000183 REQUEST FOR COUNCIL ACTION
CITY OF SAN DIEGO

1. CERTIFICATE NUMBER (FOR AUDITOR'S USE ONLY): 01/07 203

TO:	2. FROM (ORIGINATING DEPARTMENT):	3. DATE:
CITY ATTORNEY	DEVELOPMENT SERVICES	December 4, 2007

4. SUBJECT:
Shaw Lorenz, Project No. 126895

5. PRIMARY CONTACT (NAME, PHONE, & MAIL STA.)	6. SECONDARY CONTACT (NAME, PHONE, & MAIL STA.)	7. CHECK BOX IF REPORT TO COUNCIL IS ATTACHED
Tim Daly (619) 446-5356, MS-501	Leslie Goossens (619) 446-5223, MS-501	☐

8. COMPLETE FOR ACCOUNTING PURPOSES

					9. ADDITIONAL INFORMATION / ESTIMATED COST:
FUND					No cost to the City. All costs are recovered through a deposit account funded by the applicant.
DEPT.	1317				
ORGANIZATION	1776				
OBJECT ACCOUNT	4022				
JOB ORDER	420669				
C.I.P. NUMBER	N/A				
AMOUNT					

10. ROUTING AND APPROVALS

ROUTE (#)	APPROVING AUTHORITY	APPROVAL SIGNATURE	DATE SIGNED	ROUTE (#)	APPROVING AUTHORITY	APPROVAL SIGNATURE	DATE SIGNED
1	ORIG. DEPT	KELLY BROUGHTON	12/6/07	8	DEPUTY CHIEF	WILLIAM ANDERSON	12-11-07
2	EAS	TERRY GARDNER	12/7/07	9	COO		
3	CPCI/PLANNING			10	CITY ATTORNEY	SHIRLEY EDWARDS	12-17-07
4	CFO			11	ORIG. DEPT	MIKE WESTLAKE	12/5/07
5				✓	DOCKET COORD: _____ COUNCIL LIAISON _____		
6					COUNCIL PRESIDENT ☐ SPOB ☐ CONSENT ☐ ADOPTION		
7					_____ ☐ REFER TO: _____ COUNCIL DATE: _____		

11. PREPARATION OF: ☒ RESOLUTIONS ☐ ORDINANCE(S) ☐ AGREEMENT(S) ☐ DEED(S)

1) Council resolution stating for the record that the final EIR No. 2873 has been reviewed and considered prior to approving the project.

2) Council resolution terminating the stay of expiration of the Shaw Lorenz Project Approvals, Resolution No. R-302995 (Rev), September 17, 2007.

11A. STAFF RECOMMENDATIONS:

Approve Resolutions.

12. SPECIAL CONDITIONS (REFER TO A.R. 3.20 FOR INFORMATION ON COMPLETING THIS SECTION.)

COUNCIL DISTRICT(S): 1

COMMUNITY AREA(S): Del Mar Mesa

ENVIRONMENTAL IMPACT: This activity is covered under Project No. 2873, Shaw Lorenz. The activity is adequately addressed in the environmental document and there is no change in circumstance, additional information, or project changes to warrant additional environmental review. Therefore, the activity is not a separate project for purposes of CEQA review pursuant to State CEQA Guidelines Section §15060(c)(3).

CITY CLERK INSTRUCTIONS:

1. Public noticing is required.

2. Return copies of each resolution to Tim Daly, MS-501.

3. Council action requires a majority vote.

EXECUTIVE SUMMARY SHEET

DATE REPORT ISSUED: December 4, 2007 REPORT NO.:
ATTENTION: Council President and City Council
ORIGINATING DEPARTMENT: Development Services Department
SUBJECT: Shaw Lorenz, Project No. 126895
COUNCIL DISTRICT(S): 1
STAFF CONTACT: Tim Daly, Tdaly@sandiego.gov, (619) 446-5356

REQUESTED ACTION:
Request to terminate the stay of expiration for Shaw Lorenz Project Approvals, Resolution No. R-302995 (Rev), dated September 17, 2007 (Attachment 1).

STAFF RECOMMENDATION:
Approve a resolution terminating the stay of expiration for Shaw Lorenz Project Approvals, Resolution No. R-302995 (Rev), dated September 17, 2007.

EXECUTIVE SUMMARY:
The Shaw Lorenz project for residential development in the Del Mar Mesa Community Planning area was approved by City Council on May 11, 2004. The project approvals consist of Vesting Tentative Map no. 25674, Planned Development Permit no. 25675, Site Development Permit no. 25676, Coastal Development Permit no. 25677, and Neighborhood Use Permit no. 76234. Pardee Homes, the Owner/Permittee for the Shaw Lorenz project, has applied for an Extension of Time (EOT) on the aforementioned approvals; however, on October 13, 2006, United States District Judge Rudi M. Brewster in the Southern District of California rendered a decision and issued a Decision and Injunction in the case entitled, "*Southwest Center for Biological Diversity, et al. vs. Jim Bartel, Anne Badgley, and Gale Norton, and Building Industry Legal Defense Foundation*, et al.," Case No. 98-CV-2234-B(JMA) (Attachment 2). As a result of the issuance of the Decision and Injunction, Pardee Homes' Shaw Lorenz Project, as well as other development projects that refer to or rely upon the City of San Diego's incidental take permit and related MSCP Subarea Plan for impacts to the vernal pool habitat and vernal pool species, have been precluded from obtaining further discretionary or ministerial approvals from the City. On September 17, 2007, City Council approved Resolution No. R-302995 (Rev.) to stay the expiration of the Shaw Lorenz Project approvals until the Injunction is vacated or the Injunction or any modification thereof is no longer applicable to the Project.

On November 5, 2007, the U.S. Fish and Wildlife Service (Service) completed the re-initiation of the Biological Opinion on the Shaw Lorenz Project and authorized the incidental take of San Diego fairy shrimp and vernal pool habitat species (Attachment 3). Pardee Homes would no longer be relying on the City of San Diego's incidental take permit and related MSCP Subarea Plan for impacts to the San Diego fairy shrimp or other vernal pool species. Considering the Services' Biological Opinion authorizes the incidental take of the species independent of and without regard to the provisions of the City's MSCP, the Injunction no longer applies to the Shaw Lorenz Project, and therefore Pardee Homes is requesting that the stay of expiration be terminated.

This resolution to terminate the stay of the expiration date for the Shaw Lorenz Project No. 2873 approvals is adequately addressed in the environmental document and there is no change in circumstance, additional information, or project changes to warrant additional environmental review. Therefore, the activity is not a separate project for purposes of CEQA review pursuant to State CEQA Guidelines Section §15060(c)(3).

FISCAL CONSIDERATIONS:
All costs associated with the processing of this project are recovered by a deposit account maintained by the applicant.

PREVIOUS COUNCIL and/or COMMITTEE ACTION:
None

COMMUNITY PARTICIPATION AND PUBLIC OUTREACH EFFORTS:
N/A

KEY STAKEHOLDERS & PROJECTED IMPACTS (if applicable):
Pardee Homes, Owner

Kelly G. Broughton
Director
Development Services Department

William Anderson
Deputy Chief of Land Use and
Economic Development

ATTACHMENTS:
1. Resolution No. R-302995 (Rev), dated September 17, 2007.
2. Southwest Center for Biological Diversity, et al. vs. Jim Bartel, Anne Badgley, and Gale Norton, and Building Industry Legal Defense Foundation, et al.," Case No. 98-CV-2234-B(JMA).
3. USFWS Re-initiation of Biological Opinion on the Shaw Lorenz Project (Corps File No. 200400996-KJC), City of San Diego, San Diego County, California (Formerly known as 1-6-06-F-4005R1), November 5, 2007.

RESOLUTION NUMBER R-_____

DATE OF FINAL PASSAGE _____

WHEREAS, the City Council by Resolution No. R-299205, adopted on May 11, 2004, certified Master Environmental Impact Report No. 95-0353 (Project No. 2873), a copy of which is on file in the Development Services Department; and

WHEREAS, under Charter section 280(a)(2) this resolution is not subject to veto by the Mayor because this matter requires the City Council to act as a quasi-judicial body and where a public hearing was required by law implicating due process rights of individuals affected by the decision and where the Council was required by law to consider evidence at the hearing and to make legal findings based on the evidence presented; and

WHEREAS, in connection with the previous consideration and approval of Planned Development Permit No. 25675, Site Development Permit No. 25676, Coastal Development Permit No. 25677, Neighborhood Use Permit No. 76234, and Vesting Tentative Map No. 25674 for the Shaw Lorenz project [Shaw Lorenz Project Approvals], the City Council considered the issues discussed in Master Environmental Impact Report No. 95-0353 (Project No. 2873); NOW, THEREFORE,

BE IT RESOLVED, by the Council of the City of San Diego, stating for the record that the approval of lifting the stay of the Shaw Lorenz Project Approvals, is a subsequent approval of the Project addressed in the Master Environmental Impact Report and therefore not a separate project under CEQA Guideline sections 15060(c)(3) .

BE IT FURTHER RESOLVED, by the Council of the City of San Diego, stating for the record that the information contained in the final Master Environmental Impact Report, including

any comments received during the public review process, has been previously reviewed and considered by this Council and it is determined that this subsequent approval of lifting the stay of the Shaw Lorenz Project Approvals does not involve change in circumstances, project changes, or new information of substantial importance which would warrant any additional environmental review.

APPROVED: MICHAEL J. AGUIRRE, City Attorney

By _____
Shirley R. Edwards
Chief Deputy City Attorney

SRE:pev
12/17/07
Or.Dept:DSD
R-2008-536
MMS #5730

(B)
(R-2008-537)

003189

RESOLUTION NUMBER R-_____

DATE OF FINAL PASSAGE _____

WHEREAS, on May 11, 2004, the Council of the City of San Diego approved Vesting Tentative Map No. 25674, Planned Development Permit No. 25675, Site Development Permit No. 25676, Coastal Development Permit No. 25677, and Neighborhood Use Permit No. 76234 [the Shaw Lorenz Project Approvals] for the Shaw Lorenz Project, a residential development in the Del Mar Mesa Community Planning area within the City of San Diego [City]. Pardee Homes, a California Corporation, is the Owner/Permittee for the Shaw Lorenz Project; and

WHEREAS, on October 13, 2006, United States District Judge Rudi M. Brewster in the Southern District of California issued a Decision and Injunction in the case entitled, *Southwest Center for Biological Diversity, et al. vs. Jim Bartel, Anne Badgley, and Gale Norton, and Building Industry Legal Defense Foundation, et al.*, Case No. 98-CV-2234-B(JMA) [the Injunction] enjoining the City of San Diego's Incidental Take Permit as applied to the San Diego fairy shrimp and six other vernal pool species; and

WHEREAS, on September 17, 2007, the Council of the City of San Diego approved Pardee Homes' application to stay the expiration of the Shaw Lorenz Project Approvals until the Injunction is vacated or the Injunction or any modification(s) thereof is no longer applicable to the Shaw Lorenz Project and for an additional 180 days thereafter, except that, in no event shall the stay exceed the applicable statutory time limits of the Subdivision Map Act; and

WHEREAS, the USFWS re-initiated formal consultation on the Biological Opinion for the Shaw Lorenz Project and, on November 5, 2007, issued a new Biological Opinion

authorizing the incidental take of San Diego fairy shrimp and vernal pool habitat species and concluded that:

> The applicant is not relying on coverage for the San Diego fairy shrimp or other vernal pool species provided under the City of San Diego's incidental take permit and related MSCP subarea plan. The impacts of this project on the San Diego fairy shrimp is reviewed by the Service independently and without regard to the provisions of the City's MSCP subarea plan or the Service's biological opinion under Section 7 regarding the City's MSCP subarea plan and associated incidental take permit."; and

WHEREAS, under Charter section 280(a)(2) this resolution is not subject to veto by the Mayor because this matter requires the City Council to act as a quasi-judicial body and where a public hearing was required by law implicating due process rights of individuals affected by the decision and where the Council was required by law to consider evidence at the hearing and to make legal findings based on the evidence presented; NOW, THEREFORE,

BE IT RESOLVED by the Council of the City of San Diego, that the stay of the expiration of the Shaw Lorenz Project Approvals is hereby lifted. The City shall notify Pardee Homes in writing that the stay has been lifted and that Pardee Homes will have no more than 180 days after the effective date of this Resolution (the date the stay was lifted) to exercise any and all rights under the Shaw Lorenz Project approvals.

APPROVED: MICHAEL J. AGUIRRE, City Attorney

By _____
Shirley R. Edwards
Chief Deputy City Attorney

SRE:pev
12/17/07
Or.Dept:DSD
R-2008-537
MMS #5730

000191

DETERMINATION OF

ENVIRONMENTAL EXEMPTION

Pursuant to the California Environmental Quality Act (CEQA) and State CEQA Guidelines

Agency: CITY OF SAN DIEGO Project No.: 126895 Date: December 4, 2007

~~Action/Permit~~(s): Process 5 Hearing

Description of Activity: Shaw Lorenz resolution to terminate the stay (toll) of the expiration date for the Shaw Lorenz project Pardee Homes has requested that the City Council consider a resolution to stay (toll) the expiration date for the Shaw Lorenz project approvals while the Decision and Injunction in the case entitled, "*Southwest Center for Biological Diversity, et al. vs. Jim Bartel, Anne Badgley, and Gale Norton, and Building Industry Legal Defense Foundation*, et al.," Case No. 98-CV-2234-B(JMA), precluding Pardee Homes from obtaining an EOT or subsequent ministerial approvals for the Shaw Lorenz Project remains in effect. The property is locatec the southwest quadrant of Del Mar Mesa Rd and Carmel Mountain Road within the Del Mar Mesa Community Plan area and Council Dist 1.

Location of Activity: The property is located on the southwest quadrant of Del Mar Mesa Rd and Carmel Mountain Road withi the Del Mar Mesa Community Plan area and Council District 1.

(CHECK BOXES BELOW)

1. [x] This activity is EXEMPT FROM CEQA pursuant to:

   [x] Section 15060(c) (3) of the State CEQA Guidelines (the activity is not a project as defined in Section 15378).

2. [ ] This project is EXEMPT FROM CEQA pursuant to State CEQA Guidelines Section checked below:

ARTICLE 19 of GUIDELINES CATEGORICAL EXEMPTIONS (Incomplete list)		ARTICLE 18 of GUIDELINES STATUTORY EXEMPTIONS (Incomplete list)	
Section	Short Name	Section	Short Name
[ ] 15301	Existing Facilities		
[ ] 15302	Replacement or Reconstruction	[ ] 15261	Ongoing Project
[ ] 15303	New Construction or Conversion of Small Structures	[ ] 15262	Feasibility and Planning Studies
[ ] 15304	Minor Alterations to Land	[ ] 15265	Adoption of Coastal Plans and Programs
[ ] 15305	Minor Alteration in Land Use	[ ] 15268	Ministerial Projects
[ ] 15306	Information Collection	[ ] 15269	Emergency Projects
[ ] 15311	Accessory Structures	[ ] Other	
[ ] 15312	Surplus Government Property Sales		
[ ] 15315	Minor Land Divisions		
[ ] 15317	Open Space Contracts or Easements		
[ ] 15319	Annexation of Existing Facilities and Lots for Exempt Facilities		
[ ] 15325	Transfer of Ownership of Interest in Land to Preserve Open Space		
[ ] Other	_____		

It is hereby certified that the City of San Diego has determined the above activity to be exempt:

Terri Bumgardner, Senior Planner
Environmental Analysis Section

Distribution:

Exemption or Project file
Responsible Departments:
Tim Daly, Development Project Manager
Exemption File

¼

000193

(R-2008-165)
REV. 9/17/07

202 B

RESOLUTION NUMBER R- 302995

DATE OF FINAL PASSAGE SEP 17 2007

WHEREAS, on May 11, 2004, the Council of the City of San Diego approved Vesting Tentative Map No. 25674, Planned Development Permit No. 25675, Site Development Permit No. 25676, Coastal Development Permit No. 25677, and Neighborhood Use Permit No. 76234 [the Shaw Lorenz Project Approvals] for the Shaw Lorenz Project, a residential development in the Del Mar Mesa Community Planning area within the City of San Diego [City]. Pardee Homes, a California Corporation, is the Owner/Permittee for the Shaw Lorenz Project; and

WHEREAS, on October 13, 2006, United States District Judge Rudi M. Brewster in the Southern District of California issued a Decision and Injunction in the case entitled, *Southwest Center for Biological Diversity, et al. vs. Jim Bartel, Anne Badgley, and Gale Norton, and Building Industry Legal Defense Foundation, et al.*, Case No. 98-CV-2234-B(JMA) [the Injunction]; and

WHEREAS, the Injunction immediately enjoined the City of San Diego's incidental take permit dated July 18, 1997 issued by the United States Fish and Wildlife Service [USFWS] for pending and future development projects. This ruling enjoins (1) any and all pending applications for development of land containing vernal pool habitat; (2) those projects where the City has granted permission, but the development has not yet physically begun to destroy the vernal pool habitat; and (3) any further development where the permittee is presently engaged in the destruction of vernal pool habitat; and

WHEREAS, as a result of the issuance of the Injunction, Pardee is enjoined from proceeding with the Shaw Lorenz Project and has been unable to obtain from City a grading

permit or final map for the Shaw Lorenz Project. As a consequence, on March 27, 2007, Pardee applied for a stay of the expiration of the Shaw Lorenz Project Approvals pursuant to the provisions of Sections 125.0461 and 126.0111 of the City's Land Development Code and pertinent provisions of the California Subdivision Map Act [Sections 66453.5 and 66452.6 of the California Government Code]; and

WHEREAS, it is likely the Injunction will not be "lifted" in the near future; and

WHEREAS, the Shaw Lorenz Project Approvals granted by the City include dates and periods of time within which a final map must be recorded and permits acted upon; and

WHEREAS, Pardee Homes timely filed an application with the City requesting approval of a stay on the running of periods of time within which a final map must be recorded and permits acted upon as set forth in the Shaw Lorenz Project Approvals; and

WHEREAS, under Charter section 280(a)(2) this resolution is not subject to veto by the Mayor because this matter requires the City Council to act as a quasi-judicial body and where a public hearing was required by law implicating due process rights of individuals affected by the decision and where the Council was required by law to consider evidence at the hearing and to make legal findings based on the evidence presented; and

WHEREAS, City approval of such request is consistent with the Injunction, Section 66452.6, Section 66452.12, Section 66453.5, and Section 66863.9 of the California Government Code, and authorized by the Subdivision Map Act of the State of California; NOW, THEREFORE,

BE IT RESOLVED by the Council of the City of San Diego, that this City Council approval will stay the expiration of the Shaw Lorenz Project Approvals until the Injunction is

vacated or the Injunction or any modification(s) thereof is no longer applicable to the Shaw Lorenz Project and for an additional 180 days thereafter. In no event shall this stay exceed the applicable statutory time limits of the Subdivision Map Act.

