5098

SUBMITTAL TO THE FLOOD CONTROL AND WATER CONSERVATION DISTRICT BOARD COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

FROM: General Manager-Chief Engineer

SUBMITTAL DATE: July 17, 2012

SUBJECT: San Jacinto River
Eastern Municipal Water District's Recharge and Recovery Program
Amended and Restated License Agreement
District 3/District 3

RECOMMENDED MOTION:

1. Consider and accept the attached CEQA First and Second Addendums to the Hemet/San Jacintc Integrated Recharge and Recovery Program Final Environmental Impact Report; and
2. Approve the Amended and Restated License Agreement between the District and Eastern Municipa Water District (EMWD), and authorize the Chairman to execute the Agreement documents on behalf of the District; and
3. Direct the Clerk of the Board to file the Notice of Determination.

Continued on Page 2

WARREN D. WILLIAMS
General Manager-Chief Engineer

FINANCIAL DATA				
	Current F.Y. District Cost:	N/A	In Current Year Budget:	N/A
	Current F.Y. County Cost:	N/A	Budget Adjustment:	N/A
	Annual Net District Cost:	N/A	For Fiscal Year:	N/A

SOURCE OF FUNDS: N/A

Positions To Be Deleted Per A-30 ☐

Requires 4/5 Vote ☐

C.E.O. RECOMMENDATION:

APPROVE

BY: Michael R. Shetler
Michael R. Shetler

County Executive Office Signature

FORM APPROVED COUNTY COUNSEL
BY: NEAL R. KIRNIS DATE 7/11/12

Departmental Concurrence

☐ Consent ☐ Policy

☐ Consent ☐ Policy

Dep't Recomm.:

Per Exec. Ofc.:

MINUTES OF THE FLOOD CONTROL AND WATER CONSERVATION DISTRICT

On motion of Supervisor Buster, seconded by Supervisor Ashley and duly carried, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Buster, Benoit and Ashley
Nays: None
Absent: Tavaglione and Stone
Date: July 17, 2012
xc: Flood, Recorder

Kecia Harper-Ihem
Clerk of the Board
By: Deputy

Prev. Agn. Ref.: 10/21/08, Item 11.2 | **District:** 3/3 | **Agenda Number:** 11.6

ATTACHMENTS FILED
WITH THE CLERK OF THE BOARD

FLOOD CONTROL AND WATER CONSERVATION DISTRICT BOARD SUBMITTAL
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

SUBJECT: San Jacinto River
Eastern Municipal Water District's Recharge and Recovery Program
Amended and Restated License Agreement
District 3/District 3

SUBMITTAL DATE: July 17, 2012
Page 2

BACKGROUND:

This Amended and Restated License Agreement (Agreement) revises the previously executed License Agreement that sets forth the terms and conditions under which District will allow EMWD to construct, operate and maintain a series of groundwater basins within the District's San Jacinto River (SJR) Levee system.

Pursuant to the California Environmental Quality Act (CEQA) requirements, as a CEQA responsible agency, the District's Board of Supervisors adopted CEQA Findings/Statement of Overriding Considerations and filed a Notice of Determination in conjunction with the October 21, 2008 (Agenda Item 11.2) approval of a License Agreement allowing EMWD, acting as the CEQA lead agency, to construct, operate and maintain a series of groundwater recharge basins within the SJR Levee system. Subsequent to certification of the Hemet/San Jacinto Integrated Recharge and Recovery Program Final Environmental Impact Report (Final EIR) and approval of the License Agreement, EMWD collaborated with the U.S. Fish and Wildlife Service (USFWS) to further minimize potential effects to the federally listed San Bernardino Kangaroo Rat (SBKR; Dipodomys Merriami Parvus) by revising the project. The revised project and its associated environmental effect were addressed in the attached EMWD's First and Second CEQA Addendums to the Final EIR. These Addendums have been adopted by the EMWD Board of Directors to address minor technical changes to the Final EIR. District staff concurs that the Addendums are appropriate to address the proposed project subject to this Amended and Restated License Agreement under CEQA and the State CEQA Guidelines. As the CEQA lead agency, EMWD adopted and is required to implement the mitigation measures contained in the Final EIR and Addendums. This Amended and Restated License Agreement provides a number of conditions to ensure that the EMWD project and associated mitigation does not impair the District's ability to operate and maintain the SJR Levee system.

Pursuant to the requirements of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), the District submitted the project authorized in the previous License Agreement to the Western Riverside County Regional Conservation Authority (RCA), USFWS and the California Department of Fish and Game (Department) for review. The proposed project is located within MSHCP conservation areas (Proposed Core 5), and would impact Riparian/Riverine Habitat and occupied SBKR Habitat.

EMWD obtained a Federal Endangered Species Act Biological Opinion and SBKR take authorization directly from the USFWS, therefore, incidental take coverage through the MSHCP is not required. In a letter dated July 3, 2007, the RCA determined that the proposed project is consistent with both the Criteria and other MSHCP requirements (JPR 07-05-22-03). In a letter dated July 10, 2007, the USFWS and Department stated that while EMWD has obtained SBKR take authorization, the proposed project will result in a net loss of occupied SBKR habitat that serves to sustain the SJR SBKR population. The USFW and Department believe that this loss was not anticipated in the MSHCP and is not consistent with the Conservation Area identified in the MSHCP or the other species-specific objectives for SBKR. While the USFWS and Department have no objection to the EMWD project moving forward, they believe that a change in the overall MSHCP conservation strategy for SBKR needs to be addressed by the RCA, USFWS and Department.

Continued

FLOOD CONTROL AND WATER CONSERVATION DISTRICT BOARD SUBMITTAL
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

SUBJECT: San Jacinto River
Eastern Municipal Water District's Recharge and Recovery Program
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District 3/District 3

SUBMITTAL DATE: July 17, 2012
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BACKGROUND (continued):

The EMWD project changes and associated mitigation have been authorized by the USFWS through a reinitiated Section 7 consultation. EMWD has been conditioned by USFWS to offset the project's impacts through the conservation and management of approximately 532 acres along the San Jacinto River. The RCA will be a party to a Cooperative Agreement implementing the conservation areas associated with the project. The Department has authorized the project changes through an Amendment of the Section 1605 Streambed Alteration Agreement.

EMWD has executed this Agreement and County Counsel has approved the Agreement as to legal form.

FINANCIAL:

EMWD is funding all construction, construction inspection costs, and mitigation implementation costs. Future operation, maintenance costs and mitigation monitoring costs will accrue to EMWD.

CLC:blj

MEMORANDUM

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

DATE: July 2, 2012

TO: Shelagh Boggio, Executive Assistant II

FROM: Art Diaz, Senior Civil Engineer AD

RE: San Jacinto River
EMWD License Agreement

The above License Agreement is tentatively scheduled to be approved by the District's Board on July 17, 2012. The CEQA Notice of Determination (NOD) will need to be posted at the County Clerk-Recorder's office within five days of the Board's approval. The Clerk of the Board is responsible for executing and sending the NOD (P8\143815) to the County Clerk-Recorder's office following the Board's approval.

The County Clerk-Recorder's office requires that a total of $64.00 in fees be paid before they will post the NOD. We are attaching an Authorization to Bill Form for the County Clerk-Recorder in the amount of $64.00. Please ensure that this Form is provided to the Clerk of the Board to allow posting of the NOD at the County Clerk-Recorder's office. The District's Form 11 will also direct the Clerk of the Board to file the NOD with the State Office of Planning and Research (OPR). However, OPR does not require any fees to post CEQA documents.

The County Clerk-Recorder's office also collects the CEQA document filing fees imposed by the California Department of Fish and Game (CDFG). The CDFG fees were previously paid when a NOD was posted on August 9, 2004 by Eastern Municipal Water District (EMWD) for the same project. To demonstrate this to the County Clerk-Recorder's office, we are attaching a copy of EMWD's previously filed NOD and the related Environmental Filing Fee Cash Receipt. Thus, only $64.00 is required to post the District's NOD at this time.

Any questions regarding the License Agreement should be directed to Teresa Tung. If there are any questions regarding the CEQA documentation, please contact me at 51233 or Randy Sheppeard at 51306. Thank you.

Attachments

ec: Teresa Tung
Christina Coats
Randy Sheppeard

RS:mcv
P8\147623

California State Clearinghouse Handbook

Notice of Determination — Form C

To: X Office of Planning and Research
P.O. Box 3044
Sacramento, CA 95812-3044

X County Clerk
County of Riverside
2724 Gateway Drive
Riverside, CA 92507

From: Riverside County Flood Control District
1995 Market Street
Riverside, CA 92501

Original Negative Declaration/Notice of Determination was routed to County Clerks for posting on.

7/17/12 (Date) KD (Initial)

Subject: Filing of Notice of Determination in Compliance with Section 21108 or 21152 of the Public Resources Code

Project Title
License Agreement for the Eastern Municipal Water District's San Jacinto River Groundwater Recharge Basins

State Clearinghouse Number (If submitted to Clearinghouse)	Responsible Agency Contact Person	Area Code/Telephone/Extension
2003121068	Art Diaz	951.955.1233

Project Location (include County)
The proposed project is located within the Riverside County Flood Control and Water Conservation District's (District) San Jacinto River Levee system near the city of San Jacinto in western Riverside County. The proposed project is located within an un-sectioned portion of Townships 4 and 5 South, Range 1 East, of the U.S. Geological Survey (USGS) San Jacinto 7.5 Series Topographic Quadrangle map.

Project Description:
The District has amended and restated a previously executed License Agreement authorizing Eastern Municipal Water District (EMWD) to construct, operate, and maintain a series of groundwater recharge basins and appurtenances within the San Jacinto River Levee system. The amended License Agreement addresses changes in the project to further reduce potential impacts to the San Bernardino Kangaroo Rat as requested by the U.S. Fish and Wildlife Service. Pursuant to CEQA, EMWD is the lead agency and has adopted the Final Environmental Impact Report (FEIR) for the Hemet/San Jacinto Integrated Recharge and Recovery Program as well as First and Second Addendums to the FEIR. The District considered the FEIR, and adopted CEQA Findings/Statement of Overriding Considerations when approving the previous License Agreement on October 21, 2008. The amended License Agreement and the First and Second Addendums address changes in the project that were authorized in a prior license agreement. The District considered and has accepted EMWD's First and Second Addendums as a responsible agency.

This is to advise that the Riverside County Flood Control and Water Conservation District has approved the above project
(___ Lead Agency X Responsible Agency)
on July 17, 2012 (Date) and has made the following determinations regarding the above described project:

1. Pursuant to CEQA, the District considered and accepted the First and Second Addendums as adopted by EMWD.
2. The project will have a significant effect on the environment.
3. Mitigation measures were made a condition of the approval of the project.
4. A mitigation reporting and monitoring plan was adopted for this project.
5. A statement of overriding considerations was adopted for this project.
6. Findings were made pursuant to the provisions of CEQA.

This is to certify that the records of this project's approval and the First and Second Addendums are available to the general public at:

Office of the Clerk of the Board, County Administrative Center, 4080 Lemon Street, Riverside, CA 92501

Signature (Public Agency) — 7/3/12 (Date) — GM-CE (Title)

Date received for filing at OPR:
Revised January, 2001

JUL 17 2012 11.6

CEQA-7

FILED
RIVERSIDE COUNTY
NOV 17 2011
LARRY W. WARD, CLERK
By M. Meyer Deputy

NOTICE OF DETERMINATION

To: ■ Office of Planning and Research
1400 Tenth Street
P.O. Box 3044
Sacramento, CA 95812-3044

■ County Clerk
County of Riverside
2724 Gateway Drive
P.O. Box 751
Riverside, CA 92502-0751

From: Eastern Municipal Water District
2270 Trumble Road
Post Office Box 8300
Perris, CA 92572-8300

COUNTY CLERK
Neg. Declaration/Ntc Determination
Filed per P.R.C. 21152
POSTED

NOV 17 2011

Removed: 12-22-11

By: Dept.
County of Riverside, State of California

Subject: Filing of Notice of Determination in Compliance with Section 21108 or 21152 of the Public Resources Code

Project Title: **Hemet/San Jacinto Integrated Recharge and Recovery Program Second Addendum to the Final Environmental Impact Report**

State Clearinghouse Number: 2003121068

Contact Person: Karen Hackett

Phone Number/Ext.: (951) 928-3777, Extension 4462

Project Location: The proposed project is located within or near the Cities of San Jacinto and Hemet, Riverside County, California, Township 5 South, Range 1 West, near Section 31, SBBM

Project Description: As part of the Hemet/San Jacinto Integrated Recharge and Recovery Program project, Eastern Municipal Water District (EMWD) proposes to construct groundwater recharge basins and appurtenances to allow water to infiltrate the groundwater aquifer and to provide a reliable drinking water supply through groundwater stabilization and conjunctive use within the eastern portion of EMWD's service area.

The groundwater recharge basins and appurtenances were proposed in the original Environmental Impact Report (EIR). Subsequent to certification of the Final EIR, and as a result of consultation with the U.S. Fish and Wildlife (USFWS), EMWD agreed to shift the location of the proposed recharge basins and the First Addendum was completed to address the requested basin location change.

Since completion of the First Addendum, USFWS has requested another location change of the proposed recharge basins. The USFWS has requested the proposed recharge basins be constructed in essentially the same location as was proposed in the 2004 Final EIR. The currently proposed recharge basins would encompass approximately 35 acres, as addressed in the First Addendum, and have a footprint of approximately 5 acres less than the 40-acre recharge basins footprint addressed in the 2004 Final EIR. Mitigation Measures Bio-3 and Bio-6 from the 2004 Final

EIR are deleted and replaced with a new Mitigation Measure Bio-11 which replaces the Bio-11 Mitigation Measure proposed in the First Addendum.

The shift in the proposed recharge basins location in accommodation of a USFWS request would further reduce the environmental impacts of the proposed project. Additional mitigation, above and beyond what was identified in the 2004 EIR and First Addendum, identified by the USFWS, replaces and supplements the mitigation for impacts to SKBR habitat that was included in the 2004 Final EIR and First Addendum.

The Second Addendum has been prepared in accordance with §15164 of the CEQA Guidelines. The second minor project modification will not 1) constitute a substantial change in the project as originally proposed; 2) lead to substantial changes in the circumstances under which the project will be undertaken; or 3) constitute new information of substantial importance. Accordingly, a Second Addendum was prepared as opposed to a negative declaration or subsequent environmental impact report.

This is to advise that the Eastern Municipal Water District has approved the described project on November 16, 2011 and has made the following determinations regarding the above described project:

1. The project {■ will, □will not} have a significant effect on the environment.
2. ■ Two Addendums and an Environmental Impact Report were prepared for this project pursuant to the provisions of CEQA
3. Mitigation measures {■ were, □ were not} made a condition of the approval of the project.
4. A mitigation reporting and monitoring plan {■ was, □ was not} adopted for this project.
5. A statement of Overriding Considerations {■ was, □ was not} adopted for this project.
6. Findings {■ were, □ were not} made pursuant to the provisions of CEQA.

