Project and the Expanded Conservation Alternative is fairly minimal and would not create a substantial difference in their potential to impact a historic resource.

The Existing Conservation/No Project Alternative would not involve ground disturbing activities and would have no potential to impact unknown historical, archaeological, or tribal cultural resources or buried human remains. Therefore this alternative would have less impact to historical or tribal cultural resources compared to the Project and the Expanded Conservation Alternative.

6.2.6 Hydrology and Water Quality

As detailed in Section 5.6, Water Quality and Hydrology, no substantial adverse effects were identified for the Project or alternatives and all impacts were identified as less than significant. However, slight differences in the level of resulting benefit would result from each independent alternative relative to the others.

The management activities outlined in the VPHCP and as implemented through the Project or Expanded Conservation Alternative would serve to maintain or restore vernal pools to their natural hydrologic functions, which ultimately would serve to reduce and avoid on-site and off-site flooding.

6.2.7 Environmental Justice

As detailed in Section 5.7, Environmental Justice, implementation of the Project or any of the alternatives would not generate substantial adverse effects related to disproportionately high and adverse impacts on environmental justice populations. The difference in adverse impacts on environmental justice populations between the Project and alternatives is nominal and does not warrant further comparison.

6.3 ENVIRONMENTALLY PREFERABLE ALTERNATIVE

Both CEQA and NEPA require the identification of an environmentally preferable (CEQ NEPA Guidelines, Section 1505.2[b]) or superior (CEQA Guidelines, Section 15126[e][2]) alternative. The environmentally preferable and superior alternative is the alternative that would result in the least damage to the environment. If the No Project Alternative is environmentally superior, identification of a superior alternative among the other alternatives is required (CEQA Guidelines Section 15126.6[e][2]). Based on the analysis presented in Chapter 5 and comparison

of alternatives in Chapter 6, the environmentally preferable/superior alternative is the Expanded Conservation Alternative.

The Expanded Conservation Alternative would result in the highest amount of conservation, restoration, maintenance, and monitoring of vernal pools and their associated resources, including the seven listed species that would be afforded coverage with adoption of the VPHCP. The increased amount of vernal pool protection under this alternative is a result of additional lands to the MHPA that contain valuable vernal pool resources. As shown in Table 6-1 and described throughout Section 6.2, Comparison of Alternatives Environmental Effects and Benefits, this higher level of conservation would be accomplished with nominal or no increase in adverse environmental effects as a result, relative to both the Project and Existing Conservation/No Project Alternative.

It is possible that some take could occur with this alternative, whereas no take would be allowed under the Existing Conservation/No Project Alternative. However, the overall improvement to vernal pool resources through higher conservation levels, a more cohesive and comprehensive Preserve area, and a consistent management and monitoring program would provide a greater net benefit to the environment as opposed to an adverse impact due to take. This alternative would meet all Project objectives and the Project purpose.

The Expanded Conservation Alternative would primarily add additional lands with more suitable habitat for vernal pool restoration (e.g., soils, slopes). While take would be marginally reduced by just two pools (representing a 0.3% increase in conservation) and conservation of vernal pool habitat would be greater than the Project, implementation of this alternative is not necessary to meet the objectives of the VPHCP for San Diego fairy shrimp, and would meet all the Project objectives and the Project purpose to a greater extent. However, it would further reduce industrial and residential development opportunities within the Kearny Mesa and Otay Mesa Community Planning areas.

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CHAPTER 7.0
SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines Section 15126.2(b) and NEPA (40 CFR 1502.16) require that an EIR address any significant irreversible and irretrievable effects. Section 15126.2(c) of CEQA requires discussion of the extent to which a proposed project will commit nonrenewable resources to uses that future generations will probably be unable to reverse. NEPA requires discussion of the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity and also requires an explanation of which environmental impacts are irreversible or would result in an irretrievable commitment of resources.

Adoption of the Project or Expanded Conservation Alternative, and issuance of a take permit under Section 10(a)(1)(b) of FESA would permanently preserve portions of habitat areas within the City that are outside of the existing MHPA and would permit take of the species on the covered species list outside of the Preserve. Additionally, take may potentially occur within the MHPA in accordance with the development allowed per the City's ESL Regulations (i.e., 25% development within the least sensitive area for parcels wholly within the MHPA).

Incidental take of the seven covered species would represent an irreversible environmental change associated with implementation of the federal action. The number of covered species that could potentially be taken under the VPHCP or Expanded Conservation Alternative is summarized in detail in Section 5.2, Biological Resources. As demonstrated in the analysis in Section 5.2, the Project and Expanded Conservation Alternative would result in a net benefit to vernal pool habitat and the associated covered species by creating a preserve network that would be managed and monitored in perpetuity. While the authorized take of species would be considered an irreversible and irretrievable commitment of a limited biological resource, the enhancement and restoration efforts would improve the quality of preserved vernal pool habitat and promote recovery of covered species populations. Thus, the short-term adverse result of take associated with the restoration activities would be countered by the long-term benefit of increased preservation and recovery of those species and natural resources. Take of the covered species may occur under the Existing Conservation/No Project Alternative. However, federal and/or state authorization would be required.

Resources that are irreversibly or irretrievably committed to a project can include those typically used on a short-term basis or on a long-term permanent basis; these resources may include the use of nonrenewable resources such as fuel, wood, construction materials, or other natural or historical resources. The Project would require the ongoing use of natural nonrenewable

resources such as gasoline, diesel fuel, oils, and other energy sources used to power equipment and worker vehicles. The use of these resources would be irreversible and the resources irretrievable. However, this commitment of resources is necessary for implementation of the VPHCP and the use of resources would be relatively minimal as a low number of vehicle trips would be necessary and equipment use would be limited to the initial recontouring of sites requiring restored hydrologic function and minor maintenance activities requiring power equipment (such as line trimmers).

CHAPTER 8.0
GROWTH INDUCEMENT

Growth inducement refers to factors that would directly or indirectly induce growth or remove obstacles to growth. State CEQA Guidelines Section 15126.2(d) requires that an EIR "discuss ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." The EIR should also "discuss the characteristics which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

According to the City's Significance Determination thresholds, growth inducement "is usually associated with those projects that foster economic or population growth, or the construction of additional housing, either directly or indirectly which may result in the construction of major and new infrastructure facilities. Also, a change in land use policy or projects that provide economic stimulus, such as industrial or commercial uses, may induce growth… Accelerated growth may further strain existing community facilities or encourage activities that could significantly affect the surrounding environment" (City of San Diego 2011a).

The VPHCP does not propose any actions that would directly induce growth as there is no housing or development of utilities or infrastructure proposed. Additionally, implementation of the VPHCP does not necessitate the development of new or additional housing or other population supporting infrastructure nor would it cause accelerated growth beyond what is planned and forecast.

Implementation of management and monitoring requirements under the VPHCP could result in the creation of a very limited amount of employment. New employment opportunity could result from the need for additional City staff, laborers for physical implementation tasks, and specialized biologists for restoration/monitoring activities. However, the resulting workforce is expected to be fairly minimal and drawn from the local region and would not cause a substantial influx of new population growth to the area or create other economic or employment conditions that could cause population growth.

Indirect growth inducement could occur from a change in the location, type, or pattern of growth, resulting in the construction of additional housing in an area not currently planned for such housing. A project that would reduce the supply of available land for housing in one area may be

considered to have indirect growth-inducing effects, if such a reduction would result in a shift in projected growth to an area not currently planned for such growth.

The Project and Expanded Conservation Alternative have the potential to constrain development within a limited number of parcels (37 parcels would have restricted development under the Project, and an additional 50 under the Expanded Conservation Alternative). Parcels that would be wholly added to the MHPA would be subject to a development restriction over the land requiring 75% conservation but allowing 25% of the parcel to be developed. For example, Otay Mesa contains the largest area of vernal pool resources on parcels that retain development potential. With the new development restrictions that would be adopted with the VPHCP, it is possible that private land owners would look for property in other locations to develop.

It is not anticipated that this new restriction on development would cause a substantial change in location, type, or pattern of growth, resulting in the construction of housing or supporting infrastructure in an area not currently planned for such development. As described above, all parcels added to the MHPA as part of the Project or alternatives would maintain a development potential of at least 25% consistent with current land use and zoning (i.e., residential, commercial, industrial) regulations. Additionally, while lands subject to inclusion in the MHPA via the VPHCP currently do not have automatic development limitations as they would with implementation of the VPHCP, these lands are generally known to have wetlands and other sensitive biological resources and would likely be subject to ESL Regulations and other mitigation that could result in development restrictions. For these reasons, the potential volume of displaced or relocated development opportunities would be minimal. Any development that would be relocated from the VPHCP lands would be expected to be absorbed in development planned and currently occurring throughout the local and regional areas and would not be of the magnitude to cause substantial new or unplanned growth or modify the development location, type, or pattern of growth.

The Existing Conservation/No Project Alternative would not change or restrict any current land uses or development, and management of vernal pools would continue in a manner consistent with existing conditions; therefore, no growth-inducing impacts would occur with this alternative.

CHAPTER 9.0
CUMULATIVE IMPACTS

CEQA and NEPA require preparation of a cumulative impact analysis. Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. It is the combination of these effects, and any resulting environmental degradation, that should be the focus of cumulative impact analysis. This chapter analyzes how the VPHCP may affect the environmental conditions within and beyond the Plan Area.

9.1 LEGAL REQUIREMENTS FOR THE ANALYSIS OF CUMULATIVE IMPACTS

National Environmental Policy Act

NEPA defines "cumulative impact" as "the impact of the environment which results from the incremental impact of the action when added to other, past, present, and reasonable foreseeable future actions regardless of which agency (federal or nonfederal) or person undertakes the other actions." Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Section 15065 (c) states that there is a mandatory finding of significance if the project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects as defined in Section 15230.

California Environmental Quality Act

CEQA Guidelines Section 15130 describes the requirements for the discussion of cumulative impacts in an EIR. It states that an EIR will discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable. The discussion will reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as much detail as is provided for the impacts attributable to the project alone.

Section 15355 defines cumulative impacts as follows:

"Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

(a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impact from several projects is the change in environment which results from the incremental impact of the project when added to other closely related past, present and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Section 15130(b)(1) of the CEQA Guidelines allows for the use of two alternative methods to determine the scope of projects for the cumulative analysis:

> ***List Method*** – A list of past, present, and probable future projects producing related or cumulative impacts, including those projects outside the control of the agency (if necessary).
>
> ***Projection Method*** – A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect.

This analysis relies on the projection method, using regional planning and resource conservation documents, in accordance with Section 15130(b)(1), to serve as a basis for the analysis of the cumulative impacts. Pursuant to Section 15130(d), cumulative impact discussions may rely on previously approved land use documents such as general plans, specific plans, and local coastal plans and may be incorporated by reference. Also, no further cumulative impact analysis is required when a project is consistent with such plans, where the lead agency determines that the regional or area-wide cumulative impacts of the proposed project have already been adequately addressed in a certified EIR for that plan.

9.2 CUMULATIVE ANALYSIS APPROACH

This cumulative impact analysis utilizes the projection method described above and relies on previously approved regional and local conservation and land planning documents, as summarized below.

<u>Land Planning Documents</u>

City of San Diego General Plan

The City's General Plan provides guidance for development of the city. It provides a comprehensive slate of city-wide policies to balance the needs of a growing city while enhancing quality of life for current and future San Diegans. The General Plan presents 10 elements that

overall provide a comprehensive "blueprint" for the City's growth over the next 20 plus years (City of San Diego 2008a).

A broad examination of cumulative impacts involves considering the Project together with the growth of the city. Conservation pursuant to the General Plan would occur in accordance with the conservation and land use designations and intensities identified in the Conservation and the Land Use and Community Planning Elements of the General Plan.

County of San Diego General Plan

The County's General Plan is based on a set of guiding principles designed to protect San Diego County's unique and diverse natural resources and maintain the character of its rural and semirural communities. It reflects an environmentally sustainable approach to planning that balances the need for adequate infrastructure, housing, and economic vitality, while maintaining and preserving each unique community within the county, agricultural areas, and extensive open space. It guides the County's management of its environmental resources through policies to sustain and enhance the land, water, air, and biodiversity upon which all life depends, while recognizing that the county's growing population must also be accommodated (County of San Diego 2011).

Various Regional General Plans and Community Plans

Throughout the San Diego region, individual cities have general plans, similar to the City's General Plan, that outline guidance for future development of the jurisdiction. Most general plans also address policies and goals for natural resource conservation and open space preservation. Additionally, as detailed in Section 5.1.2, many communities throughout San Diego have community plans addressing similar issues on a smaller, more localized scale.

<u>Conservation Plans</u>

Natural Community Conservation Plan Program

The NCCP Program, established in 1991, is an unprecedented effort by the State of California and numerous private and public partners that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. An NCCP identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The primary objective of the NCCP Program is to conserve natural communities at the ecosystem level while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock

caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process (CDFW 2015). CDFW and USFWS provide the necessary support, direction, and guidance to NCCP participants.

San Diego Multiple Species Conservation Program

In December 1996, CDFW and USFWS approved the San Diego MSCP SAP, which encompasses 582,000 acres and establishes a 172,000-acre preserve system in San Diego County (County of San Diego 1998). The MSCP SAP covers 85 species of plants and animals and 23 vegetation types. The MSCP area encompasses 11 planning subareas in various stages of plan development (County of San Diego 1998). These SAPs create a habitat preserve system that provides coordinated coverage for the most of the county. Approved SAPs to date include the La Mesa SAP, Poway SAP, City of San Diego SAP, Chula Vista Subarea Plan, and the County of San Diego South County SAP. Other jurisdictions within the MSCP Subregion include Imperial Beach, Lemon Grove, and National City. These cities have not initiated the development of subarea plans. Additional detail on the City's MSCP SAP is provided in the land use analysis, Section 5.1.2.

San Diego Gas & Electric (SDG&E) Subregional Plan

SDG&E has completed an NCCP for SDG&E properties within the San Diego region. This linear NCCP, extending from southern Orange County south to the Mexican border, was the first plan approved in San Diego County. The plan covers 110 plant and animal species and emphasizes avoidance of impacts. Mitigation required by the plan includes revegetation and use of up to 240 acres of credits set aside in land parcels purchased by SDG&E as mitigation banks. SDG&E's properties and easements provide habitat connectivity in areas where little natural habitat remains.

Marine Corps Air Station (MCAS) Miramar Integrated Natural Resources Management Plan (INRMP) 2000

The INRMP integrates current and future land use activities at MCAS Miramar with natural resources management and conservation. The INRMP was developed in cooperation with USFWS, USACE, and CDFW. The INRMP contains the baseline information that supports compliance with regulatory and planning processes, such as those required by NEPA, FESA, and CWA (MCAS 2000).

9.3 CUMULATIVE IMPACT ANALYSIS

This discussion evaluates the potential cumulative effects on land use, biological resources, air quality, GHG emissions, historical resources, hydrology and water quality, and environmental justice. In particular, the analysis focuses on the cumulative effects of the VPHCP with the other regional and local land use and conservation plans being developed by adjoining jurisdictions in San Diego County, as described in Section 9.2, Cumulative Analysis Approach.

The land planning documents described in this chapter are consistent with the NCCP and HCP conservation guidelines, and the overall goal to balance preservations of biological resources, land use, and economics. Impacts associated with implementation of the VPHCP, as described in Chapter 5, could also be associated with cumulative implementation of the various programs described above with potential beneficial and adverse environmental consequences.

9.3.1 Land Use

As detailed in Section 5.1, Land Use, implementation of the Project or Expanded Conservation Alternative would lead to an overall city-wide minor reduction in development potential due to development restrictions associated with adding lands to the MHPA under the VPHCP. Otherwise, development patterns would be consistent with those approved under the City's General Plan, community plans, and the City's MSCP. All parcels for addition to the MHPA would continue to have some development potential allowed (25%). The magnitude of the reduction in development potential is anticipated to be minimal and would not interfere with planned development patterns throughout the region or contribute to other types of adverse land use effects such as urban sprawl or division of established communities. Activities such as the installation of exclusionary fencing, signage, and interpretative features within preserved vernal pool complexes would not necessitate a change in existing or planned land use and would not contribute to a land use-related impact in a manner that could result in or increase environmental impacts.

The increased vernal pool conservation, restoration, and monitoring efforts that would result with implementation of the Project or Expanded Conservation Alternative would be complementary to the existing vernal pool conservation efforts guided by other regional documents such as the SDG&E Subregional Plan, MCAS Miramar INRMP, NCCP, and County MSCP. Implementation of the VPHCP would not contribute to substantial conflicts or adverse environmental effects associated with regional vernal pool conservation plans.

Under the Existing Conservation/No Project Alternative, future development would be approved consistent with the existing General Plan and City MSCP. As discussed in Section 5.1, Land

Use, no land use impacts would result from the Existing Conservation/No Project Alternative. Thus, no new land use incompatibilities or conflicts would result that could contribute to a cumulative impact.

Because the Project or alternatives would not result in impacts related to land use inconsistencies, there would be no significant contribution to a long-term direct or indirect cumulatively considerable adverse impact related to land use.

9.3.2 Biological Resources – Vernal Pools

As detailed in Section 5.2, Biological Resources, implementation of the Project or Expanded Conservation Alternative would result in take of covered species due to issuance of ITPs. However, similar to other HCP and NCCP plans in the San Diego region (e.g., SDG&E NCCP Plan, South County San Diego MSCP Plan) the Project and Expanded Conservation Alternative include implementation of the Mitigation Framework, which requires avoidance, minimization, and compensatory mitigation measures that would mitigate adverse impacts to vernal pool habitat and the covered species populations associated with covered projects and covered activities. It is anticipated that cumulative, direct impacts to the covered species would be reduced to below a level of significance due to assembly and management of a vernal pool Preserve in accordance with the HCP Guidelines. Establishment of a vernal pool Preserve would result in a net benefit by providing a city-wide Preserve that is managed and monitored to sustain and enhance existing vernal pool habitat and covered species populations, as well as restoring degraded habitat.

Under the Existing Conservation/No Project Alternative, no incidental take would be authorized by the City and impacts to vernal pools would be avoided; thus, the Existing Conservation/No Project Alternative would not contribute to a cumulative loss of vernal pool species.

Under the Project or both alternatives, cumulative indirect impacts would potentially be associated with edge effects and increased development pressure outside the Preserve. These indirect impacts are not regarded as significant, either cumulatively or at the project level, with implementation of the MSCP/MHPA Land Use Adjacency Guidelines. Implementation of the Land Use Adjacency Guidelines would be required for all future projects proposing development within or adjacent to the MHPA. Other conservations plans in the County have similar types of adjacency requirements that also avoid and minimize potential edge effects.

For these reasons, the Project or alternatives would not result in a cumulatively considerable contribution to a long-term direct or indirect cumulatively considerable adverse impact related to the overall loss of biological resources.

9.3.3 Air Quality

As detailed in Section 5.3, Air Quality, implementation of the Project or alternatives would not result in a significant air quality environmental impact. The Project and alternatives would not obstruct implementation of the applicable air quality plan, violate any air quality standard, or contribute substantially to an existing or projected air quality violation. The Project or alternatives would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard. If small hand tools and/or machinery are to be used during restoration or maintenance efforts associated with the Project and Expanded Conservation Alternative, the air quality impact would be minimal, as would the emissions associated with driving vehicles for monitoring visits. The emissions associated with the Project (approximately 37 MT CO_2e per year as a conservative estimate) and Expanded Conservation Alternative are negligible and would not contribute to a cumulative impact.

The Existing Conservation/No Project Alternative would not require any additional restoration, maintenance, or monitoring activity beyond what would currently occur under existing conservation conditions; thus, no air quality impacts would result from the Existing Conservation/No Project Alternative, and no contribution to a cumulative impact would occur.

For these reasons, the Project or alternatives would not result in a cumulatively considerable contribution to a long-term direct or indirect cumulatively considerable adverse impact related to the overall degradation of air quality.

9.3.4 Greenhouse Gas Emissions

As detailed in Section 5.4, Greenhouse Gas (GHG) Emissions, implementation of the Project or Expanded Conservation Alternative would lead to a minor increase in GHG emissions due to an increase in vehicular transportation to and from vernal pool restoration sites within the MHPA by restoration and monitoring field personnel. In addition, small machinery may be used for restoration purposes; however, the overall increase in emissions (approximately 37 MT CO_2e per year as a conservative estimate for the Project) is not considered a cumulatively considerable contribution to climate change according to the City's GHG screening criteria and CEQA Significance Thresholds. The City defines a project to have less than a cumulatively considerable impact if the construction and operation GHG emissions for the project would not exceed 900 MT CO_2e per year (City of San Diego 2011a). As the Project and alternatives involve minimal machinery for restoration purposes and do not include construction of structures or substantial ground disturbance, the impacts would not significantly contribute to new emissions.

The Existing Conservation/No Project Alternative would not require any additional restoration, maintenance, or monitoring activity beyond what would currently occur under current conditions; thus, the Existing Conservation/No Project Alternative would not result in additional GHG emissions, and no cumulative impact would occur.

For these reasons, the Project or alternatives would not result in a cumulatively considerable contribution to a long-term direct or indirect cumulatively considerable adverse impact related to the overall increase in GHG emissions.

9.3.5 Historical Resources

As detailed in Section 5.5, Historical Resources, implementation of the Project or Expanded Conservation Alternative could result in the alteration, including adverse physical or aesthetic effects and/or the destruction, of any prehistoric or historical building, structure, or object, archaeological, or tribal cultural resource, or unknown buried human remains due to ground-disturbing activities. The VPHCP Plan Area does not include areas of existing religious or sacred uses or known burial sites. Grading may be necessary for vernal pool restoration that would typically average 3 to 6 inches in depth, which is generally not substantial enough to penetrate unknown prehistoric burial sites. The impact assessment is based on the APE, which includes the area of both the direct and indirect impacts of a VPHCP Plan Area on a historical or tribal cultural resource. If impacts to historical or tribal cultural resources were to occur from VPHVP-related actions, this would also constitute a potentially significant contribution to a cumulative historical resources impact resulting from combination with other ground-disturbing projects throughout the region. To mitigate for the potential VPHCP-related impact, Mitigation Measure HIST-1 would be required for the Project and Expanded Conservation Alternative. Implementation of this mitigation measure allows for evaluation of potential impacts to historical and tribal cultural resources to protect and preserve resources in accordance with the Historical Resources Regulations. Similarly, if implementation of other regional plans or projects involves ground-disturbance and has the potential to impact buried resources, those actions would also be subject to all federal, state, and local regulations mandating the protection of historical resources. If other cumulative actions identify a potential to impact historical resources, the impact would typically be mitigated through measures such as site preservation or data recovery. With implementation of such measures, similar to Mitigation Measure HIST-1, the overall critical information regarding regional history, archaeological resources, and tribal cultural resources would be preserved and/or documented.

For these reasons, with implementation of Mitigation Measures HIST-1, the Project or alternatives would not make a cumulatively considerable contribution to a long-term direct or indirect cumulatively considerable adverse impact related to the overall loss of historical or tribal cultural resources. A less than significant impact would result.

9.3.6 Hydrology and Water Quality

As detailed in Section 5.6, Hydrology and Water Quality, the Project or alternatives would not create significant impacts to water quality and hydrology. The Project or alternatives require a variety of appropriate BMPs that would protect water quality, minimize erosion, and minimize sediment transport during vernal pool management and restoration activities. The VPHCP does not propose an increase in impervious area. The VPHCP under the Project and alternatives includes an enhancement and restoration component for Level 2 and 3 complexes. As part of these activities, minor grading would occur to a typical average of 3 to 6 inches in depth to restore the natural topographic features and hydrological function of the vernal pools. This would increase the overall function and values of the City's vernal pool habitat and associated hydrologic function of the area. As a result, the Project or alternatives would slightly change the existing hydrology and drainage patterns within the VPHCP Plan Area; however, the changes would result in a net beneficial impact to hydrology, specifically watershed function and values. The Project would not result in an adverse impact to water quality or hydrology, and thus would not result in a contribution to a cumulative water quality or hydrology impact.

For these reasons, the Project and alternatives would not make a cumulatively considerable contribution to a cumulatively significant direct or indirect adverse impact to water quality and hydrology.

9.3.7 Environmental Justice

As detailed in Section 5.7, Environmental Justice, implementation of the Project or alternatives would not result in disproportionately high or adverse effects on low-income, minority, and child populations with regard to human health, environmental safety, or land use impacts. Generally, regional conservation plans, such as the SDG&E Subregional Plan, MCAS Miramar INRMP, NCCP, or MSCP do not include actions or policies that would have a substantial adverse effect on specific populations as they are characteristically centered on conservation of natural resources. Because there would be no considerable impacts to environmental justice communities, there would be no cumulative contribution to disproportionately high or adverse effects on low-income, minority, and child populations.

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CHAPTER 10.0
EFFECTS FOUND NOT TO BE SIGNIFICANT

A number of environmental issue areas are not evaluated in this EIR/EIS because the identified resource is not present within or around the VPHCP Plan Area, or because implementation of the Project or alternatives would clearly have no potential for substantial adverse effects with respect to the action being evaluated. As allowed by Section 15128 of the CEQA Guidelines, effects found not to be significant need not be discussed in detail in an EIR. Rather, a brief discussion as to why various possible effects of a project were determined not to be significant is appropriate. These issue areas are described below, with an explanation and rationale of why they are not being evaluated further in this EIR/ EIS. These issues are:

10.1 Agricultural Resources
10.2 Energy
10.3 Geologic Conditions
10.4 Health and Safety
10.5 Mineral Resources
10.6 Noise
10.7 Paleontological Resources
10.8 Population and Housing
10.9 Public Services and Facilities
10.10 Public Utilities
10.11 Recreational Resources
10.12 Transportation/Circulation/Parking
10.13 Visual Effects and/ Neighborhood Character

The Project and alternatives would protect vernal pool species by conserving habitat, restoring degraded habitat, managing the vernal pool Preserve, and conducting biological monitoring in perpetuity. The Project also includes issuance of incidental take by USFWS to the City for the seven covered vernal pool species. The City then would be able to issue third-party status for projects within the City's jurisdiction. Any future projects that may benefit from the third-party status would be required to conduct a project-specific environmental analysis in compliance with CEQA and/or NEPA, as applicable, including evaluation of the issue areas listed in this chapter.