BE IT FURTHER RESOLVED that at such time as City determines the Injunction, and any modification(s) thereto, no longer apply to the Shaw Lorenz Project, the City will terminate the Stay through City Council action. If the City determines that the Injunction no longer applies to the Shaw Lorenz Project, City shall notify Pardee Homes in writing. Pardee Homes will have no more than 180 days after the lifting of the stay to exercise any and all rights under the Shaw Lorenz Project approvals.

APPROVED: MICHAEL J. AGUIRRE, City Attorney

By _____
Shirley R. Edwards
Chief Deputy City Attorney

SRE:pev
08/28/07
10/25/07 REV.
Or.Dept:DSD
R-2008-165
MMS #5220

MICHAEL J. AGUIRRE, City Attorney
GEORGE F. SCHAEFER, Deputy City Attorney
California State Bar No. 139399
SHIRLEY R. EDWARDS, Chief Deputy City Attorney
California State Bar No. 151399
Office of the City Attorney
Civil Division
1200 Third Avenue, Suite 1100
San Diego, California 92101-4100
Telephone: (619) 533-5800
Facsimile: (619) 533-5856

Attorneys for Cross-Defendant
City of San Diego

UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF CALIFORNIA

SOUTHWEST CENTER FOR BIOLOGICAL DIVERSITY, et al.,

Plaintiffs,

v.

JIM BARTEL, ANNE BAGLEY, and GALE NORTON,

Defendants,

BUILDING INDUSTRY LEGAL DEFENSE FOUNDATION, et al.,

Intervening Defendants.

BUILDING INDUSTRY LEGAL DEFENSE FOUNDATION, et al.,

Cross-Complainants,

UNITED STATES FISH AND WILDLIFE SERVICE; et al.,

Cross-Defendants,

and

SOUTHWEST CENTER FOR BIOLOGICAL DIVERSITY, et al.,

Intervening Defendants.

Case No. 98-CV-2234-B (JMA)

CITY OF SAN DIEGO'S NOTICE OF COMPLIANCE WITH COURT'S INJUNCTION

Judge: Hon. Rudi M. Brewster
Courtroom No. 2

000198

A. INTRODUCTION

On October 13, 2006 this Court rendered a final decision and injunction. The City of San Diego ("City") gives notice to this Court and all parties of record of the City's compliance with the injunction.

This Court in October immediately enjoined the City's Incidental Take Permit (No. PRT-830241, dated July 18, 1997, issued by the United States Fish and Wildlife Service ("USFWS")) for those pending and future development projects that "take" any of the seven identified vernal pool species. Order at page 60, lines 1-15 ("60:1-15"). This Court stated in its Order:

> Specifically, the Court enjoins (1) any and all pending applications for development of land containing vernal pool habitat; (2) those projects where the City has granted permission, but the development has not yet physically begun to destroy the vernal pool habitat; and (3) any further development where the permittee is presently engaged in the destruction of vernal pool habitat.

Order at 60:16-20. The Court ordered the City to serve a copy of the Order forthwith on all applicants and permittees affected by the injunction. Order at 60:20-22.

B. INTERIM COMPLIANCE

In compliance with the Court's injunction, the City conferred with USFWS officials who later produced a list entitled, "Review of City of San Diego Vernal Pool Projects/Permits in Relation to the City of San Diego MSCP Ruling." Assistant Deputy Director Robert J. Manis, Environmental Analysis Section, Land Development Review, Development Services Department, City of San Diego, reviewed this list and included additional projects. Exhibit A to this Compliance Notice includes a copy of the most recent version of this combined list.[1] A letter from the City was mailed thereafter to the agent for each project on the City's list by certified

[1] Any party to this litigation who believes the list is incomplete should notify counsel for the City of the identity of other applicants or permittees who should have been included on the list. The City maintains a vernal pool site inventory comprising more than 2,500 sites within the City's jurisdiction that may assist in identifying additional projects affected by the Court's injunction. Because this file is too large to file with Court electronically, the City will make it available upon request of any party.

United States mail. *See* Exhibit B to this Compliance Notice.[2]

Each letter sent to an applicant or permittee states, "To the extent that you believe your project falls outside the scope of this Court Order, please provide, in writing, any and all information supporting your position." Responses received are included at Exhibit C. The City will continue to identify other projects that also may be affected by this Court's injunction. As these projects are identified, the City will mail similar letters.

C. FUTURE COMPLIANCE ISSUES

The projects identified on the City's list are at various stages of development: (1) some may be at the application stage; (2) others may not have started development but received all necessary permits to proceed; and (3) others may have received all necessary permits to proceed and are beginning or completing development. It is believed these projects share the following characteristics: The projects are on property containing vernal pool habitat and have been issued, have applied for, or will be applying for, the issuance of a Section 7 biological opinion or Section 10 permit from USFWS relating to vernal pool species.

Although the City's MSCP contains language relating to vernal pools and provides some mitigation for vernal pool habitat, the City has not used and does not use its MSCP to authorize the taking of vernal pool species. However, it is believed USFWS has, in some instances, incorporated by reference the City's MSCP into its Section 7 biological opinions, including MSCP references concerning vernal pool habitat or species. The projects identified on the USFWS's list were or are in the process of being issued biological opinions authorizing take under USFWS' biological opinion or permitting process. *See* Exhibit D. However, this Court has not enjoined USFWS from issuing any more Section 7 biological opinions for projects within the City. The Court also has not required USFWS to amend or revoke the Section 7 biological opinions it already has issued until such time as the City's MSCP is revised with respect to vernal pool species.

[2] A few of the letters were returned unclaimed. Those letters were resent earlier this month. Letters were also sent earlier this month to representatives of projects that were only recently added to the list.

000200

The City regulates land development under the provisions of the City's Land Development Code (San Diego Municipal Code ["SDMC"], Chapters 11 – 14). For purposes of complying with this Court's injunction, the City relies upon definitions in the City's Land Development Code. Under the provisions of the Code, an "applicant" is defined as:

> [A]ny person who has filed an application for a permit, map, or other matter and that is the record owner of the real property that is the subject of the permit, map, or other matter; the record owner's authorized agent; or any other person who can *demonstrate a legal right, interest, or entitlement to the use of the real property* subject to the application; including any person who has an approved and executed Disposition and Development Agreement with the Redevelopment Agency of the City of San Diego.

SDMC § 113.0102. An application is deemed complete, but not yet approved, when the City has determined the application includes all information, materials, fees and deposits required. SDMC § 113.0102. A "permit holder" is "an applicant who has been granted a permit, or the applicant's successor, or the person using the property that is subject to the permit." SDMC § 113.0102.

A "development" is defined in the Land Development Code as:

> [T]he act, process, or result of dividing a parcel of land into two or more parcels; of erecting, placing, constructing, reconstructing, converting, establishing, altering, maintaining, relocating, demolishing, using, or enlarging any building, structure, improvement, lot, or premises; of clearing, grubbing, excavating, embanking, filling, managing brush, or agricultural clearing on public or private property including the construction of slopes and facilities incidental to such work; or of disturbing any existing vegetation.

SDMC § 113.0102.

A "development permit" is defined under the Land Development Code as:

> [A] permit issued pursuant to Land Development Code Chapter 12, Article 6. Development permits include the following: Neighborhood Use Permits, Conditional Use Permits, Neighborhood Development Permits, Site Development Permits, Planned Development Permits, Coastal Development Permits, and Variances.

SDMC § 113.0102.

A "construction permit" is defined under the Land Development Code as:

> [A] permit issued pursuant to Land Development Code Chapter 12, Article 9. Construction permits include the following: Building Permits, Electrical Permits, Plumbing/Mechanical Permits, Demolition/Removal Permits, Grading Permits, Public Right-of-Way Permits, and Sign Permits.

SDMC § 113.1020.

To comply with the Court's injunction, the City will do the following: For properties where vernal pool habitat or species are present, the City will refrain from processing and/or approving any applications for development, including, but not limited to, entitlements (e.g., requests for rezoning) and permits (e.g., development permits, grading permits, construction permits). For example, this would mean that if a ten-acre parcel has a vernal pool habitat anywhere on site, no application will be processed and/or approved because a vernal pool habitat is somewhere on the parcel. In compliance with this Court's injunction (and consistent with California Government Code §§ 65944 and/or 64942(b)), an application will not be deemed complete until the applicant has obtained a Section 7 biological opinion or Section 10 Incidental Take Permit for vernal pool species from USFWS that does not refer back to the City's MSCP in relation to vernal pool habitat and vernal pool species.

For properties where vernal pool habitat or species are present, the City will continue to notify existing City permit holders by letter that they are affected by this Court's Order. Consistent with this Court's injunction, permits issued by the City will not be valid if they were issued in reliance upon the permit holder obtaining from USFWS a valid Section 7 biological opinion or Section 10 Incidental Take Permit and the biological opinion or Section 10 permit refers back to or relies upon the MSCP in relation to vernal pool species or habitat.

The Building Industry Defense Foundation, National Association of Home Builders, California Building Industry Association, Building Association of San Diego and Pardee Construction Company ("Builder Intervenors") recently indicated that they intend to file a motion to clarify the Court's injunction. (Doc. 272). The Builder Intervenors suggest that the City has misinterpreted this Court's Order. To the extent a permit holder believes that he or she is not subject to the Court's Order, the City hopes that the Builder Intervenor's motion for clarification will result in an Order of clarification that provides guidance. The City believes that its strict

000202

interpretation of this Court's decision and injunction is consistent with the requirements of the Endangered Species Act.

This Court also remanded this case to the USFWS with instructions to re-initiate consultation toward revisions of the City of San Diego's Incidental Take Permit (at least on the seven vernal pool species), or for further action that is not inconsistent with the Court's decision. Order at 60:15-18. Formal consultation has not yet been initiated by the USFWS. Nevertheless, the City will continue to comply as detailed above until the City has revised, and the USFWS has approved, the City's MSCP consistent with this Court's ruling.

Dated: December 15, 2006

MICHAEL J. AGUIRRE, City Attorney

By: _____
Shirley Edwards
Chief Deputy City Attorney
E-mail: SEdwards@sandiego.gov

By: s/ George F. Schaefer
George F. Schaefer
Deputy City Attorney
E-mail: GSchaefer@sandiego.gov

Attorneys for City of San Diego

000203

DECLARATION OF SERVICE

I, the undersigned, declare under penalty of perjury that I am over the age of eighteen years and not a party to this action; and that I served the following document(s):

- CITY OF SAN DIEGO'S NOTICE OF COMPLIANCE WITH COURT'S INJUNCTION
- EXHIBITS A-D TO CITY OF SAN DIEGO'S NOTICE OF COMPLIANCE WITH COURT'S INJUNCTION

on the individuals listed below in the manner indicated.

Electronic Mail

I served the following by electronic mail at the e-mail addresses listed below:

- **Marco Antonio Gonzalez**
  marco@coastlawgroup.com
- **William E Halle**
  bhalle@hewittoneil.com lpuzio@hewittoneil.com
- **Neil Levine**
  nlevine@earthjustice.org llovett@earthjustice.org
- **Thomas C Stahl**
  Thomas.Stahl@usdoj.gov efile.dkt.civ@usdoj.gov
- **U S Attorney CV**
  Efile.dkt.civ@usdoj.gov

United States Mail

I served the following by placing a copy in a sealed envelope and placing it for collection and mailing with the United States Postal Service this same day, at my address shown above, following ordinary business practices, at the addresses listed below:

Jane P Davenport
Wildlife and Marine Resources Section
Environment and National Resources Divis
U S Department of Justice
Ben Franklin Station P O Box 7369
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000204

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Executed: December 15, 2006 at San Diego, California.

s/ George F. Schaefer
GEORGE F. SCHAEFER
E-mail: GSchaefer@sandiego.gov

000205

UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF CALIFORNIA

SOUTHWEST CENTER FOR BIOLOGICAL DIVERSITY, et al.,

Plaintiffs,

vs.

JIM BARTEL, ANNE BADGLEY, and DIRK KEMPTHORNE,

Defendants,

and

BUILDING INDUSTRY LEGAL DEFENSE FOUNDATION, et al.,

Intervening Defendants.

and related cross complaint.

CASE NO. 98-CV-2234-B(JMA)

ORDER DENYING INTERVENING DEFENDANTS' MOTION TO CLARIFY SCOPE OF INJUNCTION

[Doc. No. 277]

Now before the Court is the Intervening Defendants' motion to clarify the scope of the injunction in this Endangered Species Act case. The Court ordered the motion submitted without oral argument. Civil Local R. 7.1. The Court has carefully considered the various issues raised by the parties, and now DENIES the motion to clarify.

The Intervening Defendants seek exceptions for specific construction projects because they contend that the City of San Diego is construing the injunction expansively and broader than the Court intended it to be applied. The Court's injunction was specific and carefully worded to enjoin any further destruction of vernal pool species or their habitat. Am. Dec. &

Inj. at 55. The Court discerns no error in the City's interpretation of the injunction or application to projects that may adversely affect vernal pool species or their habitat. The seven vernal pool species are protected by the prohibition against take under Endangered Species Act and the governing regulations. The Court had invalidated the Incidental Take Permit as to those seven species for specific flaws in the analysis of the Fish and Wildlife Service.

Consequently, the Court also denies the ex parte application for "crateo indication."[1]

DATED: March 15, 2007

Hon. Rudi M. Brewster
United States Senior District Judge

cc: all parties

[1]Intervening Defendants filed a notice of appeal to the original order, and an amended notice of appeal to the amended decision. Ordinarily, the filing of a notice of appeal divests the district court of jurisdiction over the substance of a case. Because the Court has not altered the scope of the original injunction, this Court is not taking any action that would disrupt the appellate process. *See Kern Oil & Refining Co. v. Tenneco Oil Co.*, 840 F.2d 730, 734 (9th Cir. 1988).

Plaintiffs challenge the nature of the motion and whether it is timely; however, because it lacks merit the Court need not discuss the proper characterization of the motion. *Miller v. Transamerican Press, Inc.*, 709 F.2d 524, 527 (9th Cir. 1983).

Federal Defendants' raise another jurisdictional issue when they contend that the case will be moot. Their description of the potential mootness should certain acts occur in the future demonstrates that the case is not, at this time, moot. *E.g.*, *United States v. W.T. Grant Co.*, 345 U.S. 629, 632 (1953).

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011

000207

In Reply Refer To:
FWS-SD-08B0023/08F0016R001

NOV 5 2007

Colonel Thomas Magness IV
District Engineer
Los Angeles District
U.S. Army Corps of Engineers
P.O. Box 532711
Los Angeles, California 90053-2325

Attention: Kari Coler, San Diego Field Office, Regulatory Branch

Subject: Re-initiation of Biological Opinion on the Shaw Lorenz Project (Corps File No. 200400996-KJC), City of San Diego, San Diego County, California (Formerly known as 1-6-06-F-4005R1)

Dear Colonel Magness:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion on the proposed Shaw Lorenz project, which is located in the City of San Diego in San Diego County, California. The original opinion, dated May 3, 2006, addressed the effects of the project on the federally endangered San Diego fairy shrimp (*Branchinecta sandiegonenis*), coastal California gnatcatcher (*Polioptila californica californica*), and Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*) in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). It was subsequently modified in a letter dated August 25, 2006. On October 13, 2006, the District Court in *Southwest Center for Biological Diversity v. Bartel*, No. CV-98-CV-2234 (S.D. Cal.. 2006), enjoined the City of San Diego's (City) Incidental Take Permit as applied to the San Diego fairy shrimp and six other vernal pool species issued by us in July 1997. The District Court's decision constitutes new information that reveals effects of the action that may affect listed species in a manner or to an extent not previously considered, thus triggering the need for re-inititation.

Your request for re-initiation of formal consultation dated March 28, 2007, was received on March 29, 2007. This biological opinion is based on information provided in the following: (1) your request for re-initiation dated March 28, 2007; (2) a revised Biological Assessment prepared by Natural Resource Consultants dated March 12, 2007; (3) a revised project description dated July 14, 2007; (4) the administrative record for the original biological opinion; (5) the Recovery Plan for Vernal Pools of Southern California; and (6) documents identified in the *Literature Cited* section of this document and/or in our files. A complete administrative record of this consultation is on file at the Carlsbad Fish and Wildlife Office.

The Applicant is not relying on coverage for the San Diego fairy shrimp or other vernal pool species provided under the City of San Diego's incidental take permit and related MSCP subarea plan. The impacts of this project on the San Diego fairy shrimp is reviewed by the Service independently and without regard to the provisions of the City's MSCP subarea plan or the Service's biological opinion under Section 7 regarding the City's MSCP subarea plan and associated incidental take permit. Nothing herein shall be considered a modification of the terms and conditions of approval by the City or any other governmental agency.

CONSULTATION HISTORY

The Consultation History from the original biological opinion is incorporated by reference. Since issuance of that opinion, the following events have occurred.

May 3, 2006
The Service issued the original Biological Opinion to the Corps.

August 25, 2006
The Service issued a letter to the Corps clarifying the Service's Biological Opinion.

September 1, 2006
Final Shaw-Lorenz Vernal Pool Restoration and Enhancement Plan provided to the Service.

September 5, 2006
Letter from the Service to RECON approving the Final Shaw-Lorenz Vernal Pool Restoration and Enhancement Plan.

October 13, 2006
Decision and Injunction Order issued by Judge Brewster in *Southwest Center for Biological Diversity v. Bartel.*

December 18, 2006
The Service issued a letter to the City regarding our interpretation of the Brewster decision and how it relates to biological opinions, including Shaw Lorenz.

March 29, 2007
The Service received a request for re-initiation from both the applicant and the Corps. Included in the request was an updated Biological Assessment.

May 1, 2007
The Service (California Nevada Operations Office and Carlsbad Field office staff), participated in a meeting with representatives from Pardee, the Conservation Fund, and Harvey Whitemore to discuss the re-initiation.

May 17, 2007
Ms. Susan Wynn of the Service and Ms. Amy Glad and Mr. Allen Kashani, of Pardee, walked the project site. Pardee provided a copy of an updated restoration plan.

May 18, 2007
Ms. Therese O'Rourke and Ms. Susan Wynn, of the Service, met with Ms. Amy Glad and Mr. Harvey Whittemore to discuss potential changes to the project description that would increase the level of conservation on-site.

June 20, 2007
Ms. Susan Wynn of the Service and Mr. David Hogan of Center for Biological Diversity, met with Harvey Whittemore to discuss potential changes to the project description.