This is to certify that the First and Second Addendums, and Final Environmental Impact Report with comments and responses, and/or record of project approval are available to the General Public at:

Eastern Municipal Water District
2270 Trumble Road
Perris, CA 92570

Date: 11/17/11

Joseph B. Lewis
Director of Engineering Services

Date Received for filing at OPR:

STATE OF CALIFORNIA - THE RESOURCES AGENCY
DEPARTMENT OF FISH AND GAME

ENVIRONMENTAL FILING FEE CASH RECEIPT

Receipt #: 201100901

State Clearinghouse # (if applicable): 2003121068

Lead Agency: EASTERN MUNICIPAL WATER DISTRICT *Date:* 11/17/2011

County Agency of Filing: Riverside *Document No:* 201100901

Project Title: HEMET/SAN JACINTO INTEGRATED RECHARGE & RECOVERY PROGRAM 2ND ADDEN

Project Applicant Name: EASTERN MUNICIPAL WATER DISTRICT *Phone Number:*

Project Applicant Address: 2270 TRUMBLE ROAD PERRIS CA 92572-8300

Project Applicant: Local Public Agency

CHECK APPLICABLE FEES:

☐ *Environmental Impact Report*	
☐ *Negative Declaration*	
☐ *Application Fee Water Diversion (State Water Resources Control Board Only)*	
☐ *Project Subject to Certified Regulatory Programs*	
☒ *County Administration Fee*	$64.00
☒ *Project that is exempt from fees (DFG No Effect Determination (Form Attached))*	
☐ *Project that is exempt from fees (Notice of Exemption)*	
Total Received	$64.00

Signature and title of person receiving payment: M. My

Notes:

STATE OF CALIFORNIA - THE RESOURCES AGENCY
DEPARTMENT OF FISH AND GAME

ENVIRONMENTAL FILING FEE CASH RECEIPT

Receipt # 200400897

Lead Agency: EASTERN MUNICIPAL WATER DISTRICT *Date:* 08/09/2004

County Agency of Filing: Riverside *Document No:* 200400897

Project Title: HEMET/SAN JACINTO INTEGRATED RECHARGE RECOVERY PROJECT

Project Applicant Name: EASTERN MUNICIPAL WATER DISTRICT *Phone Number:*

Project Applicant Address: 2270 TRUMBLE ROAD P.O. BOX 8300 PERRIS, CA 92572-8300

Project Applicant: Local Public Agency

CHECK APPLICABLE FEES:

☒ *Environmental Impact Report*	$850.00
☐ *Negative Declaration*	
☐ *Application Fee Water Diversion (State Water Resources Control Board Only)*	
☐ *Project Subject to Certified Regulatory Programs*	
☒ *County Administration Fee*	$64.00
☐ *Project that is exempt from fees (DeMinimis Exemption)*	
☐ *Project that is exempt from fees (Notice of Exemption)*	
Total Received	$914.00

Signature and title of person receiving payment: Anderson

Notes:

AMENDED AND RESTATED LICENSE AGREEMENT

San Jacinto River Levee System

The RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, hereinafter called "DISTRICT", and the EASTERN MUNICIPAL WATER DISTRICT, hereinafter called "EMWD", hereby agree as follows:

RECITALS

A. DISTRICT operates and maintains the San Jacinto River Levee System (Project Nos. 4-0-00020 and 4-0-00030), shown on DISTRICT Drawing Nos. 4-0234, 4-0178 and 4-0236, hereinafter called "SJR LEVEE SYSTEM", principally located in western Riverside County; and

B. SJR LEVEE SYSTEM is an essential and integral part of DISTRICT'S regional system of stormwater management infrastructure that provides critical flood control and drainage within the area; and

C. DISTRICT and EMWD previously entered into that certain License Agreement executed on October 21, 2008, hereinafter called "PREVIOUS AGREEMENT", which set forth the terms and conditions under which DISTRICT will allow EMWD to utilize a specific area consisting of thirty-five (35) acres of DISTRICT'S existing SJR LEVEE SYSTEM right-of-way to construct a series of ponds and associated appurtenances for groundwater recharge; and

D. Subsequent to the execution of PREVIOUS AGREEMENT, EMWD collaborated with the U.S. Fish and Wildlife Service to modify the ponds and its associated appurtenances for groundwater recharge, hereinafter called "PROJECT", including location to further minimize potential adverse effects to the environment. PROJECT is shown in concept on Exhibit "A", attached hereto and made a part hereof, and on EMWD's drawing C-1 dated December 14, 2011 and detailed designed drawings G-1, C-1, C-2 and M-1 dated April 12,

JUL 17 2012 11.0

2012 all of which were prepared by Krieger and Stewart, Inc. and attached hereto as Exhibit "B" and made a part hereof; and

E. EMWD has obtained the following revised regulatory permits and approvals to construct, operate and maintain PROJECT: a) Reinitiated Biological Opinion (FWS-WRIV-08B0106-10F0045) dated December 23, 2011, attached hereto as Exhibit "C"; b) Amended Section 404 Individual Permit (SPL-2004-01197) dated February 24, 2012 and expires on December 31, 2035, attached hereto as Exhibit "D"; c) Amended Section 401 Water Quality Standards Certification (SARWQCB Project No. 332007-09) dated January 5, 2012, attached hereto as Exhibit "E"; d) Amended Section 1605 Streambed Alteration Agreement (No. 1600-2007-0033-R6) dated January 25, 2012 and expires on May 1, 2027, attached hereto as Exhibit "F"; and e) a Section 408 Permit (EE2010-63) dated April 4, 2012, attached hereto as Exhibit "G". Together these regulatory permits and approvals are hereinafter called "REGULATORY PERMITS"; and

F. As a condition of one or more of the above REGULATORY PERMITS, EMWD is required to protect certain real property situated in the Cities of Hemet and San Jacinto, and the County of Riverside, hereinafter together called "PROPERTY", by means of a conservation easement(s) and/or a conservation and management area(s) designation that names the Western Riverside County Regional Conservation Authority, hereinafter called "RCA", as the beneficiary and management authority. That certain real property is generally shown on Exhibit "H", attached hereto, and made a part hereof. Said conservation easements, and conservation and management areas, are hereinafter called "CONSERVATION EASEMENT" and "CONSERVATION MANAGEMENT AREA", respectively. Together, CONSERVATION EASEMENT and CONSERVATION MANAGEMENT AREA are hereinafter called "CONSERVATION EASEMENT/MANAGEMENT AREA"; and

G. A portion of PROPERTY is subject to and encumbered by certain easements and fee simple rights of way in favor of DISTRICT, hereinafter called DISTRICT PROPERTIES, necessary for the operation and maintenance of SJR LEVEE SYSTEM; and

H. DISTRICT entered into a separate cooperative agreement on May 24, 2012 with EMWD and others which allows EMWD to (a) include DISTRICT PROPERTIES in CONSERVATION EASEMENT or CONSERVATION MANAGEMENT AREA, as appropriate, provided that this CONSERVATION EASEMENT/MANAGEMENT AREA is subject to the existing rights and benefits already granted in favor of DISTRICT; and (b) authorize the RCA to manage DISTRICT PROPERTIES in a manner that does not, in any way whatsoever, impair SJR LEVEE SYSTEM'S primary flood control purpose and function or otherwise interfere with DISTRICT'S ability to operate and maintain the SJR LEVEE SYSTEM. Said cooperative agreement, hereinafter called "COOPERATIVE AGREEMENT", is hereby incorporated by reference in its entirety; and

I. EMWD has provided DISTRICT with written confirmations from the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, California Regional Water Quality Control Board-Santa Ana Region, and Department of Fish and Game that REGULATORY PERMITS, including any subsequent renewal or amendments thereto, will not (i) impede upon DISTRICT'S ability to perform all necessary operation and maintenance activities for SJR LEVEE SYSTEM, or (ii) include any stipulations that would result in additional mitigation obligations being place upon DISTRICT for maintenance operations within SJR LEVEE SYSTEM'S right of way; and

J. EMWD has also provided written confirmation from the RCA that REGULATORY PERMITS, COOPERATIVE AGREEMENT, CONSERVATION EASEMENT or CONSERVATION MANAGEMENT AREA, will not (i) impede upon

DISTRICTS ability to perform all necessary operation and maintenance activities for SJR LEVEE SYSTEM, or (ii) include any stipulations that would result in additional mitigation obligations being placed upon the DISTRICT for maintenance operations within SJR LEVEE SYSTEM'S right of way; and

K. EMWD desires to construct, operate and maintain PROJECT within approximately thirty-five (35) acres of DISTRICT'S SJR LEVEE SYSTEM'S right of way, as shown in concept on Exhibit "I", attached hereto and made a part hereof; and

L. DISTRICT issued an encroachment permit (4-0-00020-3277), hereinafter referred to as "EP 3277" and attached hereto as EXHIBIT "J", to EMWD on April 24, 2012 for the construction, operation and maintenance of certain groundwater recharge ponds associated with PROJECT. Upon DISTRICT approval of all necessary special studies, PROJECT plans and specifications, and REGULATORY PERMITS, DISTRICT will amend EP 3277 to include other groundwater recharge components of PROJECT such as pipelines, river access ramps and fencing that are subject to review and approval by the U.S. Army Corps of Engineers; and

M. SJR LEVEE SYSTEM'S flood control function is sporadic in nature and thus, construction, operation and maintenance of PROJECT can be accommodated within SJR LEVEE SYSTEM'S right of way to the extent that such uses do not unreasonably interfere with SJR LEVEE SYSTEM'S principal function or DISTRICT'S ability to operate and maintain SJR LEVEE SYSTEM; and

N. Designation of Lead Agency pursuant to the California Environmental Quality Act (CEQA) – EMWD and DISTRICT, both parties acting as public agencies, hereby agree that, pursuant to CEQA and CEQA Guidelines Section 15051(d), for purposes of complying with CEQA:

a) EMWD will act as the sole CEQA lead agency for the PROJECT and, as such, will have the corresponding responsibility to fulfill the obligations of a CEQA lead agency with respect to PROJECT. EMWD has certified a Final Environmental Impact Report (SCH #2003121068, Certified August 4, 2004) along with two Addendums to the Final Environmental Impact Report (Adopted June 23, 2010 and November 16, 2011).

b) DISTRICT will act as the CEQA responsible agency for PROJECT in connection to this Amended and Restated License Agreement, hereinafter called "AMENDED LICENSE AGREEMENT"; and

O. Subject to the provisions of this AMENDED LICENSE AGREEMENT, DISTRICT is willing to allow EMWD to construct, operate and maintain PROJECT within SJR LEVEE SYSTEM'S rights of way provided (a) EMWD assumes sole responsibility for construction, mitigation, operation, and maintenance of PROJECT; (b) EMWD'S construction, mitigation, operation, and maintenance of PROJECT do not unduly interfere with DISTRICT'S ability to perform all necessary operation and maintenance activities for SJR LEVEE SYSTEM; (c) EMWD is willing to assume sole responsibility for any and all additional regulatory, mitigation, and/or litigation costs to DISTRICT resulting from the CONSERVATION EASEMENT/MANAGEMENT AREA, COOPERATIVE AGREEMENT and/or REGULATORY PERMITS; and (d) EMWD is willing to indemnify and hold DISTRICT harmless from any claims arising from EMWD'S use of SJR LEVEE SYSTEM'S right of way or EMWD'S responsibilities in connection therewith or the condition thereof; and

P. It is in the public interest to proceed with this AMENDED LICENSE AGREEMENT.

NOW, THEREFORE, in consideration of the preceding recitals and the mutual covenants hereinafter contained, the parties hereto mutually agree as follows:

SECTION I

EMWD shall:

1. Pursuant to CEQA, assume Lead Agency role and responsibility for preparation, circulation and adoption of all necessary and appropriate CEQA documents pertaining to construction, operation and maintenance of PROJECT.

2. Assume sole responsibility for (i) the design, construction, mitigation, inspection, operation and maintenance of PROJECT, and (ii) EMWD'S use of the SJR LEVEE SYSTEM'S right of way.

3. Not place or maintain, nor to permit the placement or maintenance of any element of PROJECT, including but not limited to CONSERVATION EASEMENT/MANAGEMENT AREA, within a minimum width of fifteen (15) feet away from the toe of the levee except as provided for in this AMENDED LICENSE AGREEMENT or as have been approved by DISTRICT in writing.

4. Prior to commencing construction of PROJECT, other than the grading of the recharge ponds, obtain an amendment to EP 3277 from DISTRICT, for the construction and subsequent operation and maintenance of PROJECT associated appurtenances, pursuant to its rules and regulations and comply with all provisions set forth therein.

5. Not permit any change to or modification of DISTRICT'S permitted PROJECT plans and specifications without prior written consent of DISTRICT.

6. Furnish DISTRICT with copies of all REGULATORY PERMITS, including any subsequent renewal or amendments thereto, for review and approval prior to final execution or acceptance by EMWD. DISTRICT approval of any such document(s) may

be withheld when, in the sole judgment of DISTRICT'S General Manager – Chief Engineer, the said document(s) unreasonably constrains, inhibits or impairs DISTRICT'S ability to operate and maintain SJR LEVEE SYSTEM.

7. Assume sole responsibility for compliance with the requirements of all REGULATORY PERMITS, including any amendments thereto, pertaining to the construction, operation and maintenance of PROJECT.

8. Ensure that REGULATORY PERMITS, including any subsequent renewal or amendments thereto, will not (i) impede DISTRICT'S ability to perform all necessary operation and maintenance activities for SJR LEVEE SYSTEM, or (ii) include any stipulations that would result in additional mitigation obligations being placed upon DISTRICT for maintenance operations within SJR LEVEE SYSTEM'S right of way. In the event additional mitigation obligations are imposed upon DISTRICT as a result of REGULATORY PERMITS and any subsequent renewal or amendments, EMWD shall be solely responsibility for implementing said mitigation at its sole cost and expense.

9. Prepare, or cause to be prepared, at its sole expense, any special studies necessary to fully comply with the requirements of REGULATORY PERMITS, including any subsequent renewal and amendments thereafter, for the construction, operation and maintenance of PROJECT. A copy of any such studies shall be furnished to DISTRICT for its review and comments prior to forwarding said studies to the respective regulatory agencies.

10. Ensure that CONSERVATION EASEMENT/MANAGEMENT AREA will not, in any way whatsoever (i) interfere with DISTRICT'S rights and benefits previously granted in favor of the DISTRICT; and (ii) impair SJR LEVEE SYSTEM'S primary flood control purpose and function or otherwise interfere with DISTRICT'S ability to operate and maintain the SJR LEVEE SYSTEM.

11. Assume sole responsibility for resolving, at its sole cost and expense, any conflicts between PROJECT, REGULATORY PERMITS including any subsequent renewal and amendments thereafter, CONSERVATION EASEMENT/MANAGEMENT AREA, COOPERATIVE AGREEMENT, and/or this AMENDED LICENSE AGREEMENT in an acceptable manner as determined solely by DISTRICT.

12. Pay DISTRICT, within thirty (30) days of receipt of invoice(s) from DISTRICT, for all costs associated with (i) the review of all environmental studies, REGULATORY PERMITS, engineering reports, PROJECT plans and specifications, right of way documents, CONSERVATION EASEMENT/MANAGEMENT AREA documents, and COOPERATIVE AGREEMENT, (ii) construction inspection and periodic compliance inspections of PROJECT, and (iii) the preparation, processing and administration of this AMENDED LICENSE AGREEMENT.