10.1 AGRICULTURAL RESOURCES

The Project and alternatives are not located within existing or designated agricultural areas: Prime Farmland, Farmland of Statewide Importance, Farmland of Local importance, or Grazing Land. The 275 acres included in the MHPA via implementation of the Project are not currently in agricultural production. The activities associated with implementation of the VPHCP, such as restoration, management, and monitoring, are not of the nature to cause or influence the conversion of surrounding agricultural operations to convert to nonagricultural uses. Implementation of the Project or alternatives would not create permanent structures or other

permanent elements that could preclude future agricultural use in areas that could, in the future, be potentially put into agricultural production. Under the Existing Conservation/No Project Alternative, vernal pools within the VPHCP Plan Area would continue to be managed and monitored where required based on existing resource management plans, or left in their existing condition. Thus, the Project and alternatives would not result in a significant or adverse impact to agricultural resources and further analysis is not necessary.

10.2 ENERGY

Other than minor amounts of fossil fuel consumption associated with the periodic operation of equipment such as a small skid-steer loader (i.e., bobcat) used during enhancement and restoration activities, small handheld power equipment such as a line trimmer during maintenance activities, or driving of vehicles to vernal pool sites for monitoring, implementation of the Project and Expanded Conservation Alternative would not have any additional energy demands. The use associated with such equipment would not be excessive and would be temporary in nature. No known fossil fuel resources are present within the vernal pool complexes managed under the VPHCP. Under the Existing Conservation/No Project Alternative, vernal pools within the VPHCP Plan Area would continue to be managed and monitored where required based on existing resource management plans, or left in their existing condition and would not require additional fossil fuel consumption beyond current conditions. Therefore, impacts associated with energy would be less than significant and not adverse, and further analysis is not necessary.

10.3 GEOLOGIC CONDITIONS

The Project and alternatives would not have a direct impact on geology and soils because the results of implementation are not expected to differ measurably from the existing conditions. Restoration of vernal pool resources may involve temporary minor recontouring of topsoil (average 3 to 6 inches in depth) but the underlying vernal pool soils and geologic formations would remain intact. Planting of native species as part of restoration efforts would aid in stabilizing soil and minimizing erosion potential. For these reasons, the Project and alternatives would not expose people or structures to potential substantial adverse effects or result in substantial soil erosion or the loss of topsoil. The Project or alternatives would not expose people or structures to potential substantial adverse geologic hazards as the Project would not involve the development of any structures or modify the soil or geology of an area in a manner that could change the stability or result in increased geologic hazards on-site or off-site. Furthermore, there is no potential for landslide, lateral spreading, or collapse.

Under the Existing Conservation/No Project Alternative, vernal pools within the VPHCP Plan Area would continue to be managed and monitored where required based on existing resource management plans, or left in their existing condition. No geologic or soil conditions would be altered under the Existing Conservation/No Project Alternative. Therefore, the Project and alternatives would result in a less than significant impact and not adverse, and further analysis is unwarranted.

10.4 HEALTH AND SAFETY

The Project and alternatives would not directly or indirectly affect public health and safety because conditions after implementation of the VPHCP are not expected to differ significantly from the existing conditions. Essentially, the same potential for development resulting in hazards to human health and public safety would occur under the Project and alternatives as under the existing conditions. The Project and alternatives would not occur on or propose a change to existing hazardous material sites. The Project and alternatives would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan as existing roads would not be modified, disturbed, or otherwise impaired in their ability to serve as evacuation routes. The Project or alternatives would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires as no new structures are proposed and areas would be restored to their proper hydraulic functions. Invasive plant species would be removed and revegetation would consist of native, drought-tolerant plants that would not result in substantial increased wildlife risk.

The Project and alternatives would not create a hazard to the public or the environment through transportation of hazardous materials or the release of hazardous materials into the environment, including near a school. Although herbicide may be used during restoration and management activities associated with Project and Expanded Conservation Alternative, herbicide use would be targeted to address discrete invasive plant populations within the vernal pool complexes. Herbicide would be applied by a licensed applicator and consistent with all federal, state, and county requirements.

Under the Existing Conservation/No Project Alternative, vernal pools within the VPHCP Plan Area would continue to be managed and monitored where required based on existing resource management plans, or left in their existing condition with minimal potential to increase public safety risks. Therefore, a less than significant and no adverse impact to public health and safety would result, and further analysis of this issue is unwarranted.

10.5 MINERAL RESOURCES

San Diego's important mineral resources include salt, sand and gravel, all of which have been produced in San Diego for many decades. "Mineral resources" refers to aggregate resources that consist of sand, gravel, and crushed rock (City of San Diego 2011a). Mineral Resource Zone (MRZ) as defined by California Department of Conservation, Division of Mines and Geology and, specifically, MRZ-2 are areas of land where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists (City of San Diego 2011a). The Project and alternatives are not located within any areas classified as MRZ-2 (City of San Diego 2008a), meaning it is not likely that important minerals that could be extracted would be located in the VPHCP Plan Area. Additionally, implementation of the Project or alternatives, including the Existing Conservation/No Project Alternative, would not create permanent structures or other permanent elements that could preclude future mineral extraction operations if significant mineral resources were to be discovered. Therefore, the impact to mineral resources would be less than significant and not adverse, and further analysis is unwarranted.

10.6 NOISE

For the purpose of analysis, noise is defined as unwanted or objectionable sound. The Project and alternatives would not create new noise generation sources, with the possible exception of minor temporary noise generated from restoration activities (i.e., equipment used for recontouring) or maintenance activities (i.e., line trimmer used for weed management). For the remainder of any given year outside of restoration or maintenance activities, no noise would be generated in association with the VPHCP. Any future restoration activities would include restrictions during the bird breeding season to ensure no adverse impacts from noise would occur. Maintenance activities would sound similar to common residential lawn care noise. Because noise-generating activities associated with the Project would generally be limited to periodic and temporary minor equipment use (skid loader) in areas of restoration or other small hand-held power tools for maintenance, these activities would not create significant increases in ambient noise levels or exceed the City's adopted noise ordinance. Project activities may result in a slight periodic increase in traffic due to laborers traveling to and from a restoration or monitoring site; however, noise impacts are expected to be temporary and negligible due to the very low volume or trips.

Under the Existing Conservation/No Project Alternative, vernal pools within the VPHCP Plan Area would continue to be managed and monitored where required based on existing resource management plans, or left in their existing condition. No substantial increase in noise generation would result under the Existing Conservation/No Project Alternative.

Therefore, a less than significant and not adverse impact would occur, and further analysis is unwarranted.

10.7 PALEONTOLOGICAL RESOURCES

Paleontological resources (i.e., fossils) are the buried remains and/or traces of prehistoric organisms. Paleontological resources are found in the geological formations within which they were originally buried. Fossils are considered nonrenewable resources because, typically, the organisms they represent no longer exist. Generally, to impact a paleontological resource, the sedimentary bedrock that embeds the resources must be disturbed.

The Project and alternatives would not impact paleontological resources, as only minor ground-disturbing activities would be required with implementation of the VPHCP. Restoration of vernal pool resources may at times involve minor grading to an average depth of 3 to 6 inches, which would not be of the magnitude necessary to reach or damage paleontological resources buried in sedimentary bedrock layers.

Under the Existing Conservation/No Project Alternative, vernal pools within the VPHCP Plan Area would continue to be managed and monitored where required based on existing resource management plans, or left in their existing condition with no excavations into sedimentary bedrock.

Therefore, implementation of the Project or its alternatives would result in a less than significant and not adverse impact to paleontological resources, and further analysis is unwarranted.

10.8 POPULATION AND HOUSING

The Project or alternatives would not displace existing housing or people as there are no residential developments within the VPHCP Plan Area. Also, the Project does not include the development of new housing or any population-generating uses. The Project or alternatives would also not require or add to a need for infrastructure expansion that could induce substantial new population growth. The Project and the Expanded Conservation Alternative may slightly reduce the amount of vacant land available to accommodate future residential or other development in the VPHCP Plan Area. However, the potential increase in demand for land elsewhere due to new development restrictions is expected to be minimal and would only be accommodating existing housing demand within the region. In addition, many of the vernal pool complexes that would be conserved under the VPHCP contain other sensitive natural resources, such as nonnative grasslands and burrowing owl habitat. Therefore, development restrictions

already exist on these lands, so a further reduction in development potential from implementation of the VPHCP would be marginal at most.

Implementation of management and monitoring requirements under the VPHCP could require additional City staff, thus providing employment opportunity. Laborers would also be required to implement actions such as recontouring, vegetation planting and irrigating, trash removal, fence installation, and other physical tasks. Specialized biologists would be required for the surveying, monitoring, reporting, and other biological activities. However, the workforce is expected to be fairly minimal and drawn from the local region and would not cause a substantial influx of new population growth to the area.

The Existing Conservation/No Project Alternative would be the same as existing conditions with continued management and monitoring where required based on existing resource management plans, or left in their existing condition.

For these reasons, any population and housing impacts from the Project and alternatives would be less than significant and not adverse, and further analysis is unwarranted.

10.9 PUBLIC SERVICES AND FACILITIES

The discussion of public services and facilities is relative to those government services such as fire or police protection or public facilities such as schools, libraries, parks, or other facilities that would be affected by the Project or alternatives, including the Existing Conservation/No Project Alternative in a manner that would result in substantial adverse physical impacts from the construction or alteration of facilities needed to maintain acceptable service ratios, response times, or other performance objectives public services. The Project or alternatives do not propose construction of any service facilities. Additionally, as described in Section 10.8, Population and Housing, the Project or alternatives would not result in the substantial increase of population or other public congregation opportunities that would result in the increased demand on or need for governmental services or facilities. The Project and alternatives would not alter the planned location or distribution of facilities or services, nor generate a need for new or upgraded facilities or services. Therefore, no significant impacts or adverse impacts would result, and further analysis is unwarranted.

10.10 PUBLIC UTILITIES

The Project and alternatives, including the Existing Conservation/No Project Alternative, would not alter the existing or planned location of public utilities or distribution of planned facilities necessary to meet anticipated service demand. The Project or alternatives would not require the

use of generated power on the restoration sites. Temporary irrigation may be required as part of the restoration and enhancement activities for Level 2 or 3 complexes for the plants to become established; however, irrigation would be needed only on a short-term basis (up to 3 years) for plant establishment. Irrigation would include watering only during the event where natural rain is inadequate to support plant establishment, upon approval by the City and Wildlife Agencies. As described in Section 5.6, Hydrology and Water Quality, drainage patterns of recontoured sites would not cause new volumes of runoff that could affect storm water drainage facilities. Minimal solid waste could be generated through trash removal from sites as part of the maintenance efforts. For these reasons, the Project and alternatives would not generate a need for new or upgraded electrical power infrastructure, water or wastewater facilities, natural gas utilities, storm water drainage facilities, solid waste disposal facilities, or communications systems. Additionally, the Project and alternatives would not alter the planned location, distribution, density, or growth rate of the City's population that would lead to the need for new or upgraded public utilities.

No structures are proposed that would create supply demand or require the disturbance or relocation of existing utility infrastructure; the Project and alternatives would generate nominal need for power, water or wastewater services, or solid waste disposal needs; and no changes are anticipated to the location or distribution of the City's population. Therefore, the Project and alternatives would not result in a need for altered public infrastructure or utilities.

Thus, no significant or adverse impacts to public utilities would result from implementation of the Project or alternatives, and further analysis is unwarranted.

10.11 RECREATIONAL RESOURCES

The Project and alternatives propose no substantial changes to large-scale development patterns or any element that would influence population density. Because the Project or alternatives would not bring new or increased population to an area or propose any element that could influence the number of visitors to a park facility, the Project and alternatives would not increase the use of neighborhood and regional parks. The Project or alternatives do not include recreational facilities as part of the VPHCP and would not require the construction or expansion of recreational facilities to meet increased demand generated by the Project. The Project and alternatives would allow trails as a compatible use in certain locations. The Project and Expanded Conservation Alternative may increase recreational opportunities by providing more open space within the MHPA for passive recreation, but trail development or implementation of other passive recreation opportunities is not proposed as part of the Project or alternatives.

Under the Existing Conservation/No Project Alternative, vernal pools within the VPHCP Plan Area would continue to be managed and monitored where required based on existing resource management plans, or left in their existing condition with no modifications or additional demands on recreational resources.

There would be no significant change related to recreational resources in the City with implementation of the Project or alternatives regarding the need for new or expanded recreational facilities or increased demand on existing facilities or opportunities. Therefore, no significant adverse effect would occur related to the quality or quantity of recreational opportunities in the City, and further analysis is not necessary.

10.12 TRANSPORTATION/CIRCULATION/PARKING

The Project and Expanded Conservation Alternative would add lands to the MHPA, thereby potentially reducing development and associated future traffic generation. However, change to development potential would be relatively minor, so while it is anticipated that a small decrease in future traffic generation would occur in the specific areas of the VPHCP Plan Area, no changes would occur to proposed community plan circulation element roadways. Consistent with the existing MSCP, circulation element roads would be allowed within the lands added to the MHPA through implementation of the VPHCP. No additional conservation acreage would be proposed with the Existing Conservation/No Project Alternative. Under this alternative, development would occur consistent with existing conditions.

No element or component of the Project or alternatives would result in the generation of substantial volumes of traffic. Minor traffic trips would result from maintenance vehicles visiting the sites for restoration, maintenance, and monitoring activities. These trips would be limited to the small number of workers needed at a site and would occur only periodically throughout the year. Thus, the Project and alternatives would not cause an increase in traffic congestion; would not affect levels of service; would not increase safety risks or increase the need for additional parking; and would not preclude the development of circulation element roads, affect emergency access, or conflict with adopted plans.

Under the Existing Conservation/No Project Alternative, vernal pools within the VPHCP Plan Area would continue to be managed and monitored where required based on existing resource management plans, or left in their existing condition with minimal impact on traffic conditions due to small volumes of trip generation from ongoing management activities.

Therefore, the Project and alternatives would have a less than significant and not adverse impact on traffic and circulation, and further analysis is unwarranted.

10.13 VISUAL EFFECTS AND NEIGHBORHOOD CHARACTER

Adoption of the VPHCP would create a Preserve designed to protect and preserve vernal pool resources. The Project or alternatives would not involve the construction of any structures or alternations to any existing structures or landforms. Any topographic recontouring to restore proper hydrologic function of an area would appear very minimal with only minor visual distinction between existing and new conditions. There would be no impacts on scenic vistas and scenic resources such as trees, rock outcroppings, and historic buildings within a state scenic highway as a result of VPHCP implementation. Additionally, the Project or alternatives would not alter visual elements within any designated scenic sites and/or corridors.

Vernal pool enhancement and restoration would occur with implementation of the Project or Expanded Conservation Alternative. Implementation would not include the development of any visual elements outside of protective measures. Protective measures include the placement of fencing (e.g., post and cable or 3-strand wire) and signage, which would be installed to prevent trespassing as well as ensure success of the enhancement and restoration efforts. The visibility of the proposed fencing types is quite minimal and while fencing may cause minor alterations to the existing visual setting, overall the existing visual character or quality of the sites would be improved through restoration or enhancement activities (e.g., planting of native species) and management activities (e.g., removal of trash, debris, and invasive, weedy plants).

The Project and alternatives would not result in the creation of any physical components that would result in light or glare. The Project and alternatives do not include the construction of or improvement to buildings or other structures. Management activities, including restoration and enhancement, would occur during daylight hours. Therefore, no significant impacts related to lighting, glare, or shading would occur.

The VPHCP is designed to restore, manage, and protect vernal pool habitat and associated sensitive species within all communities where they occur within the City's jurisdiction. The Project and Expanded Conservation Alternative would not have an adverse impact to community character; rather existing habitat areas and the visual character and natural setting of vernal pool complexes would be preserved and, where needed, enhanced and/or restored. There would be no significant change between existing conservation and the Project and alternatives.

Under the Existing Conservation/No Project Alternative, vernal pools within the VPHCP Plan Area would continue to be managed and monitored where required based on existing resource management plans, or left in their existing condition. No visual elements would be introduced or altered under the Existing Conservation/No Project Alternative.

For these reasons, any impacts on visual quality and neighborhood character from the Project and alternatives would be less than significant and not adverse, and further analysis is unwarranted.

CHAPTER 11.0
MITIGATION, MONITORING, AND REPORTING PROGRAM AND MITIGATION FRAMEWORK

CEQA, Section 21081.6, requires that an MMRP be adopted upon certification of an EIR to ensure that the mitigation measures are implemented. The MMRP specifies what the mitigation is, the entity responsible for monitoring the program, and when in the process it should be accomplished. This MMRP is designed to ensure compliance with PRC Section 21081.6 during implementation of mitigation measures. A record of the MMRP will be maintained at the City.

In addition to the mitigation measures required specifically by the EIR/EIS, the VPHCP contains a Mitigation Framework that requires measures to avoid or minimize adverse effects to vernal pool resources resulting from covered projects and covered activities. The Mitigation Framework also identifies compensatory mitigation for impacts to vernal pools and covered species resulting from covered projects and covered activities. The Mitigation Framework is considered part of the Project and the full text as written in the VPHCP is included in this MMRP to ensure implementation and enforceability of the required measures.

11.1 MITIGATION MONITORING AND REPORTING PROGRAM

The MMRP table below summarizes the potentially significant Project impacts and lists the associated mitigation measures and monitoring efforts, timing, and responsible party necessary to ensure that the measures are properly implemented. All Project-specific mitigation measures identified in the EIR/EIS are stated herein.

Table 11-1
Mitigation Monitoring and Reporting Program

Mitigation Measure Number	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
Historical Resources			
HIST-1	**Mitigation Measure HIST-1:** Prior to issuance of any permit for a future development project implemented in accordance with the VPHCP Plan area that could directly affect an archaeological or Tribal Cultural Resource, the City shall require the following steps be taken to determine (1) the presence of archaeological resources and (2) the appropriate mitigation for any significant resources that may be impacted by a development activity. Sites may include residential and commercial properties, privies, trash pits, building foundations, and industrial features representing the contributions of people from diverse socioeconomic and ethnic backgrounds. Sites may also include resources associated with prehistoric Native American activities.	Prior to and/or During Construction	City Mitigation Monitoring Coordination Section; Principal Investigator

Mitigation Measure Number	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
	INITIAL DETERMINATION The environmental analyst will determine the likelihood for a project site to contain historical resources by reviewing site photographs and existing historic information (e.g., Archaeological Sensitivity Maps; the Archaeological Map Book; and the City's "Historical Inventory of Important Architects, Structures, and People in San Diego"), and may conduct a site visit. If there is any evidence that the site contains archaeological or Tribal Cultural Resources, then an archaeological evaluation consistent with the City Guidelines would be required. All individuals conducting any phase of the archaeological evaluation program must meet professional qualifications in accordance with the City Guidelines. STEP 1: Based on the results of the Initial Determination, if there is evidence that the site contains historical resources, preparation of a historic evaluation is required. The evaluation report would generally include background research, field survey, archaeological testing, and analysis. Before actual field reconnaissance would occur, background research is required, which includes a records search at the SCIC at San Diego State University and the San Diego Museum of Man. A review of the Sacred Lands File maintained by the Native American Heritage Commission must also be conducted at this time. Information about existing archaeological collections should also be obtained from the San Diego Archaeological Center and any tribal repositories or museums. In addition to the records searches mentioned above, background information may include examining primary sources of historical information (e.g., deeds and wills), secondary sources (e.g., local histories and genealogies), Sanborn Fire Maps, and historic cartographic and aerial photograph sources; reviewing previous archaeological research in similar areas, models that predict site distribution, and archaeological, architectural, and historical site inventory files; and conducting informant interviews. The results of the background information would be included in the evaluation report. Once the background research is complete, a field reconnaissance must be conducted by individuals whose qualifications meet the standards outlined in the City Guidelines. Consultants are encouraged to employ innovative survey techniques when conducting enhanced reconnaissance, including remote sensing, ground-penetrating radar, and other soil resistivity techniques as determined on a case-by-case basis. Native American participation is required for field surveys when there is likelihood that the project site contains prehistoric archaeological resources or traditional cultural properties. If, through background research and field surveys, historical resources are identified, then an evaluation of significance, based on the City's Guidelines must be performed by a qualified archaeologist. STEP 2: Where a recorded archaeological site or Tribal Cultural Resource (as defined in the Public Resources Code) is identified, the City would be required to initiate consultation with identified California Indian tribes pursuant to the provisions in Public Resources Code Section 21080.3.1 and 21080.3.2., in accordance with Assembly Bill 52. It should be noted that during the consultation process, tribal representative(s) will be involved in making recommendations regarding the significance of a Tribal Cultural Resource which also could be a prehistoric archaeological site. A testing program may be recommended which requires reevaluation of the proposed project in consultation with the Native American representative, which could result in a combination of project redesign to avoid and/or preserve significant resources and mitigation in the form of data recovery and monitoring (as recommended by the qualified archaeologist and Native American representative). The archaeological testing program, if required shall		

Mitigation Measure Number	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
	include evaluating the horizontal and vertical dimensions of a site; the chronological placement, site function, artifact/ecofact density and variability, and presence/absence of subsurface features; and research potential. A thorough discussion of testing methodologies, including surface and subsurface investigations, can be found in the City Guidelines. Results of the consultation process will determine the nature and extent of any additional archeological evaluation of changes to the proposed project. The results from the testing program will be evaluated against the Significance Thresholds found in the City Guidelines. If significant historical resources are identified within the APE, the site may be eligible for local designation. However, this process would not proceed until such time that the tribal consultation has been concluded and an agreement is reached (or not reached) regarding significance of the resource and appropriate mitigation measures are identified. When appropriate, the final testing report must be submitted to Historical Resources Board staff for eligibility determination and possible designation. An agreement on the appropriate form of mitigation is required prior to distribution of a draft environmental document. If no significant resources are found, and site conditions are such that there is no potential for further discoveries, then no further action is required. Resources found to be nonsignificant as a result of a survey and/or assessment will require no further work beyond documentation of the resources on the appropriate Department of Parks and Recreation (DPR) site forms, and inclusion of results in the survey and/or assessment report. If no significant resources are found, but results of the initial evaluation and testing phase indicates there is still a potential for resources to be present in portions of the property that could not be tested, then mitigation monitoring is required. STEP 3: Preferred mitigation for historical resources is to avoid the resource through project redesign. If the resource cannot be entirely avoided, all prudent and feasible measures to minimize harm shall be taken. For archaeological resources where preservation is not an option, a Research Design and Data Recovery Program is required, which includes a Collections Management Plan for review and approval. When Tribal Cultural Resources are present and cannot be avoided, appropriate and feasible mitigation will be determined through the tribal consultation process and incorporated into the overall data recovery program where applicable, or project specific mitigation measures shall be developed and incorporated into the project. The data recovery program will also incorporate any agreements regarding curation or repatriation of Tribal Cultural Resources as defined during the consultation process. The data recovery program shall be based on a written research design and is subject to the provisions as outlined in CEQA Section 21083.2. The data recovery program must be reviewed and approved by the City's Environmental Analyst prior to distribution of a draft CEQA document and shall include the results of the tribal consultation process. Archaeological monitoring may be required during building demolition and/or construction grading when significant resources are known or suspected to be present on a site, but cannot be recovered prior to grading due to obstructions such as existing development or dense vegetation. A Native American observer must be retained for all subsurface investigations, including geotechnical testing and other ground-disturbing activities, whenever a Native American Traditional Cultural Property, Tribal Cultural Resource, or archaeological site located on City property or within the APE of a City project would be impacted. In the event that human remains are encountered during data recovery and/or a monitoring program, the provisions of PRC Section 5097 must be followed. These provisions will be outlined in the Mitigation Monitoring and Reporting Program (MMRP) included in a subsequent project-specific environmental document. The Native American monitor shall be		

Mitigation Measure Number	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
	consulted during the preparation of the written report, at which time he/she may express concerns about the treatment of sensitive resources. If the Native American community requests participation of an observer for subsurface investigations on private property, the request shall be honored. STEP 4: Archaeological Resource Management reports shall be prepared by qualified professionals as determined by the criteria set forth in Appendix A of the City Guidelines. The discipline shall be tailored to the resource under evaluation. In cases involving complex resources, such as Traditional Cultural Properties, Tribal Cultural Resources, rural landscape districts, sites involving a combination of prehistoric and historic archaeology, or historic districts, a team of experts will be necessary for a complete evaluation. Specific types of historical resource reports are required to document the methods (see Section III of the City Guidelines) used to determine the presence or absence of historical resources; to identify the potential impacts from proposed development and evaluate the significance of any identified historical resources; to document the appropriate curation of archaeological collections (e.g., collected materials and the associated records); in the case of potentially significant impacts to historical resources, to recommend appropriate mitigation measures that would reduce the impacts to below a level of significance; and to document the results of mitigation and monitoring programs, if required. Archaeological Resource Management reports shall be prepared in conformance with the California Office of Historic Preservation's Archaeological Resource Management Reports: Recommended Contents and Format (see Appendix C of the City Guidelines), which will be used by Environmental staff in the review of archaeological resource reports. Consultants must ensure that archaeological resource reports are prepared consistent with this checklist. This requirement will standardize the content and format of all archaeological technical reports submitted to the City. A confidential appendix must be submitted (under separate cover) with historical resources reports for archaeological sites, Traditional Cultural Properties or Tribal Cultural Resources containing the confidential resource maps and records search information gathered during the background study. In addition, a Collections Management Plan shall be prepared for projects that result in a substantial collection of artifacts, and must address the management and research goals of the project and the types of materials to be collected and curated based on a sampling strategy that is acceptable to the City. Appendix D of the City Guidelines (Historical Resources Report Form) may be used when no archaeological resources were identified within the project boundaries. STEP 5: For Archaeological Resources: All cultural materials, including original maps, field notes, non-burial-related artifacts, catalog information, and final reports recovered during public and/or private development projects, must be permanently curated with an appropriate institution, one that has the proper facilities and staffing for ensuring research access to the collections consistent with state and federal standards, unless otherwise determined during the tribal consultation process. In the event that a prehistoric and/or historic deposit is encountered during construction monitoring, a Collections Management Plan would be required in accordance with the project MMRP. The disposition of human remains and burial-related artifacts that cannot be avoided or are inadvertently discovered is governed by state (i.e., AB 2641 and California Native American Graves Protection and Repatriation Act of 2001) and federal (i.e., Native American Graves Protection and Repatriation Act) law, and must be treated in a dignified and culturally appropriate manner with respect for the deceased individual(s) and their descendants. Any human bones and associated grave goods of Native American origin shall be turned over to the appropriate		

Mitigation Measure Number	Mitigation Measure	Timeframe of Mitigation	Monitoring, Enforcement, and Reporting Responsibility
	Native American group for repatriation. Arrangements for long-term curation for all recovered artifacts must be established between the applicant/property owner and the consultant prior to the initiation of the field reconnaissance. When Tribal Cultural Resources are present, or non-burial-related artifacts associated with Tribal Cultural Resources are suspected to be recovered, the treatment and disposition of such resources will be determined during the tribal consultation process. This information must then be included in the archaeological survey, testing, and/or data recovery report submitted to the City for review and approval. Curation must be accomplished in accordance with the California State Historic Resources Commission's Guidelines for the Curation of Archaeological Collection (dated May 7, 1993) and, if federal funding is involved, 36 CFR 79 of the Federal Register. Additional information regarding curation is provided in Section II of the City Guidelines.		