July 25, 2007
The Service received an email transmitting a new project description that reflects the discussions of the previous two meetings.

September 17, 2007
The Service met with Ms. Amy Glad and Mr. Harvey Whittemore regarding the Project description, likely terms and conditions and the timeline for issuing the draft biological opinion.

September 21, 2007
The Service issued a draft re-initiated Biological Opinion.

October 5, 2007
The Service received comments from the Corps and the applicant on our draft Biological Opinion.

BIOLOGICAL OPINION

1.0 DESCRIPTION OF THE PROPOSED ACTION

The proposed action is the issuance of a permit by the Corps to the project proponent (Pardee Homes, its successors or assigns) under section 404 of the Clean Water Act to impact 0.248 acre of waters of the United States, including impacts to 0.012 acre of wetlands, associated with six unnamed drainage courses for the Shaw Lorenz project. The Shaw Lorenz project is located within the Del Mar Mesa Subarea (Subarea V) of the Future Urbanizing Area (FUA) in the City of San Diego. The 278-acre property is located at the southern terminus of Shaw Ridge Road in a developing residential area (Figure 1). The proposed project will impact approximately 125.3 acres for approximately 139 single-family homes, associated public and private interior streets and drives, landscaping, and a network of internal trails leading to multi-use trails along public rights-of-way. Approximately 118.3 acres will be dedicated into the City's Multiple Habitat Planning Area (MHPA). The remaining approximate 30 acres consists of natural open space that will be provided within an Urban Amenity[1] and lots (totaling 11.21 acres) that preserve existing vernal pools.

The project area is comprised of a variety of topographic features that include well-defined drainages, valleys, mesa top, canyons and steep slopes. Vegetation on the property consists of the following: native grassland (0.28 acre); scrub oak chaparral (9.78 acres); coastal sage scrub (150.79 acres); chaparral (104.22 acres); non-native annual grassland (3.28 acres); ruderal/disturbed/eucalyptus (8.81 acres); and, mulefat scrub/marsh/pond/depressional features (1.00 acre).

Fifty-six depressional features [totaling 8482 square foot (0.19 acre) basin] have been mapped on the property based on one or more following factors: the presence of ponding; presence of vernal pool indicator plants; occurrence within historic vernal pool complex; and, the presence of or potential to support the listed San Diego fairy shrimp. Table 1 lists the 56 depressional features. Twenty-three of the 52 depressional features identified in Glenn Lukos Associates (2005b) contain at least one vernal pool indicator plant species.

Dry season sampling in 18 depressional features affected by the project identified *Branchinecta* cysts in 15 of the 18 depressional features sampled (Glen Lukos Associates 2005a). Cysts from 13 of these depressional features (hydration of the cysts from the other two depressional features with cysts were not conducted because these two depressional features each had only cyst fragments or one cyst) were hydrated, hatched and the resulting fairy shrimp were reared so they could be identified to species. Although Tony Bomkamp opportunistically observed common

[1] Urban amenity, as defined by the *Del Mar Mesa Specific Plan* (City 2000), is open space intended to provide alternative habitats and movement corridors for wildlife and visual relief from adjacent development.

Figure 1. Project Location

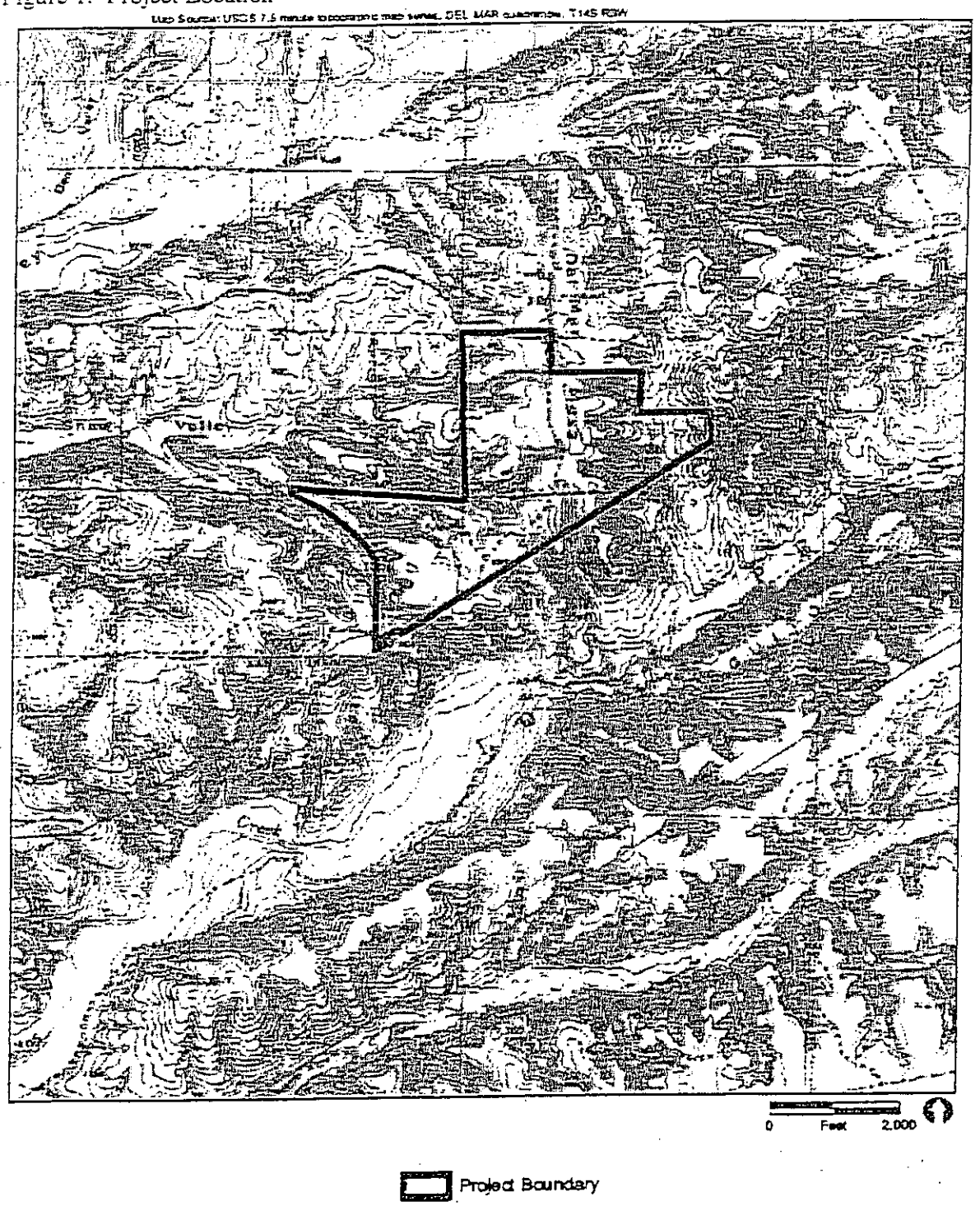


Table 1. Depression Feature Summary Table

Feature	Description	Basin Area All Depressions (Square Feet)	Basin to be Impacted	Area of Basins to be Impacted (Square Feet)	Area of Basins to be Conserved (Square Feet)
A	Ditch	195	No	Avoided	195
B	Road Rut	120	No	Avoided	120
C	Road Rut	195	No	Avoided	195
D	Ditch	195	No	Avoided	195
E	Road Rut	360	No	Avoided	360
F	Ditch	160	No	Avoided	160
G	Road Rut	50	No	Avoided	50
H	Road Rut	50	No	Avoided	50
I	Road Rut	50	No	Avoided	50
J	Road Rut	50	No	Avoided	50
K	Road Rut	600	No	Avoided	600
L	Disturbed Depression	180	No	Avoided	180
M	Disturbed Depression	100	No	Avoided	100
N	Disturbed Depression	100	No	Avoided	100
O	Road Rut	150	No	Avoided	150
P	Depression	300	No	Avoided	300
Q	Depression	160	No	Avoided	160
R	Depression	100	No	Avoided	100
S	Road Rut	60	No	Avoided	60
T	Ditch	50	No	Avoided	50
U	Road Rut	45	No	Avoided	45
V	Road Rut	560	No	Avoided	560
W	Road Rut	90	No	Avoided	90
X	Road Rut	96	No	Avoided	96
Y	Road Rut	225	No	Avoided	225
Z	Road Rut	400	No	Avoided	400
AA	Road Rut	240	No	Avoided	240
BB	Road Rut	120	No	Avoided	120
CC	Road Rut	72	No	Avoided	72
DD	Road Rut	54	No	Avoided	54
EE	Road Rut	180	No	Avoided	180
FF	Road Rut	48	No	Avoided	48
GG	Road Rut	72	No	Avoided	72
HH	Road Rut	40	No	Avoided	40

Feature	Description	Basin Area All Depressions (Square Feet)	Basin to be Impacted	Area of Basins to be Impacted (Square Feet)	Area of Basins to be Conserved (Square Feet)
II[2]	Disturbed Depression	460	No	Avoided	460
JJ	Road Rut	80	Yes	80	Impacted
KK	Ditch	45	Yes	45	Impacted
LL	Trail Rut	15	No	Avoided	15
MM	Road Rut	25	No	Avoided	25
NN	Road Rut	70	Yes	70	Impacted
OO	Road Rut	40	Yes	40	Impacted
PP	Ditch	115	Yes	115	Impacted
QQ	Road Rut	615	Yes	615	Impacted
RR	Road Rut	185	Yes	185	Impacted
SS	Road Rut	40	Yes	40	Impacted
TT	Road Rut	165	Yes	165	Impacted
UU	Road Rut	30	Yes	30	Impacted
VV	Road Rut	40	Yes	40	Impacted
WW	Road Rut	60	Yes	60	Impacted
XX	Road Rut	30	Yes	30	Impacted
YY	Road Rut	410	Yes	410	Impacted
ZZ	Road Rut	165	Yes	165	Impacted
Corps 1	Ditch	100	Yes	100	Impacted
Corps 2	Ag Road Depression	200	Yes	200	Impacted
Corps 3	Ag Road Depression	100	Yes	100	Impacted
Corps 4	Ag Road Depression	25	Yes	25	Impacted

Total area of depression features (56) = 8,482 square feet (0.194 acre)
Area of features to be impacted (19) = 2,515 square feet (0.057 acre)
Area of features to be conserved (37) = 5,967 square feet (0.137 acre)

[2] *The project will avoid the basin of Feature II, but will impact approximately 18 percent of the watershed for* Feature II.

fairy shrimp (*Branchinecta lindahli*) in two depressional features during the 2003 wet-season (Wegscheider 2003), the hydration study did not detect *B. lindahli* in 13 of the depressional features tested (Glen Lukos Associates 2005a). However, the hydration study found San Diego fairy shrimp in all 13 of the depressional features tested. Therefore, we conclude that San Diego fairy shrimp are likely to occur in all 56 depressional features on site.

The action area is defined as the entire project site, including all areas subject to direct and indirect effects of the project. Areas subject to direct effects include all areas within the construction footprint such as construction vehicle access routes, staging areas, grading areas, building pads, trails, roadways, and other constructed project features. Indirect effects include physical impacts to the watersheds of vernal pools, degradation of adjoining habitat through edge effects, habitat isolation, and fragmentation. The proposed project will directly impact the following vegetation communities: native grassland (0.24 acre); scrub oak chaparral (0.59 acre); coastal sage scrub (86.78 acres); chaparral (31.98 acres); annual non-native grassland (1.63 acres); and, ruderal/disturbed/eucalyptus (4.1 acres). In addition, fill will be placed in the following: six Corps jurisdictional drainages (Drainages A, B, C, E, F, and G totaling 0.25 acre of waters of the United States that contain 0.012 acre of jurisdictional wetlands); 19 depressional features (totaling 2515 square feet of basin area, 0.06 acre), and the watershed of 1 depressional feature. Though the project proposes to avoid direct impacts to the remaining 37 depressional features (the "Conserved Areas") (totaling 5967 square feet; 0.14 acre) and their watersheds on site, it is expected to cause indirect impacts, often referred to as "edge effects," to these depressional features because it will surround all or a major portion of each depressional features.

1.1 CONSERVATION MEASURES

The following conservation measures are proposed to be implemented as part of the proposed action to avoid, minimize, and compensate for direct and indirect impacts to depressional features.

1. The project will preserve the Conserved Areas, their watersheds, and the species they currently support, including all vernal pools on site. These 36 depressional features total 5507 square feet (0.13 acre) of basin area and are located in lots 127, 128, J, P, 0, X, WW, XX, YY, and ZZ (Figure 2). The project also will preserve the basin area, but not the entire watershed, of depressional feature II (460 square feet; 0.01 acre) located in lot N.

2. In addition to lot WW, the project will also preserve Lots 126, 127 and 128 (collectively referred to as the "Mitigation Site") (Figure 3) to minimize edge effects to the depressional features in Lot WW and allow for potential restoration and/or enhancement of additional depressional features. The Project Proponent shall construct the road section adjacent to the Mitigation Site in the manner as described on Figure 4 to minimize the amount of grade change and construction that will occur on lots 126, 127 and 128 in order to favor the natural hydrological regime for the Mitigation Site.