13. Construct or cause to be constructed, PROJECT in accordance with DISTRICT permitted plans and specifications.

14. Inspect or cause to be inspected PROJECT construction by its construction manager.

15. Completely remove or cease, upon written request of DISTRICT'S General Manager-Chief Engineer, any EMWD installed improvements and/or equipment or EMWD uses or allow uses of PROJECT in a manner which, in the opinion of DISTRICT'S General Manager-Chief Engineer, would be detrimental to the operation of SJR LEVEE SYSTEM.

16. Waive any claim against DISTRICT for damages to PROJECT or any EMWD equipment situated within SJR LEVEE SYSTEM right of way resulting from DISTRICT'S customary operation and maintenance activities performed within SJR LEVEE

SYSTEM right of way, save and except damages resulting from DISTRICT'S sole active negligence or willful misconduct.

17. Within SJR LEVEE SYSTEM right of way, (i) assume sole responsibility for the operation and maintenance of EMWD constructed PROJECT, including but not limited to, performing all necessary repairs and the routine withdrawal of water from the ponds, and (ii) assume all liability associated with PROJECT including claims of third persons for injury or death or damage to property associated with the use of SJR LEVEE SYSTEM'S right of way.

18. Promptly repair any damage to SJR LEVEE SYSTEM, in its use of SJR LEVEE SYSTEM'S right of way under the rights herein granted, unless such damage is caused by natural flooding or is the result of DISTRICT'S customary operation, maintenance or improvements to its facilities located therein.

19. Indemnify and hold harmless the DISTRICT (including its directors, officers, Board of Supervisors, elected and appointed officials, agents, employees, representatives, independent contractors, and subcontractors) from any liability whatsoever, based or asserted upon any act or omission of EMWD (including its officers, agents, employees, subcontractors, independent contractors, guests and invitees), arising from, related to or in any manner connected with EMWD'S PROJECT, EMWD'S responsibilities in connection with PROJECT, EMWD'S use of or entry upon SJR LEVEE SYSTEM right of way, or EMWD'S rights or obligations under this AMENDED LICENSE AGREEMENT, including but not limited to property damage, bodily injury, or death or any other element of any kind or nature whatsoever. EMWD shall defend, at its sole expense, all costs and fees including but not limited, to attorneys' fees, cost of investigation, defense and settlements or awards, DISTRICT (including its directors, officers, Board of Supervisors, elected and

appointed officials, agents, employees, representatives, independent contractors, and subcontractors) in any claim or legal action based upon such alleged acts or omissions.

SECTION II

DISTRICT shall:

1. As a Responsible Agency pursuant to CEQA, take all necessary and appropriate actions pertaining to the granting of this license, as it relates to flood control, and operation and maintenance of PROJECT within SJR LEVEE SYSTEM right of way.

2. Grant EMWD a license to utilize SJR LEVEE SYSTEM right of way for operation and maintenance of PROJECT which are not incompatible with SJR LEVEE SYSTEM'S primary flood control purpose and which do not interfere with or impair DISTRICT'S ability to operate and maintain SJR LEVEE SYSTEM or any of its appurtenant works. Said license shall remain in effect indefinitely so long as EMWD complies with the provisions of this AMENDED LICENSE AGREEMENT.

3. Review, comment and approve, as appropriate, EMWD'S plans and specifications for PROJECT that is to be constructed within SJR LEVEE SYSTEM'S right of way.

4. Review and comment on all REGULATORY PERMITS, including any subsequent renewal or amendments thereto, prior to final execution or acceptance by EMWD.

5. Upon DISTRICT approval of all necessary special studies, PROJECT plans and specifications, and REGULATORY PERMITS, issue an amendment to EP 3277 as set forth in Section I.5. for construction of PROJECT within SJR LEVEE SYSTEM'S right of way.

6. Notify EMWD in writing of (i) any non-compatible use or condition that is not in conformity with the provisions of this AMENDED LICENSE AGREEMENT, or (ii)

any condition which, in the sole opinion of DISTRICT'S General Manager-Chief Engineer, could adversely affect the primary flood control function of SJR LEVEE SYSTEM or DISTRICT'S ability to operate and maintain SJR LEVEE SYSTEM, and give EMWD ten (10) days from and after such notice to correct any such nonconforming use or condition.

7. Keep an accurate accounting of all DISTRICT costs associated with (i) the review of all environmental studies, REGULATORY PERMITS, engineering reports, PROJECT plans and specifications, right of way documents, CONSERVATION EASEMENT/MANAGEMENT AREA documents, and COOPERATIVE AGREEMENT, (ii) the construction inspection and periodic compliance inspections of PROJECT, and (iii) the preparation, processing and administration of this AMENDED LICENSE AGREEMENT.

8. Except as otherwise specifically provided herein, assume no responsibility, obligation or liability whatsoever for (i) the design, construction, mitigation, inspection, operation and maintenance of PROJECT, or (ii) any damage to PROJECT resulting from DISTRICT'S customary operation and maintenance activities performed within SJR LEVEE SYSTEM'S right of way.

SECTION III

It is further mutually agreed:

1. All work associated with PROJECT shall be inspected by EMWD and shall not be deemed complete until approved and accepted as complete by EMWD.

2. DISTRICT personnel may observe and inspect all work being done on PROJECT but shall provide any quality control comments to EMWD personnel who shall be responsible for all communication with EMWD'S contractor or agent during the construction of PROJECT.

3. DISTRICT reserves the right to terminate this AMENDED LICENSE AGREEMENT and any encroachment permit issued thereto, if for any reason whatsoever, DISTRICT determines that PROJECT or EMWD'S use of SJR LEVEE SYSTEM'S right of way is not compatible with SJR LEVEE SYSTEM'S primary flood control purpose.

4. Any waiver by DISTRICT or by EMWD of any breach of any one or more of the terms of this AMENDED LICENSE AGREEMENT shall not be construed to be a waiver of any subsequent or other breach of the same or of any other term hereof. Failure on the part of DISTRICT or EMWD to require exact, full and complete compliance with any terms of this AMENDED LICENSE AGREEMENT shall not be construed as in any manner changing the terms hereof, or estopping DISTRICT or EMWD from enforcement hereof.

5. If any provision in this AMENDED LICENSE AGREEMENT is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions will nevertheless continue in full force without being impaired or invalidated in any way.

6. This AMENDED LICENSE AGREEMENT is to be construed in accordance with the laws of the State of California.

7. Any and all notices sent or required to be sent to the parties of this AMENDED LICENSE AGREEMENT will be mailed by first class mail, postage prepaid, to the following addresses:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT 1995 Market Street Riverside, CA 92501 Attn: Operations and Maintenance Division	EASTERN MUNICIPAL WATER DISTRICT Post Office Box 8300 Perris, CA 92572-8300 Attn: Assistant General Manager Engineering and Construction

8. Any action at law or in equity brought by any of the parties hereto for the purpose of enforcing a right or rights provided for by this AMENDED LICENSE AGREEMENT, shall be tried in a court of competent jurisdiction in the County of Riverside,

State of California, and the parties hereto waive all provisions of law providing for a change of venue in such proceedings to any other county.

9. This AMENDED LICENSE AGREEMENT is the result of negotiations between the parties hereto and the advice and assistance of their respective counsel. The fact that this AMENDED LICENSE AGREEMENT was prepared as a matter of convenience by DISTRICT shall have no import or significance. Any uncertainty or ambiguity in this AMENDED LICENSE AGREEMENT shall not be construed against DISTRICT because DISTRICT prepared this AMENDED LICENSE AGREEMENT in its final form.

10. This AMENDED LICENSE AGREEMENT is intended by the parties hereto as a final expression of their understanding with respect to the subject matter hereof and as a complete and exclusive statement of the terms and conditions thereof and supersedes any and all prior and contemporaneous agreements and understandings, oral or written, in connection therewith. This AMENDED LICENSE AGREEMENT may be changed or modified only upon the written consent of the parties hereto.

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IN WITNESS WHEREOF, the parties hereto have executed this AMENDED LICENSE AGREEMENT on JUL 17 2012.
(to be filled in by Clerk of the Board)

RECOMMENDED FOR APPROVAL:

WARREN D. WILLIAMS
General Manager-Chief Engineer

APPROVED AS TO FORM:

PAMELA J. WALLS
County Counsel

By _____
NEAL R. KIPNIS
Deputy County Counsel

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

MARION ASHLEY, Chairman
Board of Supervisors, Riverside County Flood Control and Water Conservation District

ATTEST:

KECIA HARPER-IHEM
Clerk of the Board

By _____
Deputy

(SEAL)

EASTERN MUNICIPAL WATER DISTRICT

By _____
PAUL D. JONES II
General Manager

Amended License Agreement – SJR Levee System
TT:CLC:blj
6/20/2012

JUL 17 2012 11.6

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Addendum to the Hemet/San Jacinto Integrated Recharge and Recovery Program Final Environmental Impact Report

SCH # 2003121068

Final EIR Certification Date:	August 4, 2004
Supplemental EIR Certification Date:	November 21, 2007
Addendum Adoption Date:	June 23, 2010

This Addendum has been adopted by the Eastern Municipal Water District (EMWD) Board of Directors to address minor technical changes to the *Hemet/San Jacinto Integrated Recharge and Recovery Program Final Environmental Impact Report* (Final EIR).

Subsequent to certification of the Final EIR, EMWD collaborated with the U.S. Fish and Wildlife Service (USFWS) to change the proposed location of the groundwater recharge basins in order to further minimize potential effects to the federally listed San Bernardino kangaroo rat (SBKR; *Dipodomys merriami parvus*). This project change and its environmental effect are addressed below, as are the reasons why an Addendum is appropriate to address these changes under the California Environmental Quality Act (CEQA) and the *State CEQA Guidelines*. The *Reinitiated Biological Opinion for the Hemet-San Jacinto Integrated Recharge and Recovery Program, Riverside County, California* (Biological Opinion; USFWS 2010) issued for the proposed project is incorporated by reference into this Addendum.

Although a Supplemental EIR was certified by EMWD in November, 2007, that Supplemental EIR did not address the proposed groundwater recharge basins that are the subject of this addendum. Accordingly, this addendum focuses on changes to the proposed project as described in the 2004 Final EIR.

Changes to the Proposed Project

EMWD proposes to shift the location of the proposed recharge basins for Phase 1 of the proposed project as indicated on Figure 1. The revised footprint for the proposed Phase 1 recharge basins is within the original study area addressed in the 2004 EIR and was developed in collaboration with the USFWS and U.S. Army Corps of Engineers (Corps) during the Endangered Species Act Section 7 consultation for the proposed project's Clean Water Act Section 404 individual permit. (Implementation of the Phase 2 is speculative and was not included in the Clean Water Act permitting, the associated Endangered Species Act consultation, and/or California Fish and Game Code Section 1600 permitting.) The currently proposed Phase 1 recharge basins would encompass approximately 35 acres; as addressed in the 2004 Final EIR, these basins would have had an approximately 40-acre footprint.

The proposed project addressed in the 2004 Final EIR also included a low-flow channel to help divert river flows away from the recharge basins. The low-flow channel has been deleted from the proposed project at the request of the USFWS.

Environmental Impacts

Environmental impacts resulting from the revised groundwater recharge basins location would be comparable to or less than those addressed in the EIR because the proposed basins are almost entirely within the previously evaluated recharge basin footprint (see Figure 1) and because the new location was specifically sited to minimize potential effects to SBKR and its habitat.

***State CEQA Guidelines* Criteria for an Addendum**

Per Section 15164(a) of the *State CEQA Guidelines*, "The lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." The changes to the proposed project (and the resulting change in environmental impacts) are considered minor, and a Subsequent EIR is not necessary because:

- **No substantial changes have been proposed "due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects" (*State CEQA Guidelines*, Section 15162(a)(1)).** The proposed recharge basins location change occurs largely within the overall project footprint previously evaluated in the 2004 Final EIR. To the extent that potential impacts associated with the regard basin have changed, it is anticipated that the currently proposed recharge basins would have less of an impact on SBKR because the currently proposed basins are in an area considered less important for SBKR than the habitat located at the previously proposed Phase 1 site.
- **No substantial changes have occurred "with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR... due to the involvement of new significant environmental effects of a substantial increase in the severity of previously identified significant effects" (Section 15162(a)(2)).** The circumstances within which the proposed project would occur have not changed significantly. As noted previously, the proposed change in recharge basins location is in accommodation of a USFWS request and is intended to lessen, not increase, the environmental impact of the proposed project.
- **No new information of substantial importance that was previously unknown shows that "[t]he project will have one or more significant effects not discussed in the previous EIR" (Section 15162(a)(3)(A)).** No new information has come to light that would suggest that the proposed project would have previously undisclosed significant effects on the environment. It was disclosed in the 2004 Final EIR that the proposed project would have significant impacts on SBKR, and that these impacts would be mitigated through habitat conservation and enhancement. As a result of the USFWS consultation on the proposed project, the level of mitigation required for the Phase 1 recharge basins has increased over what was included in the EIR. This increase in mitigation for a previously identified significant impact does not trigger a requirement for preparation of a Subsequent EIR.

- **No new information of substantial importance that was previously unknown shows that "[s]ignificant effects previously examined will be substantially more severe than shown in the previous EIR" (Section 15162(a)(3)(B)).** The proposed project will not have substantially more severe impacts than were disclosed in the 2004 Final EIR. The EIR's assessment of impacts to SBKR was based on the acreage of habitat affected, and that acreage will be lower under the proposed project as revised than was addressed in the 2004 Final EIR. This reflects that (A) the Phase 1 recharge basins footprint is five acres smaller (35 acres now compared to 40 acres in the 2004 Final EIR), (B) the proposed grading of a low-flow channel has been deleted, and (C) project effects to SBKR have been reduced.
- **No new information of substantial importance that was previously unknown shows that "[m]itigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative" (Section 15162(a)(3)(C)).** In this case, additional mitigation, above and beyond what was identified in the 2004 EIR, has been identified by the USFWS and is being adopted by EMWD. This mitigation, summarized below, replaces and supplements the mitigation for impacts to SBKR habitat that was included in the 2004 Final EIR. To the extent that the shift in the proposed recharge basins location can be considered an "alternative," EMWD is adopting an alternative that would further reduce one of the significant (but mitigated) effects of the proposed project.
- **No new information of substantial importance that was previously unknown shows that "[m]itigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effect on the environment, but the project proponents decline to adopt the mitigation measure or alternative" (Section 15162(a)(3)(D)).** As noted above, additional (different) mitigation has been identified, and EMWD has agreed to this mitigation.

Revised Mitigation

Mitigation Measures Bio-3 and Bio-6 from the 2004 Final EIR are deleted from the proposed project and replaced with the following measures excerpted from the Biological Opinion (USFWS 2010). For purposes of mitigation tracking, these measures can, together, be considered as a new mitigation measure "BIO-11."