11.2 MITIGATION FRAMEWORK

The VPHCP Mitigation Framework included below, which would be adopted as part of the VPHCP under the Project, would be implemented on a project-by-project basis for covered projects and covered activities, as well as future development that is consistent with the provisions of the VPHCP.

General Avoidance and Minimization Measures

As required by FESA, the VPHCP includes measures to avoid or minimize adverse effects to vernal pools and the taking of covered species.

In accordance with the City's ESL regulations, projects within the MHPA would require a wetland deviation. For those projects that would use the Essential Public Project and Economic Viability Options, avoidance must be considered first. If avoidance is not feasible, then impacts must be minimized to the maximum extent practicable. Under the Biologically Superior Option, impacts to vernal pools may be considered if the resources are of a low quality, and through project design and/or mitigation a biologically superior project would result. An example of this situation would be the loss of an isolated pool with fairy shrimp outside of the MPHA with mitigation occurring within the MPHA. This would increase the viability and conservation within an area that has been determined to contain significant vernal pool resources (i.e., MHPA).

Indirect impacts to conserved vernal pools will be minimized through the City's existing discretionary permit review process, which requires development projects adjacent to the Preserve or MHPA to comply with existing Land Use Adjacency Guidelines (see Section 1.4.3

of the MSCP SAP and Section 10.4 of the MSCP Implementing Agreement) and as described below. Areas designated for conservation and described in this chapter include substantial amounts of high-quality habitat for covered species and vernal pool habitat. Covered activities that result in permanent impacts are anticipated to occur primarily in areas with low-quality habitat. The majority of vernal pool preservation would be concentrated within the MHPA away from covered activities.

General avoidance and minimization measures for covered projects and covered activities required in the VPHCP are as follows:

1. Any development adjacent to the MHPA shall be constructed to slope away from the extant pools to be avoided, to ensure that runoff from the project does not flow into the pools.
2. Covered projects shall require temporary fencing (with silt barriers) of the limits of project impacts (including construction staging areas and access routes) to prevent additional vernal pool impacts and prevent the spread of silt from the construction zone into adjacent vernal pools. Fencing shall be installed in a manner that does not impact habitats to be avoided. Final construction plans shall include photographs that show the fenced limits of impact and all areas of vernal pools to be impacted or avoided. If work inadvertently occurs beyond the fenced or demarcated limits of impact, all work shall cease until the problem has been remedied to the satisfaction of the City. Temporary construction fencing shall be removed upon project completion.
3. Impacts from fugitive dust that may occur during construction grading shall be avoided and minimized through watering and other appropriate measures.
4. A qualified monitoring biologist that has been approved by the City shall be on-site during project construction activities to ensure compliance with all mitigation measures identified in the CEQA environmental document. The biologist shall be knowledgeable of vernal pool species biology and ecology. The biologist shall perform the following duties:
    a. Oversee installation of and inspect the fencing and erosion control measures within or upslope of vernal pool restoration and/or preservation areas a minimum of once per week and daily during all rain events to ensure that any breaks in the fence or erosion control measures are repaired immediately.
    b. Periodically monitor the work area to ensure that work activities do not generate excessive amounts of dust.

c. Train all contractors and construction personnel on the biological resources associated with this project and ensure that training is implemented by construction personnel. At a minimum, training shall include (1) the purpose for resource protection; (2) a description of the vernal pool species and their habitat(s); (3) the conservation measures that must be implemented during project construction to conserve the vernal pool species, including strictly limiting activities, vehicles, equipment, and construction materials to the fenced project footprint to avoid sensitive resource areas in the field (i.e., avoided areas delineated on maps or on the project site by fencing); (4) environmentally responsible construction practices as outlined in measures 5, 6, and 7; (5) the protocol to resolve conflicts that may arise at any time during the construction process; and (6) the general provisions of the project's mitigation monitoring and reporting program (MMRP), the need to adhere to the provisions of FESA, and the penalties associated with violating FESA.

d. Halt work, if necessary, and confer with the City to ensure the proper implementation of species and habitat protection measures. The biologist shall report any violation to the City within 24 hours of its occurrence.

e. Submit regular (e.g., weekly) letter reports to the City during project construction and a final report following completion of construction. The final report shall include as-built construction drawings with an overlay of habitat that was impacted and avoided, photographs of habitat areas that were avoided, and other relevant summary information documenting that authorized impacts were not exceeded and that general compliance with all conservation measures was achieved.

5. The following conditions shall be implemented during project construction:

a. Employees shall strictly limit their activities, vehicles, equipment, and construction materials to the fenced project footprint.

b. The project site shall be kept as clean of debris as possible. All food-related trash items shall be enclosed in sealed containers and regularly removed from the site.

c. Disposal or temporary placement of excess fill, brush, or other debris shall be limited to areas within the fenced project footprint.

6. All equipment maintenance, staging, parking, and dispensing of fuel, oil, coolant, or any other such activities shall occur in designated areas within the fenced project impact limits. These designated areas shall be located in previously compacted and disturbed areas to the maximum extent practicable in such a manner as to prevent any runoff from entering the vernal pools or their watersheds, and shall be shown on the construction plans. Fueling of equipment shall take place within existing paved areas greater than 100

feet from the vernal pools or their watersheds. Contractor equipment shall be checked for leaks prior to operation and repaired as necessary. A spill kit for each piece of construction equipment shall be on-site and must be used in the event of a spill. "No-fueling zones" shall be designated on construction plans.

7. Grading activities immediately adjacent to vernal pools shall be timed to avoid wet weather to minimize potential impacts (e.g., siltation) to the vernal pools unless the area to be graded is at an elevation below the pools. To achieve this goal, grading adjacent to avoided pools shall comply with the following:

    a. Grading shall occur only when the soil is dry to the touch both at the surface and 1 inch below. A visual check for color differences (i.e., darker soil indicating moisture) in the soil between the surface and 1 inch below indicates the soil is dry.

    b. After a rain of greater than 0.2 inch, grading shall occur only after the soil surface has dried sufficiently as described above, and no sooner than 2 days (48 hours) after the rain event ends.

    c. To prevent erosion and siltation from storm water runoff due to unexpected rains, best management practices (BMPs) (e.g., silt fences) shall be implemented as needed during grading.

    d. If rain occurs during grading, work shall stop and resume only after soils are dry, as described above.

    e. Grading shall be done in a manner to prevent runoff from entering preserved vernal pools.

    f. If necessary, water spraying will be conducted at a level sufficient to control fugitive dust but not to cause runoff into vernal pools.

    g. If mechanized grading is necessary, grading will be performed in a manner to minimize soil compaction (i.e., use the smallest type of equipment needed to feasibly accomplish the work).

8. Prior to project construction, topsoil shall be salvaged from the impacted vernal pools or road ruts with fairy shrimp on-site consistent with the requirements of the approved restoration plan (e.g., free of versatile fairy shrimp [*Branchinecta lindahli*]). Vernal pool soil (inoculum) shall be collected when dry to avoid damaging or destroying fairy shrimp cysts and plant seeds. Hand tools (e.g., shovels and trowels) shall be used to remove the first 2 inches of soil from the pools. Whenever possible, the trowel shall be used to pry up intact chunks of soil, rather than loosening the soil by raking and shoveling, which can damage the cysts. The soil from each pool shall be stored

individually in labeled boxes that are adequately ventilated and kept out of direct sunlight in order to prevent the occurrence of fungus or excessive heating of the soil, and stored off-site at an appropriate facility for vernal pool inoculum. Inoculum from different source pools shall not be mixed for seeding any restored pools, unless otherwise approved by the City and Wildlife Agencies. The collected soils shall be spread out and raked into the bottoms of the restored pools. Topsoil and plant materials salvaged from the upland habitat areas to be impacted shall be transplanted to, and/or used as a seed/cutting source for, the upland habitat restoration/creation areas to the maximum extent practicable as approved by the City.

9. Permanent protective fencing shall be used along any interface with developed areas and/or other measures approved by the City to deter human and pet entrance into on- or off-site habitat shall be installed. Fencing shall be shown on the development plans and should have no gates (accept to allow access for maintenance and monitoring of the biological conservation easement areas) and be designed to prevent intrusion by pets. Signage for the biological conservation easement area shall be posted and maintained at conspicuous locations. The requirement for fencing and/or other preventative measures shall be included in the project's mitigation program.

Compensatory Mitigation

Impacts to vernal pool resources outside and within the MHPA shall be limited to covered projects, future projects, and covered activities, which are summarized in Chapter 3 (and described in further detail in Chapter 4 of the VPHCP). As part of the VPHCP, the Mitigation Framework has been developed to be consistent with requirements established in the City's LDM Biology Guidelines of the Land Development Manual and the ESL Regulations for wetland impacts. Mitigation shall prevent any net loss of vernal pool functions and values of impacted vernal pools (Appendix D of the VPHCP). Because the measures specified in the Mitigation Framework shall be required as part of the VPHCP implementation and development of covered projects, future projects, and covered activities, the Mitigation Framework is considered part of the project for the purposes of analysis in the EIR/EIS.

Consistent with the ESL Regulations, the Mitigation Framework includes compensatory measures that would result in a biologically superior net gain in overall function and values of (a) the type of wetland resource being impacted and/or (b) the biological resources to be conserved. As required by the Mitigation Framework, the biologically superior mitigation shall include either:

(1) Standard mitigation including wetland vernal pool restoration and enhancement (of the same type of wetland resource that is being impacted) that results in high-quality wetlands; AND a biologically superior project design whose avoided area(s) (i) is in a configuration or alignment that optimizes the potential long-term biological viability of the on-site sensitive biological resources, and/or (ii) conserves the rarest and highest quality on-site biological resources; or

(2) For a project not consistent with (1) above, extraordinary mitigation is required.

Examples of increased function and value include, but are not limited to, an increase in the availability of habitat for native fauna, an increase in native flora diversity, a decrease in invasive species, an increase in ground water recharge, water quality improvements, and sedimentation deposition rates. Success criteria using the best currently available information for the particular mitigation habitat shall be required as part of the restoration or enhancement plan.

Mitigation for projects impacting vernal pools shall include salvage of sensitive species, when appropriate (i.e., high quality and no presence of versatile fairy shrimp), from vernal pools to be impacted, introduction of salvaged material into restored vernal pool habitat where appropriate (e.g., same vernal pool series), and maintenance of salvaged material pending successful restoration of the vernal pools. Use of salvaged materials will be determined on a project-specific basis during the project-level review phase. Salvaged material shall not be introduced to existing vernal pools containing the same species outside the vernal pool series unless approved by USFWS. The mitigation sites shall include preservation of the appropriate area of watershed and a buffer based on functions and values and a hydraulic analysis that evaluates surface and/or subsurface flow; however, if such an analysis is not conducted, there shall be a default of a minimum 100-foot buffer from the watershed.

Impacts to vernal pool habitat within the MHPA require a deviation from the City's ESL Regulations (Appendix E of the VPHCP). Any impacts to vernal pools inside and outside the MHPA shall be mitigated "in-kind" and achieve a "no-net loss" of wetland function and values (except as provided for in the City's ESL Wetland Deviation Section 143.0510 (d)(2) Economic Viability Option). Standard mitigation ratios for vernal pools shall range from 2:1 when no listed species are present, and up to 4:1 for when listed species with very limited distributions are present (e.g., *Pogogyne abramsii*). Consistent with the City's LDM Biology Guidelines for the biologically superior alternative, extraordinary mitigation ratios for vernal pools can range from 4:1 when no listed species are present, and up to 8:1 when listed species with very limited distributions are present (e.g., *Pogogyne abramsii*).

As part of the project-specific environmental review for future projects, all biological impacts would be analyzed and mitigated in accordance with the ESL Regulations, VPHCP, and the City's LDM Biology Guidelines. This shall include mitigation for vernal pools impacted within and outside the Preserve as outlined in the sections below.

General Conditions for Compensatory Mitigation/Enhancement Projects

Project-specific vernal pool restoration and enhancement plans that are required as part of compensatory mitigation under the VPHCP Mitigation Framework shall be consistent with the general requirements outlined in the City's LDM Biology Guidelines. The restoration/ enhancement/preservation plan and perpetual management and monitoring plan will be mailed to the Wildlife Agencies for technical review, as generally defined below, and approval. Upon receipt of the plans, the Wildlife Agencies shall have 30 working days in which to review and provide written comments to the City. Subsequent reviews and comments shall be completed within 15 working days. Failure to respond within the specified timelines shall result in approval of the draft plans unless an extension is agreed to by all parties. General conditions specific to vernal pool enhancement and restoration/ enhancement/ and restoration preservation and perpetual management and monitoring plans are as follows:

1. The project proponent will submit a vernal pool restoration/enhancement/preservation plan to the City (Development Services Environmental Analysis Section and Planning Department MSCP Staff) and Wildlife Agencies for approval as part of the development review process and the plan shall be included as an attachment to the Project's CEQA document. The restoration plan shall be consistent (as applicable) with the restoration plan outline included in Attachment B of the City's LDM Biology Guidelines. The plan must be approved and implemented prior to or concurrent with project impacts. In addition, the restoration plan shall include the following information and conditions:

    a. Implementation of the enhancement/restoration shall be conducted under the direction of a qualified biologist (vernal pool restoration specialist) with at least 3 years of vernal pool restoration experience, to be approved by the City and Wildlife Agencies.

    b. To avoid impacts to any extant vernal pools, all conservation measures required at the project construction site to avoid and minimize impacts to adjacent vernal pools and their watersheds will also be implemented at the restoration site and thus specified in the restoration plan.

    c. All vernal pools to be avoided and their watersheds shall be enhanced as deemed appropriate by the Wildlife Agencies to achieve the same success criteria, or better,

as the restored pools and surrounding uplands. Enhancement activities shall include addition of vernal pool plant species and addition of appropriate upland habitat (e.g., coastal sage scrub, native grassland, and/or chaparral) compared to the surrounding uplands. All plant material used for enhancement shall be collected from local sources (i.e., as close to the site as reasonably feasible). This establishment can be accomplished by redistributing topsoil containing seeds, spores, bulbs, eggs, and other propagules from affected pools and adjacent vernal pool and upland habitats; by the translocation of propagules of individual species from off-site habitats; and by the use of commercially available native plant species and/or any vernal pool inoculum or plant material from an off-site source approved by the Wildlife Agencies. Topsoil and plant materials from the native habitats to be affected on-site shall be applied to the watersheds of the enhanced and restored pools to the maximum extent practicable. Nonnative invasive weed control shall be implemented within the restoration areas to protect and enhance habitat remaining on-site.

d. All restoration/enhancement activities shall commence the first summer-fall season prior to or concurrently with the initiation of project impacts.

e. Discussion and a table on the exact activities will occur at each restored or enhanced vernal pools. The discussion and table shall also include the initial and planned conditions of the pools (i.e., basin size, average depth, ponding duration), existing native and nonnative cover, and presence of listed species.

f. All final specifications and topographic-based grading, planting, and watering plans shall have 0.5-foot contours for the vernal pools, watersheds, and surrounding uplands (including adjacent mima mounds) at the restoration sites. The basis for this fine-scale resolution is the micro-depth (i.e., several inches) of the vernal pools that shall be restored. The grading plans shall also show the watersheds of extant vernal pools, and overflow pathways that hydrologically connect the restored pools in a way that mimics natural vernal pool complex topography/hydrology.

g. A hydraulic analysis (i.e., surface and/or subsurface flow, where applicable) that shows each vernal pool proposed for restoration and its watershed, and hydrologic connection between the pools is required. The restored pools and their watersheds shall not impact the watersheds of any extant pools except where needed to establish hydrologic connections.

h. As a last resort and after approval by the Wildlife Agencies, additional inoculum from donor vernal pools as close to the project site as possible may be used to supplement the inoculum collected at the project impact site. If inoculum is be used

for restoration and enhancement, the plan shall identify any proposed donor pools and include documentation that they are free of versatile fairy shrimp (*Branchinecta lindahli*). No more than 10% of the basin area of any donor pool shall be used for collection of inoculum. Collection of inoculum from donor pools shall be coordinated with the Wildlife Agencies.

i. Inoculum and planting shall not be installed until the City and Wildlife Agencies have approved habitat restoration site grading. All planting shall be installed in a way that mimics natural plant distribution, and not in rows. Inoculum shall not be introduced into the restored or enhanced pools until after they have been demonstrated to retain water for the appropriate amount of time to support the targeted vernal pool species (i.e., at least 21 to 28 days for San Diego fairy shrimp or 30 to 60 days for Riverside fairy shrimp) and have been surveyed for versatile fairy shrimp to the satisfaction of the City and Wildlife Agencies. If versatile fairy shrimp are detected in the restored or enhanced pools, inoculum shall not be introduced until appropriate measures to address versatile fairy shrimp are approved by the City and Wildlife Agencies. Inoculum shall be spread evenly over the surface, no more than 0.25 inch deep. If any ponding water is present at the time of soil inoculation, the soil shall only be placed on the wet soil adjacent to the ponded areas. Inoculum shall be placed into the bottoms of the restored/enhanced pools in a manner that preserves, to the maximum extent possible, the orientation of the fairy shrimp cysts and plant seeds within the surface layer of soil (e.g., collected inoculum shall be shallowly distributed within the pond so that cysts have the potential to be brought into solution upon inundation).

j. Plant palettes (species, size, and number/acre) and seed mix (species and pounds/acre) shall be included in the restoration/enhancement plan. The plant palette shall include native species specifically associated with the on-site habitat type(s) and should be from a local source. The source and proof of local origin of all plant material and seed shall be provided.

k. Native plants and animals shall be established within the restored/enhanced pools, their watersheds, and surrounding uplands. This can be accomplished by redistributing topsoil containing seeds, spores, bulbs, eggs, and other propagules from affected pools and adjacent vernal pool and upland habitats; by the translocation of propagules of individual species; and by the use of commercially available native plant species. Any vernal pool inoculum or plant material from an off-site source shall be approved by the City and Wildlife Agencies. Topsoil and plant materials from the native habitats to be affected on-site shall be applied to the watersheds of the enhanced and restored pools to the maximum extent practicable.

Exotic weed control shall be implemented within the restoration/enhancement areas to protect and enhance habitat remaining on-site.

l. In the event that natural rain is inadequate to support plant establishment, artificial watering of the restored/enhanced pools and their watersheds may be done upon approval by the City and Wildlife Agencies to establish plants but not hydrate shrimp. Any artificial watering shall be done in a manner that prevents ponding in the pools. Any water to be used shall be identified and documented to be free of contaminants that could harm the pools.

m. All weeding within and immediately adjacent to the enhanced/restored pools shall be performed by hand. All workers conducting weed removal activities shall be educated to distinguish between native and nonnative species so that local native plants are not inadvertently killed by weed removal activities.

n. All herbicide and pesticide use shall be under the direction of a licensed pest control advisor and shall be applied by a licensed applicator, under the supervision of a vernal pool restoration specialist. Glyphosate-based herbicides, such as RoundUp or Aquamaster, shall be applied on all areas that have been dethatched. Herbicide shall only be applied when wind speed is less than 5 miles per hour, and spray nozzles shall be of a design to maximize the size of droplets, to reduce the potential for drift of herbicide to non-target plants. A 10-foot buffer shall be maintained between concentrations of any sensitive plant species. Application of herbicide shall not occur if rain is projected within 24 hours of the scheduled application. When vernal pools are ponding or close to saturation, only hand herbicide application (i.e., saturated glove technique) shall be used in and around the edges of pools by specially trained herbicide applicators under the direct supervision of the vernal pool restoration specialist. When vernal pools are not ponding or close to saturation, herbicide may be sprayed, but applicators must stay at least 3 feet from the edge of the pools.

o. A final implementation schedule shall be included that indicates when all vernal pool impacts, as well as vernal pool restoration/enhancement grading and planting, shall begin and end. A temporal loss of vernal pools will be avoided by initiating the restoration work prior to or concurrent with impacts. This will minimize the length of time inoculum is kept in storage and ensure that there is appropriate habitat to translocate it to.

p. A minimum of 5 years of monitoring will be conducted to ensure that success criteria are achieved. Success criteria for vernal pool and upland habitat restoration/enhancement areas shall include quantitative hydrological, vegetation

transects, fairy shrimp protocol surveys, or other measurements as approved by the City and Wildlife Agencies (e.g., viable cyst, hatched fairy shrimp, and gravid female measurements), floral and faunal inventories; and photographic documentation. To minimize impacts to the vernal pool's soil surface during restoration, enhancement, and monitoring, cobbles will be oriented within the vernal pools to serve as stepping stones. Reference data will be established from a vernal pool reference or control site located within each of the three of the VPHCP subareas (North, Central, South). The vernal pool control sites shall be approved by the City and Wildlife Agencies.

q. Restoration success for fairy shrimp shall be determined by measuring the ponding of water, and density of viable cysts, hatched fairy shrimp, and gravid females within the restored pools. Water measurements shall be taken in the restored pools to determine the depth, duration, and quality (e.g., pH, temperature, total dissolved solids, and salinity) of ponding. Dry samples shall be taken in the restored and reference pools to determine the density of viable cysts in the soils. Dry sampling shall occur in the first year of the restoration monitoring program to establish a baseline, and the last year to identify changes to viable cyst density. Wet samples shall also be taken in the restored and reference pools to determine the density of hatched fairy shrimp and gravid females. The pools shall pond for a period of time similarly to reference vernal pools during an average rainfall year and at an appropriate depth and quality to support fairy shrimp. The hatched fairy shrimp and gravid female density of the restored pools shall not differ significantly ($p < 0.05$) from reference pools for at least three wet seasons before a determination of success can be made. The average viable cyst density of the restored pools shall not differ significantly ($p < 0.05$) from reference pools at the end of the monitoring period before a determination of success can be made. Vernal pools selected as reference or control pools for evaluating restoration success shall be identified and described in the restoration plan. Alternate methods of determining success may be used upon approval by the City and Wildlife Agencies.

r. To ensure that the construction and operation of the project do not adversely affect the vernal pools on-site, post-construction monitoring will be conducted throughout the rainy season of an adequate rainfall year (i.e., 55% of average rainfall) to verify that avoidance measures were successful and determine whether the project is changing the hydrology of, or causing erosion and sediment delivery to, these vernal pools (based on pre-construction conditions). Monitoring will occur for 3 years following project construction. In the event that sufficient rainfall to demonstrate adequate ponding does not occur during the 3 years following project construction, monitoring will continue in 1-year increments, to a maximum of 5

years. A monitoring report will be submitted to the City and Wildlife Agencies by September 1 following each monitoring season. The monitoring program will be described in the final vernal pool restoration/enhancement plan. If monitoring detects impacts to the adjacent vernal pools from construction and/or operation of the proposed project (e.g., from changes in hydrology) within the monitoring period, remediation will be required.

s. Monitoring and success criteria for vernal pool and upland restoration/enhancement areas shall include coastal sage scrub, native grassland, and chaparral species richness and cover criteria for all 5 years of monitoring. Success criteria for weed cover shall be as follows: 0% cover for weed species categorized as High or Moderate in the Cal-IPC Invasive Plant Inventory, and relative cover of all other weed species is no more than 5% and 10% coverage in the pools basins and watersheds, respectively, for other exotic/weed species for all 5 years of the monitoring period. Container plant survival success criteria shall be 80% of the initial plantings for the first 5 years. At the first and second anniversaries of plant installation, all dead plants shall be replaced unless their function has been replaced by natural recruitment. The method used for monitoring shall be described and a map of proposed sampling locations shall be included. Photo points shall be used for qualitative monitoring and stratified-random sampling shall be used for all quantitative monitoring.

t. Verification that restoration/enhancement of vernal pools is complete shall require written sign-off by the City and Wildlife Agencies. If a performance criterion is not met for any of the restored/enhanced vernal pools or upland habitat in any year, or if the final success criteria are not met, the project proponent shall prepare an analysis of the cause(s) of failure and, if deemed necessary by the City or Wildlife Agencies, propose remedial actions for approval. If any of the restored/enhanced vernal pools or upland habitat has not met a performance criterion during the initial 5-year period, the project proponent's maintenance and monitoring obligations shall continue until the City and Wildlife Agencies deem the restoration/enhancement successful. Contingency measures may be required by the City or Wildlife Agencies. Restoration/enhancement shall not be deemed successful until success criteria are achieved. If contingency measures are required, restoration/enhancement will not be deemed successful until at least 2 years after any significant contingency measures are implemented, as determined by the City and Wildlife Agencies.

u. Annual reports shall be submitted to the City and Wildlife Agencies by December 1 of each year that assess both the attainment of yearly success criteria and progress

toward the final success criteria. The reports shall also summarize the project's compliance with all applicable mitigation measures and permit conditions.