Figure 2. Conserved Areas

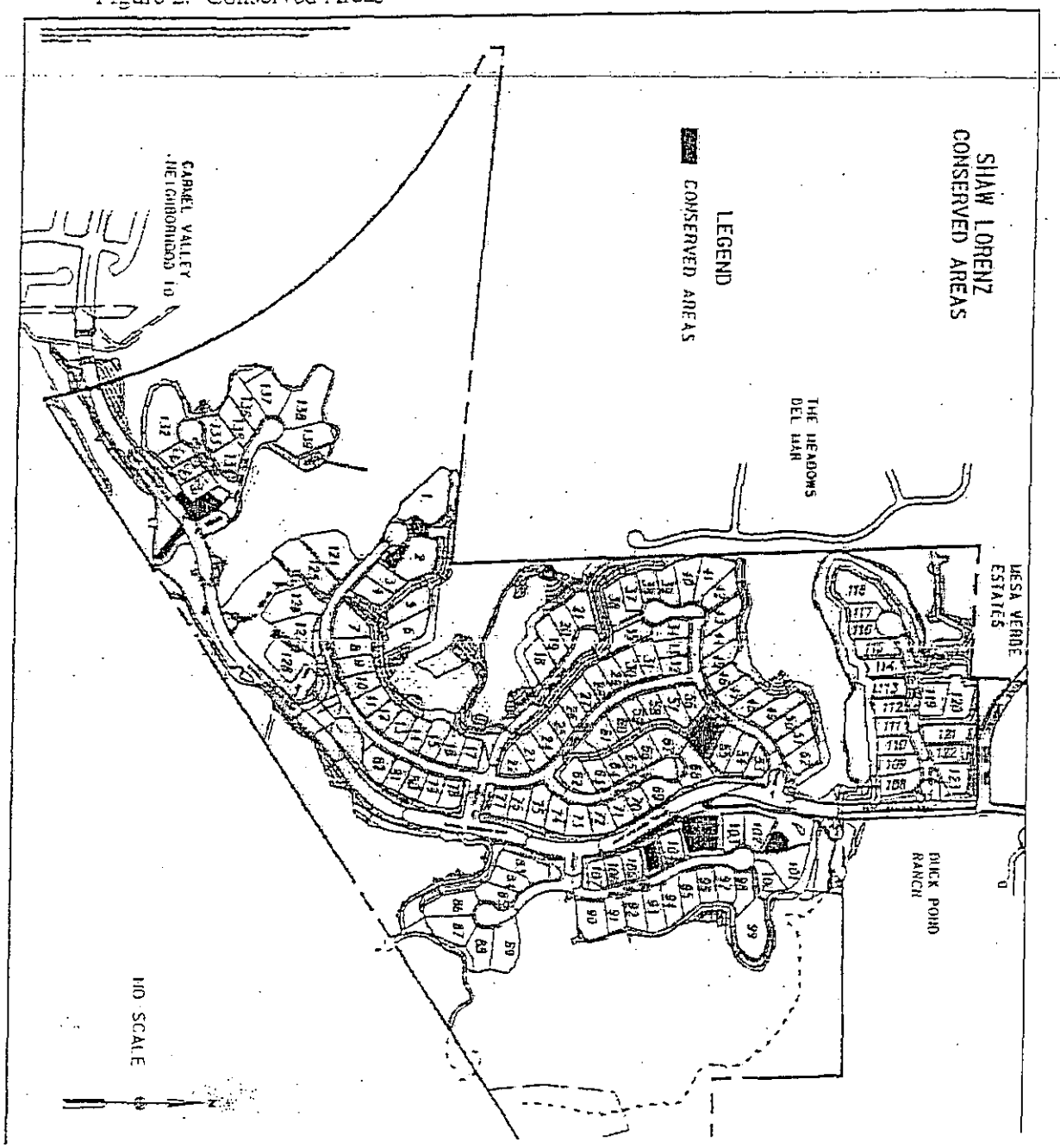


Figure 3. Mitigation Site

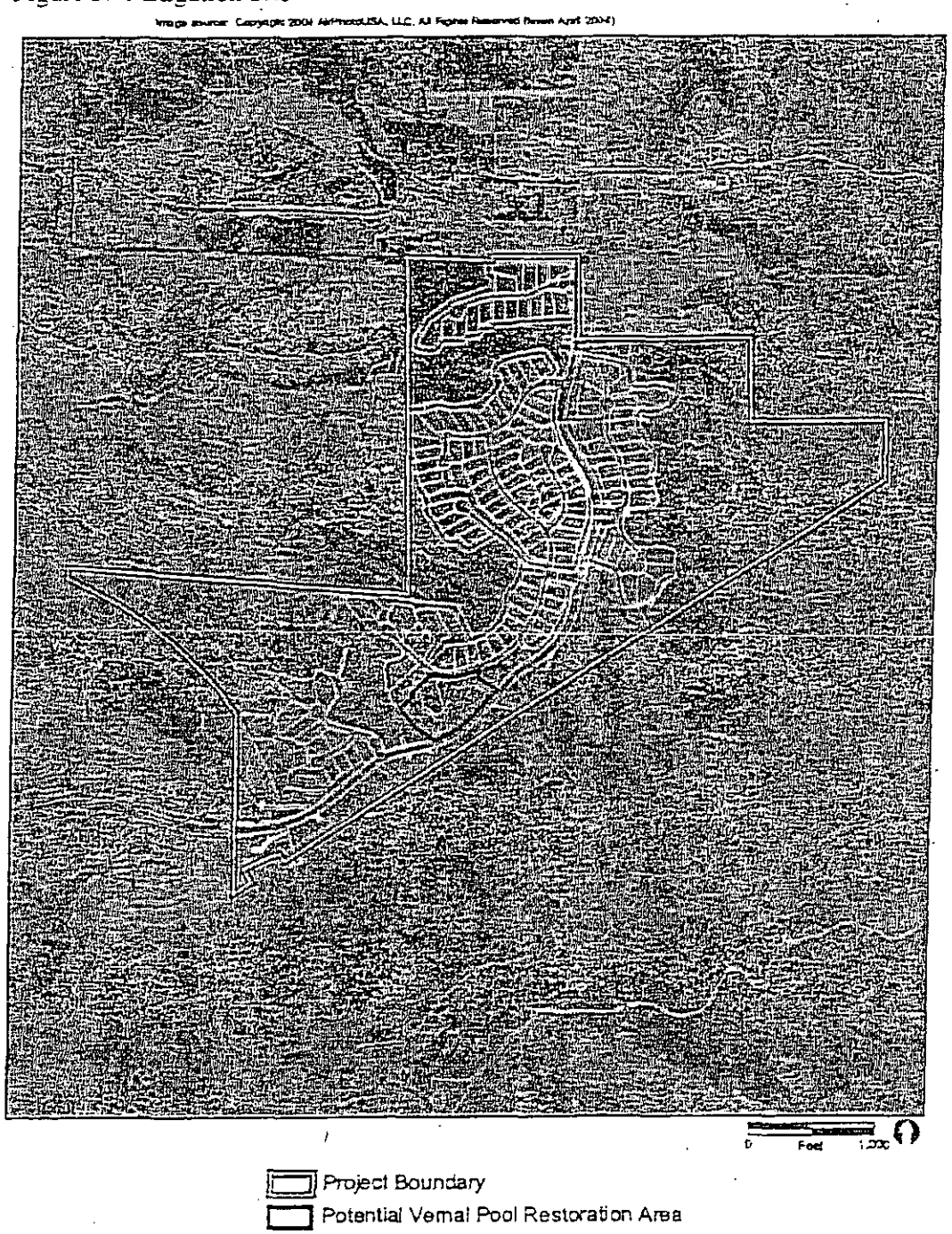
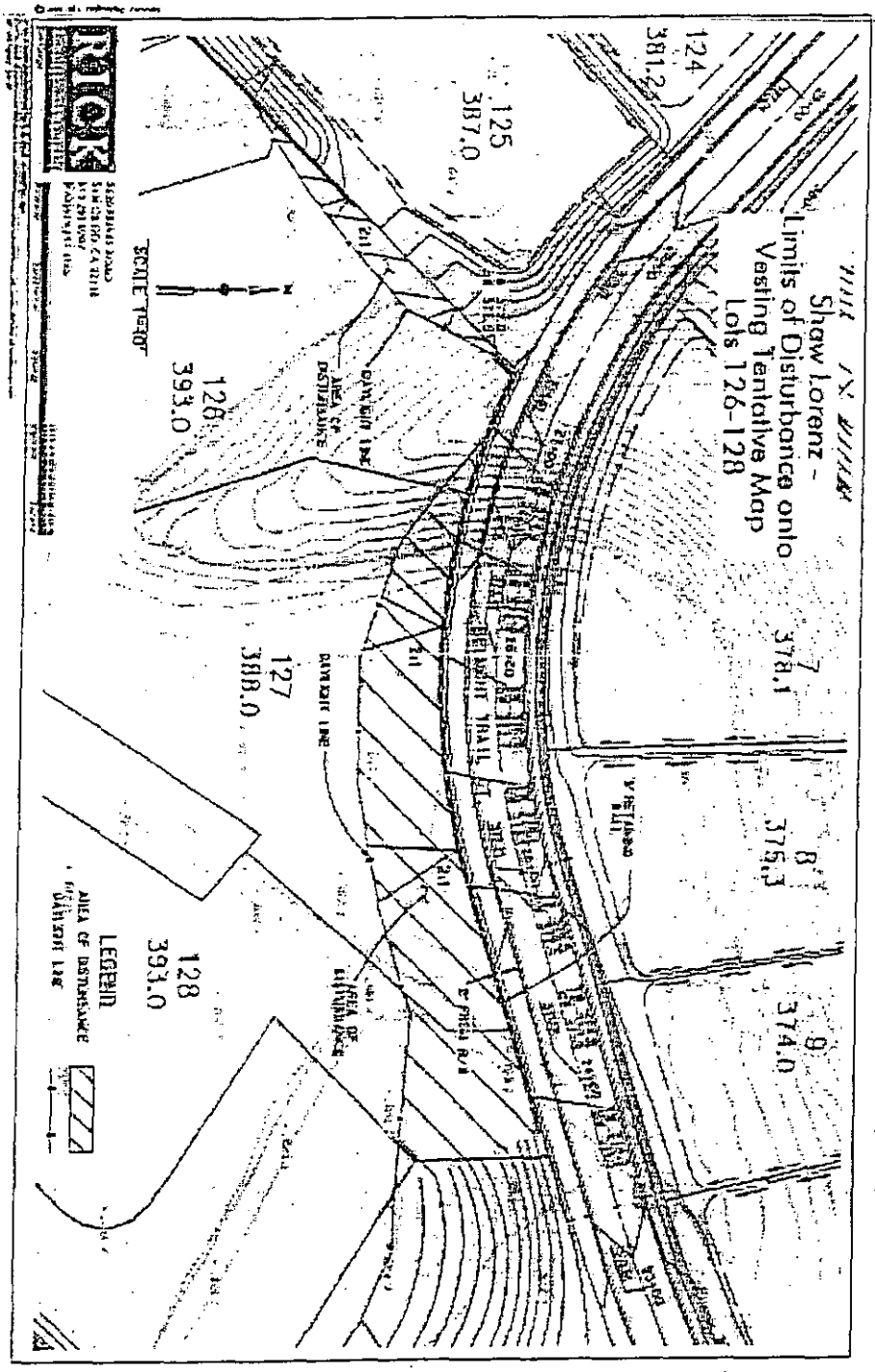


Figure 4. Road Adjacent to Mitigation Site



a. The project proponent agrees, subject to consent or approval by the Service and the City of San Diego (City), to transfer by appropriate conveyance Lots 126 and 127 (the Lots) as shown on the Vesting Tentative Map and Grading Plan within the Del Mar Mesa (Subarea V) Number 25674 (the Project) to The Conservation Fund (TCF).

b. If the City or other relevant governmental authority objects to, fails to consent to such transfer, or finds that such transfer of the Lots is a modification of the permits allowing the construction of approximately 139 single family structures, such that the project proponent would be required to submit or resubmit for approval of a new or different vesting tentative map for the Project, then the project proponent agrees to burden the Lots with a conservation easement in favor of TCF, prohibiting the construction of single family structures on the Lots (the Conservation Easement).

c. If the modifications outlined in Paragraphs 2a or 2b (and therefore the funding mechanism set forth herein) are not accepted by the City, the project proponent agrees to sell or donate to TCF Lots 126 and 127 subject to the Conservation Easement at no cost. TCF shall agree as part of the purchase agreement to cause the restoration and management of the Lots pursuant to the terms of the Plan.

3. The project proponent agrees to create, with TCF, an enforceable funding mechanism (EFM) in a form acceptable to the Service to restore and enhance the Mitigation Site. Such EFM will be separate from and in addition to any funding mechanism created by the project proponent as part of the Covenants, Codes, Restrictions, and Easements (CC&Rs) for the project. The amount of the initial funding of the EFM shall be approved by the Service as part of the Vernal Pool Restoration and Enhancement Plan, and long-term maintenance for such Mitigation Site shall be established through the use of a Property Analysis Record (PAR) (Center for Natural Lands Management ©1998), equivalent cost analysis, or such other mechanism acceptable to the Service. The project proponent shall be obligated to fully fund the costs as established by such mechanism, not less than annually. The project proponent shall make such payments to a restricted account controlled by TCF. It is the intent of the project proponent to restore and enhance two distinct areas: the Mitigation Site through the funding mechanism described herein without HOA involvement and the Conserved Areas with minimal involvement of the HOA.

a. In addition to the cost of the restoration and the long-term maintenance, the project proponent agrees to provide $500,000 (the Fund) over a period of years acceptable to the Service, to TCF for use in a manner directed by the Service for vernal pool restoration and enhancement of the Property pursuant to the Plan. This money will be available to fund remediation measures that may be necessary on-site. To the extent that the Service determines that such efforts on the Property are unsuccessful or fail to achieve the goals of the Plan, the Service may direct the remainder of the Fund to be used on locations not on the Property, or as may be provided by separate agreement

between the project proponent and the Service. In all events, the Fund must be used to support the San Diego fairy shrimp and vernal flora characteristic of San Diego fairy shrimp in the San Diego area.

b. The project proponent agrees to cause the HOA while it is under the control of Pardee Homes to require that the company selected to provide the long-term maintenance and management of the Conserved Areas and Mitigation Site be the company that provides similar services for the HOA throughout the project.

4. The project proponent will engage a qualified biological consulting firm (qualified biologist that holds a recovery permit for SDFS through the Service), to begin the process of planning a vernal pool preserve restoration and enhancement area within Lots 126, 127, 128 and WW. The project proponent will submit the Vernal Pool Restoration and Enhancement Plan (Plan) to the Service, for approval, at least 60 days prior to initiating project impacts. A minimum of 2 square feet will be enhanced/restored for every 1 square foot lost for a minimum restoration of 0.12 acre of surface ponding area of vernal pool habitat suitable for, and occupied by, the San Diego fairy shrimp. Additional surface area may be restored, as appropriate in Lots WW and 126, 127, and 128 to ensure that the minimum acreage requirement is met. The Plan will include the following measures:

a. Implementation of the final plan will be conducted under the direction of a qualified biologist (vernal pool restoration specialist), to be approved by the Service. The biologist will have at least three years of vernal pool restoration experience and hold a valid Service ESA Section 10(a)(1)(A) permit for identifying fairy shrimp.

b. All pools to be avoided and their watersheds will be enhanced as appropriate to achieve the same success criteria as the restored pools and surrounding uplands at the levels set forth herein. Enhancement activities will include addition of vernal pool plant species, inoculation of unoccupied pools with San Diego fairy shrimp as appropriate, and addition of coastal sage scrub plant species in the surrounding uplands. Any vernal pool inoculum or plant material from an off-site source must be approved by the Service.

c. All restoration/enhancement activities will commence in the first summer-fall season possible, preferably prior to the first grading period, or concurrently.

d. All final specifications and topographic-based grading, planting and watering plans will have 0.5-foot contours and show typical cross-sections for the vernal pools, watersheds and surrounding uplands (including adjacent mima mounds) at the restoration/enhancement sites. The grading plans will also show overflow pathways that hydrologically connect the restored pools in a way that mimics natural vernal pool complex topography/hydrology, as possible.

e. Additional inoculum from Service approved off-site donor vernal pools in the Del Mar Mesa area may be use to supplement the inoculum collected on site. The final plan will identify any proposed off-site donor pools and include documentation acceptable to the Service that they are free of versatile fairy shrimp (*Branchinecta lindahli*). No more than 10 percent of the basin area of any donor pool will be used for collection of inoculum.

f. Inoculum and planting will not be installed until the Service has approved the habitat restoration site grading. All planting will be installed in a way that mimics natural plant distribution, and not in rows. Inoculum will not be introduced into the restored pools until after they have been demonstrated to retain water for the appropriate amount of time to support San Diego fairy shrimp as determined by the project biologist (as defined below) [See for example (Hathaway and Simovich 1996, Ripley et. al. 2004)]. Surveys shall be completed as soon as possible after appropriate rain events for versatile fairy shrimp (*Branchinecta lindahli*) to the satisfaction of the Service. If versatile fairy shrimp are detected in the restored pools, inoculum will not be introduced until measures approved by the Service are implemented to attempt to remove the versatile fairy shrimp from the pools, but such removal and introduction shall not preclude other project activity on site. Inoculum will be placed in a manner that preserves, to the maximum extent possible, the orientation of the fairy shrimp cysts within the surface layer of soil (e.g., collected inoculum will be shallowly distributed within the pond so that cysts have the potential to be brought into solution upon inundation);

g. Plant palettes (species, size and number/acre) and seed mix (species and pounds/acre) will be included in the restoration/enhancement plan. The plant palette will include native species specifically associated with the on-site habitat type(s). If native plant species (no cultivars) cannot be obtained within Del Mar Mesa, the Service must approve the donor site. The source and proof of local origin of all plant material and seed will be provided;

h. Native plants and animals will 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 from off-site habitats; and by the use of commercially available native plant species; any vernal pool inoculum or plant material from an off-site source must be approved by the Service. Topsoil and plant materials from the native habitats to be affected on-site will be applied to the watersheds of the enhanced and restored pools to the maximum extent practicable. Exotic weed control will be implemented within the restoration areas to protect and enhance habitat remaining on-site;

i. Any artificial watering of the restored/enhanced pool watersheds will be done in a manner that prevents water from entering into the pools. Any water to be used will be identified and documented to be free of contaminants that could harm the pools;

j. All weeding within and immediately adjacent to the restored/enhanced pools will be performed by hand. No herbicide will be used within or adjacent to the restored and preserved vernal pools. Herbicide may be used in the uplands adjacent to pools only as approved by the Service. All workers conducting weed removal activities will be educated to distinguish between native and non-native species so that local native plants are not inadvertently killed by weed removal activities;

k. A final implementation schedule that indicates when all vernal/road pool impacts, as well as vernal pool restoration/enhancement grading and planting will begin and end. Any temporal loss of vernal and/or road pools or upland habitat caused by delays in restoration will be mitigated through habitat preservation and/or restoration at a 0.5:1 ratio for every 6 months of delay (i.e., 1:1 for 12 months delay, 1.5:1 for 18 months delay, etc.). In the event that the project proponent is wholly or partly prevented from performing obligations under the final plans (causing temporal losses as a result of delays) because of unforeseeable circumstances or causes beyond reasonable control, and without the fault or negligence of the project proponent, the project proponent will be excused by such unforeseeable cause(s).

l. At least 0.12 acre of the restored vernal pools will support San Diego fairy shrimp. Restoration success for San Diego fairy shrimp will 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 pools to determine the density of viable cysts in the soils. Wet samples shall also be taken in the restored pools to determine the density of hatched fairy shrimp and gravid females. The pools must 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 average viable cyst, hatched fairy shrimp, and gravid female density of the restored pools must not differ significantly ($p < 0.05$) from reference pools for, at least, three wet seasons 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 Service.

m. Five years of success criteria for upland restoration/enhancement areas will include: the appropriate[3] species richness and cover criteria for all five years of monitoring; 0

[3] Appropriate vegetation may include maritime succulent scrub or coastal sage scrub. It should match the adjacent

percent 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 percent coverage for other exotic/weed species for all five years of the five-year monitoring period. Container plant survival will be 80 percent of the initial plantings for the first five years. At the first and second anniversary of plant installation, all dead plants will be replaced unless their function has been replaced by natural recruitment.

n. The five-year monitoring program for coastal sage scrub restoration will include yearly quantitative monitoring of species richness and vegetative cover. The method used for monitoring will be described and a map of proposed sampling locations will be included. Stratified-random sampling will be used for all quantitative surveys.

o. Verification that restoration/enhancement of San Diego fairy shrimp habitat is complete will require written sign-off by the Service. 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 will prepare an analysis of the cause(s) of failure and, if deemed necessary by the Service, propose remedial actions for approval. If any of the restored/enhanced vernal pools or upland habitat have not met a performance criterion during the initial five-year period, the project proponent's maintenance and monitoring obligations will continue until the Service deems the restoration/enhancement successful, or contingency measures must be implemented. Restoration/enhancement will not be deemed successful until at least two years after any significant contingency measures are implemented, as determined by the Service.

p. If success criteria are not met within the eight years following implementation of the Plan, the project proponent will pursue restoration offsite at a location within the H series [e.g., Del Mar Mesa/Carmel Mountain, on Carmel Mountain where the project proponent has vernal pool mitigation opportunities per their development agreement with the City of San Diego for Pacific Highlands Ranch Subarea III, North City Future Urbanizing Area (dated September 8, 1998)] approved by the City and the Service or elsewhere, if approved by the Service. Appropriate upland habitat, topography, vernal pools, and their watersheds in the vernal pool restoration and enhancement areas shall be restored/enhanced to a species composition and size compared to other vernal pools within the H series. The size and shape of the depressional features shall be suggested by the restoration biologist and approved by Service.

q. Annual reports will be submitted to the Service by September 1 of each year of the 5 year monitoring program. Those reports will assess both the attainment of yearly

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habitat types .

success criteria and progress toward the final success criteria. The reports will also summarize the project's compliance with all Service biological opinion conservation measures and terms and conditions.

5. The project proponent will hire a qualified biologist (project biologist) with a minimum 3 years of vernal pool experience who will be responsible for overseeing compliance with protective measures for the fairy shrimp and will be approved by the Service. The biologist will monitor construction daily to ensure damage to preserved depressional features, their watersheds and surrounding uplands is avoided. The biologist shall be onsite during installation of protective fencing for fairy shrimp habitat and work adjacent to depressional features (within at least 100 feet of the lots to be preserved) to ensure compliance with all conservation measures and terms and conditions of this Biological Opinion and to produce reports that document compliance with these measures. The project proponent will submit the biologist's name, address, telephone number, and work schedule on the project to the Service at least 7 days prior to the planned date of initiating impacts to fairy shrimp habitat. The project biologist shall perform the following duties:

   a. Train all supervisors, (sub) contractors, construction personnel, and employees on the biological resources associated with this project and ensure that training is implemented by all construction personnel prior to working on the proposed project. At a minimum, training will include: 1) the purpose for resource protection; 2) a description of the San Diego fairy shrimp, its habitat(s) and general ecology, and sensitivity to human activities; 3) the conservation measures and terms and conditions given in the biological opinion that should be implemented during project construction to conserve their habitat and promote their persistence/survival within the project area, including strictly limiting activities, vehicles, equipment, and construction materials to the fenced project footprint (i.e., avoided areas delineated on maps or on the project site by fencing); 4) environmentally responsible construction practices as outlined in above; 5) the protocol to resolve conflicts that may arise at any time during the construction process; 6) the general provisions of the Act, the need to adhere to the provisions of the Act, and the penalties associated with violating the Act. Included in this program will be a fact sheet that includes color photographs of the listed species, which will be shown to the employees. Following the education program, the fact sheet will be posted in the contractor and Resident Engineer's office, where they will remain through the duration of the Project.

   b. Allow and direct salvage and transplant of live plants to the revegetation areas as practicable.

   c. Inspect the fencing and erosion control measures within or up-slope of lots with preserved depressional features and other preservation areas a minimum of once per week and after all rain events to ensure that any breaks in the fence or erosion control measures are repaired immediately.

d. Periodically monitor the work area to ensure that work activities do not generate excessive amounts of dust.

e. Halt work, if necessary, and confer with the Service and Corps to ensure the proper implementation of species and habitat protection measures. The biologist will report any violation to the Service and the Corps within 24 hours of its occurrence.

f. Submit a final report to the Service and the Corps within 60 days of project completion that includes: as-built construction drawings with an overlay of fairy shrimp pools that were impacted or preserved; photographs of the preserved San Diego fairy shrimp pools; and, other relevant information documenting that authorized impacts to habitat for fairy shrimp were not exceeded and that general compliance with all conditions of this Opinion was achieved.