- Impacts to SBKR habitat will be offset through conservation and management of approximately 188.8 acres of land along the San Jacinto River, as described in the *Reinitiated Biological Opinion for the Hemet-San Jacinto Integrated Recharge and Recovery Program, Riverside County, California* (USFWS 2010). All EMWD-owned properties within the conservation areas will be protected by a conservation easement(s) that names the Western Riverside County Regional Conservation Authority (RCA) as the beneficiary. The language in the conservation easement(s) will have the written approval of the USFWS Carlsbad Field Office prior to project implementation.
- The RCA shall serve as the reserve manager for the conservation areas and provide annual habitat management oversight on the property pursuant to Section 5.2 of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) (Dudek and Associates 2003). The RCA

shall maintain the biological values on the site, which now support alluvial scrub vegetation and associated upland habitat. The habitats on the property also support known populations of SBKR, which the RCA shall manage in accordance with the species-specific management activities detailed in Table 5-2 of the MSHCP. EMWD will provide a one-time endowment in the amount of $944,000 to the RCA, in advance of ground disturbance by the project, to fund their perpetual habitat management of the conservation areas;

- EMWD will prepare a **Restoration Plan** (RP) and implement the RP in areas that are heavily degraded and do not now support suitable SBKR habitat, as described in the Biological Opinion (USFWS 2010). The RP will be reviewed and approved by the USFWS Carlsbad Field Office prior to initiation of project construction.

- To maintain or improve SKBR habitat conditions, vegetation will be managed throughout the conservation areas, and SBKR abundance and distribution and vegetation characteristics will be monitored throughout the conservation areas to guide and evaluate the effectiveness of management efforts as described in the Biological Opinion (USFWS 2010).

- To encourage SBKR movement between the active floodplain and habitat outside of the flood control levee, EMWD will construct three "habitat ramps" leading from the floodplain to the top of the levee. Two of these habitat ramps will also be used for vehicle access, but all ramp surfaces will be constructed of native soil (e.g., they will not be topped with decomposed granite, gravel, or any other "all-weather" surface) to encourage use by SBKR.

- No new permanent structures will be placed in the floodplain, excepting pipelines to deliver water to the recharge basins.

- EMWD will not channelize flows from the San Jacinto River or its tributaries to protect the recharge basin berms. The basins will be constructed to withstand smaller (less than 10-year) flood events without channelization.

- Prior to commencement of clearing and/or grading for each project element in suitable habitat, the construction footprint will be flagged by a USFWS Carlsbad Field Office-approved biologist familiar with SBKR habitat requirements (SBKR biologist) to delineate the boundary of the construction footprint. The name, contact information, and qualifications of the SBKR biologist will be submitted to the USFWS Carlsbad Field Office for approval. All movement of construction contractors, including ingress and egress of equipment and personnel, as well as any staging and storage areas, will be limited to the designated construction footprint. A SBKR biologist will be on site during initial clearing activities and on at least a weekly basis during the remainder of construction activities to ensure that no impacts occur outside the construction footprint. Any material used to delineate the project boundary will be removed once construction is completed.

- To minimize incidental take of SBKR and assess impacts to SBKR within the footprint of each project element located within suitable habitat (including the 35-acre recharge basin, well sites, and pipeline alignments), SBKR will be trapped and relocated prior to ground-disturbing activities.

- To minimize and track incidental take of SBKR during routine repairs (e.g. pipeline repair) in suitable SBKR habitat outside of the flood control levee, EMWD will restore any habitat impacted by the repairs in a manner consistent with the RP and implement one of the following protocols annually:
    - EMWD will impact no more than 0.33 acre of suitable SBKR habitat annually outside the flood control levee. Impacts will be photographed and described in a report submitted to the USFWS at the end of each calendar year; or
    - EMWD will fence and implement trap and release protocol as described in the Biological Opinion (USFWS 2010). Impacts will be limited to no more than five SBKR trapped annually during routine repairs
- To limit impacts to SBKR and other species, EMWD and the SBKR biologist will ensure that any lighting used during facility construction or operation, including well sites, is directed away from Conservation Areas or any other surrounding habitat.
- To limit impacts to SBKR individuals during basin repair following floods, EMWD will evaluate the damaged area and minimize potential impacts to SBKR as described below.
    - If the damaged area has less than five percent vegetative cover due to the flood event, then the SBKR biologist will search for SBKR burrows within the area to determine if active burrows are present. If no active burrow is identified, EMWD may repair the berms without additional SBKR minimization measures within 1 month of the burrow surveys.
    - If vegetative cover exceeds five percent or active SBKR burrows are identified, the SBKR biologist will complete five nights of exclusion trapping at least 24 hours and no more than 72 hours prior to ground-disturbing activities. SBKR that are trapped will be held until construction activities are completed but no more than three weeks. SBKR procurement and holding conditions will follow the Gannon et al. (2007).
    - EMWD will provide a summary of burrow surveys or SBKR trapping to the Service prior to initiation of construction activities. A full trapping and relocation report will be provided within three months of trapping.
- To limit indirect impacts to SBKR habitat downstream of the recharge basins, EMWD will clean basins of fines regularly and specifically prior to the rainy season. All fines will be hauled off site.
- The SBKR biologist will have the authority to halt work if it is determined that the construction activities have exceeded the authorized footprint or minimization measures are not being followed.
- Best Management Practices to prevent discharge of hazardous materials associated with use and maintenance of construction equipment will be followed pursuant to the guidelines in the Riverside County Flood Control and Water Conservation District management plans.

CLOSING

With the adoption of this Addendum, the *Hemet/San Jacinto Integrated Recharge and Recovery Program Final EIR* is modified to reflect the proposed new Phase 1 recharge basins' location and SBKR mitigation as discussed above.

REFERENCES

Dudek and Associates. 2003. Final Western Riverside County Multiple Species Habitat Conservation Plan dated June 17, 2003. Prepared for County of Riverside Transportation and Land Management Agency.

Eastern Municipal Water District (EMWD). 2004. Hemet/San Jacinto Integrated Recharge and Recovery Program Final Environmental Impact Report. State Clearinghouse Number 2003121068. Cover date: July. Certified: August 4.

2007. Hemet/San Jacinto Water Management Plan Supplemental Environmental Impact Report. Cover Date: September. Certified: November 21.

Gannon, W., R. Sikes, and the Animal Care Use Committee of the American Society of Mammologists. 2007. Guidelines of the American Society of Mammologists for Use of Wild Mammals in Research. Journal of Mammology 88: 809-823.

HELIX Environmental Planning Inc. 2006. San Bernardino kangaroo rat and Los Angeles pocket mouse presence/absence trapping studies for the San Jacinto 516-acre proposed project in Riverside County, California (APN's 430-0808-012, 430-090-013, 430-110-012/013/015, 403-120-010/010/0111/012) Submitted to USFWS June 20.

2005. Presence/absence trapping studies for the San Bernardino kangaroo rat on the Hemet/San Jacinto recharge and recovery program, San Jacinto. Prepared for Eastern Municipal Water District. Submitted to USFWS June 2.

2003. Presence/absence trapping studies for the San Bernardino kangaroo rat on the Hemet/San Jacinto recharge and recovery program, San Jacinto. Prepared for Eastern Municipal Water District. Submitted to USFWS February 5.

U.S. Fish and Wildlife Service (USFWS), Carlsbad Field Office. 2010. Reinitiated Biological Opinion for the Hemet-San Jacinto Integrated Recharge and Recovery Program, Riverside County, California. FWS-WRIV-08B0 106-10F0650.

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Second Addendum to the Hemet/San Jacinto Integrated Recharge and Recovery Program Final Environmental Impact Report

SCH # 2003121068

Final EIR Certification Date:	August 4, 2004
Supplemental EIR Certification Date:	November 21, 2007
First Addendum Adoption Date:	June 23, 2010
Second Addendum Adoption Date:	November 16, 2011

This Second Addendum has been adopted by the Eastern Municipal Water District (EMWD) Board of Directors to address minor technical changes to the *Hemet/San Jacinto Integrated Recharge and Recovery Program Final Environmental Impact Report* (Final EIR) certified on August 4, 2004 and its Final EIR Addendum adopted June 23, 2010 (First Addendum).

Subsequent to certification of the Final EIR in 2004, EMWD collaborated with the U.S. Fish and Wildlife Service (USFWS) to change the proposed location of the groundwater recharge basins in order to further minimize potential effects to the federally listed San Bernardino kangaroo rat (SBKR; *Dipodomys merriami parvus*). This project change and its environmental effects were addressed in the 2010 First Addendum, which demonstrated that the proposed changes were minor and that no Subsequent or Supplemental EIR was required to address the changes[1].

Changes to the Proposed Project

In consultation with the USFWS, EMWD had agreed to shift the location of the proposed recharge basins from their originally approved location to a new location, further upstream. That change in location was addressed in the First Addendum. After EMWD agreed to the USFWS' requested basin location change, the USFWS requested another location change. More specifically, the USFWS requested that the proposed recharge basins be constructed in essentially the same location that was addressed in the 2004 Final EIR. EMWD has agreed to this change (see attached Figure 3).

This return to approximately the originally proposed location for the recharge basins is within the original study area addressed in the 2004 Final EIR, and this proposed change was developed in collaboration

[1] Although a Supplemental EIR was certified by EMWD in November, 2007, that Supplemental EIR did not address the proposed groundwater recharge basins that are the subject of this Second Addendum. Accordingly, this Second Addendum focuses on changes to the proposed project as described in the 2004 Final EIR and 2010 First Addendum.

with the USFWS and U.S. Army Corps of Engineers (Corps) during the ongoing Endangered Species Act Section 7 consultation. (Implementation of Phase 2 of the proposed project, although included in the 2004 Final EIR, is speculative and was not included in the Clean Water Act permits, the associated Endangered Species Act consultation, and/or California Fish and Game Code Section 1600 permit.) The currently proposed recharge basins would encompass approximately 35 acres, as addressed in the First Addendum and approximately 5 acres less than the 40-acre Phase 1 footprint addressed in the 2004 Final EIR.

Environmental Impacts

Environmental impacts resulting from returning the proposed groundwater recharge basins to the originally proposed location would be similar to the impacts addressed in the 2004 Final EIR. This is because the proposed location is similar to the groundwater recharge basin footprint that was addressed in that EIR

***State CEQA Guidelines* Criteria for an Addendum**

Per Section 15164(a) of the *State CEQA Guidelines*, "The lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." The changes to the proposed project (and the resulting change in environmental impacts) are considered minor, and a Subsequent EIR is not necessary because:

- **No substantial changes have been proposed "due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects" (*State CEQA Guidelines*, Section 15162(a)(1)).** The proposed recharge basins location change occurs within the overall project footprint previously evaluated in the 2004 Final EIR. To the extent that potential impacts associated with the basin have changed from what was addressed in the First Addendum, it is anticipated that the currently proposed recharge basins would have less of an impact on SBKR because the currently proposed basins are in an area now considered less important for SBKR than the habitat located at the proposed site included in the First Addendum. Since the currently proposed site is essentially the same as the originally proposed site addressed in the 2004 Final EIR, the currently proposed site would have similar impacts to the recharge basin site addressed that EIR.

- **No substantial changes have occurred "with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR... due to the involvement of new significant environmental effects of a substantial increase in the severity of previously identified significant effects" (Section 15162(a)(2)).** The circumstances within which the proposed project would occur have not changed significantly. As noted previously, the proposed change in recharge basins location is in accommodation of a USFWS request and is intended to reduce, not increase, the environmental impact of the proposed project.

- **No new information of substantial importance that was previously unknown shows that "[t]he project will have one or more significant effects not discussed in the previous EIR" (Section**

15162(a)(3)(A)). No new information has come to light that would suggest that the proposed project would have previously undisclosed significant effects on the environment. It was disclosed in the 2004 Final EIR that the proposed project would have significant impacts on SBKR, and that these impacts would be mitigated through habitat conservation and enhancement. As a result of the USFWS consultation on the proposed project, the level of mitigation required for the recharge basins was increased over what was included in the 2004 Final EIR. That increase was noted in the 2010 First Addendum. The ongoing Section 7 consultation has even further increased the amount of land that would be enhanced, permanently conserved and managed to benefit SBKR. This increase in mitigation for a previously identified significant impact does not trigger a requirement for preparation of a Subsequent EIR.

- **No new information of substantial importance that was previously unknown shows that "[s]ignificant effects previously examined will be substantially more severe than shown in the previous EIR" (Section 15162(a)(3)(B)).** The proposed project will not have substantially more severe impacts than were disclosed in the 2004 Final EIR and/or First Addendum. The EIR's assessment of impacts to SBKR was based on the acreage of habitat affected, and that acreage will be lower under the proposed project as revised than was addressed in the 2004 Final EIR and identical to the acreage addressed in the First Addendum. This reflects that (A) the revised recharge basins footprint is five acres smaller (35 acres now compared to 40 acres in the 2004 Final EIR), and (B) project effects to SBKR have been reduced.

- **No new information of substantial importance that was previously unknown shows that "[m]itigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative" (Section 15162(a)(3)(C)).** In this case, additional mitigation, above and beyond what was identified in the 2004 EIR and First Addendum, has been identified by the USFWS and is being adopted by EMWD. This mitigation, summarized below, replaces and supplements the mitigation for impacts to SBKR habitat that was included in the 2004 Final EIR and First Addendum. To the extent that the shift in the proposed recharge basins location can be considered an "alternative," EMWD is adopting an alternative that would further reduce one of the significant (but mitigated) effects of the proposed project.

- **No new information of substantial importance that was previously unknown shows that "[m]itigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effect on the environment, but the project proponents decline to adopt the mitigation measure or alternative" (Section 15162(a)(3)(D)).** As noted above, additional (different) mitigation has been identified, and EMWD has agreed to this mitigation.

Revised Mitigation

Mitigation Measures Bio-3 and Bio-6 from the 2004 Final EIR are deleted from the proposed project and replaced with the following measures developed in consultation with the USFWS. For purposes of mitigation tracking, these measures can, together, be considered as a new mitigation measure "BIO-11," which replaces the "BIO-11" mitigation measure described in the First Addendum.

- Impacts to SBKR habitat will be offset through conservation and management of approximately 186 acres of land along the San Jacinto River, as described in the *Reinitiated Biological Opinion for the Hemet-San Jacinto Integrated Recharge and Recovery Program, Riverside County, California* (USFWS 2010) and approximately an additional 260 acres of EMWD and LHWD properties along the San Jacinto River. All EMWD-owned properties within the conservation areas will be protected by a conservation easement(s) that names the Western Riverside County Regional Conservation Authority (RCA) as the beneficiary. The language in the conservation easement(s) will have the written approval of the USFWS Carlsbad Field Office prior to project implementation.

- The RCA shall serve as the reserve manager for the conservation areas and provide annual habitat management oversight on the property pursuant to Section 5.2 of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) (Dudek and Associates 2003). The RCA shall maintain the biological values on the site, which now support alluvial scrub vegetation and associated upland habitat. The habitats on the property also support known populations of SBKR, which the RCA shall manage in accordance with the species-specific management activities detailed in Table 5-2 of the MSHCP. EMWD will provide a one-time endowment in the amount of approximately $1.5 million to the RCA, in advance of ground disturbance by the project, to fund their perpetual habitat management of the conservation areas;

- EMWD will prepare a Restoration Plan (RP) and implement the RP in areas that are heavily degraded and do not now support suitable SBKR habitat, as described in the Biological Opinion for the project. The RP will be reviewed and approved by the USFWS Carlsbad Field Office prior to initiation of project construction.