2. The project proponent shall ensure the long-term management of the on-site areas shall occur in perpetuity. Each project proponent will implement a perpetual management, maintenance, and monitoring plan (e.g., Habitat Management Plan) for their respective biological conservation easement areas. The Plan, which will be approved by the City and Wildlife Agencies and funding source must be established prior to or concurrent with impacts. The plan should include, but not be limited to, the following: method of protecting the resources in perpetuity (i.e., covenant of easement dedication to the City, or a deed restriction or other conservation mechanism consistent with California Civil Code Section 815, et seq. and acceptable to the Wildlife Agencies); monitoring schedule; measures to prevent human and exotic species encroachment; funding mechanism; and contingency measures should problems occur. In addition, the plan will include the proposed land manager's name, qualifications, business address, and contact information. The project proponent will also establish a nonwasting endowment or similar secure funding method in an amount approved by the City and the Wildlife Agencies based on a Property Analysis Record (PAR; Center for Natural Lands Management ©1998), or similar cost estimation method, to secure the ongoing funding for the perpetual long-term management, maintenance, and monitoring of the biological conservation easement area by an agency, nonprofit organization, or other entity approved by the City and the Wildlife Agencies.

3. In the event that a new occurrence of a covered species is identified (i.e., previously undocumented) within an area to be impacted by a covered project or covered activity, mitigation shall be required in the form of salvage and restoration for the impact to the new occurrence. Mitigation shall occur consistent with Conditions 1 and 2 above, as well as the City's LDM Biology Guidelines.

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CHAPTER 12.0
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CHAPTER 13.0
LIST OF PREPARERS

The following individuals were consulted during preparation of this EIR/EIS.

CITY OF SAN DIEGO

Planning Department
Jeanne Krosch, Senior Planner
Myra Herrmann, Senior Planner/Archaeology/Tribal Liaison
Denise Russell, Assistant Planner
Tait Galloway, Principal Planner
Bobby Mordenti, Associate Planner
Rebecca Malone, Associate Planner

Park and Recreation Department
Chris Zirkle, Deputy Director
Betsy Miller, Senior Planner

Development Services Department
Anita Eng, Biologist III

Transportation and Stormwater Department
Genene Lehotsky, Senior Planner
Mark Stephens, Associate Planner

Public Utilities Department
Keli Balo, Project Officer II
Nicole McGinnis, Senior Planner

Real Estate Assets Department/Airports
Rodney Propst, Deputy Director
Brandi Mulvey, Supervising Property Agent
Wayne Reiter, Airports Project Manager

Environmental Services Department
Lisa Wood, Senior Planner

U.S. FISH AND WILDLIFE SERVICE

Susan Wynn, Fish and Wildlife Biologist
David Zoutendyk, Division Chief

AECOM

Peter Augello, Senior GIS Analyst
Lindsey Cavallaro, Senior Project Manger
Teri Fenner, Project Director
Kara Friedman, Senior Environmental Analyst
Bill Graham, CEQA/NEPA Compliance Review
Stephanie Jow, Archeological Historian
Scott McMillan, Senior Restoration Ecologist
Tom Oberbauer, Senior Biologist
Chelsea Ohanesian, Environmental Analyst
Jason Paukovits, Environmental Scientist
Linnea Spears-Lebrun, Restoration Ecologist
Jessica Sisco, Senior Planner Public Outreach Specialist
Stev Weidlich, Ethnographer/Social Scientist
Stacie Wilson, Archeological Historian
Dan Arellano, GIS Analyst

SANDAG SERVICE BUREAU

Keith Greer, Senior Regional Planner
Cheryl Mason, Senior Research Analyst

SCIENTIFIC REVIEWERS (VPHCP TECHNICAL WHITE PAPERS)

Ellen T. Bauder, Ph.D.
Andrew J. Bohonak, Ph.D.
Mark Dodero, M.S.
Paul Fromer, M.S.
Christina M. Schaefer, MLA, M.Sc.
Marie Simovich, Ph.D.

APPENDIX A

NOTICE OF PREPARATION / NOTICE OF INTENT AND COMMENTS RECEIVED

FILED
Ernest J Dronenburg, Jr., Recorder County Clerk

NOV 28 2011
BY L. Kesian
DEPUTY

FILED IN THE OFFICE OF THE COUNTY CLERK
San Diego County on NOV 28 2011
Posted NOV 28 2011 Removed
Returned to agency on
Deputy L. Kesian

THE CITY OF SAN DIEGO

DEVELOPMENT SERVICES DEPARTMENT

Date of Notice: November 28, 2011

PUBLIC NOTICE OF THE PREPARATION OF A ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT AND PUBLIC NOTICE OF AN ENVIRONMENTAL IMPACT REPORT SCOPING MEETING

SAP No AB1000310-09 (Internal No.)

PUBLIC NOTICE: The City of San Diego as the Lead Agency has determined that the project described below will require the preparation of an Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) in compliance with the California Environmental Quality Act (CEQA). This Notice of Preparation of a project EIR/EIS and Scoping Meeting was publicly noticed and distributed on November 28, 2011 and published in the SAN DIEGO DAILY TRANSCRIPT; in addition it was placed on the City of San Diego web-site (http://clerkdoc.sannet.gov/Website/publicnotice/pubnotceqa.html).

SCOPING MEETING: A public scoping meeting will be held by the City of San Diego's Development Services Department on **Monday, December 12, 2011, beginning at 5:30 PM and running no later than 7:30 PM at the Santa Fe Room of the Balboa Park Club located in Balboa Park at 2150 Pan American Road, San Diego, CA 92101. Please note that depending on the number of attendees, the meeting could conclude earlier than 7:30 PM.** Verbal and written comments regarding the scope and alternatives of the proposed EIR/EIS will be accepted at the meeting.

Written/Mail-in comments may also be sent to Elizabeth Shearer-Nguyen, City of San Diego Development Services Department, 1222 First Avenue, MS 501, San Diego, CA 92101, or e-mailed to **DSDEAS@sandiego.gov** referencing the Project Name (Vernal Pool Habitat Conservation Plan) in the subject line within 30 days of the receipt of this notice/date of the Public Notice above. Responsible agencies are requested to indicate their statutory responsibilities in connection with this project when responding. An EIR/EIS incorporating public input will then be prepared and distributed for public review and comment.

PROJECT NAME/NO.: VERNAL POOL HABITAT CONSERVATION PLAN
COMMUNITY AREA: City-wide
COUNCIL DISTRICT: City-wide

PROJECT DESCRIPTION: The project would include the conservation of the vernal pool resources within the existing City of San Diego Multi-Habitat Planning Area and conserved lands plus additional core lands containing the seven focal species (San Diego fairy shrimp, Riverside fairy shrimp, San Diego button celery, spreading navarretia, San Diego mesa mint, California Orcutt grass, and Otay mesa mint) and associated vernal pool habitat. This proposal would provide a comprehensive approach to the protection and management of the vernal pool preserve areas. The vernal pool preserve areas would be identified based on the analysis to be provided in the project's technical white papers including: Focal Species Status, Assessment of the Conservation of the Seven Focal Species, Development of Adaptive Management Strategy, Development

of Monitoring Strategy, Property Analysis Record (PAR), Recommendations for Conditions of Coverage, Conservation Analysis, and Preserve Management Funding Mechanisms. The proposal would include adoption of the Vernal Pool Habitat Conservation Plan (HCP), Implementing Agreement, a Vernal Pool Management Plan, a funding strategy, specific conditions of coverage for the seven focal species, amendments to the City's General Plan, Community Plans, and the Land Development Code (LDC)/Environmentally Sensitive Lands (ESL) Ordinance and Land Development Manual/Biology Guidelines.

Applicant: Development Services Department, Multiple Species Conservation Program

Recommended Finding: Pursuant to Section 15060(d) of the CEQA Guidelines, it appears that the proposed project may result in significant environmental impacts in the following areas: **Land Use, Biological Resources, Hydrology, and Cumulative Effects.**

Availability in Alternative Format: To request the City's letter to the applicant detailing the required scope of work (EIR Scoping Letter) in alternative format, call the Development Services Department at (619) 446-5460 immediately to ensure availability. This information is ALSO available in alternative formats for persons with disabilities; to request this notice in alternative format, call (619) 446-5446 or (800) 735-2929 (TEXT TELEPHONE).

Additional Information: For environmental review information, contact Elizabeth Shearer-Nguyen at (619) 446-5369. The Scoping Letter and supporting documents may be reviewed, or purchased for the cost of reproduction, at the Fifth floor of the Development Services Department. For information regarding public meetings/hearings on this project, contact the Project Manager, Jeanne Krosch, at (619) 236-7225.

Cecilia Gallardo, AICP
Assistant Deputy Director
Development Services Department

CERTIFICATE OF PUBLICATION

Stacie Maxwell
City of San Diego/Development Svcs.
1222 First Avenue, M.S 501
SAN DIEGO CA 92101

IN THE MATTER OF

CASE NO.

SAP No. AB1000310-09

THE CITY OF SAN DIEGO
DEVELOPMENT SERVICES DEPARTMENT
Date of Notice: November 28, 2011
PUBLIC NOTICE OF THE PREPARATION OF A
ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT
AND
PUBLIC NOTICE OF AN ENVIRONMENTAL IMPACT REPORT
SCOPING MEETING
SAP No AB1000310-09 (Internal No.)

PUBLIC NOTICE: The City of San Diego as the Lead Agency has determined that the project described below will require the preparation of an Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) in compliance with the California Environmental Quality Act (CEQA). This Notice of Preparation of a project EIR/EIS and Scoping Meeting was publicly noticed and distributed on November 28, 2011 and published in the SAN DIEGO DAILY TRANSCRIPT. In addition it was placed on the City of San Diego web-site (http://clerkdoc.sannet.gov/Website/publicnotice/pubnotcega.html).

SCOPING MEETING: A public scoping meeting will be held by the City of San Diego's Development Services Department on **Monday, December 12, 2011, beginning at 5:30 PM and running no later than 7:30 PM at the Santa Fe Room of the Balboa Park Club located in Balboa Park at 2150 Pan American Road, San Diego, CA 92101. Please note that depending on the number of attendees, the meeting could conclude earlier than 7:30 PM.** Verbal and written comments regarding the scope and alternatives of the proposed EIR/EIS will be accepted at the meeting. Written/Mail-in comments may also be sent to Elizabeth Shearer-Nguyen, City of San Diego Development Services Department, 1222 First Avenue, MS 501, San Diego, CA 92101, or e-mailed to **DSDEAS@sandiego.gov** referencing the Project Name (Vernal Pool Habitat Conservation Plan) in the subject line within 30 days of the receipt of this notice/date of the Public Notice above. Responsible agencies are requested to indicate their statutory responsibilities in connection with this project when responding. An EIR/EIS incorporating public input will then be prepared and distributed for public review and comment.

Project Name/No.: Vernal Pool Habitat Conservation Plan
Community Area: City-wide
Council District: City-wide

Project Description: The project would include the conservation of the vernal pool resources within the existing City of San Diego Multi-Habitat Planning Area and conserved lands plus additional core lands containing the seven focal species (San Diego fairy shrimp, Riverside fairy shrimp, San Diego button celery, spreading navarretia, San Diego mesa mint, California Orcutt grass, and Otay mesa mint) and associated vernal pool habitat. This proposal would provide a comprehensive approach to the protection and management of the vernal pool preserve areas. The vernal pool preserve areas would be identified based on the analysis to be provided in the project's technical white papers including: Focal Species Status, Assessment of the Conservation of the Seven Focal Species, Development of Adaptive Management Strategy, Development of Monitoring Strategy, Property Analysis Record (PAR), Recommendations for Conditions of Coverage, Conservation Analysis, and Preserve Management Funding Mechanisms. The proposal would include adoption of the Vernal Pool Habitat Conservation Plan (HCP), Implementing Agreement, a Vernal Pool Management Plan, a funding strategy, specific conditions of coverage for the seven focal species, amendments to the City's General Plan, Community Plans, and the Land Development Code (LDC)/Environmentally Sensitive Lands (ESL) Ordinance and Land Development Manual/Biology Guidelines.

Applicant: Development Services Department; Multiple Species Conservation Program

Recommended Finding: Pursuant to Section 15060(d) of the CEQA Guidelines, it appears that the proposed project may result in significant environmental impacts in the following areas: **Land Use, Biological Resources, Hydrology, and Cumulative Effects.**

Availability in Alternative Format: To request the City's letter to the applicant detailing the required scope of work (EIR Scoping Letter) in alternative format, call the Development Services Department at (619) 446-5460 immediately to ensure availability. This information is ALSO available in alternative formats for persons with disabilities; to request this notice in alternative format, call (619) 4465446 or (800) 7352929 (TEXT TELEPHONE).

Additional Information: For environmental review information, contact Elizabeth Shearer-Nguyen at (619) 446-5369. The Scoping Letter and supporting documents may be reviewed, or purchased for the cost of reproduction, at the Fifth floor of the Development Services Department. For information regarding public meetings/hearings on this project, contact the Project Manager, Jeanne Krosch, at (619) 236-7225.

Cecilia Gallardo, AICP
Assistant Deputy Director
Development Services Department
Pub. Nov. 28 -00093371

I, Gail V. Daniels, am a citizen of the United States and a resident of the county aforesaid; I am over the age of eighteen years, and not party to or interested in the above entitled matter. I am the principal clerk of the San Diego Daily Transcript, a newspaper of general circulation, printed and published daily, except on Saturdays and Sundays, in the City of San Diego, County of San Diego and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of San Diego, State of CA, under the date of January 23, 1909, Decree No. 14894; and the

Public Notice

is a true and correct copy of which the annexed is a printed copy and was published in said newspaper on the following date(s), to wit:

November 28

I certify under penalty of perjury that the forgoing is true and correct.

Dated at San Diego, California this November 28, 2011

Gail V Daniels

Signature

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The Federal Register

The Daily Journal of the United States Government

Notice

Draft Environmental Impact Statement and Proposed Vernal Pool Habitat Conservation Plan for the City of San Diego, CA

A Notice by the **Fish and Wildlife Service** on **12/20/2011**

Summary

We, the Fish and Wildlife Service (Service), intend to prepare an environmental impact statement (EIS) under the National Environmental Policy Act (NEPA) of 1969, as amended, for the proposed Vernal Pool Habitat Conservation Plan (VPHCP) under development by the City of San Diego (City). The draft EIS will evaluate the impacts of several alternatives related to the VPHCP being prepared by the City in support of the City's anticipated application for an Endangered Species Act (ESA) permit for incidental take of seven federally listed vernal pool species, from activities associated with urban development activities. We also announce plans for a public scoping meeting and the opening of a public comment period. We request data, comments, new information, or suggestions from the public, other concerned governmental agencies, the scientific community, Tribes, industry, or any other interested party.

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DATES:

To ensure consideration, please send your written comments by February 16th, 2012.

For more information, see "Public Comments" and "Reasonable Accommodation" under the SUPPLEMENTARY INFORMATION section.

ADDRESSES:

To request further information or submit written comments, please use one of the following methods, and note that your information request or comment is in reference to the City of San Diego Vernal Pool HCP:

- Fax: Attn: Jim Bartel, Field Supervisor, (760) 431-5902.
- U.S. Mail: Jim Bartel, Field Supervisor, Carlsbad Fish and Wildlife Office, U.S. Fish and Wildlife Service, 6010 Hidden Valley Road, Suite 101, Carlsbad, CA 92011.
- In-Person Drop-off: You may drop off comments during regular business hours at the above address.

FOR FURTHER INFORMATION CONTACT:

Karen Goebel, Assistant Field Supervisor, by phone at (760) 431-9440, or by U.S. mail at the above address; or Jeanne Krosch, Senior Planner, City of San Diego, by phone at (619) 236-7225.

SUPPLEMENTARY INFORMATION:

We publish this notice under the National Environmental Policy Act of 1969, as amended (**42 U.S.C. 4321** et seq.; NEPA), and its implementing regulations in the Code of Federal Regulations (CFR) at **40 CFR 1506.6**, as well as in compliance with section 10(c) of the Endangered Species Act (**16 U.S.C. 1531** et seq.; ESA). We intend to prepare a draft environmental impact statement to evaluate the impacts of several alternatives related to the potential issuance of an incidental take permit (ITP) to the City of San Diego, as well as impacts from implementation of the supporting habitat conservation plan. The EIS will be a joint document with an environmental impact report (EIR) prepared by the City under the California Environmental Quality Act (CEQA).

The City proposes to develop a Vernal Pool HCP as part of their application for an ITP under section 10 (a)(1)(B) of the ESA. The proposed VPHCP will include measures necessary to minimize and mitigate the impacts, to the maximum extent practicable, of potential proposed taking of federally listed species to be covered by the VPHCP, and the habitats upon which they depend, resulting from residential, commercial, and other development activities within the proposed plan area.

In addition to this notice, the City has publicly released a CEQA notice of preparation for its EIR via State Clearinghouse and local media. Please see **http://www.sandiego.gov/development-services/industry/pdf/infobulletin/ib401.pdf** for more information on the CEQA process.

The proposed VPHCP would establish the structure to integrate development and vernal pool conservation in the City.

The proposed VPHCP would serve as a multiple-species HCP for the City in its application for an ITP under section 10(a)(1)(B) of the ESA. If the application is approved by the Service, the City would obtain authorization for the incidental take of certain threatened and endangered animal species ("covered species"). If the Federal permit is issued, the City could extend the permit authorization to proponents of development projects under the City's jurisdiction.

Background

Section 9 of the ESA prohibits taking of fish and wildlife species listed as endangered or threatened under section 4 of the Act. Under the ESA, the term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The term "harm" is defined in the regulations as including significant habitat modification or degradation that results in death or injury to listed wildlife species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (**50 CFR 17.3**). The term "harass" is defined in the regulations as to carry out actions that create the likelihood of injury to listed wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, which include, but are not limited to, breeding, feeding, or sheltering (**50 CFR 17.3**).

However, under specified circumstances, the Service may issue permits that allow the take of federally listed wildlife species, provided that the take is incidental to, but not the purpose of, an otherwise lawful activity. Regulations governing permits for endangered and threatened wildlife species are **50 CFR 17.22** and 17.32, respectively. The ESA's take prohibitions do not apply to federally listed plants. However, other provisions of the Act prohibit the removal or destruction of plants on non-federal lands in violation of State law.

Section 10(a)(1)(B) of the ESA contains provisions for issuing incidental take permits to non-Federal entities for the take of endangered and threatened wildlife species, provided the following criteria are met:

1. The taking will be incidental;

2. The applicants will, to the maximum extent practicable, minimize and mitigate the impact of such taking;

3. The applicants will develop a proposed HCP and ensure that adequate funding for the plan will be provided;

4. The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and

5. The applicants will carry out any other measures that the Service may require as being necessary or appropriate for the purposes of the HCP.

Thus, the purpose of issuing an ITP to the City would be to allow the City, under its local authority, to authorize development while conserving the covered species and their habitats. Implementation of a vernal pool species habitat conservation plan, rather than a species-by-species or project-by-project approach, is intended to maximize the benefits of conservation measures for covered species and eliminate expensive and time-consuming efforts associated with processing individual ITPs for each project within the City's proposed plan area. The Service expects that the City will request ITP coverage for a period of 50 years.

Project Area

The proposed VPHCP Planning Area covers approximately 206,124 acres of land in the City's jurisdiction, including City-owned lands in the unincorporated areas of Otay Lakes and Marron Valley, where development potentially may occur. The proposed VPHCP would cover non-Federal lands in the Planning Area. To facilitate timely and environmentally responsible development, the proposed VPHCP may focus on specific areas for development, such as Otay Mesa, Kearny Mesa, Mira Mesa, and Del Mar Mesa.

Alternatives in the Draft Environmental Impact Statement

The proposed action presented in the draft EIS will be compared to the no-action alternative. The no-action alternative represents estimated future conditions assuming an ITP is not issued, to which the proposed action's estimated future conditions can be compared. Other alternatives, including their potential impacts, will also be addressed in the draft EIS.

No-Action Alternative

Because future development activities are vital for the City, these activities would likely continue regardless of whether the proposed 10(a)(1)(B) ITP is issued. Where a specific project would result in potential impacts to federally protected species within the proposed permit area that could not be avoided and a federal permit or federal funding is involved, i.e., there is a federal nexus for the project, the project proponent would address impacts in accordance with the an individual formal or informal consultation under Section 7 of the Act between the Federal authorizing agency and the Service. If no federal nexus exists for a proposed project that is likely to result in take of a listed vernal pool animal species, the project proponent would likely seek an individual section 10(a)(1)(B) ITP on a project-specific basis. Although future activities by the City or a private applicant would be similar to those covered by the VPHCP, not all activities would necessitate an incidental take permit or consultation with the Service. Thus, under the no-action alternative, the City and various project proponents would likely have to file numerous separate section 10(a)(1)(B) permit applications over the 50-year project period. This activity-by-activity approach would be more time-consuming and less efficient than authorizing activities under an umbrella incidental take permit, and could result in a fragmented mitigation approach.

Proposed Alternative

The proposed action is the issuance of an ITP to the City of San Diego covering impacts to seven vernal pool species resulting from development activities authorized by the City within the proposed Planning Area for a period of 50 years. The purpose of the Vernal Pool HCP would be to contribute to the conservation of the covered species while streamlining endangered species permitting for development projects. The Vernal Pool HCP, which must meet the requirements of section 10(a)(2)(A) of the ESA, would be developed and implemented by the City through its local regulatory and land use authorities. This alternative would allow for a comprehensive mitigation approach for unavoidable impacts and reduce permit processing times and efforts for the City and the Service.

Potential impacts to covered species would be addressed through a conservation program that includes avoidance, minimization, mitigation, preservation, and restoration and enhancement of habitat for covered species by multiple components, such as reserve design and assembly processes, protection and management elements, funding assurances, monitoring, and adaptive management within the VPHCP planning area.

The planning goals of the Vernal Pool HCP are anticipated to include the following:

- Provide for long-term conservation and management of Covered Species within the VPHCP area;
- Preserve, restore, and enhance vernal pool ecosystems that support Covered Species within the VPHCP area;
- Build on the City's general plans;
- Further identify the most appropriate locations within the VPHCP area for development projects, taking into account potential impacts to threatened and endangered species and their vernal pool habitat;
- Provide a means to implement covered activities in a manner that complies with the ESA, NEPA, CEQA, and other relevant laws;
- Provide a basis for the issuance of take authorizations allowing the lawful take of covered species incidental to covered activities;
- Provide a comprehensive means to coordinate and standardize mitigation and compensation requirements for covered activities within the plan area;
- Provide a framework for a more efficient process by which proposed development projects with the plan area may obtain regulatory authorizations, and which results in greater conservation values than would a project-by-project, species-by-species review; and
- Identify and incorporate climate change adaptation research, management objectives, and policies into the final plan document.

More information on the proposed VPHCP is available on the Internet at **http://www.sandiego.gov/planning/mscp/**.

Covered Activities

The covered activities under the VPHCP are expected to include residential, commercial, and industrial development; airports; roads; utilities; trails; and vernal pool restoration and enhancement.

Covered Species

We anticipate that the following federally listed endangered wildlife species will be included as covered species in the City of San Diego's proposed VPHCP: the San Diego fairy shrimp (Branchinecta sandiegonensis) and the Riverside fairy shrimp (Streptocephalus woottonii). Take of federally listed plant species is not prohibited under the ESA, and authorization under an ESA ITP is not required. Section 9 of ESA does, however, prohibit the removal or malicious destruction of federally listed plants from areas under Federal jurisdiction and the removal or destruction of such plants in knowing violation of State law. In addition, section 7(a)(2) of the ESA prohibits Federal agencies from jeopardizing the continued existence of any listed plant or animal species, or destroying or adversely modifying the critical habitat of such species. The following federally listed plant species are anticipated to be included in the VPHCP in recognition of the conservation benefits to be provided for them under the plan and to be listed on the ITP for purposes of receiving mitigation assurances: The threatened spreading navarretia (Navarretia fossalis), the endangered San Diego button celery (Eryngium aristulatum var. parishii), the endangered San

Diego mesa mint (Pogogyne abramsii), the endangered California Orcutt grass (Orcuttia californica), and the endangered Otay mesa mint (Pogogyne nudiscula).

Conservation Alternative

An expanded conservation alternative that would conserve additional vernal pool resources and provide increased opportunities for restoration and enhancement of vernal pool habitat will also be considered in the draft EIS.

Environmental Review and Next Steps

The Service will conduct an environmental review to analyze the proposed action, along with other alternatives evaluated and the associated impacts of each. The draft EIS will be the basis for the impact evaluation for each covered species and the range of alternatives to be addressed. The draft EIS is expected to provide biological descriptions of the affected species and habitats, as well as the effects of the alternatives on other resources, such as vegetation, wetlands, wildlife, geology and soils, air quality, water resources, water quality, cultural resources, land use, recreation, water use, local economy, and environmental justice.

Following completion of the environmental review, the Service will publish a notice of availability and a request for comment on the draft EIS and the City's permit application, which will include the proposed HCP. The draft EIS and proposed HCP are expected to be completed and available to the public in late summer 2012.

Public Comments

We request data, comments, new information, or suggestions from the public, other concerned governmental agencies, the scientific community, Tribes, industry, or any other interested party on this notice. We will consider these comments in developing a draft EIS and in the development of a HCP and ITP. We particularly seek comments on the following:

1. Biological information concerning the species;

2. Relevant data concerning the species;

3. Additional information concerning the range, distribution, population size, and population trends of the species;

4. Current or planned activities in the planning area and their possible impacts on the species;

5. The presence of archeological sites, buildings and structures, historic events, sacred and traditional

areas, and other historic preservation concerns, which are required to be considered in project planning by the National Historic Preservation Act; and

6. Identification of any other alternatives to the proposed action that should be analyzed in the draft EIS.

7. Identification of any other environmental issues that should be considered in the draft EIS.

You may submit your comments and materials by one of the methods listed in the ADDRESSES section.