6. The project proponent shall ensure that development landscaping does not include exotic plant species that may be invasive to native habitats. Exotic plant species not to be used include those species listed on Lists A & B of the California Invasive Plant Council's (Cal-IPC) list of "Exotic Pest Plants of Greatest Ecological Concern in California as of October 1999." This list includes such species as pepper trees, pampas grass, fountain grass, ice plant, myoporum, black locust, capeweed, tree of heaven, periwinkle, sweet alyssum, English ivy, French broom, Scotch broom, and Spanish broom. A copy of the complete list can be obtained from Cal-IPC's web site at http://www.caleppc.org. In addition, landscaping should not use plants that require intensive irrigation, fertilizers, or pesticides adjacent to preserve areas. The project proponent shall submit a draft list of species to be included in the landscaping to the Service at least 60 days prior to installing any landscaping.

7. Before construction of the Shaw Lorenz project commences in those areas where topsoil collection will occur, topsoil will be salvaged from the impacted vernal/road pools on site. Vernal pool soil (inoculum) will be collected when dry to avoid damaging or destroying fairy shrimp cysts. Hand tools (i.e., shovels and trowels) will be used to remove the first two inches of soil from the pools. Whenever possible, the trowel will 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 will 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 will not be mixed for seeding any restored pools. The collected soils will 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 will 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 Service.

8. The project proponent will execute and record a biological conservation easement over the 11 vernal pool lots containing depressional features (i.e. Lots 126, 127, 128, B, J, N, O, P, X, WW, XX, YY, and ZZ) that will be avoided/preserved and restored/enhanced by the project. The easement shall be in favor of the City of San Diego or other grantee approved by the Agencies. The Service shall be named as a third party beneficiary. The easements on Lots J and X can acknowledge the option to be removed, with concurrence from the Service, provided a biologically superior alternative is developed consistent with City ordinances. If this were to occur, new development lots would be created between lots 55 and 56 (Lot 55A), between Lots 103 and 104 (Lot 103A) and between lots 104 and 105 (lot 104A). There should be no active trails in the easement areas except in Lots B and J if easement restrictions currently exist for those trails and as approved by the Service. The project proponent shall submit a draft easement to the Service, which includes exhibits of the proposed trail designs and locations, for review and approval at least 60 days prior to initiating project impacts, where depressional features exist. The project proponent shall receive prior written approval by the Service prior to execution and recordation of the conservation easement. The easement shall be approved by the Service prior to its execution. The project proponent shall submit the final easement and evidence of its recordation to the Agencies prior to the issuance of the first certificate of occupancy.

9. The project will conserve the Orcutt's brodiaea (*Brodiaea orcuttii*) which occurs within the proposed preserved areas.

10. Water runoff from landscaped areas will be directed away from the biological conservation easement areas (e.g., lots that contain preserved depressional features) and contained and/or treated within the development footprint. No permanent irrigation or water from irrigation systems will be permitted to enter lots that contain preserved depressional features (i.e., Lots 128, B, J, N, O, P, X, WW, XX, YY, and ZZ). Where depressional features to be preserved are located below graded slopes or walls, drainage swales and/or concrete ditches will be installed to prevent runoff from the slopes or walls from entering the depressional features and their watersheds. The project proponent will submit detailed figures to the Service depicting the proposed irrigation systems, slopes, drainage swales and/or concrete ditches utilized to avoid introduction of increased storm water run-off into the depressional features for review and approval prior to grading. The project proponent will conduct maintenance of the concrete ditch and graded swales annually prior to the rainy season (i.e., October 15), for the life-of-the-project and after each significant storm event to ensure that they are properly functioning in preventing runoff from entering the depressional features and their watersheds.

11. Grading activities adjacent to lots with preserved depressional features will be timed to avoid wet weather to minimize potential impacts (e.g., siltation) to the avoided pools unless the area to be graded is at an elevation below the lots. To achieve this goal,

grading within and adjacent to lots to be preserved shall comply with the following:

a. All depressional features to be preserved, and the lots within which they are located, will be flagged and surrounded with orange construction fencing prior to the beginning of grading. Fencing shall be installed in a manner that does not impact habitats to be avoided. All sensitive habitats to be avoided will be flagged and all construction personnel will be informed that they are "no-entry" areas for the duration of construction. If work occurs beyond the fenced limits of impact, all work shall cease until the problem has been remedied to the satisfaction of the Service. Any impacts to depressional features beyond the fenced limits will be offset at a minimum 5:1 ratio. Temporary construction fencing will be removed upon project completion.

b. Grading will occur only when the soil is dry to the touch both at the surface and one inch below. A visual check for color differences (i.e., darker soil indicating moisture) in the soil between the surface and one inch below indicates the soil is dry.

c. After a rain of greater than 0.2 inch, grading will occur only after the soil surface has dried sufficiently as described above, and no sooner than two days (48 hours) after the rain event ends.

d. To prevent erosion and siltation from storm water runoff due to unexpected rains, Best Management Practices (i.e., silt fences) will be implemented as needed during grading.

e. If rain occurs during grading, work will stop and resume only after soils are dry, as described above.

12. Grading will be done in a manner to prevent run-off from entering the preserved depressional features. Grading on the project site outside the MHPA is to be consistent with MSCP and thus not restricted on the basis of the gnatcatcher breeding season unless the grading negatively affects gnatcatchers located within the MHPA.

13. The project proponent shall install permanent protective fencing along any interface with developed areas (including trails) and/or use other measures approved by the Service to deter human and pet entrance into on-site habitat if feasible and within the approvals previously granted by the City. This fencing will be installed per phase as the development occurs. Entire development bubbles will be fenced, as phased, to ensure effectiveness of the fencing, prior to the occupancy of any homes in each phase. Different types of fencing will be used depending upon the location within the project. Post and rail will be used along public trails and walkways to guide people away from and around protected areas without calling undo attention to them. Post and rail fencing will be used on both sides of the public trail in Lot J to direct people away from the depressional features. Wrought iron or concrete block will be used along the backs of lots where

adjacent to open space to preserve views while protecting the depressions and other resources within the MHPA. Fencing should have no gates and be designed to prevent intrusion by pets. Signage for the biological conservation easement area shall be posted and maintained at conspicuous locations throughout the project site noting areas that are conserved to direct people away from such areas. The project proponent will ensure funding, above and beyond the funds dedicated to vernal pool management, restoration and enhancement to upgrade fencing to prevent human and pet encroachment in the habitat areas if the originally installed fencing is found to be ineffective at keeping people and pets out. Final plans for fencing and/or other preventative measures will be submitted to the Service within 60 days after initiating project impacts.

14. The project proponent shall ensure that the following conditions are 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. Pets of project personnel shall not be allowed on the project site.

d. Disposal or temporary placement of excess fill, brush or other debris shall not be allowed in waters of the United States, their banks and/or any depression features or their watersheds.

e. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities shall occur in designated areas within the fenced project impact limits but outside of lots with preserved depressional features. 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 waters of the United States and depressional features, and shall be shown on the construction plans. Contractor equipment shall be checked for leaks prior to operation and repaired as necessary. "No-fueling zones" shall be designated on construction plans.

f. Impacts from fugitive dust will be avoided and minimized through watering and other appropriate measures. However, no watering shall be permitted to enter watersheds of depressional features that are being conserved.

g. There are a set of additional upland conservation measures required by the City and the MSCP which will be implemented.

15. The project proponent will ensure the long-term management of the Conserved Areas and

the Mitigation Site will occur in perpetuity. The project proponent will hire a qualified biological manager to prepare a long-term management and monitoring plan (Vernal Pool Management and Maintenance Program (VPMP)) and submit it to the Service for approval prior to impacts. The program shall include a PAR, or other similar cost estimation study, to determine the costs for long-term management of San Diego fairy shrimp habitat to identify the level of funding that is necessary to adequately preserve and manage the habitat in perpetuity. The project proponent shall provide adequate funding, as defined by the PAR or similar cost estimation study, to implement the VPMP. This could be through the establishment of a non-wasting endowment account (or other mechanism approved by the Agencies). Management activities will be funded by the project proponent. The expenditure of these funds will be at the direction of the Service. Any funds not expended in any given year will be set aside for use in future years for similar activities and will not diminish the annual obligation. Accounting for these carryover funds will be part of an annual report provided to the Service. These reports will also summarize the amount expended, carryover amount, and total amount in reserve for Conserved Areas. The HOA-obligated funds will be mandatory and the CC&Rs will not allow for the removal or the reduction of funds. The VPMP, will include, but is not limited to the following provisions:

a. No lighting will be installed within the lots with conserved depressional features. Any lighting adjacent to the conserved lots will be shielded and directed away from the lots.

b. Weeding in the lots with conserved depressional features will be conducted at least twice a year, generally in the spring, to remove new invasions of non-native species. Weeding will concentrate on bent grass and Italian ryegrass, although efforts will be made to remove new invasions of problematic species. Weeding will be done by hand or hoe using personnel trained to distinguish between native and week species. No herbicide will be permitted within these lots, unless prior approval is received from the Service.

c. A public information package will be given to all homebuyers, explaining the importance of the vernal pools and depressions and the need for avoidance. Information will be included to direct homeowners to avoid excessive irrigation, use native plants and shield lighting where they are adjacent to the Mitigation Site and Conserved Areas. These three requirements will also be included in the CC&R's for these particular lots.

d. Maintenance of the Mitigation Site and Conserved Areas will include removal of trash and repair of protective fencing, signage, and drainage ditches and swales intended to divert water away from certain depressional features.

e. No brush management will be conducted within the Mitigation Site and Conserved Areas that contain preserved depressional features with the exception of Lot O. However, brush management will not occur within the depressional feature (i.e., W) located within Lot O.

f. Monitoring will be conducted in perpetuity in accordance with a specific schedule. The monitoring schedule includes specific tasks to be done at specific intervals. The company performing the maintenance and monitoring must meet certain qualifications. The project proponent will insure that these qualifications are met when hiring the maintenance and monitoring company. An annual report to the City is required, with copies to the Service.

16. The project proponent will post a performance bond with CDFG or another qualified entity, with approval by the Service for grading, planting, and five years of maintenance and monitoring of the vernal pool and upland restoration/enhancement areas (including a 20 percent contingency to be added to the total cost). This bond is to guarantee the successful implementation of the vernal pool/upland restoration/enhancement. The project proponent will submit a draft bond with an itemized cost list to the Service and the holder of the bond for approval at least 60 days prior to initiating project impacts. The project proponent will submit the final bond for the amount approved by the Service and the holder of the bond within 30 days of receiving Service and the holder of the bond approval of the draft bond. .

17. To the extent that TCF is incapable in the judgment of the Service to perform the duties outlined herein, the Service may substitute another conservation entity similar in purpose to the TCF[4]. The Lots shall be restored and enhanced through implementation of the Vernal Pool Restoration and Enhancement Plan (Plan) (collectively the area to be restored and enhanced under the Plan is the Mitigation Site). If the Service determines that TCF, an alternative conservation entity, or the HOA is failing to perform any of the obligations imposed by these conditions or the Plan, the Service shall notify the project proponent and/or the HOA. The project proponent shall have sixty days to bring TCF, the alternative conservation entity, or the HOA's performance into compliance with these conditions and the Plan.

18. The project proponent shall use its best efforts to seek City approval of removing Lot WW/128 from control by the Homeowners Association (HOA) for management and restoration as described in Conservation Measure 3. In the event that the City declines this request, the HOA will be required to allow access by the project proponent or it agents to Lot WW/128 for restoration. Lots J, N, O, P, X, XX, YY, and ZZ shall be managed by the HOA pursuant to the terms of the Plan. The project proponent shall

[4] All references to TCF in this biological opinion include such other conservation organization as may be approved by the Service.

include in the Covenants, Codes, Restrictions and Easements for the Project that Lots J, N, O, P, X, XX, YY, and ZZ shall be managed. The request to the City for removal of Lot WW/128 from control of the HOA will be made after issuance of Section 404 permit and Section 401 certification for the Project.

19. The project proponent will phase the grading. Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 124, 125, and the associated access road shall be in the last phase of construction in order to allow the Service the opportunity to acquire funding for purchase of some of the more "desirable" lots.

2.0 STATUS OF THE SPECIES

2.1 San Diego Fairy Shrimp

2.1.1 *Listing Status*

The SD fairy shrimp was federally listed as endangered on February 3, 1997, (62 *Federal Register* 4925). The Recovery Plan for Vernal Pools of Southern California (Recovery Plan), which includes SD fairy shrimp, was published in September 1998 (Service 1998).

2.1.2 *Critical Habitat*

Critical habitat for the SD fairy shrimp was designated on October 23, 2000, (65 *Federal Register*: 63438). Critical habitat was remanded but not vacated by the Central District Court of California on June 12, 2002. Critical habitat was re-proposed on April 22, 2003, (68 *Federal Register* 19887). A new Final Critical Habitat designation is anticipated to be published by November 12, 2007. Primary constituent elements include: (1) small to large vernal pools with shallow to moderate depths that hold water for sufficient lengths of time necessary for SD fairy shrimp incubation and reproduction, but not necessarily every year; (2) associated watershed(s) and hydrology for vernal pool basins and their related vernal pool complexes; (3) ephemeral depressional wetlands; (4) flat or gently sloping topography; and (5) any soil type with a clay component and/or an impermeable surface or subsurface layer known to support vernal pool habitat. This projects falls outside the boundaries of the currently designated and proposed critical habitat, therefore, no analysis regarding the adverse modification of critical habitat will be done for this biological opinion.

2.1.3 *Species Description*

The SD fairy shrimp is a small freshwater crustacean in the family Branchinectidae of the Order Anostraca. The species was originally described by Fugate (1993) from samples collected on Del Mar Mesa, San Diego County. Male SD fairy shrimp are distinguished from males of other species of Branchinecta by differences found at the distal (located far from the point of attachment) tip of the second antennae. Females are distinguishable from females of other

species of Branchinecta by the shape and length of the brood sac, the length of the ovary, and by the presence of paired dorsolateral (located on the sides, toward the back) spines on five of the abdominal segments (Fugate 1993). Adult male SD fairy shrimp range in size form 0.35 to 0.63 in (9 to 16 mm) and adult females are 0.31 to 0.55 in (8 to 14 mm) long.

2.1.4 *Distribution*

The range of the SD fairy shrimp includes Orange and San Diego Counties in southern California, and northwestern Baja California, Mexico (Service 1998; Brown et al. 1993). In Baja California, SD fairy shrimp have been recorded at two localities: Valle de Palmas, south of Tecate and Baja Mar, north of Ensenada. A single isolated female was previously reported from vernal pools in Isla Vista, Santa Barbara County, California; however, directed surveys have not located any additional individuals (62 *Federal Register* 4925).

In Orange County, the SD fairy shrimp has been documented at Fairview Park (CNDDB occurrence #11, 1996), Newport Banning Ranch, North Ranch Policy Plan Area, and within the San Juan Creek watershed at Chiquita Ridge and Radio Tower Road (See Appendix A).

In San Diego County, the species occurs in vernal pools from Marine Corps Base Camp Pendleton, inland to Ramona and south through Del Mar Mesa, Proctor Valley, and Otay Mesa. A minimum of 246 pools on Marine Corps Base Camp Pendleton are known to be occupied by SD Fairy Shrimp (See Appendix A). Based on surveys of the 2,856 vernal pool basins currently mapped on Marine Corps Air Station Miramar, 1,303 are occupied by SD fairy shrimp (Miramar 2006). Of the 62 vernal pool complexes[5] mapped by The City of San Diego's Vernal Pool Inventory[6] (2002-2003), 29 were found to be occupied by SD fairy shrimp and occur at the following localities: Del Mar Mesa (1), Carmel Mountain (1), Mira Mesa (6), Nobel Drive (3), Kearny Mesa (3), Mission Trails Regional Park (1), and Otay Mesa (14).

Additional vernal pool complexes with occurrences of SD fairy shrimp located in San Diego County but not included in the City of San Diego's Inventory include: Carlsbad, San Marcos, Ramona, Poway, Santee, Rancho Santa Fe, Murphy Canyon, Otay Lakes, Imperial Beach, East Otay Mesa, Marron Valley, and Proctor Valley (CNDDB Occurrence # 27, 2001).

2.1.5 *Habitat Affinity*

San Diego fairy shrimp are restricted to vernal pools and vernal pool-like depressions (e.g., ruts

[5] Vernal pool complexes are defined as a series of vernal pool groups that are hydrolocially connected with similar soil types and species compositions. They were first described and surveyed by Beauchamp and Cass 1979 and subsequently updated in 1986 (Bauder) and 1998 (Recovery Plan). The City of San Diego (2003) surveyed complexes within City boundaries and MCAS Miramar has surveys current through 2006 for approximately 70% of the Base.

[6] The City of San Diego conducted non-protocol surveys for San Diego fairy shrimp. Therefore this inventory may under-represent the true number of vernal pools with occurrences of San Diego fairy shrimp.

in dirt roads). Vernal pools are ephemeral wetlands that occur from southern Oregon through California into northern Baja California, Mexico (Service 1998). They require a unique combination of climatic, topographic, geologic, and evolutionary factors for their formation and persistence. They form in regions with Mediterranean climates where shallow depressions fill with water during fall and winter rains and then dry up when the water evaporates in the spring (Collie and Lathrop 1976; Holland 1976; Holland and Jain 1977, 1988).

Downward percolation of water within the pools is prevented by an impervious subsurface layer consisting of claypan, hardpan, or volcanic stratum (Holland 1976, Holland and Jain 1988). Seasonal inundation makes vernal pools too wet for adjacent upland plant species adapted to drier soil conditions, while rapid drying during late spring makes pool basins unsuitable for typical marsh or aquatic species that require a more persistent source of water. Local upland vegetation communities associated with vernal pools include needlegrass grassland, annual grassland, coastal sage scrub, maritime succulent scrub, and chaparral (USFWS 1998).