- To encourage SBKR movement between the active floodplain and habitat outside of the flood control levee, EMWD will construct three "habitat ramps" leading from the floodplain to the top of the levee. Two of these habitat ramps will also be used for vehicle access, but all ramp surfaces will be constructed of native soil (e.g., they will not be topped with decomposed granite, gravel, or any other "all-weather" surface) to encourage use by SBKR.

- No new permanent structures will be placed in the floodplain, excepting pipelines to deliver water to the recharge basins.

- Prior to commencement of clearing and/or grading for each project element in suitable habitat, the construction footprint will be flagged by a USFWS Carlsbad Field Office-approved biologist familiar with SBKR habitat requirements (SBKR biologist) to delineate the boundary of the construction footprint. The name, contact information, and qualifications of the SBKR biologist will be submitted to the USFWS Carlsbad Field Office for approval. All movement of construction contractors, including ingress and egress of equipment and personnel, as well as any staging and storage areas, will be limited to the designated construction footprint. A SBKR biologist will be on site during initial clearing activities and on at least a weekly basis during the remainder of construction activities to ensure that no impacts occur outside the construction footprint. Any material used to delineate the project boundary will be removed once construction is completed.

- To minimize and track incidental take of SBKR during routine repairs (e.g. pipeline repair) in suitable SBKR habitat outside of the flood control levee, EMWD will restore any habitat impacted by the repairs in a manner consistent with the RP.
- EMWD will impact no more than one acre of suitable SBKR habitat annually outside the flood control levee. Impacts will be photographed and described in a report submitted to the USFWS at the end of each calendar year.
- To limit impacts to SBKR and other species, EMWD and the SBKR biologist will ensure that any lighting used during facility construction or operation, including well sites, is directed away from Conservation Areas or any other surrounding habitat.
- To limit indirect impacts to SBKR habitat downstream of the recharge basins, EMWD will clean basins of fines regularly and specifically prior to the rainy season.
- The SBKR biologist will have the authority to halt work if it is determined that the construction activities have exceeded the authorized footprint or minimization measures are not being followed.
- Best Management Practices to prevent discharge of hazardous materials associated with use and maintenance of construction equipment will be followed pursuant to the guidelines in the Riverside County Flood Control and Water Conservation District management plans.

CLOSING

With the adoption of this Second Addendum, the *Hemet/San Jacinto Integrated Recharge and Recovery Program Final EIR* is modified to reflect the currently proposed recharge basins' location and SBKR mitigation as discussed above.

REFERENCES

Dudek and Associates. 2003. Final Western Riverside County Multiple Species Habitat Conservation Plan dated June 17, 2003. Prepared for County of Riverside Transportation and Land Management Agency.

Eastern Municipal Water District (EMWD). 2004. Hemet/San Jacinto Integrated Recharge and Recovery Program Final Environmental Impact Report. State Clearinghouse Number 2003121068. Cover date: July. Certified: August 4.

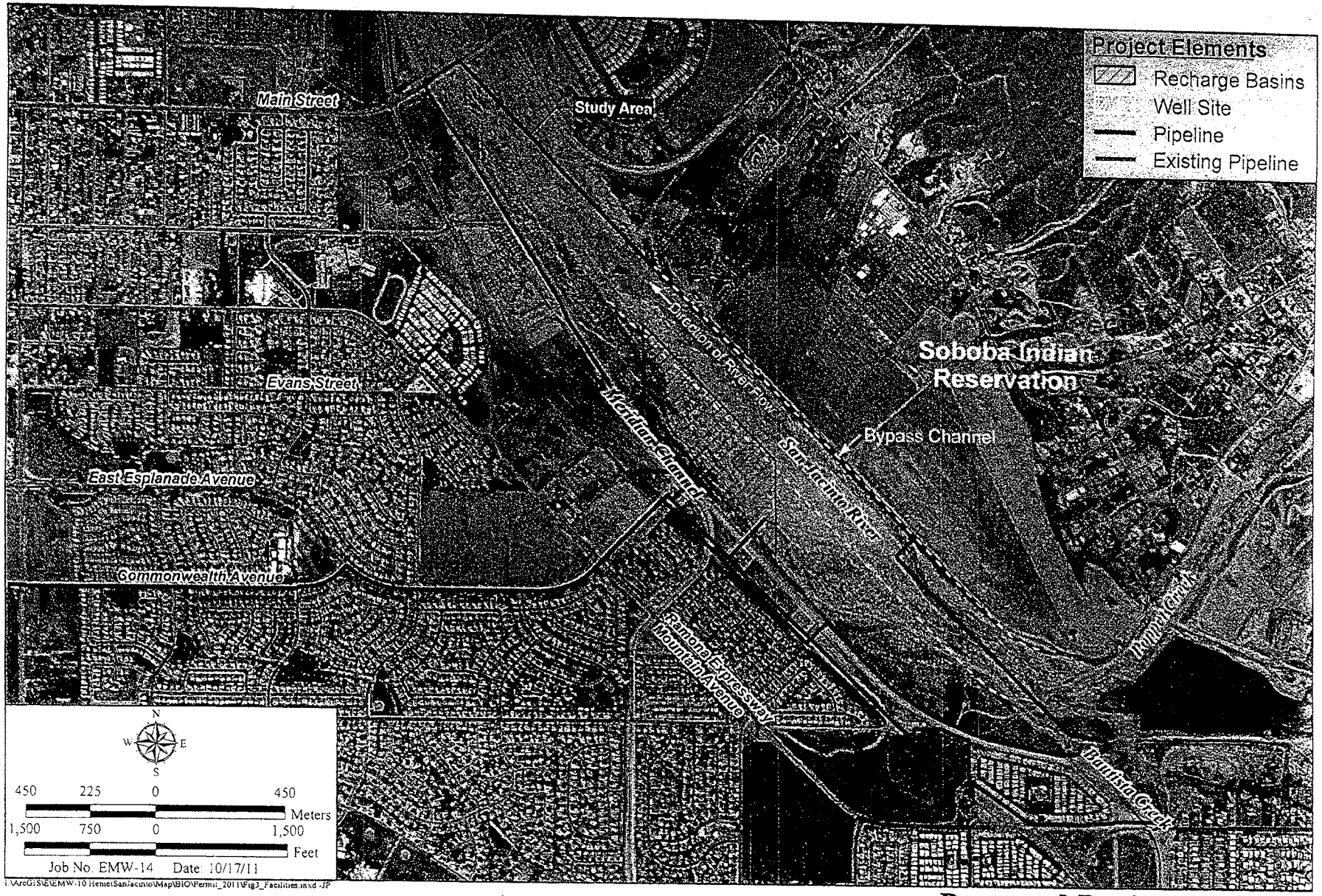
2007. Hemet/San Jacinto Water Management Plan Supplemental Environmental Impact Report. Cover Date: September. Certified: November 21.

HELIX Environmental Planning Inc. 2006. San Bernardino kangaroo rat and Los Angeles pocket mouse presence/absence trapping studies for the San Jacinto 516-acre proposed project in Riverside County, California (APN's 430-0808-012, 430-090-013, 430-110-012/013/015, 403-120-010/010/0111/012) Submitted to USFWS June 20.

2005. Presence/absence trapping studies for the San Bernardino kangaroo rat on the Hemet/San Jacinto recharge and recovery program, San Jacinto. Prepared for Eastern Municipal Water District. Submitted to USFWS June 2.

2003. Presence/absence trapping studies for the San Bernardino kangaroo rat on the Hemet/San Jacinto recharge and recovery program, San Jacinto. Prepared for Eastern Municipal Water District. Submitted to USFWS February 5.

U.S. Fish and Wildlife Service (USFWS), Carlsbad Field Office. 2010. Reinitiated Biological Opinion for the Hemet-San Jacinto Integrated Recharge and Recovery Program, Riverside County, California. FWS-WRIV-08B0 106-10F0650.



I:\ArcGIS\E\EMW-10 Hemet\SanJacinto\Map\BIO\Permit_2011\Fig3_Facilities.mxd -JP

Proposed Project Facilities

HEMET/SAN JACINTO INTEGRATED RECHARGE AND RECOVERY PROGRAM

HELIX Environmental Planning

Figure 3

EXHIBIT A

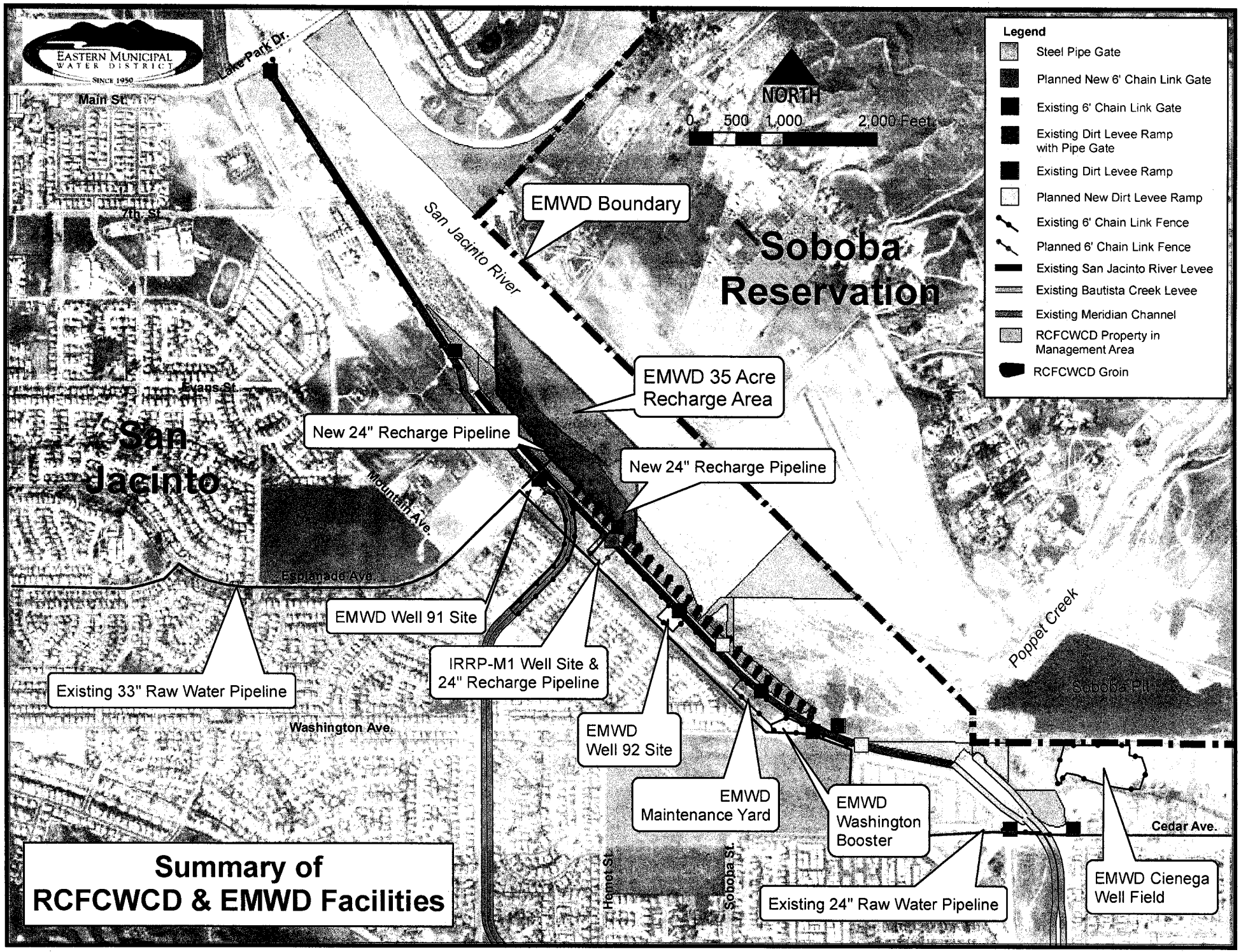
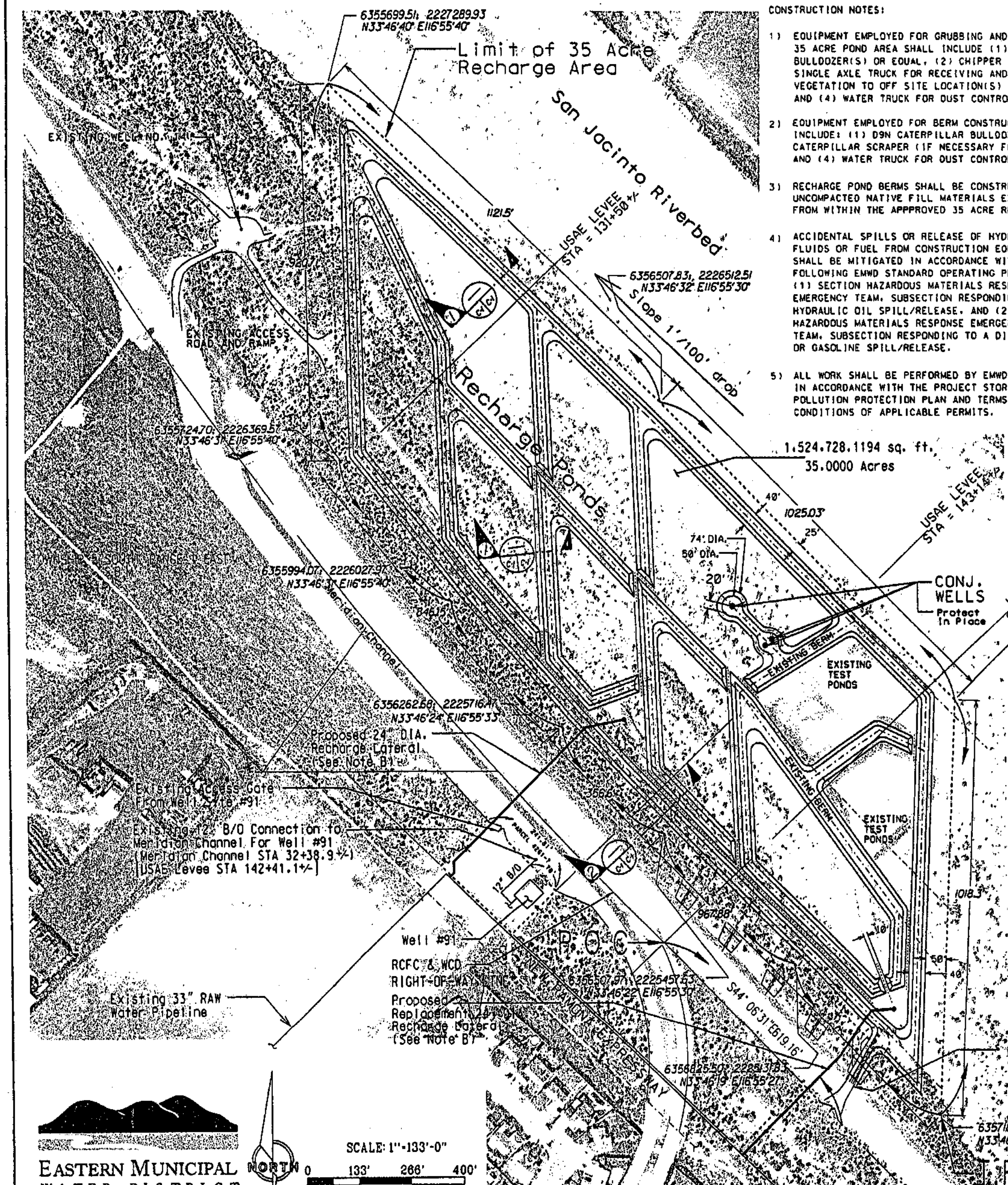