Comments can also be submitted to the City in response to their notice of EIR preparation under CEQA at **DSDEAS@sandiego.gov**, and comments will also be included as an appendix to the draft EIR/EIS.

Comments and materials we receive, as well as supporting documentation we use in preparing the draft EIS, will be available for public inspection by appointment, during normal business hours, at our office (see FOR FURTHER INFORMATION CONTACT).

Public Availability of Comments

Written comments we receive become part of the public record associated with this action. Before including your address, phone number, email address, or other personal identifying information in your comments, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Authority

We provide this notice under section 10 of the ESA (**16 U.S.C. 1531** et seq.) and by NEPA Regulations (**40 CFR 1501.7**, **40 CFR 1506.6**, and 1508.22).

Paul McKim,

Deputy Regional Director, Pacific Southwest Region, U.S. Fish and Wildlife Service, Sacramento, California.

[FR Doc. 2011-32494 Filed 12-19-11; 8:45 am]

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Site Feedback

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

Notice of Preparation

RECEIVED

DEC 02 2011

Development Services

November 29, 2011

To: Reviewing Agencies

Re: Vernal Pool Habitat Conservation Plan
SCH# 2011111075

Attached for your review and comment is the Notice of Preparation (NOP) for the Vernal Pool Habitat Conservation Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Elizabeth Shearer-Nguyen
City of San Diego
1222 First Avenue, MS-501
San Diego, CA 92101

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH#	2011111075
Project Title	Vernal Pool Habitat Conservation Plan
Lead Agency	San Diego, City of

Type	**NOP** Notice of Preparation
Description	The project would include the conservation of the vernal pool resources within the existing City of San Diego Multi-Habitat Planning Area and conserved lands plus additional core lands containting the seven focal species (San Diego fairy shrimp, Riverside fairy shrimp, San Diego button celery, spreading navarretia, San Diego mesa mint, California Orcutt grass, and Otay mesa mint) and associated vernal pool habitat. This proposal would provide a comprehensive approach to the protection and management of the vernal pool preserve areas. The vernal pool preserve areas would be identified based on the analysis to be provided in the project's technical white papers including: Focal Species Status, Assessment of the Conservation of the Seven Focal Species, Development of Adaptive Management Strategy, Development of Monitoring Strategy, Property Analysis Record (PAR), Recommendatins for Conditions of Coverage, Conservation Analysis, and Preserve Management Funding Mechanisms. The project would include adoption of the Vernal Pool Habitat Conservation Plan (HCP), Implementing Agreement, a Vernal Pool Management Plan, a funding strategy, specific conditions of coverage for the seven focal species, amendments to the City's General Plan, Community Plans, and the Land Development Code (LDC)/Environmentally Sensitive Lands (ESL) Ordinance and Land Development Manual/Biology Guidelines.

Lead Agency Contact

Name	Elizabeth Shearer-Nguyen		
Agency	City of San Diego		
Phone	(619) 446-5369	*Fax*	
email			
Address	1222 First Avenue, MS-501		
City	San Diego	*State* CA	*Zip* 92101

Project Location

County	San Diego			
City	San Diego			
Region				
Cross Streets	City-wide			
Lat / Long				
Parcel No.				
Township		*Range*	*Section*	*Base*

Proximity to:

Highways	5, 15, 52, 54, 56, 67, 76, 125,
Airports	Multiple
Railways	Multiple
Waterways	Multiple
Schools	Multiple
Land Use	Varied - project is city-wide

Project Issues	Biological Resources; Drainage/Absorption; Water Quality; Landuse; Cumulative Effects
Reviewing Agencies	Resources Agency; California Coastal Commission; Department of Parks and Recreation; California Energy Commission; Department of Water Resources; Department of Fish and Game, Region 5; Native American Heritage Commission; Public Utilities Commission; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 11; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 9

Note: Blanks in data fields result from insufficient information provided by lead agency.

Document Details Report
State Clearinghouse Data Base

Date Received 11/29/2011 *Start of Review* 11/29/2011 *End of Review* 12/28/2011

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: San Diego

SCH# 2011111107

sources Agency

Resources Agency
Nadell Gayou

☐ **Dept. of Boating & Waterways**
Nicole Wong

☒ **California Coastal Commission**
Elizabeth A. Fuchs

☐ **Colorado River Board**
Gerald R. Zimmerman

☐ **Dept. of Conservation**
Elizabeth Carpenter

☒ **California Energy Commission**
Eric Knight

☐ **Cal Fire**
Allen Robertson

☐ **Central Valley Flood Protection Board**
James Herota

☐ **Office of Historic Preservation**
Ron Parsons

Dept of Parks & Recreation
Environmental Stewardship Section

☐ **California Department of Resources, Recycling & Recovery**
Sue O'Leary

☐ **S.F. Bay Conservation & Dev't. Comm.**
Steve McAdam

☒ **Dept. of Water Resources** Resources Agency
Nadell Gayou

sh and Game

☐ **Depart. of Fish & Game**
Scott Flint
Environmental Services Division

☐ **Fish & Game Region 1**
Donald Koch

☐ **Fish & Game Region 1E**
Laurie Harnsberger

☐ **Fish & Game Region 2**
Jeff Drongesen

☐ **Fish & Game Region 3**
Charles Armor

☐ **Fish & Game Region 4**
Julie Vance

☒ **Fish & Game Region 5**
Leslie Newton-Reed
Habitat Conservation Program

☐ **Fish & Game Region 6**
Gabrina Gatchel
Habitat Conservation Program

☐ **Fish & Game Region 6 I/M**
Brad Henderson
Inyo/Mono, Habitat Conservation Program

☐ **Dept. of Fish & Game M**
George Isaac
Marine Region

Other Departments

☐ **Food & Agriculture**
Sandra Schubert
Dept. of Food and Agriculture

☐ **Depart. of General Services**
Public School Construction

☐ **Dept. of General Services**
Anna Garbeff
Environmental Services Section

☐ **Dept. of Public Health**
Bridgette Binning
Dept. of Health/Drinking Water

☐ **Delta Stewardship Council**
Terry Macaulay

Independent Commissions,Boards

☐ **Delta Protection Commission**
Linda Flack

☐ **Cal EMA (Emergency Management Agency)**
Dennis Castrillo

☒ **Native American Heritage Comm.**
Debbie Treadway

☒ **Public Utilities Commission**
Leo Wong

☐ **Santa Monica Bay Restoration**
Guangyu Wang

☐ **State Lands Commission**
Jennifer Deleong

☐ **Tahoe Regional Planning Agency (TRPA)**
Cherry Jacques

Business, Trans & Housing

☒ **Caltrans - Division of Aeronautics**
Philip Crimmins

☐ **Caltrans - Planning**
Terri Pencovic

☒ **California Highway Patrol**
Suzann Ikeuchi
Office of Special Projects

☐ **Housing & Community Development**
CEQA Coordinator
Housing Policy Division

Dept. of Transportation

☐ **Caltrans, District 1**
Rex Jackman

☐ **Caltrans, District 2**
Marcelino Gonzalez

☐ **Caltrans, District 3**
Bruce de Terra

☐ **Caltrans, District 4**
Lisa Carboni

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☐ **Caltrans, District 10**
Tom Dumas

☒ **Caltrans, District 11**
Jacob Armstrong

☐ **Caltrans, District 12**
Marlon Regisford

Cal EPA

Air Resources Board

☐ Airport/Energy Projects
Jim Lerner

☐ Transportation Projects
Douglas Ito

☐ Industrial Projects
Mike Tollstrup

☐ **State Water Resources Control Board**
Regional Programs Unit
Division of Financial Assistance

☐ **State Water Resources Control Board**
Student Intern, 401 Water Quality Certification Unit
Division of Water Quality

☐ **State Water Resouces Control Board**
Phil Crader
Division of Water Rights

☒ **Dept. of Toxic Substances Control**
CEQA Tracking Center

☐ **Department of Pesticide Regulation**
CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

☐ **RWQCB 1**
Cathleen Hudson
North Coast Region (1)

☐ **RWQCB 2**
Environmental Document Coordinator
San Francisco Bay Region (2)

☐ **RWQCB 3**
Central Coast Region (3)

☐ **RWQCB 4**
Teresa Rodgers
Los Angeles Region (4)

☐ **RWQCB 5S**
Central Valley Region (5)

☐ **RWQCB 5F**
Central Valley Region (5)
Fresno Branch Office

☐ **RWQCB 5R**
Central Valley Region (5)
Redding Branch Office

☐ **RWQCB 6**
Lahontan Region (6)

☐ **RWQCB 6V**
Lahontan Region (6)
Victorville Branch Office

☐ **RWQCB 7**
Colorado River Basin Region (7)

☐ **RWQCB 8**
Santa Ana Region (8)

☒ **RWQCB 9**
San Diego Region (9)

☐ **Other** _____

_____

_____

☐ _____
Conservancy

Last Updated 9/29/11

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

December 5, 2011

Ms. Elizabeth Shearer-Nguyen, Environmental Planner
City of San Diego Development Services Department
1222 First Avenue, MS-501
San Diego, CA 92101

Re: SCH#2011111075 CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the **"Vernal Pool Habitat Conservation Plan;"** located City-Wide; City of San Diego; San Diego County, California

Dear Ms. Shearer-Nguyen:

The Native American Heritage Commission (NAHC) is the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources pursuant to California Public Resources Code §21070 and affirmed by the Third Appellate Court in the case of EPIC v. Johnson (1985: 170 Cal App. 3rd 604). The court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites. The NAHC wishes to comment on the proposed project.

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect.

The NAHC Sacred Lands File (SLF) search resulted as follows: **Native American cultural resources were identified** within the City Limits of the City of San Diego in numerous locations. Contact the Native American contacts for further input on the proposed project. Also, the absence of archaeological resources does not preclude their existence. . California Public Resources Code §§5097.94 (a) and 5097.96 authorize the NAHC to establish a Sacred Land Inventory to record Native American sacred sites and burial sites. These records are exempt from the provisions of the California Public Records Act pursuant to. California Government Code §6254 (r). The purpose of this code is to protect such sites from vandalism, theft and destruction. The NAHC "Sacred Sites,' as defined by the Native American Heritage

Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the
list of Native American contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Special reference is made to the *Tribal Consultation* requirements of the California 2006 Senate Bill 1059: enabling legislation to the federal Energy Policy Act of 2005 (P.L. 109-58), mandates consultation with Native American tribes (both federally recognized and non federally recognized) where electrically transmission lines are proposed. This is codified in the California Public Resources Code, Chapter 4.3 and §25330 to Division 15.

Furthermore, pursuant to CA Public Resources Code § 5097.95, the NAHC requests that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources.

Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254(r) and may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery'.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

California Native American Contacts
San Diego County
December 5, 2011

Barona Group of the Capitan Grande
Edwin Romero, Chairperson
1095 Barona Road Diegueno
Lakeside , CA 92040
sue@barona-nsn.gov
(619) 443-6612
619-443-0681

Sycuan Band of the Kumeyaay Nation
Danny Tucker, Chairperson
5459 Sycuan Road Diegueno/Kumeyaay
El Cajon , CA 92021
ssilva@sycuan-nsn.gov
619 445-2613
619 445-1927 Fax

La Posta Band of Mission Indians
Gwendolyn Parada, Chairperson
PO Box 1120 Diegueno/Kumeyaay
Boulevard , CA 91905
gparada@lapostacasino.
(619) 478-2113
619-478-2125

Viejas Band of Kumeyaay Indians
Anthony R. Pico, Chairperson
PO Box 908 Diegueno/Kumeyaay
Alpine , CA 91903
jrothauff@viejas-nsn.gov
(619) 445-3810
(619) 445-5337 Fax

San Pasqual Band of Mission Indians
Allen E. Lawson, Chairperson
PO Box 365 Diegueno
Valley Center, CA 92082
allenl@sanpasqualband.com
(760) 749-3200
(760) 749-3876 Fax

Kumeyaay Cultural Historic Committee
Ron Christman
56 Viejas Grade Road Diegueno/Kumeyaay
Alpine , CA 92001
(619) 445-0385

Iipay Nation of Santa Ysabel
Virgil Perez, Spokesman
PO Box 130 Diegueno
Santa Ysabel, CA 92070
brandietaylor@yahoo.com
(760) 765-0845
(760) 765-0320 Fax

Jamul Indian Village
Kenneth Meza, Chairperson
P.O. Box 612 Diegueno/Kumeyaay
Jamul , CA 91935
jamulrez@sctdv.net
(619) 669-4785
(619) 669-48178 - Fax

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California Native American Contacts
San Diego County
December 5, 2011

Mesa Grande Band of Mission Indians
Mark Romero, Chairperson
P.O Box 270 Diegueno
Santa Ysabel, CA 92070
mesagrandeband@msn.com
(760) 782-3818
(760) 782-9092 Fax

Inaja Band of Mission Indians
Rebecca Osuna, Spokesperson
2005 S. Escondido Blvd. Diegueno
Escondido , CA 92025
(760) 737-7628
(760) 747-8568 Fax

Pala Band of Mission Indians
Tribal Historic Preservation Office/Shasta Gaugher
35008 PalaTemecula Road, PMB Luiseno
Pala , CA 92059 Cupeno
sgaughen@palatribe.com
(760) 891-3515
(760) 742-3189 Fax

Kumeyaay Cultural Repatriation Committee
Steve Banegas, Spokesperson
1095 Barona Road Diegueno/Kumeyaay
Lakeside , CA 92040
(619) 742-5587 - cell
(619) 742-5587
(619) 443-0681 FAX

Rincon Band of Mission Indians
Tiffany Wolfe, Cultural & Environmental
P.O. Box 68 Luiseno
Valley Center, CA 92082
twolfe@rincontribe.org
(760) 297-2632
(760) 297-2639 Fax

Pauma Valley Band of Luiseño Indians
Bennae Calac, Tribal Council Member
P.O. Box 369 Luiseno
Pauma Valley CA 92061
bennaecalac@aol.com
(760) 617-2872
(760) 742-3422 - FAX

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
P.O. Box 775 Diegueno -
Pine Valley , CA 91962
(619) 709-4207

Rincon Band of Mission Indians
Bo Mazzetti, Chairperson
P.O. Box 68 Luiseno
Valley Center, CA 92082
bomazzetti@aol.com
(760) 749-1051
(760) 749-8901 Fax

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California Native American Contacts
San Diego County
December 5, 2011

San Pasqual Band of Indians
Kristie Orosco, Environmental Coordinator
P.O. Box 365 Luiseno
Valley Center, CA 92082 Diegueno
(760) 749-3200
council@sanpasqualtribe.org
(760) 749-3876 Fax

La Jolla Band of Mission Indians
James Trujillo, Vice Chair
22000 Highway 76 Luiseno
Pauma Valley CA 92061
rob.roy@lajolla-nsn.gov
(760) 742-3796
(760) 742-1704 Fax

Ewiiaapaayp Tribal Office
Will Micklin, Executive Director
4054 Willows Road Diegueno/Kumeyaay
Alpine , CA 91901
wmicklin@leaningrock.net
(619) 445-6315 - voice
(619) 445-9126 - fax

Ipai Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507 Diegueno/Kumeyaay
Santa Ysabel, CA 92070
cjlinton73@aol.com
(760) 803-5694
cjlinton73@aol.com

Ewiiaapaayp Tribal Office
Michael Garcia, Vice Chairperson
4054 Willows Road Diegueno/Kumeyaay
Alpine , CA 91901
michaelg@leaningrock.net
(619) 445-6315 - voice
(619) 445-9126 - fax

Manzanita Band of the Kumeyaay Nation
Leroy J. Elliott, Chairperson
P.O. Box 1302 Diegueno/Kumeyaay
Boulevard , CA 91905
(619) 766-4930
(619) 766-4957 - FAX

San Luis Rey Band of Mission Indians
Cultural Department
1889 Sunset Drive Luiseno
Vista , CA 92081 Cupeno
760-724-8505

760-724-2172 - fax

Kumeyaay Diegueno Land Conservancy
M. Louis Guassac
P.O. Box 1992 Diegueno/Kumeyaay
Alpine , CA 91903
guassacl@onebox.com
(619) 952-8430

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California Native American Contacts
San Diego County
December 5, 2011

Inter-Tribal Cultural Resource Protection Council
Frank Brown, Coordinator
240 Brown Road Diegueno/Kumeyaay
Alpine , CA 91901
FIREFIGHTER69TFF@AOL.
COM
((619) 884-8437

Kumeyaay Cultural Repatriation Committee
Bernice Paipa, Vice Spokesperson
P.O. Box 1120 Diegueno/Kumeyaay
Boulevard , CA 91905
(619) 478-2113

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THE CITY OF SAN DIEGO

VERNAL POOL HABITAT CONSERVATION PLAN
(PROJECT NO. NO. *TBD*/SCH NO. 2011111075)
EIR Scoping Meeting Sign-In Sheet
Monday, December 12, 2011

Name/Affiliation (please print)	Address (please print)
Frank Landis, CNPSSD	7885 Via Montebello #5, San Diego CA 92129
JOE FRICHTEL / MIRA MESA	8120 VALDOSTA S.D, CA 92126
CLAUDIO CASTRUITA	220 2ND AVE CHULA VISTA CA 91910
Greg Mason / Alden	3245 University #1158, San Diego, CA 92104
Jim Peugh	2776 Nipoma St. San Diego 92106
Mike Kelly	11591 Polaris Dr S.D. 92126
DAVID HOGAN	THE CHAPARRAL LANDS CONSERVANCY POB 141 MOUNT LAGUNA CA 91948
Russ Baggs	1042 N El Camino Real Ste B339 92024
Dustin Jaeke	2924 Larkin Pl. San Diego CA 92123

SPEAKER SLIP

City of San Diego - Development Services Department

VERNAL POOL HABITAT CONSERVATION PLAN – SCOPING MEETING

Monday, December 12, 2011

Name/Address: Frank Landis, 7885 Via Montebello #5, SD 92129

Email or Phone Number franklandis03@yahoo.com

Do Not Wish to Speak: ____ Wish to speak: X

Comments: Submitted separately on paper & verbally.

SPEAKER SLIP

City of San Diego - Development Services Department

VERNAL POOL HABITAT CONSERVATION PLAN – SCOPING MEETING

Monday, December 12, 2011

Name/Address: Mike Kelly

Email or Phone Number MKelly1@sun.rr.com

Do Not Wish to Speak: ____ Wish to speak: ✓

Comments:

SPEAKER SLIP

City of San Diego - Development Services Department

VERNAL POOL HABITAT CONSERVATION PLAN – SCOPING MEETING

Monday, December 12, 2011

Name/Address: Jim Peugh - Audubon Society

Email or Phone Number peugh@sandiegoaudubon.org

Do Not Wish to Speak: ____ Wish to speak: ✓

Comments:

SPEAKER SLIP

City of San Diego - Development Services Department

VERNAL POOL HABITAT CONSERVATION PLAN – SCOPING MEETING

Monday, December 12, 2011

Name/Address: JOE FRICHTEL / 8120 VALDOSTA SD CA 92126

Email or Phone Number JFRICHTEL@UCSD.EDU 858 566 5990

Do Not Wish to Speak: ____ Wish to speak: X

Comments: From Mira Mesa

SPEAKER SLIP

City of San Diego - Development Services Department

VERNAL POOL HABITAT CONSERVATION PLAN – SCOPING MEETING

Monday, December 12, 2011

Name/Address: Van Collinsworth

Email or Phone Number

Do Not Wish to Speak: ____ Wish to speak: ✓

Comments: Letter with Attachments

SPEAKER SLIP

City of San Diego - Development Services Department

VERNAL POOL HABITAT CONSERVATION PLAN – SCOPING MEETING

Monday, December 12, 2011

Name/Address: DAVID HOGAN, THE CHAPARRAL LANDS CONSERVANCY POB 141 MOUNT LAGUNA CA 91948

Email or Phone Number DIRECTOR@CHAPARRALCONSERVANCY.ORG 619 756-3864

Do Not Wish to Speak: ____ Wish to speak: X

Comments:

Transcript from the Scoping Meeting for the EIR/EIS Vernal Pool HCP
December 12, 2011

Good evening thank you for attending and welcome to the scoping meeting for the Environmental Impact Report for the Vernal Pool Habitat Conservation Plan. I am Anna McPherson Senior Environmental Analyst with the City of San Diego Development Services Department.

I will be managing the production of the document. This meeting is referred to as Environmental Impact Report scoping meeting and the purpose is to give the public and interested parties an opportunity to submit comments regarding the potential environmental impacts of a proposed project. The information that is gathered tonight along with submitted written comments provided during the 30 day public review scoping period will be used to develop the scope and the content of the Environmental Impact Report. Public review began on November 28, 2011 and will formally conclude on December 28, 2011 but we will also take comments after that date. I am required as the environmental review staff by the City's municipal code to provide the public and the decision makers with an independently prepared environmental document which discloses the impacts to the physical environment of the proposed project

The information is used by the City's decision makers as part of the deliberating process in approving or denying a project. The environmental document itself does not recommend approval or denial of a project. I just have a few sort of housekeeping comments about how the meeting will be conducted. First a brief description of the project by the project applicant and in this instance it is the City will take place and then we will open the meeting for public comment. The meeting is designed to get as much public input as possible on areas that need to be addressed in the EIR (Environmental Impact Report) in the time we have allocated for this meeting. Our meeting this evening is scheduled from 5:30pm-7:30pm depending on the number of people who come in to speak. The meeting could end earlier than the noted 7:30 pm time.

Our purpose is to get everyone's comments that being the most important thing. Your verbal comments will be recorded up here therefore each speaker is asked to introduce themselves, state their address, and complete your comments within approximately 3 minutes. This is especially important this is a scoping meeting to assist Jeanne and me (whom you will meet in a few minutes) in the preparation of the document.

Please refrain from trying to conduct a debate on the merits of the project at this meeting for that is not the purpose of this meeting. The focus of the comments tonight need to stay on those potential environmental impacts you believe need to be thoroughly analyzed in the projects EIR. Hopefully you have all received a copy of the NOP and the scoping letter if not I can provide you a copy either electronically or in hard copy format.

The scoping letter identified the following issue areas that will be addressed in the EIR those were land us, biological resources and hydrology. The EIR will also describe the impacts that cannot be avoided as a result of the project growth inducement, cumulative impacts, those that effects that are found not to be significant and alternatives.

Lastly I will be acting as the moderator and timekeeper for the duration of the meeting and I respectfully request that you end your comments when I notify you that your time is up. We usually allocate 3 minutes for each speaker. There are not a lot of us here so we can be a little flexible but we do like to be fair. Thank you very much for your patience.

We will now begin first I would like to introduce you to Jeanne Krosch who is a Senior Planner with the Multiple Species Conservation program section of the Development Services Department. Jeanne is Project Manager of the HCP and she is going to provide you with a brief description of the project.

Hello everyone thanks for coming out tonight. We will be preparing a Vernal Pool HCP (Habitat Conservation Program). The proposed project is for the adoption of a Vernal Pool HCP the lands within the City of San Diego's jurisdiction and that includes city owned lands in the unincorporated areas in Otay Lake, Proctor Valley, and Marron Valley. The proposal includes obtaining coverage for seven endangered and threatened Vernal Pool species. An issuance of an incidental take permit from the U.S. Fish and Wildlife Service under Section 10a of the Federal Endangered Species Act. The seven species include San Diego Fairy Shrimp, Riverside Fairy Shrimp, San Diego Button Celery, San Diego Mesa Mint, California Orcutt Grass, Otay Mesa Mint and Spreading Navarretia. The proposed project would provide a comprehensive approach to the protection and management of the Vernal Pool preserve areas which would be identified as part of the HCP planning process. The preserve areas are being formulated by the City in coordination with the U.S. Fish & Wildlife Service and the California Department of Fish & Game. Input has been and will continue to be solicited from property owners, environmental groups, the building industry and the public. The EIR it is going to be a joint document - the EIR (Environmental Impact Report) and EIS (Environmental Impact Statement) and will include at the no project alternative based on the MSCP or MHPA (Multi-Habitat Planning Area) and the existing conserved lands. In addition to the proposed project, there will be an expanded conservation alternative which will include additional Vernal Pool resources and/or additional restoration and enhancement of vernal pool habitat.

The purpose of the Vernal Pool HCP is to contribute to the conservation of the seven covered species and will include multiple components such as preserve design, assembly process, protection and management elements, funding insurances, monitoring and adaptive management of the Vernal Pool complexes within the Vernal Pool HCP preservation areas. Proposed actions that would occur with the project include adoption of the VP HCP, the implementing agreement, a Vernal Pool management plan, funding strategy, specific conditions of coverage for the seven species, amendments to the community plans if any land use changes are proposed, and amendments to the land development code, environmentally sensitive lands ordinance and land development manual/biology guidelines. Again thank you for coming out tonight. We also have David Zoutendyk from the U.S. Fish & Wildlife Service, Craig Hooker, and Cathy Winterrowd are here too.

Thank you Jeanne for the project overview so now we are going to open it up for public comment. We do have sign in sheets, speaker slips if you can fill one out and give that to us to make sure your name and information is correct. This is for the administrative record and also put into the environmental document. If you can go ahead and give us a speaker slip we can call your name and when you come forward please come up to the podium and speak into the microphone because that is how we are recording the meeting this evening.

So I have Frank Landis is that correct?

My name is Frank Landis- Representative for the California Native Plant Society San Diego Chapter my address is: 7885 Via Montebello #5 San Diego, Ca 92129

First I want to thank you for the opportunity to provide input. California Native Plant Society is very concerned about the scope both as it presented and in its implications. As presented we found four issues. First the list of local species seemed to be incomplete and the plant species heard by the MSCP's such as "Little Mouse Tail", San Diego Golden Star and Orcutt's brodiaea are not considered in this analysis. These are plants that occur in or near Vernal Pools.

Furthermore there are over a dozen other sensitive plants listed by Fish & Game and not listed by the MSCP that could be affected by any development around a Vernal Pool.