San Diego fairy shrimp tend to inhabit shallow, small vernal pools and vernal pool-like depressions that range in temperature from 10° to 26° Celsius. They are ecologically dependent on seasonal fluctuations in their habitat, such as absence or presence of water during specific times of the year, duration of inundation, and other environmental factors that likely include specific salinity, conductivity, dissolved solids, and pH levels (Gonzalez *et al.* 1996, Hathaway and Simovich 1996, and Holtz 2003)

2.1.6 *Life History*

San Diego fairy shrimp are non-selective particle feeding filter-feeders, or omnivores. Detritus, bacteria, algal cells, and other items between 0.3 to 100 microns may be filtered and ingested (Eriksen and Belk 1999). Adult fairy shrimp are usually observed from January to March; however, in years with early or late rainfall, the hatching period may be extended (65 *Federal Register* 63438). SD fairy shrimp, have a two-stage life cycle and spend the majority of their life cycle in the cyst stage (Templeton and Levin 1979, Schaal and Leverich 1981, Herzig 1985, Hairston and De Stasio 1988, Venable 1989). After hatching, SD fairy shrimp reach sexual maturity in about 7 to 17 days, depending on water temperature and persist for about 4 to 6 weeks (Hathaway and Simovich 1996). Fairy shrimp mate upon reaching maturity, and female SD fairy shrimp produce between 164 and 479 cysts (eggs) over their lifetime (Simovich and Hathaway 1997). The cysts are either dropped by the females to settle into the mud at the bottom of the pool, or they remain in the brood sac until the female dies and sinks to the bottom (Eriksen and Belk 1999). Fairy shrimp cysts may persist in the soil for several years until conditions are favorable for successful reproduction (Simovich and Hathaway 1997). The cysts will hatch in 3 to 5 days when water temperatures are between 10 and 20 degrees Celsius (Hathaway and Simovich 1996). Not all cysts are likely to hatch in a season, thus providing a mechanism for survival if water quality and ponding conditions are not favorable in a given year (Simovich and Hathaway 1997, Ripley et. al., 2004).

2.1.7 *Population Trend*

The loss of vernal pools that have the potential to support SD fairy shrimp has resulted in a range-wide reduction in diversity and abundance of SD fairy shrimp. Urban and water development, flood control, and highway and utility projects, as well as conversion of wild lands to agricultural use, have eliminated or degraded vernal pools and/or their watersheds in southern California (Jones and Stokes Associates 1987). Historically, vernal pools covered approximately 200 square miles of San Diego County (Bauder and McMillan 1998). Approximately 95 to 97 percent of vernal pools within San Diego County have been lost (Bauder 1986b, Bauder and McMillan 1998, Oberbauer 1990). Most of the remaining vernal pools in San Diego County occur on Redding soils, primarily on MCAS Miramar (Service 1998). It is assumed that an unknown quantity of vernal pools occupied with SD fairy shrimp has been lost in Mexico.

A listing, by Management Area[7], of the current conservation status of the known vernal pool complexes throughout the extant range of SD fairy shrimp is included in Appendix B[8]. Currently, there are 222[9] complexes identified; 131 of those are occupied by SD fairy shrimp. The Recovery Plan identified 111 of these complexes as necessary to stabilize (90) or reclassify (21) the species. Since completion of the Recovery Plan, there have been 37 new complexes identified, 25 of which have occurrences of SD fairy shrimp. Of the 131 complexes with SD fairy shrimp, 79 (or 60%) have been conserved, identified as a conservation priority (on military land), proposed for conservation, or partially conserved and restored; 50 (or 38%) are not conserved, have been developed, are partially developed, are proposed for development, or have been impacted. Of the 111 complexes listed in the Recovery Plan as necessary to stabilize or reclassify the population of SD fairy shrimp, 64 (or 58%) are currently conserved, identified as a conservation priority (on military land), proposed for conservation, or partially conserved and restored; 45 (or 41%) are not conserved, have been developed, are proposed for development, or are impacted. The status of the remaining complexes is unknown at this time. Projects reviewed by the Service within the Management Areas have been required to implement restoration and management/monitoring programs to achieve a no net loss of SD fairy shrimp habitat. Restoration techniques have included decompaction, sculpting/recontouring, reseeding, re-establishment, and invasive species removal to restore impacted or lost pools.

Overall, since the time of listing, the status of San Diego fairy shrimp has remained unchanged. The same threats that were identified in the final rule still remain. The biggest threats are loss and degradation of habitat due to fragmentation and direct impacts from development, as well as lack of management. For vernal pools that have been impacted by development, these impacts have been offset through the restoration, enhancement, and management of habitat. In some

[7] Management Areas were defined in the Recovery Plan based on plant and animal species distributions, soil types and climatic variables. Eight distinct Management Areas, which comprise locally variable vernal pool complexes covered in Southern California, were defined (see Figure 9 in the Recovery Plan).

[8] This includes both verified and unverified vernal pool complexes.

[9] Three of these complexes, which were identified in the Recovery Plan, have been completely extirpated by development.

cases, due to security of the site and the active management of the vernal pools, the species status has improved. In addition, grants have been awarded to restore habitat in several areas including Otay Mesa, the San Diego National Wildlife Refuge, and Sweetwater Authority lands. Sites that have been restored benefit from fencing and management which further removes threats from the site that were occurring prior to the restoration efforts. Range-wide more information is known about the species than at the time of listing. New sites have been identified that support the species that were not known at the time of listing. The following is a status summary of the complexes by each Management Area (MA).

Los Angeles-Orange: Los Angeles Basin-Orange Management Area

This MA occurs within the coastal terraces, valleys, and foothills in Los Angeles and Orange Counties. Extensive vernal pool habitat once occurred on the coastal plain of Los Angeles and Orange Counties (Mattoni and Longcore 1997); however, there has been a near total loss of vernal pool habitat in these areas (Ferren and Pritchett 1988, Keeler-Wolf et al. 1998, Mattoni and Longcore 1997, Service 1998). No remaining vernal pools occupied by SD fairy shrimp are known from Los Angeles County. The Recovery Plan identifies 10 pool complexes in this MA, including one known to be occupied by SD fairy shrimp (i.e., Fairview Park); two are identified as needed to stabilize the species (i.e., Fairview Park and San Clemente). Since completion of the Recovery Plan, there have been six new complexes identified in Orange County, four of which have occurrences of SD fairy shrimp (Newport Banning Ranch, Radio Tower Road, Chiquita Ridge, and Irvine Ranch Land Reserve). Of the five total complexes in Orange County with SD fairy shrimp, four (or 80%) are conserved and/or restored. The Fairview complex assemblage has been partially restored and conserved as mitigation (Glenn Lukos Associates 2006b). Additional restoration at the site will occur once funding is secured. Long term management has been secured for three of the conserved complexes (Chiquita Ridge, Radio Tower Road, and Irvine Ranch Land Reserve). The long-term plans for Newport Banning Ranch are unknown at this time.

San Diego: North Coastal Management Area

The vernal pools within this MA are associated with the coastal terraces north of the San Dieguito River within San Diego County. It includes the vernal pool complexes at MCB Camp Pendleton and those within the City of Carlsbad. Currently, there are 17 complexes in this MA, 11 (or 65%) are known to be occupied by SD fairy shrimp. The Recovery Plan identified nine of these as needed to stabilize (8) or reclassify (1) the species; of these, eight (or 88%) are known to be occupied by SD fairy shrimp. Since the completion of the Recovery Plan, there has been one new complex identified in Carlsbad that is occupied by SD fairy shrimp. Of the three complexes in Carlsbad (all of which support SD fairy shrimp), two have been partially impacted (including the two complexes identified as needed for stabilization of SD fairy shrimp, and the one new complex occupied by SD fairy shrimp). Additional impacts are proposed for the other complex identified in the Recovery Plan as needed to stabilize the SD fairy shrimp (i.e., SD County Airport). We are working informally with the County to identify appropriate mitigation to offset this proposed loss.

Fourteen of the 17 complexes in the MA are on Marine Corps Base Camp Pendleton (MCBCP); nine of which are occupied by SD fairy shrimp. However, the fairy shrimp collected from Range 409, which is inland of the Y series complex, were identified as versatile fairy shrimp (*Branchinecta lindahli*) (as determined by Jonathan Snapp-Cook, CFWO). In addition, potential hybrids of SD fairy shrimp and versatile fairy shrimp have been reported from the previously unknown Papa Three complex which is also inland from the Y series. Several projects have partially impacted/partially restored SD fairy shrimp habitat in the Las Pulgas complex on Camp Pendleton. To date, these efforts appear to have successfully established SD fairy shrimp in the restored pools. Monitoring is continuing to confirm the long-term viability of the San Diego fairy shrimp populations in the restored pools.

San Diego: Central Coastal Management Area

The vernal pools within this MA are associated with the coastal terraces and mesas of central San Diego County from the San Dieguito River south to San Diego Bay and north of the Sweetwater River. It includes the vernal pools at Del Mar Mesa and Mira Mesa, the Kearny Mesa vernal pool complexes (MCAS Miramar, Tierrasanta, Montgomery Field, Mission Trails Regional Park), and the San Diego Mesa Complex (Chollas Heights). SD fairy shrimp have been detected from all of these areas. Approximately 73 percent of all the pools destroyed in San Diego County during the 7-year period between 1979 and 1986 (Keeler-Wolf et. al. 1998) occurred in this MA. Currently, there are 99 complexes in this MA, 72 (or 73%) are known to be occupied by SD fairy shrimp. The Recovery Plan identified 53 of these complexes as needed to stabilize (45) or reclassify (8) the species. Since completion of the Recovery Plan, there have been nine new complexes identified in this MA, seven of which have occurrences of SD fairy shrimp. Of the 72 complexes in this MA with SD fairy shrimp, 50 (or 69%) are conserved and/or restored, partially conserved, identified as a conservation priority (on military land), or partially restored; 21 (or 29%) are not conserved, have been developed, are partially developed, are proposed for development, or have been impacted. Of the 53 complexes in this MA identified in the Recovery Plan as needed to stabilize or reclassify the species, 44 (or 83%) are conserved and/or restored, partially conserved, identified as a conservation priority (on military land), or partially restored; eight (or 15%) are not conserved, have been developed, are partially developed, are proposed for development, or have been impacted. Projects reviewed by the Service within this Management Area have been required to implement restoration and management/monitoring programs to achieve a no net loss of SD fairy shrimp habitat. Example of this is the extensive restoration the military has completed (as part of the base realignment (1-6-95-F-33) on MCAS Miramar:

- In 1997, 2.30 acres (79 pools) were restored within AA4-7, F (north), F16, U15, and U19 pool groups (Black 2000a, 2003a).
- In 1997, 2.3 acres (75 pools) were restored within Management Unit 2, X1-4, Z1-3, EE1, and HH3+ pool groups (Black 2000b, 2003b).
- In 1998-1999, 0.85 acre (69 pools) was restored within A4, AA8, AA9, and AA10 pool groups (KEA Environmental, Inc. 1999; EDAW, Inc. 2005).

- In 1999-2000 MCAS Miramar re-established/restored about 170,000 square feet of vernal pool surface in the Miramar Mounds National Natural Landmark Vernal Pool Group U (north) (Tomsovic and Macalller 2003, 2004a, and 2004b).

San Diego: South Coastal Management Area

The southern San Diego coastal mesa vernal pools include isolated pools and complexes from the Sweetwater River south to the Mexican border. Included within this management area are the National City and Chula Vista pools (mostly extirpated), Border Field pools, Western and Eastern Otay Mesa complexes, Sweetwater Reservoir pools, and the vernal pools in the vicinity of Otay Lake; SD fairy shrimp have been detected from all of these areas. Substantial losses have occurred in the Otay Mesa Area, where over 40 percent of the vernal pools were destroyed between 1979 and 1990. Currently, there are 65 complexes in this MA, 29 (or 45%) are known to be occupied by SD fairy shrimp. The Recovery Plan identified 27 of these complexes as needed to stabilize (23) or reclassify (4) the species. Since completion of the Recovery Plan, there have been 10 new complexes identified in this MA, nine of which have occurrences of SD fairy shrimp. Of the 29 complexes in this MA with SD fairy shrimp, 12 (or 41%) are conserved and/or restored, identified as a conservation priority (on military land), or partially conserved; 16 (or 55%) are not conserved, have been developed, are proposed for development, or have been impacted. Of the 27 complexes in this MA identified in the Recovery Plan as needed to stabilize or reclassify the species, nine (or 33%) are conserved and/or restored, identified as a conservation priority (on military land), or partially conserved; 17 (or 63%) are not conserved, have been developed, are proposed for development, or have been impacted. Projects reviewed by the Service within this Management Area have been required to implement restoration and management/monitoring programs to achieve a no net loss of SD fairy shrimp habitat. As an example, Pardee homes restored 45 acres of vernal pool habitat supporting 330 pools to offset impacts to 162 pools.

San Diego: Inland Valleys Management Area

The San Diego Inland Valley MA consists of pools situated in San Marcos, Ramona, San Dieguito Valley, Poway, Marron Valley, and Proctor Valley. The majorities of these pools are isolated to a degree from extreme maritime influence by topography and occur more than nine kilometers (6 miles) from the coast. SD fairy shrimp have been observed in all of these areas. These complexes are smaller and more isolated than the coastal complexes, and as a result are suffering from indirect effects such as fragmentation, off road vehicle use, and changes in hydrology. Currently, there are 25 complexes in this MA, 14 (or 56%) are known to be occupied by SD fairy shrimp. The Recovery Plan identified 20 of these complexes as needed to stabilize (12) or reclassify (8) the species. Since completion of the Recovery Plan, there have been four new complexes identified in this MA, three of which have occurrences of SD fairy shrimp. Of the 14 complexes in this MA with SD fairy shrimp, five (or 36%) are conserved, partially conserved, or proposed for conservation; nine (or 64%) are not conserved, have been developed, are proposed for development, or have been impacted. Of the 20 complexes in this MA identified in the Recovery Plan as needed to stabilize or reclassify the species, three (or 21%) are conserved, partially conserved, or proposed for conservation; 17 (or 85%) are not conserved,

have been developed, are proposed for development, or have been impacted. Efforts in this management area focus on conservation, restoration, and management of pools on privately owned lands to reduce further development of known pools.

The SD fairy shrimp faces threats throughout its range. These threats can be divided into three major categories: 1) direct destruction of vernal pools and vernal pool habitat as a result of construction, vehicle traffic, domestic animal grazing, dumping, and deep plowing; 2) indirect threats which degrade or destroy vernal pools and vernal pool habitat over time including altered hydrology (e.g., damming or draining), invasion of non-native species, habitat fragmentation, and associated deleterious effects resulting from adjoining urban land uses; and 3) long-term threats including the effect of isolation on genetic diversity and locally adapted genotypes, air and water pollution, climatic variations, and changes in nutrient availability (Bauder 1986, Service 1998, Bohonak 2005).

2.1.8 *Rangewide Conservation Needs*

Based on current population trends, threats analysis, and new genetic information, the SD fairy shrimp has the following needs to survive and recover:

1. Vernal pool habitat should be restored and enhanced; this includes expansion of existing populations and re-establishment of populations where habitat and historical conditions are appropriate.
2. Vernal pool management plans should be developed and implemented to maintain hydrologic regimes; watershed and habitat functions; and species viability.
3. Land protection strategies should be developed to prevent further loss and fragmentation of existing habitat.
4. Vernal pool complexes not identified in the Recovery Plan as necessary to stabilize or reclassify the population should be re-evaluated based on their genetic structure to ensure the genetic variation within the SD fairy shrimp population is maintained.

3.0 ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR §402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed Federal projects in the action area that have undergone section 7 consultation, and the impacts of State and private actions which are contemporaneous with the consultation in progress.

3.1 *Action Area*

Under section 7(a)(2) of the Act, the action area is defined as the reach of direct and indirect

effects, as well as the analysis area for this opinion. The action area also includes the area in which baseline conditions and cumulative effects are analyzed. The action area for this opinion encompasses the entire project site which is approximately 278 acres.

3.2 *Site Characteristics and Surrounding Land Use*

The proposed project is located with the northern portion of the City of San Diego on Del Mar Mesa. This site lies approximately two miles east of Interstate 5 and one mile south of State Route 56. Topography on the Shaw Lorenz site consists of relatively flat mesas and ridge tops with several intervening canyons that either drain south toward Penasquitos Canyon or west and northwest toward Carmel Valley. Portions of the site have been disturbed by historical agricultural activities. The flatter mesa tops on site were cleared of the original vegetation and subsequently diced and plowed. Vegetation communities present on site include scrub oak chaparral, southern mixed chaparral, chamise chaparral, native and non-native grassland, and coastal sage scrub. Land uses in the vicinity of the site include single-family homes, an equestrian center, a golf course, and undeveloped preserve lands.
Depressional features (e.g., vernal pools) within the action area are defined as the part of the H Series (i.e., Penasquitos North) of vernal pools that are located a top Del Mar Mesa and Carmel Mountain, central coastal mesas which extend from I-805 to the west, I-15 to the east, McGonigle Canyon to the north, and Penasquitos Canyon to the south (Bauder 1986b, Service 1998). Vernal pools on Del Mar Mesa are associated with Redding soils, which consist of a well-drained gravelly loam underlain with gravelly clay subsoils and a hardpan composed of cobbles cemented by iron and silica (Bauder and McMillan 1998). Federally listed species known to occupy vernal pools on Del Mar Mesa include the endangered San Diego fairy shrimp, San Diego mesa mint (*Pogogyne abramsii*), San Diego button celery (*Eryngium aristulatum* var. *parishii*), and spreading navarretia (*Navarretia fossalis*) (Bauder 1986b, Recon 2002). Vernal pools on Del Mar Mesa often occur among openings of dense chaparral vegetation, making them difficult to detect away from existing trails. Prior to 1979, over 200 vernal pools were identified in this series. As of 1986, approximately 40 percent of these pools had been lost to either residential development or agricultural activities (Bauder 1986b). Although some of the remaining pools on Del Mar Mesa are relatively undisturbed, other pools, particularly near existing trails and roads, have been damaged or nearly eliminated by past road grading, off-road vehicle traffic, and creation of new trails by mountain bikes.

Vernal pools located on the Shaw Lorenz property have been classified as part of the H 17 and H36 groups. Prior to 1979, 18 vernal pools had been mapped in this area (they were referred to as H XII (Beauchamp 1979)). Bauder's (1986) efforts to provide a status of vernal pools that had been previously mapped speculated that the H 17 and H36 pools (she references 10 pools) had been lost to agriculture. The Recovery Plan also noted that these pools needed restoration. Though agricultural activities have ceased, the site continues to be affected by unauthorized dumping and utilization of SDGE access roads and trails by off-road vehicles.