EASTERN MUNICIPAL WATER DISTRICT
SINCE 1950
Main St.
Lake Park Dr.
7th St.
Evans St.
San Jacinto
Mountain Ave.
Esplanade Ave.
Washington Ave.
San Jacinto River
EMWD Boundary
Soboba Reservation
NORTH
0 500 1,000 2,000 Feet
Legend
Steel Pipe Gate
Planned New 6' Chain Link Gate
Existing 6' Chain Link Gate
Existing Dirt Levee Ramp with Pipe Gate
Existing Dirt Levee Ramp
Planned New Dirt Levee Ramp
Existing 6' Chain Link Fence
Planned 6' Chain Link Fence
Existing San Jacinto River Levee
Existing Bautista Creek Levee
Existing Meridian Channel
RCFCWCD Property in Management Area
RCFCWCD Groin
EMWD 35 Acre Recharge Area
New 24" Recharge Pipeline
New 24" Recharge Pipeline
EMWD Well 91 Site
IRRP-M1 Well Site & 24" Recharge Pipeline
Existing 33" Raw Water Pipeline
EMWD Well 92 Site
EMWD Maintenance Yard
EMWD Washington Booster
Existing 24" Raw Water Pipeline
EMWD Cienega Well Field
Poppet Creek
Soboba Pit
Cedar Ave.
Hemet St.
Soboba St.
Summary of RCFCWCD & EMWD Facilities

EXHIBIT B



CONSTRUCTION NOTES:

1) EQUIPMENT EMPLOYED FOR GRUBBING AND CLEARING THE 35 ACRE POND AREA SHALL INCLUDE (1) D9N CATERPILLAR BULLDOZER(S) OR EQUAL, (2) CHIPPER AS NEEDED, (3) SINGLE AXLE TRUCK FOR RECEIVING AND TRANSPORTING VEGETATION TO OFF SITE LOCATION(S) APPROVED BY EMWD AND (4) WATER TRUCK FOR DUST CONTROL AS NEEDED.

2) EQUIPMENT EMPLOYED FOR BERM CONSTRUCTION SHALL INCLUDE: (1) D9N CATERPILLAR BULLDOZER(S), (2) 816 CATERPILLAR SCRAPER (IF NECESSARY FOR LONG HAULS) AND (4) WATER TRUCK FOR DUST CONTROL AS NEEDED.

3) RECHARGE POND BERMS SHALL BE CONSTRUCTED OF UNCOMPACTED NATIVE FILL MATERIALS EXCAVATED FROM WITHIN THE APPPROVED 35 ACRE RECHARGE AREA.

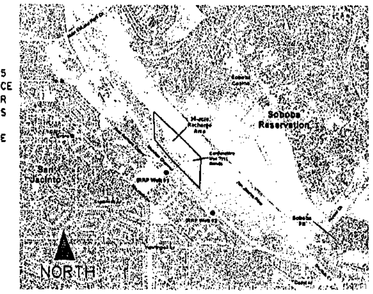
4) ACCIDENTAL SPILLS OR RELEASE OF HYDRAULIC FLUIDS OR FUEL FROM CONSTRUCTION EQUIPMENT SHALL BE MITIGATED IN ACCORDANCE WITH THE FOLLOWING EMWD STANDARD OPERATING PROCEDURES: (1) SECTION HAZARDOUS MATERIALS RESPONSE EMERGENCY TEAM, SUBSECTION RESPONDING TO A HYDRAULIC OIL SPILL/RELEASE, AND (2) SECTION HAZARDOUS MATERIALS RESPONSE EMERGENCY TEAM, SUBSECTION RESPONDING TO A DIESEL FUEL OR GASOLINE SPILL/RELEASE.

5) ALL WORK SHALL BE PERFORMED BY EMWD STAFF IN ACCORDANCE WITH THE PROJECT STORM WATER POLLUTION PROTECTION PLAN AND TERMS AND CONDITIONS OF APPLICABLE PERMITS.

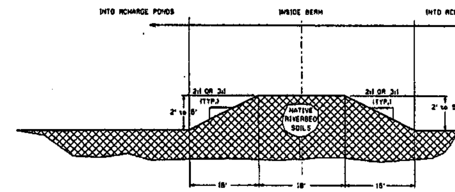
GENERAL NOTES:

A) THE OUTSIDE PERIMETER BERM SHOWN ON THE PLAN WILL BE CONSTRUCTED 25 TO 50 FEET INSIDE THE BOUNDARY OF THE 35 ACRE RECHARGE AREA. THIS 25 TO 50 FEET WIDE AREA WILL PROVIDE A MAINTENANCE CORRIDOR FOR BERM REPAIRS AND ENSURE THE OUTER BERM AND OPERATIONS AND MAINTENANCE ACTIVITIES DO NOT ENCROACH ON SURROUNDING HABITAT. INTERIOR BERMS THAT DEFINE INDIVIDUAL RECHARGE PONDS ARE LOCATED TO CONFORM TO EXISTING TOPOGRAPHY TO THE EXTENT PRACTICABLE. THIS IS DONE TO MINIMIZE GRADING REQUIREMENTS AND FACILITATE EFFICIENT RECHARGE OPERATIONS AND MAINTENANCE. RECHARGE OPERATIONS WILL FOLLOW A CYCLE OF FILLING, INFILTRATION, DRYING AND CLEANING IN INDIVIDUAL PONDS.

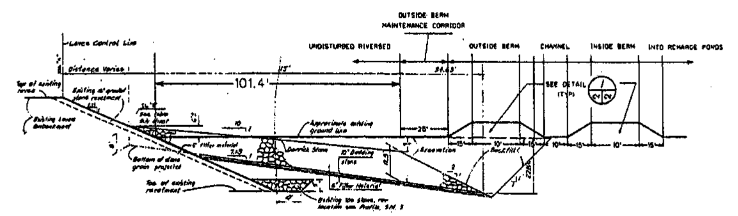
B) RECHARGE PIPELINE LATERAL(S) ARE SHOWN FOR REFERENCE PURPOSES ONLY. DESIGN AND CONSTRUCTION DETAILS FOR THESE PIPELINES ARE DEFINED IN A SEPARATE PLAN SET.



LOCATION MAP
N.T.S.



1 TYPICAL DRIVE BERM
N.T.S.



2 TYPICAL GROIN & WEST BERM PROFILE
N.T.S.

APPROVED BY:

DIRECTOR OF ENGINEERING DATE

REVISIONS				
NO.	DATE	INITIAL	DESCRIPTION	APP'VD / DATE
1	12-14-2001	CVR	NEW POND CONFIGURATION	

EASTERN MUNICIPAL WATER DISTRICT

DESIGNED		
DRAWN	C. REBER	03-08-2001
TRACED		
CHECKED		
SUBMITTED		

APPROVALS — PROJECT ENG., INSPECTION, WTR. OPERATIONS, SEW. OPERATIONS — INITIAL — DATE

SCALE: 1" = 133'

EASTERN MUNICIPAL WATER DISTRICT
RIVERSIDE COUNTY, CALIFORNIA

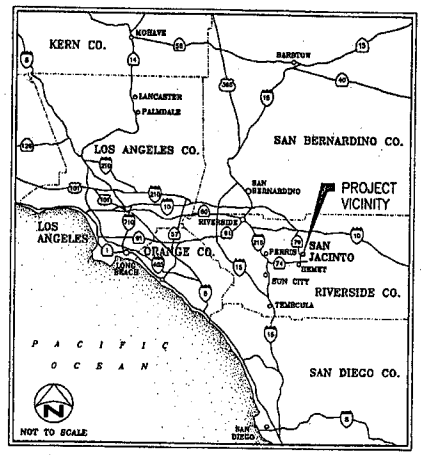
HEMET/SAN JACINTO Intergrated Recharge and Recovery Program Phase 1 Recharge Ponds

I.D. 00
S.A. 00
W.O. 00000
C.O.
COORD. 00 B 00
SHT. 1 OF 1
D- 00000
C-1

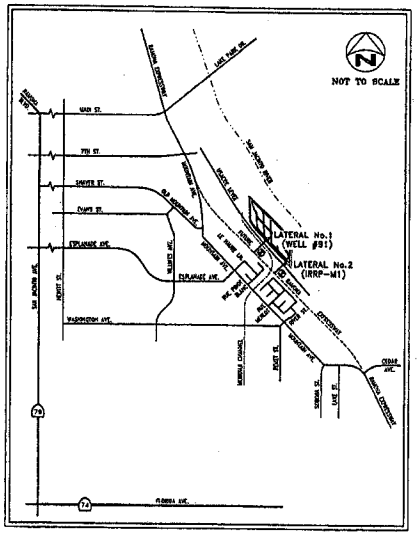
EXHIBIT B

EASTERN MUNICIPAL WATER DISTRICT

RIVERSIDE COUNTY, CALIFORNIA



VICINITY MAP



LOCATION MAP

EASTERN MUNICIPAL WATER DISTRICT
SINCE 1950

BOARD OF DIRECTORS

JOSEPH J. KUEBLER	PRESIDENT
PHILIP E. PAULE	VICE PRESIDENT
RONALD W. SULLIVAN	BOARD MEMBER
RANDY A. RECORD	BOARD MEMBER
DAVID J. SLAWSON	BOARD MEMBER
PAUL D. JONES, II	GENERAL MANAGER

APPROVED BY: _____ 4/12/12
CHARLES J. BACHMANN
ASSISTANT GENERAL MANAGER, ENGINEERING
DATE

DRAWING INDEX

DWG. No.	SHEET No.	FILE No.	DESCRIPTION
G-1	1	D-38012	TITLE SHEET
G-2	2	D-38013	CONSTRUCTION NOTES
G-3	3	D-38014	LEGENDS, SYMBOLS, AND ABBREVIATIONS
C-1	4	D-38015	LATERAL No.1 PIPING PLAN AND PROFILE AT WELL #31 SITE
C-2	5	D-38016	LATERAL No.2 PIPING PLAN AND PROFILE AT IRRP-M1 SITE
C-3	6	D-38017	M-1 5" ELECTRICAL SERVICE CONDUIT AND ACCESS ROAD
M-1	7	D-38018	MISCELLANEOUS PIPELINE MECHANICAL
M-2	8	D-38019	MISCELLANEOUS DETAILS
S-1	9	D-38020	SUNSHADE FOUNDATION, ELEVATION, AND SECTION
E-1	10	D-38021	ELECTRICAL SYMBOLS, ABBREVIATIONS, AND LIGHTING FIXTURE SCHEDULE
E-2	11	D-38022	SINGLE LINE DIAGRAM, MCC PLAN AND ELEVATIONS
E-3	12	D-38023	IRRP-M1 RTU PANEL INTERCONNECT DIAGRAM

RECEIVED
MAY 30 2012
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

HEMET/SAN JACINTO INTEGRATED RECHARGE AND RECOVERY PROGRAM PHASE I RECHARGE PIPELINE LATERALS (SCHEDULE B)

BASIS OF BEARING

THE HORIZONTAL DATUM FOR THIS SURVEY IS A GROUND COORDINATE SYSTEM BASED ON THE CALIFORNIA COORDINATE SYSTEM ZONE VI, NAD83, EPOCH DATE 1992.8 PER RCFC&WCD – SAN JACINTO RIVER LEVEE MONUMENTS. COORDINATES ARE DERIVED FROM GPS OBSERVATIONS FROM RCFC&WCD Z 9101 (CP 153) TO RCFC Z 9114 (CP 170) THE GRID COORDINATE AT RCFC&WCD Z 9101 (CP 153) IS HELD AS THE GROUND COORDINATE & THE ORIGIN OF SCALING.

THE COMBINATION FACTOR FOR THIS SURVEY IS 0.999904297.

THE GRID BEARING OF S41°05'56"E IS HELD FROM Z 9101 TO Z 9114. THE GRID ANGLE IS (–) 00°22'03.7" AS DERIVED AT Z 9114.

AT RCFC Z 9101 GRID= GROUND:

N: 2227246.209 E: 6354984.267

BENCHMARK

THE VERTICAL DATUM FOR THIS SURVEY IS BASED UPON NGVD29 AS DETERMINED FROM GPS OBSERVATIONS FROM RCFC&WCD Z 9101. ELEVATION= 1623.327

Underground Service Alert
Call: TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY
HORZ./VERT. DATUM
HORZ. = NAD83
VERT. = NGVD29

KRIEGER & STEWART INCORPORATED
3602 University Ave. • Riverside, CA. 92501 • 951-684-6900
APPROVED BY _____
REGISTERED ENGINEER No. 53990 DATE 05/22/12

REGISTERED PROFESSIONAL ENGINEER No. 53990 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA

REVISIONS				
NO.	DATE	INITIAL	DESCRIPTION	APP'VD/DATE

APPROVED BY:
DIRECTOR OF ENGINEERING _____ 6-12-12 DATE
REFERENCES

EASTERN MUNICIPAL WATER DISTRICT
PROJECT MANAGER _____ 4-12-12 DATE

APPROVALS	INITIAL	DATE
PROJECT ENGR.		
INSPECTION		
WTR. OPERATIONS		
MAINTENANCE		

	DATE
DESIGNED DKJ	
DRAWN SPM	
TRACED N/A	
CHECKED DKJ	
SUBMITTED DKJ	

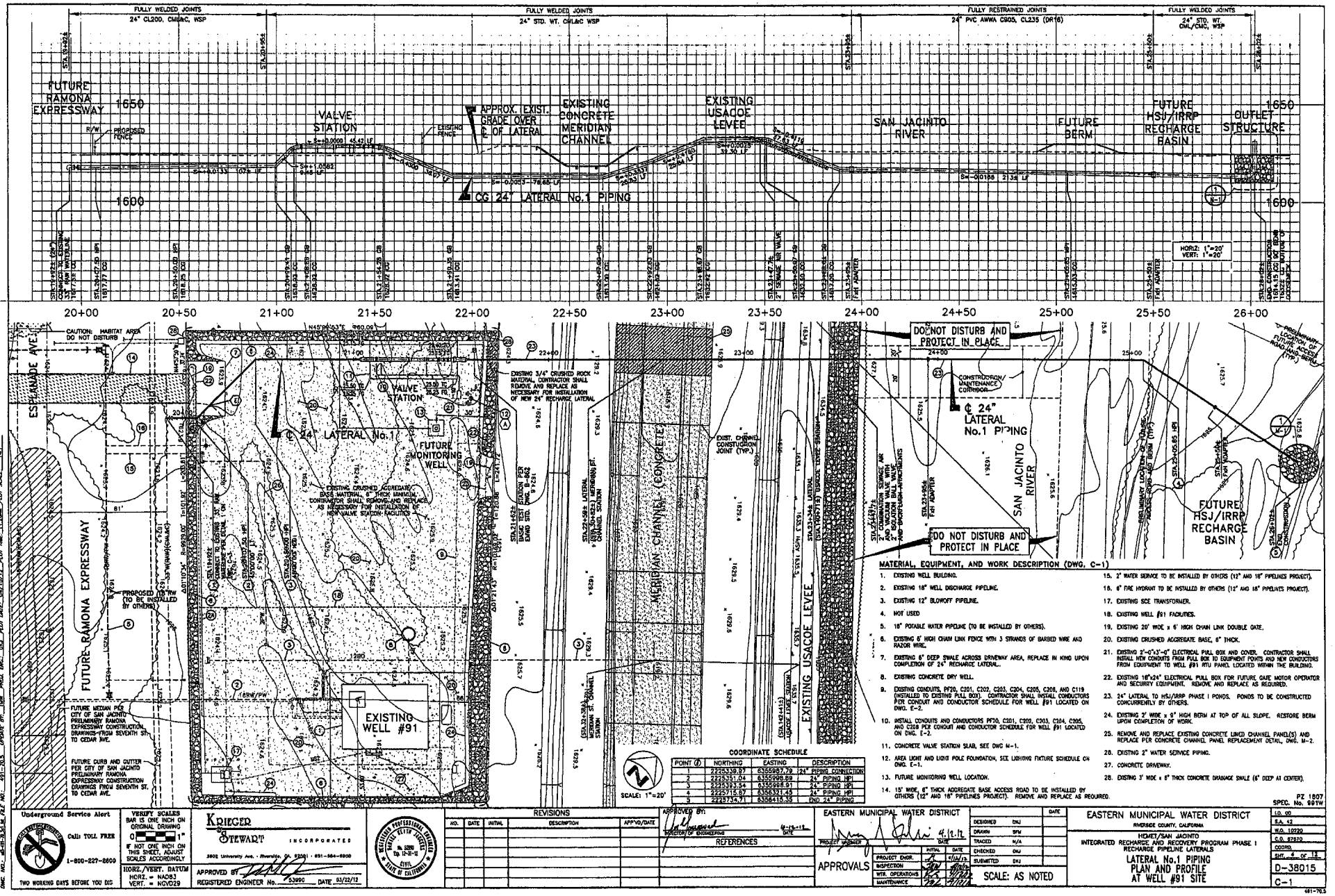
SCALE: AS NOTED

EASTERN MUNICIPAL WATER DISTRICT
RIVERSIDE COUNTY, CALIFORNIA
HEMET/SAN JACINTO INTEGRATED RECHARGE AND RECOVERY PROGRAM PHASE I RECHARGE PIPELINE LATERALS
TITLE SHEET

PZ 1807
SPEC. No. 991W
I.O. 00
S.A. 42
W.O. 10270
C.O. 97870
COORD.
SHT. 1 OF 12
D-38012
G-1

491-70.5

EXHIBIT B



COORDINATE SCHEDULE

POINT	NORTHING	EASTING	DESCRIPTION
1	2225339.97	6355987.79	24" PIPING CONNECTION
2	2225351.04	6355998.69	24" PIPING HPI
3	2225313.54	6355998.51	24" PIPING HPI
4	2225715.67	6358321.45	24" PIPING HPI
5	2225734.71	6358415.35	END 24" PIPING

MATERIAL, EQUIPMENT, AND WORK DESCRIPTION (DWG. C-1)

1. EXISTING WELL BUILDING.
2. EXISTING 16" WELL DISCHARGE PIPELINE.
3. EXISTING 12" BLOWOFF PIPELINE.
4. NOT USED
5. 16" POTABLE WATER PIPELINE (TO BE INSTALLED BY OTHERS).
6. EXISTING 6' HIGH CHAIN LINK FENCE WITH 3 STRANDS OF BARBED WIRE AND RAZOR WIRE.
7. EXISTING 6" DEEP SWALE ACROSS DRIVEWAY AREA, REPLACE IN KIND UPON COMPLETION OF 24" RECHARGE LATERAL..
8. EXISTING CONCRETE DRY WELL.
9. EXISTING CONDUITS, PF20, C201, C202, C203, C204, C205, C208, AND C119 (INSTALLED TO EXISTING PULL BOX). CONTRACTOR SHALL INSTALL CONDUCTORS PER CONDUIT AND CONDUCTOR SCHEDULE FOR WELL #91 LOCATED ON DWG. E-2.
10. INSTALL CONDUITS AND CONDUCTORS PF20, C201, C202, C203, C204, C205, AND C208 PER CONDUIT AND CONDUCTOR SCHEDULE FOR WELL #91 LOCATED ON DWG. E-2.
11. CONCRETE VALVE STATION SLAB, SEE DWG M-1.
12. AREA LIGHT AND LIGHT POLE FOUNDATION, SEE LIGHTING FIXTURE SCHEDULE ON DWG. E-1.
13. FUTURE MONITORING WELL LOCATION.
14. 15' WIDE, 6" THICK AGGREGATE BASE ACCESS ROAD TO BE INSTALLED BY OTHERS (12" AND 16" PIPELINES PROJECT). REMOVE AND REPLACE AS REQUIRED.
15. 2" WATER SERVICE TO BE INSTALLED BY OTHERS (12" AND 16" PIPELINES PROJECT).
16. 6" FIRE HYDRANT TO BE INSTALLED BY OTHERS (12" AND 16" PIPELINES PROJECT).
17. EXISTING SCE TRANSFORMER.
18. EXISTING WELL #91 FACILITIES.
19. EXISTING 20' WIDE x 6' HIGH CHAIN LINK DOUBLE GATE.
20. EXISTING CRUSHED AGGREGATE BASE, 6" THICK.
21. EXISTING 2'-0"x3'-0" ELECTRICAL PULL BOX AND COVER. CONTRACTOR SHALL INSTALL NEW CONDUITS FROM PULL BOX TO EQUIPMENT POINTS AND NEW CONDUCTORS FROM EQUIPMENT TO WELL #91 RTU PANEL LOCATED WITHIN THE BUILDING.
22. EXISTING 18"x24" ELECTRICAL PULL BOX FOR FUTURE GATE MOTOR OPERATOR AND SECURITY EQUIPMENT. REMOVE AND REPLACE AS REQUIRED.
23. 24" LATERAL TO HSJ/IRRP PHASE I PONDS. PONDS TO BE CONSTRUCTED CONCURRENTLY BY OTHERS.
24. EXISTING 2' WIDE x 9" HIGH BERM AT TOP OF ALL SLOPE. RESTORE BERM UPON COMPLETION OF WORK.
25. REMOVE AND REPLACE EXISTING CONCRETE LINED CHANNEL PANEL(S) AND REPLACE PER CONCRETE CHANNEL PANEL REPLACEMENT DETAIL, DWG. M-2.
26. EXISTING 2" WATER SERVICE PIPING.
27. CONCRETE DRIVEWAY.
28. EXISTING 3' WIDE x 6" THICK CONCRETE DRAINAGE SWALE (6" DEEP AT CENTER).

PZ 1807
SPEC. No. 991W

Underground Service Alert
Call: TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

HORZ./VERT. DATUM
HORZ. = NAD83
VERT. = NGVD29

KRIEGER & STEWART INCORPORATED
3602 University Ave., Riverside, Ca. 92501 • 951-684-6900
APPROVED BY: _____
REGISTERED ENGINEER No. 53990 DATE 03/22/12

REGISTERED PROFESSIONAL ENGINEER No. 53990 Cp. 12-31-12 CIVIL STATE OF CALIFORNIA

NO.	DATE	INITIAL	REVISIONS DESCRIPTION	APP'VD/DATE

APPROVED BY: _____ DIRECTOR OF ENGINEERING 4-12-12 DATE
REFERENCES

EASTERN MUNICIPAL WATER DISTRICT
PROJECT NUMBER
APPROVALS

	INITIAL	DATE
PROJECT ENGR.		4/12/12
INSPECTION		
WTR. OPERATIONS		
MAINTENANCE		

	DATE
DESIGNED	DKJ
DRAWN	SPM
TRACED	N/A
CHECKED	DKJ
SUBMITTED	DKJ

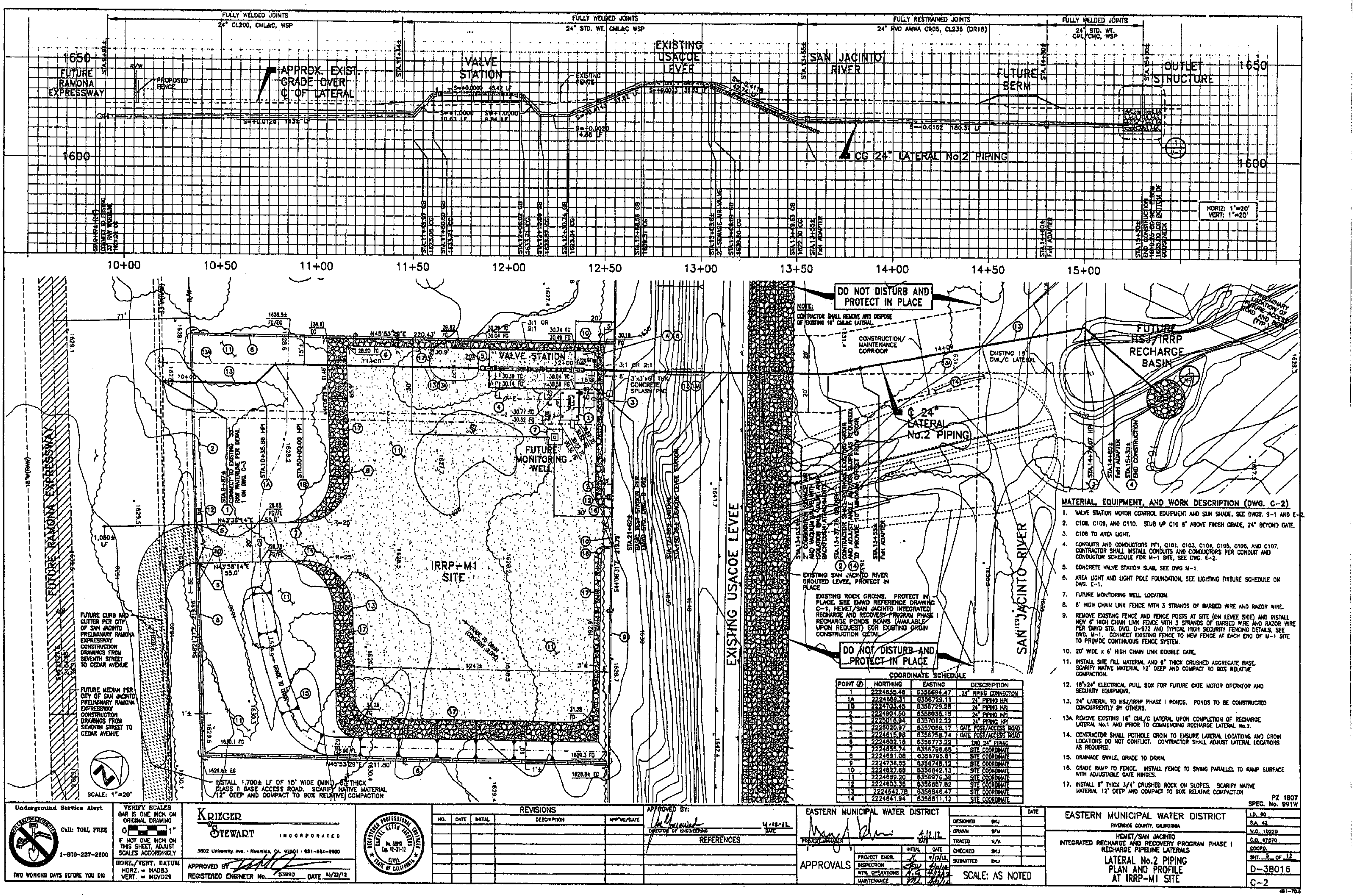
SCALE: AS NOTED

EASTERN MUNICIPAL WATER DISTRICT
RIVERSIDE COUNTY, CALIFORNIA
HEMET/SAN JACINTO
INTEGRATED RECHARGE AND RECOVERY PROGRAM PHASE I RECHARGE PIPELINE LATERALS
LATERAL No.1 PIPING
PLAN AND PROFILE
AT WELL #91 SITE

I.O. 00	
S.A. 42	
W.O. 10220	
C.O. 87870	
COORD.	
SHT. 4 OF 15	
D-38015	
C-1	

491-70.5

EXHIBIT B



COORDINATE SCHEDULE

POINT #	NORTHING	EASTING	DESCRIPTION
1	2224655.48	6356694.47	24" PIPING CONNECTION
1A	2224689.31	6356729.11	24" PIPING HPI
1B	2224703.45	6356729.28	24" PIPING HPI
2	2224904.50	6356935.15	24" PIPING HPI
3	2225016.94	6357012.22	24" PIPING HPI
4	2225020.97	6357066.17	GATE POST/ACCESS ROAD
5	2224615.98	6356758.74	GATE POST/ACCESS ROAD
6	2224602.16	6356773.22	END 24" PIPING
7	2224655.74	6356796.65	SITE COORDINATE
8	2224691.08	6356795.61	SITE COORDINATE
9	2224736.55	6356748.12	SITE COORDINATE
10	2224827.68	6356842.13	SITE COORDINATE
11	2224689.20	6356976.38	SITE COORDINATE
12	2224603.35	6356887.82	SITE COORDINATE
13	2224642.78	6356846.47	SITE COORDINATE
14	2224641.94	6356811.12	SITE COORDINATE