Impacts to these species must be analyzed as well whether they are listed by the MSCP or not. Second issue the scope calls for the use of figures to present information, unfortunately the location provided for our perusal was so crude I could not tell where important boundaries are, where the scope was applied or not. Since at least one vernal pool currently exist at the very edge of a preserve on Del Mar Mesa accurate maps and figures are critical in this project. The scope should be amended to reflect this need for absolute accuracy and where the boundaries are. Third, the scope says that the growth inducement must be analyzed and the growth inducement has already been determined to be a non-significant issue in two different paragraphs.

I would suggest correcting this so growth inducement is analyzed. We would also suggest that the neighborhood quality is a significant issue, as at least some people who live near vernal pools value them very highly. Fourth, the pools currently contain water, fairy shrimp, tadpoles, and sprouting plants and field survey should have started weeks ago because vernal pools are ephemeral. The scope must require that all field surveys are performed at the proper time of year for each species surveyed. Unless the City can expedite the contract, field work may have to wait until 2012-2013 rainy season next winter. If the next winter is dry, field work may have to wait another year, so that survey can be accurate. As for the implications of this update, CNPS (California Native Plant Society) is concerned that an updated HCP would open the door to further take of Vernal Pools. Over 97% of San Diego's vernal pools are already gone. While the City may think a 99% take is appropriate; we do not think so.

The court has already ruled "the City's application must satisfy the ESA goal of conservation which would allow species to recover in order to reverse the trend to extinction". Further take of sensitive species will not further endangered species. We do hope the City will realize this and mandate the HCP to enhance conservation of unique and tiny ecosystems. Thank you very much for hearing my testimony.

I apologize in advance if I mispronounce your name. I believe it is Joe Frichtel

Good evening my name is Joe Frichtel. I am from Mira Mesa. I have good news; fairy shrimp will outlive all of us. They are in with cockroaches; we will never get rid of them. One of the things we need to do with the vernal pools and habitat we have to open them up to the public, we cannot restrict them and keep them away from everybody because people do not understand this environment, what it entails and what it is for. Without any understanding and experience of

these things we are running a downhill battle all the time. The community of Mira Mesa has been severely penalized with these vernal pools and the habitat surrounding the vernal pools. If you drive off road anywhere in Mira Mesa where there is dirt and leave 2 inch impression with a tire you are going to have a vernal pool.

We have some areas of Miramar campus that has been stopped from building out their campus completely because of these are low grade vernal pools. What we would like to do, with permission of Fish & Wildlife, is to move them over to a different location. Which we all know we can do now. Twenty years ago you could not move or create a vernal pool. We do need to have some flexibility in how we approach this. Getting these vernal pools open to the public in different areas in the communities will greatly enhance all this work that the environmentalists and everybody that really cares about these things will make it t easier to get public support for this kind of an effort. Keep up the good work.

David Hogan with Chaparral Lands Conservancy, address: P.O. Box 141 Mt. Laguna Ca 91948. Thanks for having the meeting tonight. I was in the field today doing some fairy shrimp surveys. I just had a few random thoughts, the vernal pool preserve that you come up with should be more land than just the pools and watershed. One of the things we keep seeing in places where there are preserves are if a watershed is only 2 feet from the edge of the pool that is where the retaining wall goes and the houses are right behind that.

We want to make sure that these are actual viable vernal pool preserves that include more land than just the pools and immediate watersheds. At the very least, we need to be going out at least 100 feet if not further. I think the way to look at this, any particular property that has a vernal pool complex that is important we should be looking at if the conditions are right on the rest of the property for vernal pool conservation and management. Looking at using that entire parcel up to 25% development footprint for preservation so that way there is still the MSCP standard of fair property use that has already been applied and upheld by courts at the same time we are able to maintain viable pool preserves in areas where there are important resources. When the preserves is identified we would really like to see you use each of the particular species; covered species as a basis for not the sole basis but one basis for why a particular area is important for pools. For example, in Otay Mesa we would need to preserve enough vernal pools to preserve Otay Mesa Mint, Orcutt Grass, and Riverside fairy shrimp. For example, in Mira Mesa, preserve San Diego Mesa Mint, Button Celery, and San Diego fairy shrimp.

It can't just be because there is more land left on Otay Mesa that is where the preserve goes or because there is more land protected at Del Mar Mesa that is where preserves end up being. It needs to actually be an assessment of are there enough places spread throughout the county to meet the needs of the covered species that will be covered by the HCP. It is critical to come up with the assured funding source that has been so illusive for the existing MSCP. There cannot be yet another HCP that is approved with a speculative future funding source. I know there has been talk of different methods. The one that seems the best possibility being the community assessment districts. Vernal pools and other resources can be treated just like street lights or medians for management in funding.

One of the things we would like to ask for when you do the HCP is that the HCP cover not just development activities but restoration. The Chaparral Lands Conservancy is interested in

restoring vernal pools and one of the hurdles to that is getting permits to do restoration. They can be difficult when there is not a development that the restoration project is a mitigation project for. To the extent that there can be CEQA & NEPA coverage for restoration as part of the HCP for the City of San Diego that would be extremely helpful. I am not sure if it would go this far. If we could actually get clean water act permission for that as well, it would be extremely helpful. I agree with the anti-environmental zealous and vernal pool opponents. In some cases, it is a good idea to have more public access to vernal pools so it is one of the things we actually agree on. Places like Carmel Mountain, Del Mar Mesa, Mira Mesa and future reserves in Otay Mesa where you have a place that has had previous public use and there are trails and informal paths that have never been designated it can be much more effective to pick one path that weaves through the area where it causes the least damage, is well fenced and has educational signs.

A place to take people on nature walks, show them vernal pools and reduce the impact. If you go from 10 informal paths to a single trail that is designated, that is well defined, fenced and signed, that is much better than say "NO ACCESS" because the access will continue if we ask for it or not.

The only thing I would add is it would be good to expand the number of species that are covered. Some of the plants he listed but also potentially Western Spadfoot Toad, which is very sensitive and Tooth Calico Flower down. **Geocuspidada** is also very sensitive just has not been recognized as such. It is very limited in the Southbay. For example, there is only one vernal pool in the entire Proctor Valley area that has the species that is a good example of the species not listed. I do not think it is a candidate for listing but it is very sensitive. Two striped garter snake is another obvious one. Thank you.

Van Collinsworth my address is 9222 Lake Canyon Road Santee Ca I am representing Preserve Wild Santee and also the California Chaparral Institute. My comments are going to focus on the objectives for the project and also providing you with a large stack of written materials so I will not up here more than three minutes.

The following points should be the objectives used for the project and all alternatives considered in the EIR (Environmental Impact Report)/EIS (Environmental Impact Study) should be evaluated by how will they will meet these objectives in essential plan components. So, first I am going to go through three general objectives and then get into some more specific objectives and planned components:

1. Provide for both preservation and recovery for vernal pool species and their ecosystems preserve enhanced ecosystem acreage and function.

2. Develop comprehensive inventory of vernal pools and vernal pool species on all lands public and private inside & outside MHPA within the City of San Diego as the basis of a comprehensive recovery strategy.

3. Establish an adequate and reliable funding mechanism to implement the recovery strategy and perpetuity.

In terms of specific objectives and essential plan components:

1. Provide comprehensive vernal pool ecosystem inventory. Include all ephemeral pools, known historic sites of vernal pools including those considered damaged or degraded to the point of being labeled road ruts.

2. Utilize Hydrogeomorphic approach to evaluate existing vernal pool functions and assess the overall health and status of the entire vernal pool inventory.

3. Provide strict recovery standards

4. Conserve adjacent uplands and maximize preserve connectivity to protect entire ecosystems within hardline preserves.

5. Utilize proven restoration measures. The plan should not rely upon unproven mitigation measures such as vernal pool creation nor should it attempt to create vernal pools under stretched labels of restoration. Restoration should take place on known historically authentic vernal pool sites.

6. Make other management plans consistent with Vernal Pool HCP. Include adjacent land use guidelines and all plans to reduce adjacent site impacts on vernal pool ecosystems.

7. Include an education and recreational component implemented simultaneous with and complimentary to protective measures that addresses edge effects and other threats such as fairy shrimp hybridization.

8. Establish a standardized system and data base to track and report the status on vernal pools and their functions using readily measured and quantitative descriptions.

9. Include specific details required for implementation including expected staff hours, task, and oversight. Include mechanisms to leverage non-profit and volunteer partnership.

10. Establish an adequate and reliable funding mechanism to implement the recovery plan in perpetuity. Include measures to prevent degradation by invasion by non-native species, include surveillance, enforcement, prosecution and fencing measures that will prevent damage to pools from human disturbance such as motor vehicles, dumping, etc.

All of these things which I have listed off actually were presented earlier in a letter presented to the City earlier by Coalition and Environmental groups. My comments essentially reinforce those goals that were provided to the City earlier. Thank you

Jim Peugh, Conservation Chair of the San Diego Audubon Society. We have messed up a lot of vernal pools and vernal pool species in our region. I would strongly urge that recovery be the standard for this program and the program not be accepted unless that is the case. Recovery for all vernal pool species listed. Dan mentioned a thorough inventory, I urge that the inventory also describe what the watershed benefits the pool and have that in the inventory and how much a buffer to keep that watershed viable. Minimizing edge effects that could eventually degrade those watersheds so they should all be inventoried not just the pools themselves. It is really important that the management and maintenance standards be clear and who is responsible for them. How they are going to be implemented.

In particular with respect to invasive species but also to hydrology changes in the watershed. As far as Van mentioned making sure that the funding is adequate to preserve the pools in perpetuity. It cannot just be adequate. It has to be adequate based on what we hope or plan for, it has to be adequate in the face of the fact we don't really know what the cost will be and we don't know what things will not work out well. So, to be adequate with a really reasonable sort of range for error so it really will work in the long run rather than only working in the long run if things go well. I support the former comment Van gave as well.

Mike Kelley- Conservation Chair for Friends of Penasquitos Canyon Preserve. We own two parcels in Penasquitos with vernal pools on them, which we currently have grants to begin to do restoration work. I want to support the remarks made by Frank on species. One in particular that concerns me is the Danengia. I consider that a rare species a species that needs to be part of the active management plans. Dave mentioned Spadfoot Toad, Little Mouse Tails and a number of other plants associated with vernal pools. I can't see ignoring them in these plans. Dave mentioned funding. We were supposed to have funding for the Multiple Species Conservation Plan in the City of San Diego, and the County. Years have gone by, it never materialized. Some in desperation negotiated via Trans Net and SANDAG a pretty big chunk of funding for land conservation & restoration. That was only a down payment for what is needed overall. Attempts to get on the ballot with a permanent funding measure for MSCP have failed to gel due to the economy. Even though SANDAG did not vote for it, funding is the Achilles heel for this Vernal Pool Management Plan that looks great on paper. But, if we don't have a secure funding mechanism and as Jim said not based on minimal maintenance restoration but something that is going to allow for the fact that we are dealing with perhaps a sensitive ecosystem. We are going to be attempting to restore. One issue that needs to be addressed specifically is fire and fire management.

Vernal pools on Lopez Ridge were part of a fire that swept through the vernal pool. Carmel Mountain is susceptible to fire. The vernal pools themselves can do just fine in fire. The plant and animal species will come through a fire just fine. We have seen that in the past. I am concerned about the fire fighting and that needs to be addressed. We have significant damage to public owned property by the fire fighters, vehicles, and the after math of them. Unless we have detailed fire fighting plans to prevent damage in the very fighting of these fires. If you have prepared ahead of time you can minimize the damage that is done if you have good planning and actual on the ground coordination. This is done elsewhere. We have nothing in the City of San Diego to incorporating fire fighting and planning for it into our management plans.

Public access that was mentioned. We do already have public access The Friends of Penasquitos Canyon have been leading vernal pool walks in the City of San Diego owned lands on Carmel Mountain and in the ground parcels on Lopez Ridge now for 15-20 years done under very controlled conditions with small groups and active participation of City of San Diego departments. If we want to have public support for saving these vernal pools, then the public needs to be educated about them. Take people through with trained guides which we do on Carmel Mountain and Del Mar Mesa. The Navy has allowed public access of their pools. Restoration permitting is very important. I have done restoration work for the Navy Murphy Canyon pools and also other pools on Miramar and even there the permitting process is too rigorous and too restrictive.

Anna McPherson- That is all the speaker slips that I have so if there is anyone else who wishes to speak I encourage them to come up at this time. Looks like everyone who would like to speak has, you can also of course send comments on the NOP and the scoping letter electronically. You can send to our email address which is enclosed on the NOP and on our website. I would like to offer mine AMcPherson@sandiego.gov . I also have business cards if anyone wants to get one.

I would encourage you to send it that way if you did not wish to speak this evening or you think of something else later.

You can also rely upon U.S. Postal service and send us a letter we don't get many of those, but they are still fully legitimate. If you can express your thoughts that way we would encourage you to do so. You can call on the telephone but we do like it to be memorialized in writing so that we make sure that we accurately represent when we transcribe and as we look at this information as we begin to approach the document. If no one else has anything, I can go ahead and end the testimony and the meeting. Anybody have any objections to that? Okay I don't hear any objections. Thank you very much for coming out this evening. We do appreciate your participation this will be a very exciting process, very public process. I want to remind you this is just the beginning of the environmental review. Once the document is out you can provide public comment and then we will be going through the public hearing process. Those of you who provided comments on the NOP will receive a copy of the draft environmental document. So, if you have not done so and you want to submit please do so.

Thank you

Frank Landis, PhD (Botany)
Representing the California Native Plant Society, San Diego Chapter
7885 Via Montebello Unit 5
San Diego, CA 92129
310-883-8569

December 12, 2011

Comments for the Scoping Meeting of the Vernal Pool Habitat Conservation Plan

Thank you for this opportunity to provide input. The California Native Plant Society is very concerned about this scope, both as it is presented and in its implications.

As presented, we found four problems:

First, the list of focal species is incomplete, in that plant species covered by the MSCP, such as little mousetail, San Diego goldenstar, and Orcutt's brodiaea, are not considered in this analysis. Furthermore, there are over a dozen other sensitive plants listed by CDFG and not covered by the MSCP that could be affected by any development around vernal pools. Impacts to these species must be analyzed as well, whether they are listed by the MSCP or not.

Second, although the scope calls for use of figures to present information, the Location Map provided for our perusal is so crude that I cannot tell whether where important boundaries are. Since at least one vernal pool currently exists at the very edge of a preserve on Del Mar mesa, accurate maps and figures are critical in this project, and the scope should be amended to reflect this need for accuracy.

Third, the scope says both that Growth Inducement must be analyzed, and that Growth Inducement has already been determined to be a non-significant issue. This needs to be corrected so that Growth Inducement is analyzed. We also suggest that Neighborhood Quality is a significant issue, as at least some people who live near vernal pools value them highly.

Fourth, the pools currently contain water, fairy shrimp, tadpoles, and sprouting plants. Field surveys should have started weeks ago. Because vernal pools are ephemeral, the scope must require that all field surveys are performed at the proper time of year for each species surveyed. Unless the city can expedite this contract, field work may have to wait until the 2012-2013 rainy season next winter. If that winter is dry, field work may have to wait another year after that.

As for the implications of this update, CNPS is concerned that an updated HCP would open the door to further take of vernal pools. Over 97 percent of San Diego's vernal pools are already gone. While the City may think a 99 percent take is appropriate, it is not. The court has already ruled that "*the City's permit application must satisfy the ESA goal of conservation, which will allow the species to recover in order to 'reverse the trend to extinction.'*" Further take of sensitive will not further the Endangered Species Act's goal of conserving these species. We hope the city will realize this, and that it will only amend the HCP to enhance conservation of these unique and tiny ecosystems.

Thank you for taking my testimony.

From: Alan Francisco [mailto:alanfrancisco=hotmail.com@change.org] **On Behalf Of** Alan Francisco
Sent: Thursday, December 15, 2011 10:07 AM
To: Blake, Martha
Subject: Vernal Pool Habitat Conservation Plan

Ladies and Gentlemen:,

I just signed the following petition addressed to: Elizabeth Shearer-Nguyen, City of San Diego Development Services Associate Planner; Martha Blake, City of San Diego Development Services Senior Planner; Sherri Lightner, City of San Diego District 1 Councilmember; Kevin Faulconer, City of San Diego District 2 Council President Pro Tem; Todd Gloria, City of San Diego District 3 Councilmember; Tony Young, City of San Diego District 4 Councilmember Council President; Carl DeMaio, City of San Diego District 5 Councilmember; Lorie Zapf, City of San Diego District 6 Councilmember; Marti Emerald, City of San Diego District 7 Councilmember; David Alvarez, City of San Diego District 8 Councilmember.

We, the undersigned, agree that the Vernal Pool Habitat Conservation Plan is the key to that land preservation. We don't want San Diego to ignore its biodiversity and natural habitat. We do not believe the city will see a long-range benefit by cutting corners on land use planning.

We want the comprehensive provisions and the proposed considerations incorporated and support a thorough EIR/EIS and diligence with all relevant agencies to promote conservation. The efforts put forth to realize this plan will be valuable to ongoing and future environmental conservation campaigns.

The city quality of life depends on the plan provisions constraining any development not respecting vernal pool habitat or sustainable development standards. The city character includes vernal pool habitat scenery. Thank you for your time.

Sincerely,

Not facilitating environmental impact study and mitigation won't preserve our vernal pool habitat.

Alan Francisco

,

Note: this email was sent as part of a petition started on Change.org, viewable at www.change.org/petitions/san-diego-needs-to-adopt-the-vernal-pool-habitat-conservation-plan. To respond, email responses@change.org and include a link to this petition.

From: Frank Landis [mailto:franklandis03@yahoo.com]
Sent: Tuesday, December 13, 2011 12:06 PM
To: McPherson, Anna
Subject: Additional comment on vernal pool HCP

Dear Anna,

Thank you for providing me with the opportunity to speak to the scoping hearing last night.

As a private citizen (not representing CNPS), I'd like to add additional input. I volunteer to patrol and clean up Del Mar Mesa several times per week. I know the area pretty well, and I've talked to other residents who hike and bike in the area.

One of them, who claimed to have lived there for over 20 years, told me that, since McGonigle Creek (north of the vernal pools) had become a perennial stream, frogs and toads no longer breed in it. My assumption is that McGonigle Creek is perennial due to upstream urban runoff, and that frogs have disappeared from it due to increased pollution and also to the introduction of mosquito fish for vector control.

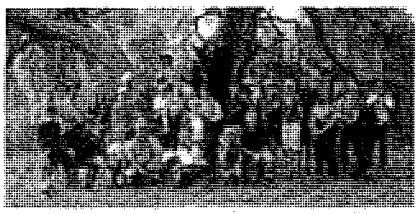
I have only lived here since 2008, so I cannot corroborate his history. However, I've never seen tadpoles in the creek. The only place I see tadpoles is in the vernal pools. My assumption is that the pools have fewer predators, and that they also have cleaner water than the stream does. I'd like to see this addressed in the EIR/S if possible. With urban runoff turning many local streams into perennial and polluted waterways, vernal pools and similar ephemeral water bodies may be the only places where amphibians can breed. Given the declines faced by amphibians in California in general, elimination of vernal pools may hasten the decline of local amphibian populations.

As a separate comment, I have noted that many of the cyclists who use Del Mar Mesa avoid the pools. Most of them "don't want to hurt the pollywogs" (their words), but they don't seem to know about fairy shrimp or the other endangered species. Although I know it's a controversial suggestion, I'd suggest that major public education might be useful for preserving the pools, given how a little information is already affecting which routes cyclists take to avoid pools. We may be able to better than fencing, walkways, and educational signage.

For example, someone called vernal pools "miniature Serengetis," for all the natural drama that goes on in them every wet year. Will the fairy shrimp breed before the dragonfly larvae eat them or the pool dries out? Will the tadpoles metamorphose before the pool dries and the crows, garter snakes, and ducks eat them all? Will the button celery avoid being eaten by the deer? As a biologist, I can tell you its fascinating to watch, but I have yet to find anything in writing that says more than something like "vernal pools are delicate and home to many endangered tiny species." We can do a bit better than that, I think.

Sincerely,

Frank Landis



Preserve Wild Santee

CALIFORNIA CHAPARRAL INSTITUTE
...the voice of the chaparral

December 12, 2011

Elizabeth Shearer-Nguyen
City of San Diego Development Services Department
1222 First Avenue, MS 501
San Diego, CA 92101

RE: Scope of the Vernal Pool Habitat Conservation Plan EIR/EIS

Dear Ms. Shearer-Nguyen,

The following points should be the objectives used for the Project and all alternatives considered in the EIR/EIS should be evaluated by how well they meet these objectives and essential plan components:

General Objectives:

1. Provide for both the preservation and ***recovery*** of vernal pool species and their ecosystems. Preserve and enhance ecosystem acreage and function.

2. Develop a comprehensive inventory of vernal pools and vernal pool species on all lands (public and private) (inside and outside the MHPA) within the City of San Diego as the basis for a comprehensive recovery strategy.

3. Establish an adequate and reliable funding mechanism to implement the recovery strategy in perpetuity.

Specific Objectives & Essential Plan Components:

1. Provide a comprehensive vernal pool ecosystem inventory. Include all ephemeral pools on known historic sites of vernal pools, including those considered damaged or degraded to the point of being labeled "road ruts".
2. Utilize the Hydrogeomorphic (HGM) approach to evaluate existing vernal pool functions and assess the overall health and status of the entire vernal pool inventory.
3. Provide strict recovery standards.
4. Conserve adjacent uplands and maximize preserve connectivity to protect entire ecosystems within hard line preserves.
5. Utilize proven restoration measures. The plan should not rely upon unproven mitigation measures such as vernal pool "creation." Nor should it attempt to "create" vernal pools under stretched labels of "restoration." Restoration should take place on

known historically authentic vernal pool sites.
6. Make other management plans consistent with the Vernal Pool HCP. Include adjacent land use guidelines in all plans to reduce adjacent site impacts on vernal pool ecosystems.
7. Include an education and recreational component implemented simultaneous with and complimentary to protective measures that address edge effects and other threats such as fairy shrimp hybridization, etc.
8. Establish a universal standardized system and database to track and report the status of vernal pools and their functions, using readily measured quantitative metrics, not qualitative descriptions.
9. Include specific details required for implementation including expected staff hours, tasks and oversight. Include mechanisms to leverage non-profit and volunteer partnerships.
10. Establish an adequate and reliable funding mechanism to implement the recovery plan in perpetuity. Include measures to prevent degradation by invasion of non-native species. Include surveillance, enforcement, prosecution, and fencing measures that will prevent damage to pools from human disturbance such as motor vehicles, dumping, etc.

The objectives listed above were presented by nine environmental organizations to the City of San Diego by letter dated April 25, 2011. The letter is attached for reference.

The EIR/EIS should also closely consider the court's prior vernal pool decision. A copy of the decision is attached for reference.

Thank you for your consideration,

Van K. Collinsworth, M.A.
Natural Resource Geographer
Resource Analyst/Executive Director
Preserve Wild Santee
Vernal Pool Conservation Program Coordinator
California Chaparral Institute

Attachments:
Vernal Pool Habitat Conservation Plan Preparation Letter, April 25, 2011
Decision And Injunction, Case No. 98-CV-2234-B(JMA), Southwest Center for Biological Diversity vs, Jim Bartel, et al.

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WILDCOAST COSTASALVAJE

Because fire is good.

CALIFORNIA NATIVE PLANT SOCIETY

San Diego Audubon Society

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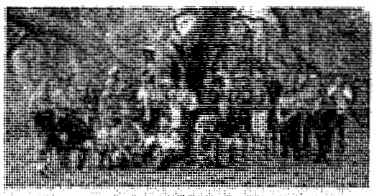

Preserve Wild Santee

April 25, 2011

Ms. Jeanne Krosch, Senior Planner
City Planning & Community Investment
202 C Street, MS 5A
San Diego, CA 92101-3865

RE: Vernal Pool Habitat Conservation Plan Preparation

Dear Ms. Krosch,

We appreciate that the City of San Diego has launched vernal pool habitat conservation plan preparations and is currently soliciting public input with regard to potential HCP content. This letter is intended to offer a basic set of guiding principles that can serve as the foundation for a successful vernal pool habitat conservation plan.

Guiding Principles for development and implementation of the Vernal Pool Habitat Conservation Plan (HCP)

Objectives:

1. Provide for both the preservation and ***recovery*** of vernal pool species and their ecosystems. Preserve and enhance ecosystem acreage and function.

2. Develop a comprehensive inventory of vernal pools and vernal pool species on all lands (public and private) (inside and outside the MHPA) within the City of San Diego as the basis for a comprehensive recovery strategy.
3. Establish an adequate and reliable funding mechanism to implement the recovery strategy in perpetuity.

Rationale:
The new HCP must address the specific findings of the Court regarding the inadequacy of the previous conservation plan. Specifically, the Court found that the prior plan violated "both the spirit and the letter of the ESA." The Court stated,

> *"...FWS has authorized extensive development of lands containing vernal pools that would destroy essential habitat for these rare species under the guise of obtaining promises for 'mitigation' in other areas. The ostensible 'mitigation' is inadequate to ensure that fairy shrimp will survive and recover to the point where they need not be listed for protection under the ESA. In short, while vigorous development is certain, the purported mitigation is unlikely to conserve listed species. Moreover, the record does not support FWS's finding that the City of San Diego would fund its share of the conservation plan. The Court finds that this plan violates both the spirit and the letter of the ESA."*[1]

The Court devoted substantial consideration and emphasis to the topic of recovery concluding, *"Thus, the City's permit application must satisfy the ESA goal of conservation, which will allow the species to recover in order to "reverse the trend to extinction."*[2]

The Court directed the US Fish & Wildlife Service to consider the standards within its own Vernal Pools of Southern California Recovery Plan (1998) ("Vernal Pool Recovery Plan").

> *"The Vernal Pool Recovery Plan is pertinent evidence of the measures necessary to prevent the extinction of vernal pool species. The language and structure of the ESA's provisions for recovery plans shows that FWS must make a conscientious and educated effort to implement the plans for recovery of species."*[3]

Therefore, the standards of the USFWS Vernal Pool Recovery Plan must be utilized as guidance for the preparation of the new HCP.