With the cessation of agriculture, the area has naturally reverted to the existing vegetation types. Recent surveys on site found depressional features that display vernal pool characteristics [e.g., presence of vernal pool indicator plant species (Corps 1997), fairy shrimp, ponding and/or cracked soil]. Glen Lukos Associates mapped 20 depressional features on May 7, 2001, under dry conditions, and as such, the mapping was only sufficient to identify features with obvious remnant vegetation indicators. Glenn Lukos mapped an additional 14 and 18 depressional features in February 2003 and spring 2005, respectively, for total of 52 depressional features. Glen Lukos Associates has identified vernal pool plant indicator species in 23 of these 52 depressional features. The Corps identified 4 additional depressional features in winter 2006. *Branchinecta* species have been identified in depressional features throughout the site. Nearly all of the depressional features supporting vernal pool flora and/or fauna at Shaw Lorenz consist of tire ruts and ditches, with the majority of remaining areas (occurring off of the roads) having been heavily disturbed through agriculture. Many of the features on site (including preserved and impacted) do not support any vernal pool flora, although many support plants with wetland indicator status. However, many of these support a predominance of non-native vegetation (e.g. pools P, Q, and R). The features range from 15 to 615 square feet, with an average of 150 square feet. Another 10 (Pools D, F, J, K, T, Z, AA, BB, EE, HH) of the depression features do not support any vernal pool flora, but do contain some plant species with wetland indicator status. However, many of these consist of non-native plant species. For example, Feature T consists of a low corner where two man-made ditches intersect. The portion that becomes inundated (approximately 50 square feet) is vegetated entirely with the non-native grass poly (*Lythrum hyssopifolium*).

Over the last ten years, the Service has consulted on a number of projects impacting San Diego fairy shrimp. Recently built projects within the immediate vicinity of Del Mar Mesa include Greystone Homes (1-6-00-F-36) and State Route 56 (1-6-99-F-60). Another project at the eastern end of Del Mar Mesa that has been approved by the City, but has not built, is Rhodes Crossings. All of these projects included the preservation and restoration of vernal pool habitat supporting San Diego fairy shrimp, consistent with the City of San Diego's Environmentally Sensitive Land (ESL) ordinance which requires impacts to vernal pools to be mitigated at a 2-4:1 ratio, depending on the quality of pools being impacted.

3.3 *Status of the Species in the Action Area*

Surveys following Service guidelines for listed fairy shrimp species (Service 1996) have not been conducted in all potential habitats for fairy shrimp. However, based on the following information, the Service concludes that San Diego fairy shrimp likely occur in all depressional features throughout the subject property. A dry season survey for fairy shrimp in 2003 identified *Branchinecta* cysts in 6 out of the 6 vernal pools (Pools U, A, and B in Lot ZZ and Pools V, D, C in Lot YY) surveyed for fairy shrimp (Wegscheider 2003). The City's *Vernal Pool Inventory, 2002-2003*, observed live *Branchinecta* species in 10 (Pools C and V in Lot YY; Pools A and B in Lot ZZ; and Pools K, J, H, E, F, and AA in Lot WW) out of twenty-six vernal pools observed as ponding during their surveys. In addition, the Service observed fairy shrimp during two

different field visits with either the City or the Corps and Pardee's representatives. Hatching and rearing of fairy shrimp cysts from 13 depressional features (Pool II in proximity to Lot ZZ; Pools JJ, KK, LL, and MM in proximity to Lot WW; Pools NN, OO, PP, and QQ in proximity to the proposed Carmel Mountain Road; Pools TT, UU, VV, and YY within and in proximity to Lot J) confirmed that San Diego fairy shrimp occupy the site (Glen Lukos Associates 2005a). Though no other species of *Branchinecta* were identified among the reared fairy shrimp species, Tony Bomkamp of Glenn Lukos Associates did identify individuals of *Branchinecta lindahli* during the 2003 wet-season in two depressional features (Pool C in Lot YY and Pool Z in Lot WW) (Wegscheider 2003, Glenn Lukos Associates, 2005a). The presence of *B. lindahli* on site is of concern because this species has been observed to hybridize with San Diego fairy shrimp in the lab, though it is not known if they can hybridize in the field (Simovich, 2005 *pers. comm.*). *B. lindahli* is rare within the H Series. It was previously only known to occur within 4 vernal pools within Group H 38, which is located on a different mesa top (i.e., Carmel Mountain) approximately 2 miles west of the Shaw Lorenz site (Simovich, 2005 electronic mail message to the Service). In all of these pools, *B. lindahli* co-occurs with San Diego fairy shrimp, so the presence of either species does not appear to preclude occurrences of the other. However, based on the results of the cysts hatching study, which is the most comprehensive and reliable survey to date, it appears that San Diego fairy shrimp is the dominant fairy shrimp species on the Shaw Lorenz site. Although it cannot be ruled out, it does not appear that the *B. lindahli* is widely distributed on site.

4.0 EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat that will be added to the environmental baseline, along with the effects of other activities that are interrelated and interdependent with that action. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

4.1 *Scientific Basis for Effects*

Activities that alter hydrology, increase vernal pool habitat fragmentation, or decrease land types suitable for vernal pool formation have the potential to limit the survivability and recovery of SD fairy shrimp (Service 1998). Changes in the natural micro-topography surrounding vernal pools will alter natural hydrological regimes and may result in increased runoff, erosion, sedimentation, and contamination into the vernal pools. The complex hydrology of vernal pools is supported by both surface flows within a pool's topographic watershed (e.g., the surface area in which water drains into a vernal pool) and subsurface flows that may extend beyond the surface watershed. Surface and subsurface lateral flows between vernal pools and the surrounding uplands influence the onset and level of inundation, and the seasonal drying of vernal pools (Hanes and Stromberg 1998). Therefore, modifications to the uplands surrounding a vernal pool can negatively affect

the pool's hydrology, even if such modifications occur outside the pool's surface watershed. For example, grading cuts near pools can accelerate the flow of water out of the subsoil (Bauder 1987). As such, graded slope cuts adjacent to the watersheds of vernal pools may result in "leakage" of water out of the watersheds (City of San Diego 2003). Conversely, trapping all subsurface flows of water within the surface watershed of the vernal pools via putting in retaining walls may alter the hydrology of the pools by changing the onset or duration of ponding. Modifications to the hydrology of vernal pools can also alter the distribution of other vernal pool flora and fauna that are influenced by the length and frequency of water inundation (Bauder 1987, 2000). For instance, exotic plant species can become more prevalent in disturbed vernal pools when the periods of water inundation are reduced, while freshwater marsh species can expand into disturbed vernal pools when the periods of inundation are increased.

Modifications of landscapes from native to artificial adjacent to exiting vernal pools can alter natural hydrologic regimes, biogeochemical processes, and limit gene flow between pool complexes. Irrigation of artificial landscapes adjacent to vernal pools can saturate the soils and alter the timing and duration of inundation in fairy shrimp habitat. Additionally, water from the irrigation system may enter the fairy shrimp habitat, causing hatching of cysts at inappropriate times for their phenology. Altering the timing and duration of ponding also could negatively affect the ability of SD fairy shrimp to grow and reproduce because their phenology is dependent on such factors (Hathaway and Simovich 1996).

SD fairy shrimp are "osmoregulators" that maintain constant internal chemical concentrations, but cannot tolerate wide extremes in sodium or bicarbonate concentrations so they are vulnerable to contaminants in runoff waters and watershed quality that alter levels of salts and alkalinity (Service 1998). Therefore, runoff laden with fertilizers and pesticides from adjacent artificial landscapes could alter the specific water chemistry (Gonzalez et al. 1996) and temperature (Hathaway and Simovich 1996) required by SD fairy shrimp, thus negatively affecting their ability to mature and reproduce (Gonzalez et al. 1996, Holtz 2003).

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 (Service 1998). Such ecological and mutualistic processes involve insects that pollinate the vernal pools 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, Leong et. al. 1995, 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 (Service 1998). Therefore, plants in vernal pools that are isolated from other natural ecosystems may experience reduced pollination and thus produce less offspring. 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 (Kearns et. al. 1998). 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, Driver 1981, Ahl 1991). 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 multi-scale ecological processes associated with vernal pools (Leidy and White 1998). As such, the scientific community repeatedly recommends that conservation of vernal pools include the surrounding upland habitats (Bauder 1987, Thorp and Leong 1995 and 1998, California Department of Fish and Game 1998, Hanes and Stromberg 1998, Leidy and White 1998, Service 1998). These surrounding upland habitats influence vernal pool hydrology, species composition, and essential interactions between the species that inhabit them (California Department of Fish and Game 1998). 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 (Service 2004), and hinder their ability to reestablish after local extinctions (Fugate 1998). 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 (Service 1998).

Other indirect effects to SD fairy shrimp and its habitat, often referred to as "edge effects," include unauthorized dumping; human and pet intrusion; trampling; vandalism; plant and animal collection; runoff; erosion and siltation; spills and contamination; invasion of nonnative species;

and increased off-road vehicle and bicycle activity. Multiple examples exist demonstrating the edge effects can result in direct impacts to vernal pool preserves. Direct impacts have been observed at two vernal pool preserves (i.e., the 14-acre Phoenix Park Vernal Pool Preserve and the 8-acre Phoenix Field Ecological Reserve) in Sacramento County, California (Clark et. al. 1998). These preserves have a large perimeter relative to their size (i.e., large edge-to-area ratio), and have little or no buffer from surrounding residential and recreational areas. Indirect impacts associated with urban development observed at one or both of these preserves resulted from: use of herbicides in nearby areas; changes in hydrology; dumping of landscape litter; introduction and invasion of exotic plants; brush management for fire; encroachment from feral and domestic animals; vandalism of the protective fencing; foot, horse and bicycle traffic; and plant and animal collection.

Similar to the Sacramento pools, vernal pools in San Diego have suffered from dumping, vehicle and foot traffic, irrigation and redirected surface water (both damming and culverts), and invasions of exotic plants (Bauder 1987). Most vernal pool mitigation and/or preserve monitoring reports the Service receives document some form of human disturbance related to urban development that must be corrected. For example, the City's *Carroll Canyon Vernal Pool Preserve Monitoring Report* for the September 27, 2004, site visit documented that trash, illegally planted non-natives, and dirt discarded by an adjacent landowner had to be removed from the preserve. As another example, vandals removed the protective fencing surrounding vernal pool complexes and constructed moguls (bumps probably used for jumping bicycles) within the vernal pool watersheds located in the West Otay Mesa Environmental Preserve (The Environmental Trust 2003). Although not its primary purpose, the *City of San Diego Vernal Pool Inventory* (City 2004b) also provides documentation of indirect impacts to preserved vernal pools adjacent to urban development. For example, the inventory notes that trash has been observed in the only remaining pool of the C 27 series at the Mira Mesa Market Center (a.k.a., Cousins Market Center), which is surrounded by housing and Interstate 15.

Habitat favorable for vernal pool formation consists of coastal terraces with an underlying iron-silica impervious soil layer or layers with undulating landscapes, where soil mounds are interspersed with basins, swales, and drainages (Service 1998). As stated under section 2.1.7, approximately 95 to 97 percent of vernal pool habitat within San Diego County has been lost, any loss of remaining habitat that facilitates vernal pool formation will reduce the amount of suitable land available for restoration and re-introduction opportunities of vernal pools, potentially limiting the recovery of listed vernal pool species. Further, there is a high degree of endemicity in vernal pool complex assemblages due to local adaptations to climate and environmental variables, this leads to a high degree of genetic differentiation among complex assemblages (Bohonak 2005). Destruction of entire complex assemblages may result in the loss of the considerable genetic variation that currently exists within the SD fairy shrimp population.

Vernal pool restoration can reestablish the physical and biotic characteristics of vernal pool habitat such that critical functions are restored. The restored habitat should resemble reference habitat in regard to the following attributes: soil properties, water quality, topography,

hydrology, nutrient cycling, species diversity and species interactions. Based on positive data from ongoing mitigation monitoring programs it appears that restoration can provide self-sustaining vernal pool ecosystems with clear and significant benefits to San Diego fairy shrimp; especially when cyst translocation occurs from existing (conserved) occupied pools (RECON 2007; GLA 2005c, 2006c; Black 2000a, 2000b; Edaw 2005). Benefits of restoration to the San Diego fairy shrimp include increasing the amount of available vernal pool habitat, increasing the quality of existing vernal pool habitat, and providing long-term management for this species. These benefits, when supplemented by long-term monitoring, provides the potential for reducing threats to the shrimp and maintaining and improving the habitat quality and regional distribution of San Diego fairy shrimp. Restoration of vernal pool ecosystems has not only benefited San Diego fairy shrimp, but has also provided additional and improved habitat for a number of other vernal pool plant and animal species that coexist with this species in the San Diego region. Since 1997, projects have documented success in the translocation of San Diego fairy shrimp. These include California Terraces on Otay Mesa (RECON 2007), San Diego Spectrum at Kearny Mesa (GLA 2005c), and other vernal pool restoration projects on Otay Mesa, Marine Corps Air Station Miramar, and Camp Pendleton.

4.2 *Direct Impacts*

Clearing and grading activities will directly affect 19 depressional features[10] (totaling 2515 square feet or 0.06 acre). These impacts would be a result of grading and filling of the basins. Though all 19 of these depressional features likely contain San Diego fairy shrimp, it has only been confirmed that San Diego fairy shrimp occupy 13 of these depressional features. The depressions to be directly impacted by the project consist of road ruts and ditches that do not support any vernal pool flora. Of the depressions to be impacted and that have been documented with San Diego fairy shrimp (by cyst), the majority have very low cysts densities. Destruction of habitat for San Diego fairy shrimp, including features which are suitable but presently unoccupied, precludes potential recovery efforts for this and other listed species dependent upon vernal pools at those locations. Prior to their filling, soil containing fairy shrimp cysts will be salvaged from the affected depressional features for use as inoculum in the vernal pools to be restored onsite, provided that such salvage does not interfere with the project's grading and construction schedule. However, it is not anticipated that 100 percent of the cysts will be salvaged and/or survive the salvage process.

Grading for the proposed project could result in unintentional fill entering into the avoided pools. To avoid these direct impacts, all depressional features, and the lots within which they are located, will be flagged and surrounded with orange construction fencing prior to the beginning of grading. Grading will be done in such a manner to ensure that no runoff enters the depressional features. Additionally, a qualified biologist will monitor construction to ensure damage to the depressional features is avoided.

[10] Includes JJ, KK, NN, OO, PP, QQ, RR, SS, TT, UU, VV, WW, XX, YY, ZZ, and Corps 1, 2, 3, and 4

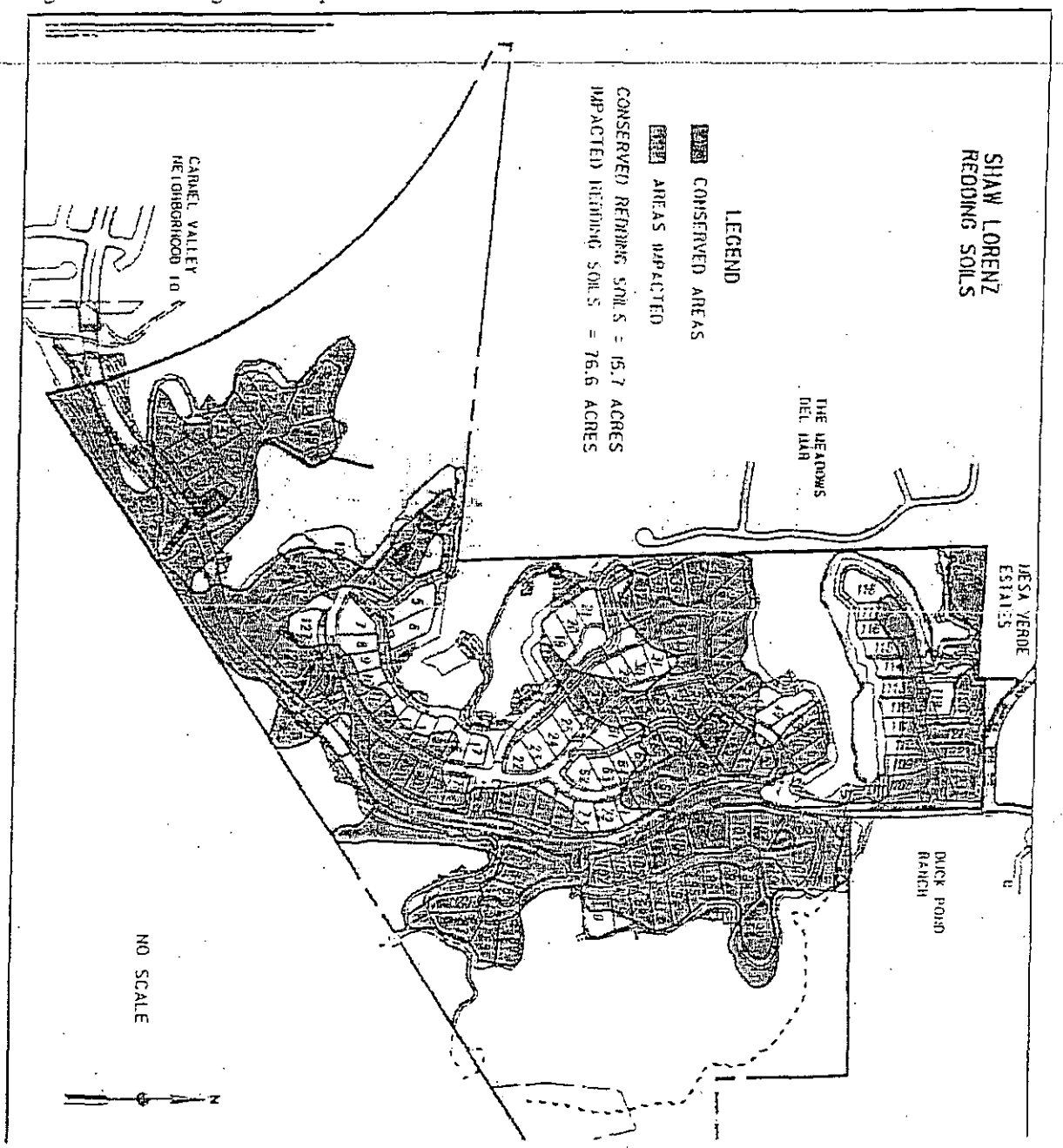
Despite the best intentions, inadvertent impacts to depressional features may occur during project construction resulting from excess runoff and contaminants and/or fill entering the features. Pardee Homes proposes to utilize erosion control measures around the depressional features; however; if grading and construction are conducted adjacent to depressional features during the rainy season, overland flows from rain events may overwhelm the erosion control measures and enter the depressional features. Such events could introduce excess dirt or fill and contaminants into the depressional features, potentially harming the San Diego fairy shrimp. The introduction of fill dirt or polluted runoff to adjacent landscapes can alter the specific water chemistry (Gonzalez et al. 1996) and temperature (Hathaway and Simovich 1996) required by San Diego fairy shrimp, thus negatively affecting their ability to mature and reproduce (Gonzalez et al. 1996, Holtz 2003). To minimize the potential for construction related run-off or siltation to enter the depressional features, Pardee Homes proposes to conduct grading adjacent to lots with preserved depressional features outside the rainy season unless the area to be graded is at an elevation below the lots, thus eliminating this threat.

Development of the project will eliminate the potential to restore ~77 acres (Figure 5) of potential vernal pool habitat on Del Mar Mesa that support Redding soils. Although the loss of the remaining Redding soils on the mesa top due to construction of the proposed project will reduce the amount of suitable land available for restoration and reintroduction of vernal pools and listed vernal pool species, the recovery plan does not identify the H17 and H36 complexes as necessary for the stabilization and/or downlisting of San Diego fairy shrimp. Nor are these pools identified as necessary for any of the other five listed vernal pool species that could occur in the area. Redding soils are the most common soil series remaining that support vernal pools within San Diego County, therefore loss of a portion of this site is not as significant as loss of rarer soil types elsewhere in the County (e.g. Stockpen in Otay Mesa). In addition, because Pardee Homes is proposing to avoid the Conserved areas and restore the Mitigation Site, there should be a net gain 16 acres of vernal pool habitat that was not anticipated in the Recovery Plan if the restoration is successful.

The project proposes on site avoidance and preservation of 37 depressional features[1] and the species they currently support. These depressional features total 5,967 square feet (0.14 acre) of basin area and are located in lots 127, 128, J, N, O, P, X, WW, XX, YY, and ZZ. This constitutes avoidance of a substantial portion of the extant habitat for San Diego fairy shrimp on site. Of the features to be preserved, three features (Pools P, Q, and R) were identified with plants of wetland indicator status, but no vernal pool indicator plant species. These features were not observed to pond during several years of studies conducted by GLA, but were noted (and preserved) due to their occurrence within one of the historic H17 pool groups identified by Ellen Bauder. In addition, the area to be conserved supports a population of Orcutt's brodiaea (*Brodiaea orcuttii*), which is a sensitive plant associated with vernal pool upland habitats.

[1] Although the basin of feature II is avoided, approximately 18% of it's watershed will be lost.

Figure 5. Redding Soils Impacted and Conserved



Pardee Homes will develop a vernal pool restoration plan for Lots 126, 127, 128 and WW, and potentially within Lots XX, YY, and B. Restoration of these areas will involve grading to re-contour depressional features for enhancement of vernal pools that could kill San Diego fairy shrimp by crushing their cysts. In addition, restoration activities, such as grading and movement of soils, have the potential to spread *B. lindahli* into pools that may not be currently occupied by *B. lindahli*. *B. lindahli* were observed within depressional feature Z located within Lot WW, which is the lot proposed for restoration. This is of concern because *B. lindahli* have been observed to hybridize with San Diego fairy shrimp in the lab though it is not currently known if they have hybridized in the field. Pardee Homes will develop and incorporate measures into their restoration and enhancement activities to prevent the introduction and spread of *B. lindahli* into the restoration/enhancement areas. In addition, annual identification of fairy shrimp in the depressional features will determine whether *B. lindahli* occurs within the restored and enhanced pools. If B. *lindahli* are found within the restored or enhanced pools, measures will be taken as directed by the Service and Corps to eradicate and prevent further spread of *B. lindahli*.

As stated above in section 2.1.7, the status of San Diego fairy shrimp has remained unchanged from the time of listing. This project will not change that determination. The overall acreage of impacts is small relative to the overall habitat available for the shrimp range wide. The site was thought to have been lost to agriculture at the time of listing, therefore we did not rely on this site for the recovery of the species in the Recovery plan. The fact that the site has recovered to the degree that it has, without any active restoration demonstrates that active restoration of the Mitigation Site should maintain habitat for the shrimp thus maintaining the same acreage. The loss of the site compared to the overall habitat of the species is small and the identified mitigation site would adequately offset the impacts. Therefore, the project would be a "no net loss" to the shrimp population on-site or range-wide. With active restoration and management, the density of cysts may increase, thus making this site more viable in the long term for the shrimp by eliminating the threats from lack of management.

4.3 *Indirect Impacts*

The proposed project will introduce development on the mesa top surrounding and adjacent to extant depressional features to be preserved. Many of the vernal pools will be completely surrounded by development (e.g., residential buildings, roads, and trails), and will have little to no habitat buffers to development. The Conserved lots are relatively small, ranging in size from 0.03 to 3.63 acres, and likely do not contain enough acreage of upland habitat to support such essential ecological interactions between vernal pools, pollinators, and herbivores and their predators. Therefore, plants in vernal pools that are isolated from other natural ecosystems, such as in many of the extant depressional features conserved by the Shaw Lorenz project, may experience reduced pollination and thus produce less offspring. Five of the eight lots containing vernal pools are either not contiguous with preserved open space (i.e., Lots X) or are configured to only provide a narrow connection from relatively large native open spaces to depressional features within the Lots (i.e., depressional features P, Q, R, S, T, CC, DD, EE, HH, TT, and YY in Lot J; depressional feature II in Lot N; depressional feature W in Lot O; and depressional

features U, A, and B in Lot ZZ). Lot J is further fragmented by a trail and its associated fencing, which separates depressional features HH, S, EE, and T from the other depressional features in that lot. Lot B is also fragmented by a trail and fence which separates depressional features in Lots XX and YY from the contiguous open space of the Multiple Habitat Preserve Area (MHPA).

Because the lots containing preserved depressional features will be isolated from each other and lack a significant connection, if any, to contiguous open space, the long-term viability of the "Conserved habitat" for San Diego fairy shrimp is questionable. The continued existence of these vernal pool 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 m^2) scales, they are greatly influenced by large landscape scale processes (e.g., hydrology, plant and animal dispersal) (Leidy and White 1998). Unlike the Conserved Habitat, the Mitigation site (Lots WW, 126, 127, and 128) is connected to open space and will be the focus of the restoration efforts. Because of this connection, these indirect effects should be minimized within the Mitigation Site. The habitat within the Mitigation Site will be restored to achieve at least a 2:1 replacement of the habitat being lost within the development footprint as well as indirectly within the Conserved habitat, thereby offsetting the indirect impacts to the Conserved areas.

As described above in section 4.1, vernal pool preserves with a high edge-to-area ratio, such as the Conserved Habitat, will be subject to continual edge effects, including unauthorized dumping, human and pet intrusion, trampling, vandalism, plant and animal collection, runoff, erosion and siltation, spills and contamination, invasion of nonnative species, and off-road vehicles and bicycles. The Shaw Lorenz project is incorporating several conservation measures to minimize edge effects associated with the proposed development. Fencing will be located around the lots containing depressional features to reduce human encroachment; landscaping adjacent to these lots will include plantings with a 'native naturalized character'; drainage swales and/or concrete ditches will be used to divert irrigation away from depressional features located down-grade of landscaping; lighting will be directed away from lots containing depressional features; and a public information package will be given to all homebuyers, explaining the importance of the vernal pools and the need for avoidance. In addition, maintenance of the lots containing depressional features will include regular weeding to remove all new invasions of non-native species, removal of trash, and maintenance of the fencing. However, landscaping within the lots containing depressional features includes species that are not native (e.g., *Acacia*) and if landscaping in other parts of the project site utilize species that are non-native and invasive there is the potential that non-native invasive species could colonize and expand into the depressional features. The long-term maintenance plan will address this potential impact through education of the homeowners and weeding of both the Mitigation Site and the Conserved areas.

Changes in grade and increased irrigation surrounding the depressional features will influence changes in hydrology and may result in increased runoff, erosion, sedimentation, and

contamination into the depressional features. The proposed project will directly grade approximately 20 percent of the watershed (i.e., 425 square feet of the 2311 square-foot watershed) for depressional feature II (460 square-foot basin area; 0.01 acre) located in Lot N, resulting in potential changes to the hydrology of that depressional feature. Carmel Mountain Road will be above grade to Lots ZZ (which contains features U, A, and B), YY (which contains features V, C, and D), and X (which contains feature L). Though the road or the lot is outside the mapped watershed of the depressional features in these lots, the grade of the road is higher than the watershed so it is highly probable that storm water runoff from the road could enter into the depressional features, potentially carrying road pollutants (e.g., oil, grease, coolants) into the depressional features. Similarly, the proposed grade adjacent to Lot J in proximity to depressional feature GG is above the mapped watershed of GG. Lot X has a graded slope that will drain into the lot and potentially depressional feature FF. A concrete ditch will be constructed at the base of this slope in Lot X to direct runoff away from depressional feature FF (and its watershed). However, if maintenance of the ditch is inadequate, excess runoff could enter depressional feature FF, altering the hydrology of the depressional feature. Runoff laden with fertilizers and pesticides from the adjacent landscaping also could enter depressional features FF (Lot X) and GG (Lot J). The introduction of fill dirt or polluted runoff to adjacent landscapes can alter the specific water chemistry (Gonzalez et al. 1996) and temperature (Hathaway and Simovich 1996) required by San Diego fairy shrimp, thus negatively affecting their ability to mature and reproduce (Gonzalez et al. 1996, Holtz 2003). The project proponent will adequately fund the long-term maintenance of the site to ensure that the drainage features are maintained, thus minimizing this threat.

Other parts of the project will be graded to below the watershed of the depressional features, so the potential for stormwater flow from the developed areas entering the depressional features will be largely eliminated. For instance, most of the development adjacent to Lots WW (which contains features M, E, F, G, H, I, AA, LL, O, and BB), J (which contains features S, EE, HH, CC, P, Q, R, T), X (which contains feature FF), and P (which contains features X and Y) is proposed to be below the watersheds of the depressional features. Retaining walls will be placed within Lot J contiguous with the depressional features T, EE, S, and HH to keep development below the features. The road section adjacent to the Mitigation Site will be graded in the manner as described on Figure 4 to minimize the amount of grade change and construction that will occur on lots 126, 127 and 128 in order to favor the natural hydrological regime for the Mitigation Site.

Additionally the Shaw Lorenz project includes landscaping adjacent to depressional features and installation of permanent irrigation systems. To prevent alterations in vernal pool hydrology, Pardee Homes proposes to not allow any water from installed irrigation systems to enter lots that contain depressional features. Furthermore, if it is found that enhanced depressional features differ significantly from reference or control pools, Pardee Homes has committed to provide adequate contingency measures to the restored and enhanced depressional features as identified in their Vernal Pool Restoration and Enhancement Plan. These measures will be funded with the $500,000 that they are providing for this purpose. In the event that this funding is not needed

to implement contingency measures, it can be directed to other vernal pool restoration and/or enhancement efforts in the Del Mar Mesa Area.

Pardee Homes is proposing to offset impacts to vernal pool habitat by enhancing the existing 37 depressional features, their watersheds, and surrounding upland habitat to be avoided in Lots 127, 128, J, N, O, P, X, WW, XX, YY, and ZZ (Figure 2). In addition, appropriate upland habitat, topography, vernal pools, and their watersheds in the Mitigation Site (Figure 3) will be restored/enhanced to a typical species composition and size compared to other vernal pools within the H series. This is consistent with Recovery Task 2 from the Recovery Plan that emphasized the need to reestablish vernal pool habitat to historic structure and composition. As described above, if the restoration effort is unsuccessful, Pardee proposes to provide $500,000[12] to be used for restoration of vernal pool habitat offsite at a location within the H series [e.g., Del Mar Mesa/Carmel Mountain, on Carmel Mountain where the project proponent has vernal pool mitigation opportunities per their development agreement with the City of San Diego for Pacific Highlands Ranch Subarea III, North City Future Urbanizing Area (dated September 8, 1998)] approved by the Corps and the Service or elsewhere, if approved by the Service. The size and shape of the depressional features shall be suggested by the restoration biologist and approved by Agencies.

The Recovery Plan emphasizes the need to manage and monitor protected habitat (see Recovery Tasks 4 and 5). Consistent with this task, the long term maintenance and monitoring of the Mitigation Site will be secured and implemented as described in Conservation Measure 3.

4.4 *Cumulative Effects*

Cumulative effects include the effects of future State, Tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. We do not anticipate any activities to occur within the action area that will not have a federal action associated with it.

5.0 CONCLUSION

After reviewing the current status of the species at issue, the environmental baseline for the action area, the effects of the proposed Shaw Lorenz project, and the cumulative effects, it is the Service's biological opinion that the project, as proposed, is not likely to jeopardize the continued existence of the San Diego fairy shrimp. We present this conclusion based on the following reasons:

1. The loss of 19 depressional features and the fairy shrimp they currently support is not expected to appreciably reduce the long-term viability of this species. The loss of 2515

[12] As described in Conservation Measure 2d.

square feet (0.06 acre) of depressional feature surface ponding area is not large relative to the extent of habitat remaining over the San Diego fairy shrimp's range, and the species has not been observed in large numbers on the site.

2. The indirect impacts to 37 depressional features occupied by San Diego fairy shrimp is not expected to appreciably reduce the long-term viability of this species because the habitat of San Diego fairy shrimp affected by this project (5967 square feet; 0.14 acre) is not large relative to the extent of habitat remaining over San Diego's fairy shrimp's range and the impacts will be offset through the restoration of an equal or greater area of habitat within the Mitigation Site.

3. The conservation measures and compensation ratios that will be implemented as part of the project description will ensure there will be a net increase in higher quality vernal pool habitat within the Mitigation Site.

4. There will be a net benefit to the species ,under active management, since the project provides for long-term management of the species in the action area and reduces the threats that occur do to lack of management.

5. The project is consistent with the goals outlined in the Recovery Plan for the SD fairy shrimp because there will be a net increase in higher quality vernal pool habitat upon project completion.

6.0 INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened animal species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the Corps and/or the applicant (i.e., Pardee Homes) designated by the Corps. The Corps has ongoing responsibility to regulate the activity that is covered by this incidental take statement. If the

Corps: (1) fails to assume and implement the terms and conditions or (2) fails to require its designated agency(ies) and individual(s) to adhere to the terms and conditions of this incidental take statement through enforceable terms incorporated into contracts, grants, and permits related to work activities associated with the project, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of the incidental take, the Corps or Pardee Homes, must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR § 402.14(I)(3)].

6.1 Amount or Extent of Take

The Service anticipates that it will be difficult to quantify the exact number of SD fairy shrimp that could be affected by the proposed action for the following reason:

1. The exact population size is difficult to estimate due to the dynamic conditions associated with their habitat. The reproductive success of SD fairy shrimp is dependent on seasonal fluctuations in their habitat, such as presence or absence of water during specific times of the year, duration of inundation, and other environmental factors that likely include specific salinity, conductivity, dissolved solids, and pH levels (See Section 2.2.5). Therefore, the population of SD fairy in any given pool varies dramatically.

Nevertheless, we anticipate that all SD fairy shrimp and/or cysts within 19 of the depressional features within the action area (i.e., JJ, KK, NN, OO, PP, QQ, RR, SS, TT, UU, VV, WW, XX, YY, ZZ, and the 4 additional features identified in Winter 2006) will be taken in the form of direct mortality (i.e., harm) by grading and filling the depressional features they occupy. The Service anticipates that a major portion of San Diego fairy shrimp in the 24 depressional features within the Conservation Area will be taken due to indirect edge effects that can ultimately become direct impacts (e.g., changes in hydrology and water quality, trampling, dumping, and invasion of nonnative species). In addition, some SD fairly shrimp and/or cysts within the 13 conserved pools within the Mitigation Site will be taken during the restoration activities (e.g. crushing of cysts during recontouring of the basins). Should project construction directly impact more than the 19 depressional features listed above, or if indirect effects are greater than the 24 depressional features described above, or if the restoration activities require any additional grading or cyst removal beyond that described in the restoration plan, reinitiation of formal consultation will be required.

6.2 Effect of the Take

In the accompanying biological opinion, the Service determined that this level of take is not likely to result in jeopardy to San Diego fairy shrimp.

7.0 REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of SD fairy shrimp:

7.1 Take of SD fairy shrimp will be avoided and minimized through project design and implementation of best management practices during construction of the project.

7.2 Effects of the project on SD fairy shrimp and vernal pools will be minimized by restoring/enhancing new vernal pool habitat on the project site that can support SD fairy shrimp, and by preserving and managing the enhanced and/or restored vernal pools in perpetuity.

7.3 Take of SD fairy shrimp shall be quantified to the extent possible by the development and implementation of a SD fairy shrimp monitoring program.

8.0 TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, the Corps must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. The Project Proponent shall implement all of the Conservation Measures as listed above in Section 1.1. Conservation Measures 1, 2, 6, 7, 10, 11, 12, 13, and 14 implement Reasonable and Prudent Measure 7.1. Conservation Measures 3, 4, 5, 8, 15, and 16 implement Reasonable and Prudent Measure 7.2. Conservation Measure 3 also implements Reasonable and Prudent Measure 7.3.

The Service retains the right to access and inspect the project site for compliance with the proposed project description and with the terms and conditions of this biological opinion. Any habitat destroyed that is not in the identified project footprint should be disclosed immediately to the Service for possible reinitiation of consultation. Compensation for such habitat loss will be requested at a minimum ratio of 5:1.

The Service believes that all of the SD fairy shrimp within 0.06 acre of SD fairy shrimp habitat, comprised of 19 vernal pool basins and a subset of the SD fairy shrimp and/or cysts within the remaining 37 vernal pool basins, will be incidentally taken as a result of the proposed action. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Corps and/or the project proponent must

immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

9.0 MONITORING REQUIREMENTS

Pursuant to 50 CFR 402.14(i)3, the Corps of Engineers and/or the project proponent "...must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement." The reporting requirements are established in accordance with 50 CFR 13.45 and 18.27. To receive coverage under this biological opinion, the Corps of Engineers and/or the project proponent must provide annual monitoring reports of the estimated take that may have occurred in relation to the amount of take that is identified in this Incidental Take Statement. Annual reports are due prior to January 31st of each year for the duration of this project. The monitoring report will also identify the amount of habitat affected and must specify whether pre-project surveys were conducted and the results of those surveys.

10.0 CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans or to develop information.

> Wherever possible, for all projects involving vernal pools, the Corps should work with applicants to establish a minimum 100-foot wide habitat buffer to be preserved around vernal pools and their watersheds to limit the more immediate indirect edge effects caused by surrounding development and to ensure natural hydrological regimes are maintained.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

11.0 REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in the request for consultation. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances

where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Sincerely,

Therese O'Rourke

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Assistant Field Supervisor

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