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[1] Decision And Injunction, Case No. 98-CV-2234-B(JMA), United States District Court Southern District of California, Southwest Center for Biological Diversity, et al., vs. Jim Bartel, et al., page 3.
[2] Decision And Injunction, P. 11.
[3] Decision And Injunction, P. 22, 23.

The City of San Diego has asked the public ***"Which areas are most important for the conservation of targeted species? What factors should be considered in evaluating the importance of preserving vernal pools (e.g. size of vernal pool, number of vernal pool species, located on conserved land, connectivity to other pools, etc.).***

The premise of this important question (that there are some areas that aren't that important) fails to recognize the current status of vernal pools. Only 3% of vernal pools remain and many of these are being damaged by direct human disturbance and the edge effects of adjacent land uses (even on conserved lands). Most functional vernal pool ecosystems in San Diego have already been lost. The very few that remain are on the verge of destruction. The situation is dire, therefore ***all lands with targeted species and restoration potential are "most important"***. The new HCP must be an extraordinarily ambitious effort that provides for recovery of targeted species and the vernal pool ecosystem as a whole. In the judgment of the Court, "Given the exceptionally small number of vernal pool species that may still be viable in San Diego, it defies reason to give *less* protection to those creatures and plants that have survived some measure of damage by human activity, as these would appear to be among the more hearty specimens."[4]

It is crucial for the new plan to include a complete inventory of vernal pools and understand the status of these pools, including the species supported by each pool, the functional status of the pools and the restoration potential of their ecosystems. A fiscal analysis and funding mechanism is critical to the implementation of any conservation strategy prepared.

Essential Plan Components:

1. A comprehensive vernal pool ecosystem inventory. Include all ephemeral pools on known historic sites of vernal pools, including those considered damaged or degraded to the point of being labeled "road ruts".
2. Utilize the Hydrogeomorphic (HGM) approach to evaluate existing vernal pool functions and assess the overall health and status of the entire vernal pool inventory.
3. Provide strict recovery standards.
4. Conserve adjacent uplands and maximize preserve connectivity to protect entire ecosystems within hard line preserves.
5. Utilize proven restoration measures. The plan should not rely upon unproven mitigation measures such as vernal pool "creation." Nor should it attempt to "create" vernal pools under stretched labels of "restoration." Restoration should take place on known historically authentic vernal pool sites.
6. Make other management plans consistent with the Vernal Pool HCP. Include adjacent land use guidelines in all plans to reduce adjacent site impacts on vernal pool ecosystems.

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[4] Decision And Injunction, P. 25.

7. Include an education and recreational component implemented simultaneous with and complimentary to protective measures that address edge effects and other threats such as fairy shrimp hybridization, etc.
8. Establish a universal standardized system and database to track and report the status of vernal pools and their functions, using readily measured quantitative metrics, not qualitative descriptions.
9. Include specific details required for implementation including expected staff hours, tasks and oversight. Include mechanisms to leverage non-profit and volunteer partnerships.
10. Establish an adequate and reliable funding mechanism to implement the recovery plan in perpetuity. Include measures to prevent degradation by invasion of non-native species. Include surveillance, enforcement, prosecution, and fencing measures that will prevent damage to pools from human disturbance such as motor vehicles, dumping, etc.

Thank you for your diligence and consideration of these thoughts as the new HCP moves forward.

Sincerely,

Van K. Collinsworth, M.A.
Natural Resource Geographer
Resource Analyst/Executive Director
Preserve Wild Santee
Vernal Pool Conservation Program Coordinator
California Chaparral Institute

Richard Halsey
Director, California Chaparral Institute

Jim Peugh
Conservation Chair
San Diego Audubon Society

John Buse
Senior Staff Attorney
Center for Biological Diversity

Ben McCue
Conservation Director
WILDCOAST

Duncan McFetridge
Director, Save Our Forests & Ranchlands
President, Cleveland National Forest Foundation

Carrie Schneider
Conservation Chair
California Native Plant Society, San Diego Chapter

Michael Beck
San Diego Director
Endangered Habitats League

Carolyn Chase
Chapter Chair
Sierra Club of San Diego

cc.
Keith Greer, SANDAG
Cheryl Mason, SANDAG
David Mayer, CADFG
Jim Bartel, USFWS
David Zoutendyk, USFWS
Susan Wynn, USFWS
Patrick Gower, USFWS
Mayor Jerry Sanders, City of San Diego
Council President Tony Young
Council President Pro Tem Kevin Faulconer
Councilmember Sherri Lightner
Councilmember Todd Gloria
Councilmember Carl DeMaio
Councilmember Lorie Zapf
Councilmember Marti Emerald
Councilmember David Alvarez

APPENDIX B

SUMMARY OF KEY COMMENTS ON PRELIMINARY DRAFT VPHCP

PRELIMINARY REVIEW DRAFT VPHCP (March 2015)
RESPONSE TO KEY PUBLIC COMMENTS

Commenter	General Topic	Comment Summary	Response to Comment
CBD et al.			
1	Guiding principles from 2011 letter	The VPHCP should include a section in the introduction that analyzes how well the VPHCP achieves the objectives and essential plan components requested by the 2011 letter.	The VPHCP meets the guiding principles outlined in the 2011 letter. Refer to Chapter 5 and Appendix C for an analysis of conservation of vernal pools and species, including the conservation strategy. The analysis is based on an updated vernal pool inventory (as discussed in Section 1.3.4). Refer to Chapter 10 and Appendix F for the funding strategy.
2	Provide for recovery	The VPHCP needs to provide for recovery of the species.	Although not required, the City's VPHCP is consistent with the Recovery Plan for Vernal Pools of Southern California. Refer to Section 1.1.2, Section 4.1.1, and Section 5.1 of the VPHCP, which state that the biological goal of the VPHCP is to contribute to the recovery of vernal pool species. Table 5-1 of the VPHCP summarizes conservation objectives to achieve this.
3	Comprehensive vernal pool ecosystem inventory	A comprehensive inventory of vernal pools should be developed.	A comprehensive inventory was completed. Refer to Sections 1.3.3 and 1.3.4, Table 2-2, and the vernal pool mapping tool on the City's website at https://www.sandiego.gov/planning/programs/mscp/vphcp. This information is the best scientific data available for the seven vernal pool species addressed in this VPHCP. The mapping tool now has a table of references.
4	Adequate funding	Establish an adequate and reliable funding mechanism to implement the recovery strategy in perpetuity.	Adequate funding is an issuance criterion that must be met (see Section 1.4.1). Chapter 10 was not complete in the preliminary draft VPHCP. Chapter 10 has been updated in the Public Review Draft VPHCP.

Commenter	General Topic	Comment Summary	Response to Comment
5	Utilize the Hydrogeomorphic (HGM)	Utilize the HGM approach to evaluate existing vernal pool functions, overall health, and status of the entire vernal pool inventory.	As discussed in Section 7.5.3, the plan does utilize HGM methods where appropriate and feasible. A citation and discussion that HGM is being used for hydrology baseline studies has been added to Section 7.5.2.
6	Conserve adjacent uplands/connectivity	Conserve adjacent uplands and maximize preserve connectivity to protect entire ecosystems within hard line preserves.	The preservation of watershed and buffer area is a requirement of the VPHCP (see Section 5.3.1). Language has been added to Section 5.2.2 to make this point more clear.
7	Proven restoration	Utilize proven restoration measures.	The VPHCP does rely on only proven restoration measures (see Section 5.3.2). Language has been added to Section 5.1 that acknowledges and clarifies restoration requirements, as well as in Section 5.3.2 that states that the plan does not rely on vernal pool creation as a mitigation measure.
8	Update existing management plans for consistency	Make other management plans consistent with the Vernal Pool HCP.	To the extent that the City has discretion (see Section 8.2.2), other management plans will be made consistent. Language has been added to the introduction of Chapter 7 that other management plans should be consistent with the VPHCP.
9	Adjacency guidelines	Adjacency guidelines should be addressed in the plan.	The existing ESL includes these (see Sections 5.2.1 and 6.3).
10	Education and recreational component	Include an education and recreational component	Education is a component of management (see Table 4.5). A summary of management goals, including stewardship, public outreach, educational use, information sharing, and administration has been added to Chapter 7.
11	Data Base	Establish a universal standardized system and database tracker.	Refer to Section 7.7. The VPHCP data will be sent to multi-taxa database at SDMMP.
12	Implementation and staffing	Specific details should be included that address implementation including staffing. Mechanisms to leverage non-profit and volunteer partnerships should also be included.	Chapter 8 has been expanded to include a discussion of staffing and City coordination with other entities.

Commenter	General Topic	Comment Summary	Response to Comment
13	ESA requirements	The VPHCP does not follow standards of the USFWS Vernal Pool Recovery Plan.	The VPHCP does follow the standards of the USFWS Vernal Pool Recovery Plan (see Section 1.4.1).
14	Lawsuit requirements	The Endangered Species Act and the Southwest Center for Biological Diversity v. Bartel decision (470 F. Supp. 2d 1118, S.D. Cal. 2006) require that the standards of the USFWS Vernal Pool Recovery Plan must be utilized for the preparation of the new VPHCP.	There were no binding agreements associated with this law suit and the case was dismissed.
15	Consistency with 1998 Recovery Plan	There is not a discussion of how the impacts to vernal pools, allowed by covered projects, is consistent with the 1998 Recovery Plan.	The Recovery Plan anticipated that development would continue and that some pools would be lost; however, this would be balanced with active management and monitoring. Language has been added to Chapter 5 that clarifies the intent of the Recovery Plan. Consistency with the Recovery Plan is analyzed in Chapters 5 and 6.
16	Adequacy of baseline data	The surveys and analysis essential to avoiding loss and establishing the baseline conditions of vernal pools is being deferred.	Disagree. The location of vernal pool habitat and species is well documented throughout the plan area (also see Response to Comments 3 and 5).
17	Documentation of management level	The management plan was not provided	The Vernal Pool Management and Monitoring Plan (VPMMP) was not released with the preliminary draft VPHCP as it was still in development. The VPMMP will be released with the Public Review Draft VPHCP.
18	Adequacy of maps	Maps of the vernal pool areas, complexes and maps of un-conserved pools versus conserved pools need to be included.	Please utilize the City's mapping tool (see Response to Comment 3), which allows users to zoom in on individual parcels. Hard copy maps are not available at the same scale.
19	Hyperlink TOC to document	Include hyperlinks of all items in the TOC.	Please see revised TOC.

Commenter	General Topic	Comment Summary	Response to Comment
20	Reference on Page 1.3	The reference on Page 1.3, Section 1.1.2 Conservation Goals should reference Chapter 5 instead of Chapter 6.	Agree. The typo has been fixed.
21	Vernal Pool Preservation Fund	Discussion is needed that provides the status and dollar balance of the Vernal Pool Preservation Funds and what vernal pool land acquisitions and other activities the fund has been used for.	The status of the Vernal Pool Preservation Fund is included in Section 1.3.1.
22	Map of losses	Specific known losses of vernal pool complexes should be mapped to provide additional perspective needed to create a functional preserve.	This is beyond the scope of the HCP. References to the 5-year review have been added for a complete discussion on the status of each species.
23	Impact analysis	Additional analysis should be provided of activities cited that degrade or destroy vernal pool resources. Analysis should include options to avoid such impacts.	Please see Chapters 6 and 7. This analysis has also been addressed in the EIR/EIS; specifically, that coordination with the fire department is a component of the VPHCP.
24	Species maps	A summary of covered species key information and status within the VPHCP should be supported by a set of species-specific maps.	The mapping tool (see Response to Comment 3) allows the user to click on each pool and see what species occur in the specific location; however, there are no comprehensive maps by species. Figures 3-1 through 3-7 have been added and include species locales. The ability to display species distribution has also been added to the mapping tool.
25	Castlerock	Castlerock project maps should be modified to reflect changes resulting from settlement of CEQA litigation.	The figure for Castlerock has been updated.
26	Status of covered projects	Ensure all four of the projects listed in Section 4.1.2 have completed their entitlement process.	None one of these projects have completed the entitlement process, except Castlerock, which is now a Planned Project.

Commenter	General Topic	Comment Summary	Response to Comment
27	Covered road projects	Maps and greater detailed information is needed to explain why the Covered Road Projects should be allowed to impact vernal pools.	A map showing the general alignments has been added to Section 4.1.4. This project (as with all Covered Projects) will be subject to project-specific CEQA review to analyze impacts from the project. The VPHCP is not the environmental document for Covered Projects.
28	Brown Field	The Brownfield discussion should be updated to describe the status and changes (if any) due to CEQA litigations and negotiations. Agree. In addition, this section will be updated to reflect recent discussions with Montgomery Field.	Agree. Section 4.1.6 has been updated to include maps for both airports as well as recent discussions with Montgomery Field.
29	Resource protection	On Page 4-3, Section 4.2.2 the word "resource" should be inserted prior to "protection".	This revision has been made to Section 4.2.2.
30	Pipeline projects	Describe the entitlement status of each of the pipeline projects listed on Page 4-21, Section 4.3, Pipeline Projects.	Existing baseline is already permitted; however, take is not addressed by the VPHCP.
31	Un-managed pools	Describe the supporting rationale for excluding approximately eight vernal pool sites from the VPMMP and where they are located.	These pools are isolated and have little long-term conservation value. This discussion has been added to Section 5.1.
32	Conservation analysis	Describe approximately how many acres of occupied habitat are being conserved and where.	Basin acreages by vernal pool site are detailed in the Conservation Analysis in Appendix C and summarized in Table 5-2.
33	Monitoring associated with adjacent construction	Monitoring should be expanded to 12 years, rather than 3, for projects affecting vernal pools.	Monitoring is to verify that adjacency measures are adequate, not to follow up on restoration activities. Section 5.2.1, Measure 9 has been modified to clarify intent.
34	Basis for proposed loss	Describe the basis for allowing the destruction of 14% of vernal pools within the VPHCP area.	The impacts to the vernal pools are fully mitigated and will result in a net gain of function and value so thatissuance criteria can be met (see Sections 1.4 and 5.3).

Commenter	General Topic	Comment Summary	Response to Comment
35	Proposed impacts to J13	Explain why eight of the eleven pools occupied by San Diego button-celery are being destroyed.	Of the 732 pools occupied with San Diego button-celery in the VPHCP Plan Area, 99% are being conserved (722 occupied pools). Avoidance of nine pools occupied with San Diego button-celery at the J 13 complex is not practicable as the pools would be surrounded by development and therefore their long-term viability is questionable. A biologically superior alternative has been identified and San Diego button-celery has been successfully reestablished in restored pools. Text has been added to Section 5.2.3 to clarify.
36	Critical habitat	Describe the rational for conserving the designated amount (percentage) of the covered species. In addition, Table 5-4 Summary of Critical Habitat Conservation needs supporting maps.	The rationale is provided in Section 5.2.4. The City's mapping tool (refer to Response to Comment 3) has been updated to include critical habitat.
37	Mitigation is speculative	Identify the support that mitigation will include compensatory measures that would result in biologically superior net gain in overall function and values. Also, creation should not be conducted.	Restoration and enhancement are not speculative and has been successful in many instances; however, creation in areas not historically supporting vernal pools is not appropriate. Text has been modified in Section 5.3.1 to delete reference to creation.
38	Salvaged materials	Describe how long would salvaged materials be maintained and how will the USFWS determine whether to approve it.	This section is a general summary of measures to be included in a detailed restoration plan, which would be developed on case-by-case basis.
39	Hybridization	Experts have concerns regarding hybridization.	This is a concern and is discussed in Section 3.9.
40	Need to ensure functions and values for avoided pools	A hydraulic analysis should be completed rather than relying on biologist to make a "function and buffer" decision.	Text has been added to Section 6.2.1 to require a hydraulic analysis.

Commenter	General Topic	Comment Summary	Response to Comment
41	Standard versus extraordinary	The standard versus extraordinary ratios are unclear.	This language is from the Wetlands Deviation Ordinance. Text has been added to Section 5.3.1 to clarify.
42	Mitigation Measure f	Describe the circumstances, as well as process for determining, how would hydrologic connections be needed or not needed for restored pools and their watersheds and be required or not required to impact the watershed of any extant pool.	These determinations will be made on a case-by-case basis (during project-specific review) depending on the conditions at an individual site. A qualified biologist will prepare the restoration plan, which will be reviewed and approved by the City and Wildlife Agencies prior to implementation, as described in Condition 1 of Section 5.3.2.
43	Mitigation Measure h	The following should be defined: amount of time to support targeted species, demonstrate water retention, support species and survey for fairy shrimp.	Agree that targeted ponding should be defined. However, regarding versatile fairy shrimp, this is a work in progress. As effective measures are identified, they will be included. Condition “h” has been modified to include requirements for ponding for SDFS and RFS.
44	Mitigation Measure j	Define how long exotic weed control will be implemented within the restoration/enhancement areas.	Initial control will be done during the 5-year restoration period (see Condition P) and then long-term control will be implemented in perpetuity by the preserve manager (Condition 2).
45	Mitigation Measure k	Define what contaminants and levels are allowable for artificial watering.	The intent of this measure is to disallow the use of tap water in the pools due to the presence of chlorine. These details would be provided in a site specific restoration plan, which would be approved by the City and Wildlife Agencies.
46	Mitigation Measure i	Define how the basic plant knowledge of maintenance workers will be identified.	All work will be conducted under the oversight of a qualified biologist who will ensure that all workers are properly educated and implementing the restoration as prescribed in the approved plan.
47	Mitigation Measure o	Define what alternate methods of determining success may be used upon approval by the City and USFWS.	There are no other alternative methods at this point in time that the authors are aware of; however, there could be new technology or methods in the future that may be appropriate at that point in time. Mitigation Measure o allows for this.

Commenter	General Topic	Comment Summary	Response to Comment
48	Mitigation Measures p and q	Define how a determination is made regarding the function/value of recruited plants relative to the functions/value that should be being provided by the deceased plants and their replacement, as well as what circumstances remedial actions would be "deemed necessary" and be required? What is a "significant contingency measure"?	These are case specific and will be reviewed at the point in time when they become an issue. Text has been revised to state "required contingency measure."
49	Long-term management	Page 5-19 needs to define how applicants would ensure long-term management of the on-site areas into perpetuity.	Please refer to Chapter 7.
50	Mitigation Banking	Page 5---19, 5.3.3 Mitigation Banking needs to define a "vernal pool Conservation Bank" and a "Wetland Mitigation Bank regulated by the USACE".	The reference to Wetland Mitigation Banks has been deleted as it is not relevant to the discussion.
51	Include a biologically superior alternative to the proposed project.	On Page 6-4, 6.1 Direct Impacts to Vernal Pools there should be a biologically superior alternative that limits take of remaining vernal pools to 2% or less.	Agree that a biologically superior alternative should be considered; however, the expanded conservation alternative limits impacts to 4%. Table 11-1 has been revised to include expanded conservation of all pools, not just pools containing SDFS.
52	Justification of impacts	On Page 6-5 there should be a discussion of why the 49 pools are not being avoided and what it would take to conserve them.	See Response to Comment 34. In addition, there is no "taking" of land.
53	Page 6-7 - Indirect impacts	Indirect Impacts to Vernal Pools, define the circumstances that a Bruch Management Zone would be allowed within the associated watershed and buffer as well as the process that will be utilized to make the determination.	The last sentence of this section has been deleted.

Commenter	General Topic	Comment Summary	Response to Comment
54	VPMMP Standards	Define where the VPMMP standards on Page 7-5, Section 7.3 came from and how they relate to maintaining functions and values of vernal pool ecosystems and if they have been tested elsewhere in vernal pool conservation plan implementation.	These standards were developed based on expert opinion provided through the Technical White Papers (TWPs) and in coordination with the Wildlife Agencies. The standards were vetted with the scientific advisors during the TWP review process. Additional details are provided in Table 7-1.
55	Monitoring protocol	Explain, in detail, what level of staffing is needed.	Staffing is included in the Vernal Pool Management Plan, as well as in TWPs 3 and 4. The detailed cost analysis in Appendix F also accounts for staffing needs and cost.
56	Baseline hydrologic surveys	Page 7-12, Section 7.5.2 Baseline Hydrologic Surveys needs to define if baseline surveys for pipeline and covered projects have been completed, and if not then describe when and how they will be completed.	Baseline surveys have been completed for all pipeline projects that have already been permitted. This section is related to management of the preserve not development projects. A reference addressing which type of hydrologic survey has been added to Section 7.5.2 with language that allows methods to evolve over time. Baseline surveys are funded as part of implementation of the VPMMP.
57	CNPS Plat cover methodology	On Page 9-15, Section 7.5.4 Quantitative Monitoring Methods, define the limitations of the CNPS plant cover methodology when applied to valuation of vernal pool ecosystems and if it has been tested elsewhere in vernal pool conservation plan implementation.	Yes, it has been tested by Ellen Bauder and, per her suggestion, the protocol has been modified.
58	Compliance monitoring - data sharing	On Page 7-25, Section 7.7 VPMMP Data Collection, Analysis, And Reporting, define who makes sure the City performs or contracts to perform the required actions on an annual basis and what data and reports will be made available to the	The Wildlife Agencies are responsible for ensuring compliance (Section 8.5.2) and data will be sent to SDMMP multi-taxa database, which the public is able to access. Reporting on the VPHCP program will be sent to the Wildlife Agencies on an annual basis, as described in Section 7.7.

Commenter	General Topic	Comment Summary	Response to Comment
		public and how the public will be notified of their availability.	
59	Opportunistic management related research	On Page 7---27, Section 7.9 Opportunistic Management-Related Research, explain the following; the requirements to upgrade covered shrimp species data collection methods for use in the HGM Model, why a sufficient method is not being built in from the outset, frequency that the City will incorporate vernal pool data into the statewide CRAM database and what the requirements are for sufficient data collection and annual updates to statewide CRAM.	Answering these questions is beyond the scope of the VPHCP.
60	Responsibilities of private properties	On Page 8-1, Section 8.1 Implementation Overview define who is responsible for implementing the actions within the private/third party plans and describe funding as well as incentives/penalties for failure to perform.	Additional text has been added to Condition 2 in Section 5.3.2 describing that the project proponent is responsible for developing and funding the long-term management and monitoring consistent with the measures described in the VPHCP.
61	Grant opportunities	On Page 8-1 define the following; existing structures to request and manage grants for opportunistic acquisitions, what the most promising sources of acquisition grants for vernal pool parcels are, who will lead the acquisition effort/s and what parcels exist with vernal pool complexes that have been acquired with grants or City mitigation funds for conservation in the past.	Non-traditional Section 6 Grants are the most common acquisition grant that has been used to acquire vernal pools. Vernal pool complexes that have been acquired with grants or City mitigation funds for conservation in the past are identified on the management sheets in Appendix B of the VPMMP.

Commenter	General Topic	Comment Summary	Response to Comment
62	Agency Staffing	Funding for City and Wildlife Agency staffing	Comment noted. Agency staffing is subject to availability of appropriated funds. City staffing is addressed above in Comment 12.
63	Funding for changed and unforeseen	On Page 8-2, define what amounts project applicants are required to fund long-term management and monitoring of conserved lands and how those needs and funding requirements determined.	Assured funding must be identified for responding to changed circumstances (see Chapter 10). Appendix F in Chapter 10 identifies funding for changed circumstances.
64	History of Unforeseen Circumstances	On Page 9---1, Assurances for Unforeseen Circumstances, define what funds are available to respond to a finding of "unforeseen circumstances" and what funds are being established up to respond to a finding of "changed circumstances" and where are the funds maintained and managed.	This finding has not been made for any of the approved southern California regional HCPs. Following the 2003 and 2007 fires, USFWS collaborated with USGS and SANDAG to establish post-fire monitoring to determine the effects of these large fires and their impacts on covered species; this effort is ongoing.
65	Large Fires	The catastrophic 280,000 acre Cedar Fire of 2003 had severe impacts upon MSCP "covered species" status and was an unforeseen circumstance. Define how firefighters are trained to avoid vernal pool impacts.	Large fires are not unforeseen as they have happened twice in the last decade and therefore should be planned for, as they are in the VPHCP under Changed Circumstances. Training of firefighters is beyond the scope of the VPHCP. Impacts to vernal pools from emergency response are evaluated in Chapter 9.
66	Climate change language	Page 9-13 should discuss how climate change is preventable.	Agree. The text has been modified as suggested.
67	Cost analysis	On Page 10-1, Chapter 10 Preserve Management And Funding Mechanisms, describe what evidence exists to support the conclusions and values provided by Appendix F.	The estimates of cost were prepared by the City and their consultants (see Appendix F, Chapter 10). Details regarding the cost estimate, including process for developing costs and assumptions, are provided. Costs are listed by site.

Commenter	General Topic	Comment Summary	Response to Comment
68	Funding mechanisms	On Page 10-4, 10.3 Identifying Funding Mechanisms, define the status of the MSCP regional funding mechanism and the status of "SANDAG's Quality of Life Funding?"	The VPHCP does not rely on a future funding source for implementation. Existing funding sources are identified in Chapter 10. The status of regional funding for MSCP is beyond the scope of the VPHCP. Chapter 10 has been updated to include this discussion.
69	Short term funding	On Page 10-9 Section 10.6 Short-Term Funding Mechanisms, define what the items of competing "normal operations" are and why vernal pool management would rise to a level of priority.	Chapter 10 has been updated to clarify.
70	Alternatives to Take	On Page 11-1, Chapter 11 Alternates to Take, the alternatives are not complete and should avoid take in "covered", "pipeline" and other projects, as well as have maps for comparison.	Agree. The identified alternatives do minimize take (see Response to Comments 51 and 30) and the mapping tool has been updated.
71	Appendix D	Appendix D was not provided in the preliminary draft.	Appendix D has been included.
72	Appendix E	Appendix D was not provided in the preliminary draft.	Appendix E has been included.
73	Contingency Fund	Page F-4, define the incentive to establish, maintain and utilize contingency funds for as-needed vernal pool expenditures. Contingency Fund is for management of vernal pools, it cannot be used for other activities. It is also assumed that it would not be needed every year so it will build up over time. The incentive is that this will keep them in compliance and minimize costs in the future by addressing issues sooner.	Contingency Fund is for the management of vernal pools; it cannot be used for other activities. It is also assumed that the fund would not be needed every year so it will build up over time while remaining in compliance and minimizing costs in the future by addressing issues sooner. Contingency funding would be identified in an annual report, which the Wildlife Agencies would review. .

Commenter	General Topic	Comment Summary	Response to Comment
74	VPMMP Management & Monitoring Level	For Table F-5, Column 18 Level 1 should be the standard for all conserved sites.	The intent of Table F5 is to indicate the level of management needed to bring the site up to Level 1. Level 2 or 3 management and monitoring is needed for sites that are not a Level 1. Level 1 costs shown in Column 18 are the ongoing annual cost once a site is at Level 1.
Bauder			
75	Comparison table	Include a table that summarizes the reasons for and against inclusion of sites that are not protected by the alternatives (as indicated in Tables 2.4-6).	Agree. Table 11.1 has been expanded.
76	Geomorphology of pools	Section 1.2 needs to discuss which of the 24 pool types each pool complex is assigned to.	Text has been added to end of Section 1.2.
78	Status of J14	Describe the current status of J14.	J14 is currently owned by Caltrans and therefore is considered part of the baseline conditions and is currently being restored.
79	Status of Pogogyne nudiuscula	*Pogogyne nudiuscula* has been extirpated from this J14.	True; however, additional populations have been restored within the existing preserves across Otay Mesa (see 5-year review for complete details on distribution). Additional text has been added to Section 3.7.3 to describe this.
80	Seed distribution	Pages 3-9, 13, and 7-3 need to say that small and large mammals distribute seeds.	Agree. Text has been modified as suggested in Sections 3.5.1 and 3.7.1 and Figure 7-1.
81	Pogogyne seed storage	Page 3-9 needs to include information on seed storage in the soil as described by Dr. Tom Ebert.	Agree. Section 3.5.1 has been updated to include the provided information and reference.
82	Bauder citation for *Pogogyne abramsii*	Section 3-5 needs to include the biology and ecology of *Pogogyne abramsii* that is contained in the first chapter of a book published in 2011 by California State University, Chico.	Reference has been added.

Commenter	General Topic	Comment Summary	Response to Comment
83	Bauder citation for precipitation and plant distributions	On Page 6-2 cite the paper (Bauder 2000) that deals with year-to-year changes in vernal pool plant distributions related to variation in precipitation.	Reference has been added.
84	Appendix A	The ACOE in Appendix A should be replaced with the table that is included in the Draft Guidebook (Bauder *et al*. 1999) as Appendix D.	Appendix A has been updated.
85	Level 1 monitoring	Pools chosen for Level 1 monitoring should represent the diversity of size, depth and network position present in the complex or assessment area.	Section 7.5.2 has been updated.
Ponder - Cubic			
86	*Myosurus minimum* ssp. *apus*	The unresolved taxonomic issues for little mouse tail (*Myosurus minimus ssp. apus*) are not included within the VPHCP.	This species is not being included in the VPHCP because it is not a unique species to southern California vernal pools and is widely distributed throughout California.
87	California Orcutt grass	Page 3-11 needs to include a discussion describing how California Orcutt grass is wind pollinated.	Determining how Orcutt's grass is pollinated is beyond the scope of the VPHCP and is not needed to meet issuance criteria. All of the species accounts were peer reviewed by vernal pool experts and rely on the best available scientific information.
88	Communities Facilities District	Should the City determine it practical to purse a CDF, the City should be aware of City of San Diego v. Shapiro (2014) 228 Cal.App.4th 756.	Chapter 10 has been updated.
89	Cubic	The government is required to offer just compensation for taking of private property.	The VPHCP allows for reasonable use of private property and is consistent with the 25% allowable development in the MHPA. Based on a site visit with the property owner and biological surveys provided by Helix Environmental, hard lines have been agreed to by the property owner and the VPHCP has been updated accordingly.

Commenter	General Topic	Comment Summary	Response to Comment
Ponder - Pardee			
90	Access - streets	Street construction addressed in the VPHCP	Circulation elements are an allowable use in the VPHCP (see Section 4.1.4).
91	West Mesa Village Planning Area	Mitigation requirements need to address both exant pools as well as loss of critical habitat PCEs	Based on a site visit with the property owner and biological surveys provided by RECON, hard lines have been agreed to by the property owner and the VPHCP has been updated accordingly.
Story - Otay Tijuana			
92	Otay-Tijuana Venture, LLC	The City's interactive maps do not show any vernal pools on the property and therefor it is not clear why the draft VPHCP would include any portion of the property in the expanded MHPA.	Based on a site visit with the property owner and biological surveys provided by Helix Environmental, hard lines have been agreed to by property owner and the VPHCP has been updated accordingly. Land with suitable habitat for vernal pools (e.g., soils, slopes) has been included in the MHPA as part of the VPHCP.
Rhodes			
93	Rhodes Crossing	Impacts from Rhodes Crossing project	This project's impacts to listed species were addressed through a separate Biological Opinion and are not take-authorized in the VPHCP. The project is part of the baseline and is therefore not subject to analysis in the VPHCP.
Asmus			
94	Status of research	Discuss if the research concepts listed in Section 7.9 have been implemented.	The research being funded by SANDAG is currently underway; research identified as an "option" has not been implemented.
Ohrmund			
95	Corn Property	The Corn Property property was used by the ACOE in 2001 as a construction yard which created tractor tire ruts, later identified as Vernal Pools, which were subsequently graded by the ACOE. The area has also been used by the Border Patrol to patrol the border	Thank you for the information provided. The data sources are available on the City's website through the mapping tool (see Response to Comment 2). We agree that conditions change; however, site-specific surveys are not required to process the VPHCP (see Comment 3). Site-specific surveys are required when the property owner seeks land development permits (see existing City ordinances).

Commenter	General Topic	Comment Summary	Response to Comment
		with their vehicles and any new vernal pools are most certainly a result of their. As such, copies of all sources used to determine the habitat and species on the property should be provided.	
96	One management entity	All vernal pools should be managed by one public agency entity.	This is not feasible given the numerous land owners.
97	Mitigation requirements	Any mitigation for impacts to vernal pools on a parcel should only require the project to fund management on the same number of pool square footage and not any excess pools that just happen to remain on the parcel.	Comment noted. The conservation strategy and mitigation ratios are based on existing ordinances.
98	Funding through property tax bill	The management expenses for mitigation and an option approved by the County of San Diego to add the annual management expense to the property tax bill of a designated development parcel or parcels.	Comment noted. Funding strategies for the City are outlined in Chapter 10.
99	Agricultural Lands	Previously developed farmland, tilled and graded lands that do not have any vernal pools should not be included within the VPHCP preserve boundary.	On Otay Mesa, some agricultural lands do provide buffer, watershed, and opportunities for restoration. When these lands are located adjacent to extant vernal pools, they are critical to the conservation strategy and therefore are included in the Preserve.
Whalen - Tierra			
100	MHPA versus preserve	Distinguish the MHPA versus the preserve.	Refer to the Glossary for definitions. The document has been updated throughout to clarify.
101	Road maintenance and avoidance of fairy shrimp	Clarify how the City would know if road ruts contain SDFS or RFS.	The existing City ordinance requires surveys prior to maintenance activities.
102	Deep rooted species.	In Table 4-3, the “installation of vegetation” should be clarified to include that no deep rooted species would be planted.	The description does state that no deep root species are allowed.

Commenter	General Topic	Comment Summary	Response to Comment
103	Dust control	Page 5-5, 7(a)-(e) needs to include how the measures accommodate water spraying for dust control and soil compaction purposes.	Text has been added to Section 5.2.3 to address spraying and compaction.
104	Addition of Conserve Lands	In Section 5.2.2 the subsection title "Addition of Conserved Lands to the MHPA" should be changed to "Addition of Lands not Currently in MHPA to MHPA".	Section 5.2.2 heading has been changed per suggestion.
105	Verify level of conservation 94% versus 86%	Page 5-7 states approximately 94% of the vernal pools will be conserved. Clarify how its differs from the previous quoted 86% referenced in the first paragraph of Section 5.2.2	The 86% conservation referenced refers to the baseline conditions. The 94% refers to the percentage of pools to be conserved through implementation of the VPHCP. Note these numbers have been updated based on the revised conservation analysis.
106	Figure 7-4	The meaning of "prevent an average" needs to be explained and the graphic needs to be updated accordingly.	Please refer to Section 7.3 for a description of the Standards. The graphic includes a downward arrow, meaning "prevent an average decline." Figure 7-4 has been updated to be more clear.
107	Benchmark for rainfall	Clarify if 55% or 65% percent is the benchmark for rainfall as they are both used throughout.	Text in Section 7.3 has been updated.
108	Cap on management efforts	Explain how the VPMMP would be funded.	The funding levels are defined upfront and the City receives assurance through the No Surprises rule.
109	Boundary line adjustments	On Page 8-5, Section 8.3.2, describe why the standard MSCP boundary line adjustments were not used.	Section 8.3.2 does describe the methods used for MSCP.
110	City acceptance of vernal pool open space	On Page 8-8, bullet #5, discuss if the City will accept vernal pool open space or not.	The City is exploring options for accepting vernal pool open space for long-term management under the VPHCP.
111	Wildlife agency review	On Page 8-8, Section 8.5.2, describe which small subset of covered species/project would require additional agency review.	As stated in Section 8.5.2, projects that include an ESL/Wetland Deviation/biologically superior option require agency review and approval.

Commenter	General Topic	Comment Summary	Response to Comment
112	County staff	On Page 9-8 define why biologists must be County staff.	Text has been changed to reference City staff.
113	Typo in Appendix A title	In Appendix A, “indication” should be replaced with “indicator”.	Indication changed to Indicator.
114	Consultation with land managers	In Appendix F, Page F-2 to F3 the discussion of not contacting the entities funding and managing the pools is an omission in the planning of this document.	Multiple entities were contacted, as described in this section. In addition, the costs reflected in Tables F2 and F3 are programmatic estimates and will be further refined when projects apply for permitting.
115	Tierra Alta	Description of this covered project	The figure has been updated as has narrative description of the project in Section 4.1.
116	Tierra Alta	Appendix D-1 baseline mm level for Tierra Alta	A footnote has been added to Appendix D-1.
117	Tierra Alta	Funding and Management Level	Agree that this applicant will do their own plan and PAR – cost estimate is for planning purposes. A footnote has been added.
118	Account for inflation	Table F-8 does not reflect inflation.	The cost analysis is a programmatic estimate based on 2014 dollars. Actual implementation costs will be determined on an annual basis based on the results of the prior year’s VPMMP program to identify management and monitoring needs at each site that is managed under the VPHCP. Therefore, adjusting for inflation at the programmatic level is not necessary. As stated in Section 10.4, hen determining final funding amounts on an annual basis, the City should assume an average annual inflation rate of 3% over time. It is assumed that, over time, revenues from the funding sources would also increase by at least the same rate on average.
Whalen - St. J			
119	Church at St. Jerome	Section 4.1.2 should be revised. The proposed project originally included a church.	Narrative description in Section 4.1.2 has been updated.

Commenter	General Topic	Comment Summary	Response to Comment
120	Costs for St. Jerome	Tables F-5 and F-8 need to be clarified as the costs for St. Jerome's are not yet determined.	Footnote 1 has been clarified.
Boyer			
121	Miramar ownership	Large parcel of land belonging to MCAS Miramar on the south side of SR 52, and west of Magnatron Blvd. is not shown in the plan as a part of the federal property of MCAS Miramar (vernal pool group U-15).	Online maps have been updated.
122	City actions on Federal land	Explain how the plan could support City actions on federal lands, specifically MCAS Miramar.	Federal lands are not included in the VPHCP, with the exception of lands under jurisdiction of USFWS.
Schaeffer			
123	Brown Field - Kelco Ponds	Clarify if the vernal pools containing RFS that will be covered under the MHPA as a result of the VPHCP include the ones located at the Kelco Ponds at Brownfield.	Yes, these were addressed as part of the Biological Opinion that was issued for the project and that is part of the baseline condition.
124	Salvaged materials	Clarify requirements for salvage materials from vernal pools for restoration.	This would be determined on a case-by-case basis and would be reviewed during the review and approval of the restoration plan.
125	Standardized restoration monitoring plan	Consistent restoration and monitoring protocols should be developed.	Restoration and monitoring protocols are required as part of the VPMMP, as detailed in Chapter 7.
126	Extraordinary mitigation	Section 5.3.1 needs to better define species with limited distribution	This language is from Wetlands Deviation Ordinance.
127	Measure 1a	A qualified biologist should have 5 years of experience rather than 3.	Three years is sufficient, although more is always better.
128	Measure 1c	Measure 1c should be revised so that enhancement will reach success criteria levels that are the same or better.	Language has been updated for Measure 1c.
129	Measure 1e	Measure 1e should be revised so that contours are 2 inches.	Measure has been updated to require 25-foot contours.

Commenter	General Topic	Comment Summary	Response to Comment
130	Measure 1f	The water balance model is not sufficient.	The hydraulic model measure has been updated to clarify.
131	Measure 1j	The species should be collected within watershed.	This will be required, if feasible, and is a detail that will be reviewed as part of project-specific restoration plans.
132	Measure 1k	Clarify that water is to sustain plants, not to hydrate shrimp.	Measure has been updated.
133	Measure 1n	There should be monitoring standards mentioned throughout the document.	Monitoring standards will be consistent with those defined in Section 7.5.1.
134	Measure 1o	Dry season sampling should be reduced.	Measure has been updated per the comment.
135	Edge effects	In Section 6.3 edge effects should be considered.	Edge effects will be considered, where feasible, as discussed in Section 6.3.
136	Watershed integrity	Section 7.3 should include a standard regarding watershed integrity.	A standard regarding watershed integrity has been added to Section 7.3.
137	Dry season sampling	In Table 7-1, dry season sampling should be reduced to 5 times per year.	Table 7-1 has been updated.
138	Hydraulic monitoring	In Section 7.5.4 include hydraulic monitoring at least every three years or during high rainfall.	As described in Section 7.5.1, monitoring of vernal pools following rain events will occur at least three times per year.
139	Data management	Section 7.7 should be revised so that data is only be submitted to SDMMP, not SANDAG.	Section 7.7 has been updated.

APPENDIX C

AIR QUALITY AND GREENHOUSE GAS EMISSIONS CALCULATIONS

San Diego VPHCP

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.90	Acre	2.90	126,324.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2015
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Additional acreage of vernal pool complexes in the Plan Area.

Construction Phase - Estimated emissions for one year of construction.

Off-road Equipment -

Trips and VMT -

Vehicle Trips - No operational emissions.

Water And Wastewater - No operational emissions.

Solid Waste - No operational emissions.

Construction Off-road Equipment Mitigation -

Grading - Estimated project acreage.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	3.00	261.00
tblGrading	AcresOfGrading	391.50	2.90
tblProjectCharacteristics	OperationalYear	2014	2015
tblSolidWaste	SolidWasteGenerationRate	0.25	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	3.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblWater	OutdoorWaterUseRate	3,455,295.91	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2015	0.3268	3.0167	2.2707	3.0400e-003	0.0364	0.2353	0.2717	7.8100e-003	0.2164	0.2242	0.0000	313.5520	313.5520	0.0870	0.0000	315.3782
Total	**0.3268**	**3.0167**	**2.2707**	**3.0400e-003**	**0.0364**	**0.2353**	**0.2717**	**7.8100e-003**	**0.2164**	**0.2242**	**0.0000**	**313.5520**	**313.5520**	**0.0870**	**0.0000**	**315.3782**

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	lb/day										lb/day					
2015	0.3268	3.0167	2.2707	3.0400e-003	0.0300	0.2353	0.2652	7.1100e-003	0.2164	0.2235	0.0000	313.5519	313.5519	0.0870	0.0000	315.3782
Total	**0.3268**	**3.0167**	**2.2707**	**3.0400e-003**	**0.0300**	**0.2353**	**0.2652**	**7.1100e-003**	**0.2164**	**0.2235**	**0.0000**	**313.5519**	**313.5519**	**0.0870**	**0.0000**	**315.3782**

	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**	**17.79**	**0.00**	**2.39**	**8.96**	**0.00**	**0.31**	**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	lb/day										lb/day					
Area	3.5054	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		6.3000e-004	6.3000e-004	0.0000		6.7000e-004
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
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
Total	**3.5054**	**0.0000**	**3.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**6.3000e-004**	**6.3000e-004**	**0.0000**	**0.0000**	**6.7000e-004**

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	lb/day										lb/day					
Area	3.5054	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		6.3000e-004	6.3000e-004	0.0000		6.7000e-004
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
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
Total	**3.5054**	**0.0000**	**3.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**6.3000e-004**	**6.3000e-004**	**0.0000**	**0.0000**	**6.7000e-004**

	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	Site Preparation	Site Preparation	1/1/2015	12/31/2015	5	261	

Acres of Grading (Site Preparation Phase): 2.9

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37

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
Site Preparation	3	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2015

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	lb/day										lb/day					
Fugitive Dust					0.0118	0.0000	0.0118	1.2700e-003	0.0000	1.2700e-003			0.0000			0.0000
Off-Road	0.3153	3.0031	2.1224	2.7300e-003		0.2351	0.2351		0.2163	0.2163		286.5517	286.5517	0.0856		288.3482
Total	**0.3153**	**3.0031**	**2.1224**	**2.7300e-003**	**0.0118**	**0.2351**	**0.2468**	**1.2700e-003**	**0.2163**	**0.2175**		**286.5517**	**286.5517**	**0.0856**		**288.3482**

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	lb/day										lb/day					
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
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
Worker	0.0115	0.0136	0.1483	3.1000e-004	0.0246	1.9000e-004	0.0248	6.5400e-003	1.8000e-004	6.7100e-003		27.0003	27.0003	1.4200e-003		27.0300
Total	**0.0115**	**0.0136**	**0.1483**	**3.1000e-004**	**0.0246**	**1.9000e-004**	**0.0248**	**6.5400e-003**	**1.8000e-004**	**6.7100e-003**		**27.0003**	**27.0003**	**1.4200e-003**		**27.0300**

3.2 Site Preparation - 2015

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	lb/day										lb/day					
Fugitive Dust					5.3000e-003	0.0000	5.3000e-003	5.7000e-004	0.0000	5.7000e-004			0.0000			0.0000
Off-Road	0.3153	3.0031	2.1224	2.7300e-003		0.2351	0.2351		0.2163	0.2163	0.0000	286.5517	286.5517	0.0856		288.3482
Total	**0.3153**	**3.0031**	**2.1224**	**2.7300e-003**	**5.3000e-003**	**0.2351**	**0.2404**	**5.7000e-004**	**0.2163**	**0.2168**	**0.0000**	**286.5517**	**286.5517**	**0.0856**		**288.3482**

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	lb/day										lb/day					
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
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
Worker	0.0115	0.0136	0.1483	3.1000e-004	0.0246	1.9000e-004	0.0248	6.5400e-003	1.8000e-004	6.7100e-003		27.0003	27.0003	1.4200e-003		27.0300
Total	**0.0115**	**0.0136**	**0.1483**	**3.1000e-004**	**0.0246**	**1.9000e-004**	**0.0248**	**6.5400e-003**	**1.8000e-004**	**6.7100e-003**		**27.0003**	**27.0003**	**1.4200e-003**		**27.0300**

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	lb/day										lb/day					
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
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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.509603	0.073619	0.192430	0.134105	0.036943	0.005309	0.012459	0.020989	0.001832	0.002087	0.006541	0.000614	0.003471

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	lb/day										lb/day					
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
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

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	lb/day										lb/day					
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
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**

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	lb/day										lb/day					
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
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**

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	lb/day										lb/day					
Mitigated	3.5054	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		6.3000e-004	6.3000e-004	0.0000		6.7000e-004
Unmitigated	3.5054	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		6.3000e-004	6.3000e-004	0.0000		6.7000e-004

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	lb/day										lb/day					
Architectural Coating	0.8021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7033					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-005	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		6.3000e-004	6.3000e-004	0.0000		6.7000e-004
Total	**3.5054**	**0.0000**	**3.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**6.3000e-004**	**6.3000e-004**	**0.0000**		**6.7000e-004**

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	lb/day										lb/day					
Architectural Coating	0.8021					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7033					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-005	0.0000	3.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		6.3000e-004	6.3000e-004	0.0000		6.7000e-004
Total	**3.5054**	**0.0000**	**3.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**6.3000e-004**	**6.3000e-004**	**0.0000**		**6.7000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

San Diego VPHCP

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.90	Acre	2.90	126,324.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2015
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Additional acreage of vernal pool complexes in the Plan Area.

Construction Phase - Estimated emissions for one year of construction.

Off-road Equipment -

Trips and VMT -

Vehicle Trips - No operational emissions.

Water And Wastewater - No operational emissions.

Solid Waste - No operational emissions.

Construction Off-road Equipment Mitigation -

Grading - Estimated project acreage.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	3.00	261.00
tblGrading	AcresOfGrading	391.50	2.90
tblProjectCharacteristics	OperationalYear	2014	2015
tblSolidWaste	SolidWasteGenerationRate	0.25	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	3.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblWater	OutdoorWaterUseRate	3,455,295.91	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					
2015	0.0426	0.3939	0.2957	3.9000e-004	4.6800e-003	0.0307	0.0354	1.0000e-003	0.0282	0.0292	0.0000	36.9560	36.9560	0.0103	0.0000	37.1722
Total	**0.0426**	**0.3939**	**0.2957**	**3.9000e-004**	**4.6800e-003**	**0.0307**	**0.0354**	**1.0000e-003**	**0.0282**	**0.0292**	**0.0000**	**36.9560**	**36.9560**	**0.0103**	**0.0000**	**37.1722**

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					
2015	0.0426	0.3939	0.2957	3.9000e-004	3.8300e-003	0.0307	0.0345	9.1000e-004	0.0282	0.0292	0.0000	36.9560	36.9560	0.0103	0.0000	37.1722
Total	**0.0426**	**0.3939**	**0.2957**	**3.9000e-004**	**3.8300e-003**	**0.0307**	**0.0345**	**9.1000e-004**	**0.0282**	**0.0292**	**0.0000**	**36.9560**	**36.9560**	**0.0103**	**0.0000**	**37.1722**

	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**	**18.16**	**0.00**	**2.40**	**9.00**	**0.00**	**0.31**	**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	0.6397	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-005	5.0000e-005	0.0000	0.0000	5.0000e-005
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	**0.6397**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

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	0.6397	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-005	5.0000e-005	0.0000	0.0000	5.0000e-005
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	**0.6397**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

	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	Site Preparation	Site Preparation	1/1/2015	12/31/2015	5	261	

Acres of Grading (Site Preparation Phase): 2.9

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37

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
Site Preparation	3	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2015

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					1.5400e-003	0.0000	1.5400e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0412	0.3919	0.2770	3.6000e-004		0.0307	0.0307		0.0282	0.0282	0.0000	33.9242	33.9242	0.0101	0.0000	34.1369
Total	**0.0412**	**0.3919**	**0.2770**	**3.6000e-004**	**1.5400e-003**	**0.0307**	**0.0322**	**1.7000e-004**	**0.0282**	**0.0284**	**0.0000**	**33.9242**	**33.9242**	**0.0101**	**0.0000**	**34.1369**

3.2 Site Preparation - 2015

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	1.4800e-003	1.9600e-003	0.0187	4.0000e-005	3.1400e-003	3.0000e-005	3.1600e-003	8.3000e-004	2.0000e-005	8.6000e-004	0.0000	3.0319	3.0319	1.7000e-004	0.0000	3.0354
Total	**1.4800e-003**	**1.9600e-003**	**0.0187**	**4.0000e-005**	**3.1400e-003**	**3.0000e-005**	**3.1600e-003**	**8.3000e-004**	**2.0000e-005**	**8.6000e-004**	**0.0000**	**3.0319**	**3.0319**	**1.7000e-004**	**0.0000**	**3.0354**

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					6.9000e-004	0.0000	6.9000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0412	0.3919	0.2770	3.6000e-004		0.0307	0.0307		0.0282	0.0282	0.0000	33.9241	33.9241	0.0101	0.0000	34.1368
Total	**0.0412**	**0.3919**	**0.2770**	**3.6000e-004**	**6.9000e-004**	**0.0307**	**0.0314**	**7.0000e-005**	**0.0282**	**0.0283**	**0.0000**	**33.9241**	**33.9241**	**0.0101**	**0.0000**	**34.1368**

3.2 Site Preparation - 2015

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	1.4800e-003	1.9600e-003	0.0187	4.0000e-005	3.1400e-003	3.0000e-005	3.1600e-003	8.3000e-004	2.0000e-005	8.6000e-004	0.0000	3.0319	3.0319	1.7000e-004	0.0000	3.0354
Total	**1.4800e-003**	**1.9600e-003**	**0.0187**	**4.0000e-005**	**3.1400e-003**	**3.0000e-005**	**3.1600e-003**	**8.3000e-004**	**2.0000e-005**	**8.6000e-004**	**0.0000**	**3.0319**	**3.0319**	**1.7000e-004**	**0.0000**	**3.0354**

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
City Park	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
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.509603	0.073619	0.192430	0.134105	0.036943	0.005309	0.012459	0.020989	0.001832	0.002087	0.006541	0.000614	0.003471

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					
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
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
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			
City Park	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			
City Park	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	0.6397	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-005	5.0000e-005	0.0000	0.0000	5.0000e-005
Unmitigated	0.6397	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-005	5.0000e-005	0.0000	0.0000	5.0000e-005

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	0.1464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4934					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-005	5.0000e-005	0.0000	0.0000	5.0000e-005
Total	**0.6397**	**0.0000**	**3.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

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	0.1464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4934					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-005	5.0000e-005	0.0000	0.0000	5.0000e-005
Total	**0.6397**	**0.0000**	**3.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

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			
City Park	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			
City Park	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			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	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