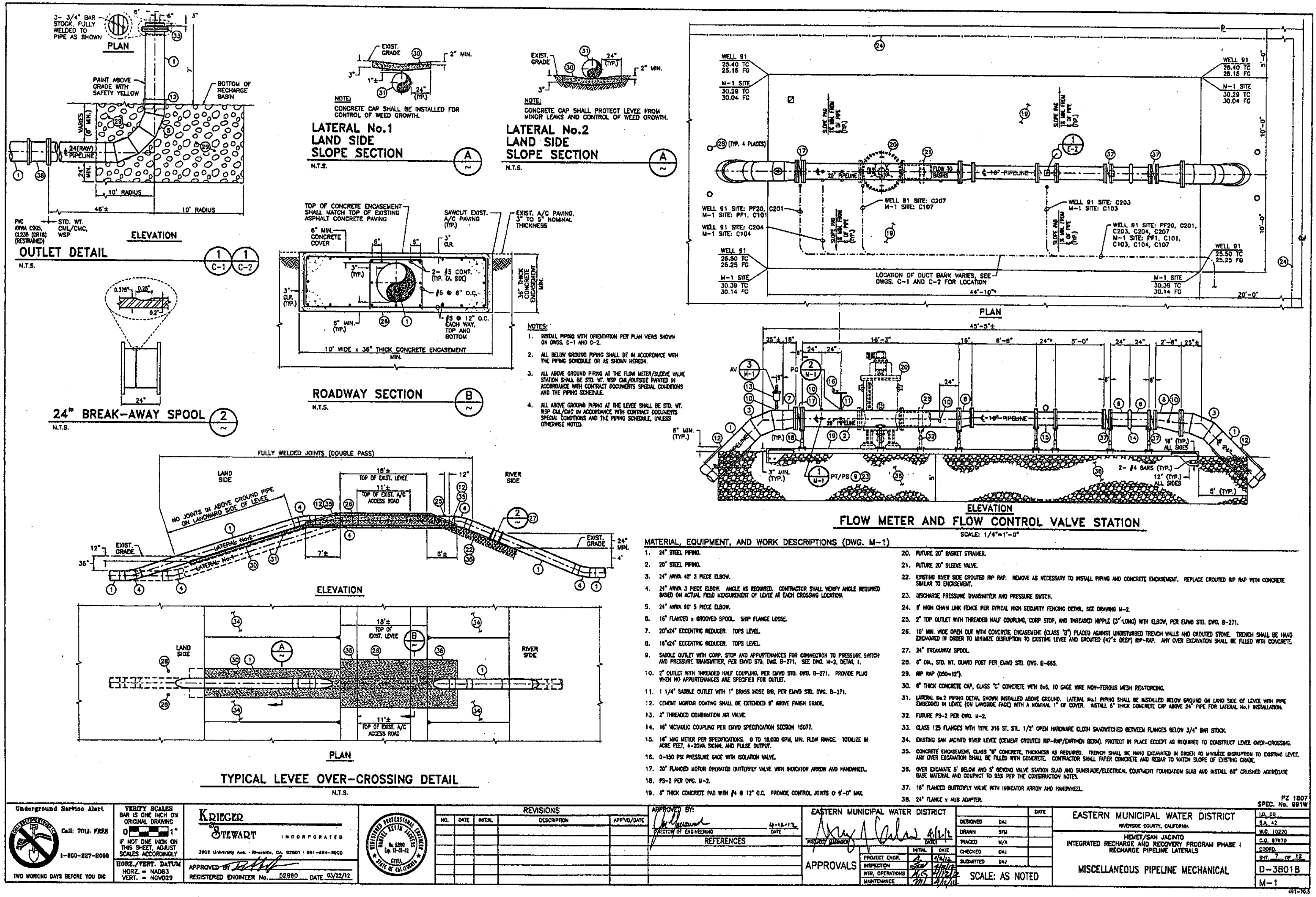
MATERIAL, EQUIPMENT, AND WORK DESCRIPTION (DWG. C-2)

1. VALVE STATION MOTOR CONTROL EQUIPMENT AND SUN SHADE, SEE DWGS. S-1 AND E-2.
2. C108, C109, AND C110. STUB UP C10 6" ABOVE FINISH GRADE, 24" BEYOND GATE.
3. C106 TO AREA LIGHT.
4. CONDUITS AND CONDUCTORS PF1, C101, C103, C104, C105, C106, AND C107. CONTRACTOR SHALL INSTALL CONDUITS AND CONDUCTORS PER CONDUIT AND CONDUCTOR SCHEDULE FOR M-1 SITE, SEE DWG. E-2.
5. CONCRETE VALVE STATION SLAB, SEE DWG M-1.
6. AREA LIGHT AND LIGHT POLE FOUNDATION, SEE LIGHTING FIXTURE SCHEDULE ON DWG. E-1.
7. FUTURE MONITORING WELL LOCATION.
8. 6' HIGH CHAIN LINK FENCE WITH 3 STRANDS OF BARBED WIRE AND RAZOR WIRE.
9. REMOVE EXISTING FENCE AND FENCE POSTS AT SITE (ON LEVEE SIDE) AND INSTALL NEW 6' HIGH CHAIN LINK FENCE WITH 3 STRANDS OF BARBED WIRE AND RAZOR WIRE PER EMWD STD. DWG. 0-672 AND TYPICAL HIGH SECURITY FENCING DETAILS, SEE DWG. M-1. CONNECT EXISTING FENCE TO NEW FENCE AT EACH END OF M-1 SITE TO PROVIDE CONTINUOUS FENCE SYSTEM.
10. 20' WIDE x 6' HIGH CHAIN LINK DOUBLE GATE.
11. INSTALL SITE FILL MATERIAL AND 6" THICK CRUSHED AGGREGATE BASE. SCARIFY NATIVE MATERIAL 12" DEEP AND COMPACT TO 90% RELATIVE COMPACTION.
12. 18"x24" ELECTRICAL PULL BOX FOR FUTURE GATE MOTOR OPERATOR AND SECURITY EQUIPMENT.
13. 24" LATERAL TO HSJ/IRRP PHASE I PONDS. PONDS TO BE CONSTRUCTED CONCURRENTLY BY OTHERS.

13A. REMOVE EXISTING 16" CML/C LATERAL UPON COMPLETION OF RECHARGE LATERAL No.1 AND PRIOR TO COMMENCING RECHARGE LATERAL No.2.

14. CONTRACTOR SHALL POTHOLE GROIN TO ENSURE LATERAL LOCATIONS AND GROIN LOCATIONS DO NOT CONFLICT. CONTRACTOR SHALL ADJUST LATERAL LOCATIONS AS REQUIRED.
15. DRAINAGE SWALE, GRADE TO DRAIN.
16. GRADE RAMP TO FENCE. INSTALL FENCE TO SWING PARALLEL TO RAMP SURFACE WITH ADJUSTABLE GATE HINGES.
17. INSTALL 6" THICK 3/4" CRUSHED ROCK ON SLOPES. SCARIFY NATIVE MATERIAL 12" DEEP AND COMPACT TO 90% RELATIVE COMPACTION

EXHIBIT B


OUTLET DETAIL
N.T.S.
PLAN
ELEVATION
24" BREAK-AWAY SPOOL
N.T.S.
LATERAL No.1 LAND SIDE SLOPE SECTION
N.T.S.
NOTE: CONCRETE CAP SHALL BE INSTALLED FOR CONTROL OF WEED GROWTH.
LATERAL No.2 LAND SIDE SLOPE SECTION
N.T.S.
NOTE: CONCRETE CAP SHALL PROTECT LEVEE FROM MINOR LEAKS AND CONTROL OF WEED GROWTH.
ROADWAY SECTION
N.T.S.
10' WIDE x 36" THICK CONCRETE ENCASEMENT
NOTES:
1. INSTALL PIPING WITH ORIENTATION PER PLAN VIEWS SHOWN ON DWGS. C-1 AND C-2.
2. ALL BELOW GROUND PIPING SHALL BE IN ACCORDANCE WITH THE PIPING SCHEDULE OR AS SHOWN HEREON.
3. ALL ABOVE GROUND PIPING AT THE FLOW METER/SLEEVE VALVE STATION SHALL BE STD. WT. WSP CML/OUTSIDE PAINTED IN ACCORDANCE WITH CONTRACT DOCUMENTS SPECIAL CONDITIONS AND THE PIPING SCHEDULE.
4. ALL ABOVE GROUND PIPING AT THE LEVEE SHALL BE STD. WT. WSP CML/CMC IN ACCORDANCE WITH CONTRACT DOCUMENTS SPECIAL CONDITIONS AND THE PIPING SCHEDULE, UNLESS OTHERWISE NOTED.
TYPICAL LEVEE OVER-CROSSING DETAIL
N.T.S.
LAND SIDE
RIVER SIDE
FULLY WELDED JOINTS (DOUBLE PASS)
NO JOINTS IN ABOVE GROUND PIPE ON LANDWARD SIDE OF LEVEE
ELEVATION
PLAN
PLAN
LOCATION OF DUCT BANK VARIES, SEE DWGS. C-1 AND C-2 FOR LOCATION
ELEVATION
FLOW METER AND FLOW CONTROL VALVE STATION
SCALE: 1/4"=1'-0"
MATERIAL, EQUIPMENT, AND WORK DESCRIPTIONS (DWG. M-1)
1. 24" STEEL PIPING.
2. 20" STEEL PIPING.
3. 24" AWWA 45° 3 PIECE ELBOW.
4. 24" AWWA 3 PIECE ELBOW. ANGLE AS REQUIRED. CONTRACTOR SHALL VERIFY ANGLE REQUIRED BASED ON ACTUAL FIELD MEASUREMENT OF LEVEE AT EACH CROSSING LOCATION.
5. 24" AWWA 90° 5 PIECE ELBOW.
6. 16" FLANGED x GROOVED SPOOL. SHIP FLANGE LOOSE.
7. 20"x24" ECCENTRIC REDUCER. TOPS LEVEL.
8. 16"x24" ECCENTRIC REDUCER. TOPS LEVEL.
9. SADDLE OUTLET WITH CORP. STOP AND APPURTENANCES FOR CONNECTION TO PRESSURE SWITCH AND PRESSURE TRANSMITTER, PER EMWD STD. DWG. B-271. SEE DWG. M-2, DETAIL 1.
10. 2" OUTLET WITH THREADED HALF COUPLING, PER EMWD STD. DWG. B-271. PROVIDE PLUG WHEN NO APPURTENANCES ARE SPECIFIED FOR OUTLET.
11. 1 1/4" SADDLE OUTLET WITH 1" BRASS HOSE BIB, PER EMWD STD. DWG. B-271.
12. CEMENT MORTAR COATING SHALL BE EXTENDED 6" ABOVE FINISH GRADE.
13. 2" THREADED COMBINATION AIR VALVE.
14. 16" VICTAULIC COUPLING PER EMWD SPECIFICATION SECTION 15077.
15. 16" MAG METER PER SPECIFICATIONS. 0 TO 18,000 GPM, MIN. FLOW RANGE. TOTALIZE IN ACRE FEET, 4-20MA SIGNAL AND PULSE OUTPUT.
16. 0-150 PSI PRESSURE GAGE WITH ISOLATION VALVE.
17. 20" FLANGED MOTOR OPERATED BUTTERFLY VALVE WITH INDICATOR ARROW AND HANDWHEEL.
18. PS-2 PER DWG. M-2.
19. 8" THICK CONCRETE PAD WITH #4 @ 12" O.C. PROVIDE CONTROL JOINTS @ 8'-0" MAX.
20. FUTURE 20" BASKET STRAINER.
21. FUTURE 20" SLEEVE VALVE.
22. EXISTING RIVER SIDE GROUTED RIP RAP. REMOVE AS NECESSARY TO INSTALL PIPING AND CONCRETE ENCASEMENT. REPLACE GROUTED RIP RAP WITH CONCRETE SIMILAR TO ENCASEMENT.
23. DISCHARGE PRESSURE TRANSMITTER AND PRESSURE SWITCH.
24. 8' HIGH CHAIN LINK FENCE PER TYPICAL HIGH SECURITY FENCING DETAIL, SEE DRAWING M-2.
25. 2" TOP OUTLET WITH THREADED HALF COUPLING, CORP STOP, AND THREADED NIPPLE (3" LONG) WITH ELBOW, PER EMWD STD. DWG. B-271.
26. 10' MIN. WIDE OPEN CUT WITH CONCRETE ENCASEMENT (CLASS "B") PLACED AGAINST UNDISTURBED TRENCH WALLS AND GROUTED STONE. TRENCH SHALL BE HAND EXCAVATED IN ORDER TO MINIMIZE DISRUPTION TO EXISTING LEVEE AND GROUTED (42"± DEEP) RIP-RAP. ANY OVER EXCAVATION SHALL BE FILLED WITH CONCRETE.
27. 24" BREAKAWAY SPOOL.
28. 6" DIA., STD. WT. GUARD POST PER EMWD STD. DWG. B-665.
29. RIP RAP (D50=12").
30. 6" THICK CONCRETE CAP, CLASS "C" CONCRETE WITH 6x6, 10 GAGE WIRE NON-FEROUS MESH REINFORCING.
31. LATERAL No.2 PIPING DETAIL SHOWN INSTALLED ABOVE GROUND. LATERAL No.1 PIPING SHALL BE INSTALLED BELOW GROUND ON LAND SIDE OF LEVEE WITH PIPE EMBEDDED IN LEVEE (ON LANDSIDE FACE) WITH A NOMINAL 1' OF COVER. INSTALL 6" THICK CONCRETE CAP ABOVE 24" PIPE FOR LATERAL No.1 INSTALLATION.
32. FUTURE PS-2 PER DWG. M-2.
33. CLASS 125 FLANGES WITH TYPE 316 ST. STL. 1/2" OPEN HARDWARE CLOTH SANDWICHED BETWEEN FLANGES BELOW 3/4" BAR STOCK.
34. EXISTING SAN JACINTO RIVER LEVEE (CEMENT GROUTED RIP-RAP/EARTHEN BERM). PROTECT IN PLACE EXCEPT AS REQUIRED TO CONSTRUCT LEVEE OVER-CROSSING.
35. CONCRETE ENCASEMENT, CLASS "B" CONCRETE, THICKNESS AS REQUIRED. TRENCH SHALL BE HAND EXCAVATED IN ORDER TO MINIMIZE DISRUPTION TO EXISTING LEVEE. ANY OVER EXCAVATION SHALL BE FILLED WITH CONCRETE. CONTRACTOR SHALL TAPER CONCRETE AND REBAR TO MATCH SLOPE OF EXISTING GRADE.
36. OVER EXCAVATE 5' BELOW AND 5' BEYOND VALVE STATION SLAB AND SUNSHADE/ELECTRICAL EQUIPMENT FOUNDATION SLAB AND INSTALL 60" CRUSHED AGGREGATE BASE MATERIAL AND COMPACT TO 95% PER THE CONSTRUCTION NOTES.
37. 16" FLANGED BUTTERFLY VALVE WITH INDICATOR ARROW AND HANDWHEEL.
38. 24" FLANGE x HUB ADAPTER.
PZ 1807
SPEC. No. 991W
Underground Service Alert
Call: TOLL FREE 1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY
HORZ./VERT. DATUM
HORZ. = NAD83
VERT. = NGVD29
KRIEGER & STEWART INCORPORATED
3602 University Ave. • Riverside, CA 92501 • 951-684-6900
REGISTERED ENGINEER No. 52980 DATE 03/22/12
REVISIONS
APPROVED BY:
DIRECTOR OF ENGINEERING
REFERENCES
EASTERN MUNICIPAL WATER DISTRICT
PROJECT MANAGER
APPROVALS
DESIGNED DKJ
DRAWN SFM
TRACED N/A
CHECKED DKJ
SUBMITTED DKJ
SCALE: AS NOTED
EASTERN MUNICIPAL WATER DISTRICT
RIVERSIDE COUNTY, CALIFORNIA
HEMET/SAN JACINTO
INTEGRATED RECHARGE AND RECOVERY PROGRAM PHASE I
RECHARGE PIPELINE LATERALS
MISCELLANEOUS PIPELINE MECHANICAL
I.D. 00
S.A. 42
W.O. 10220
C.O. 87870
SHT. 7 OF 12
D-38018
M-1

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

In Reply Refer To:
FWS-WRIV-08B0106-10F0045

DEC 23 2011

Colonel R. Mark Toy
District Commander, Los Angeles
U.S. Army Corps of Engineers
P.O. Box 532711
Los Angeles, California 90053-2325

Attention: Office of the Chief, Regulatory Division (Permit No. 2004-01197-DPS)

Subject: Reinitiated Biological Opinion for the Hemet-San Jacinto Integrated Recharge and Recovery Program, Riverside County, California

Dear Colonel Toy:

On November 6, 2006, we issued a non-jeopardy biological opinion (FWS-WRIV-4051.5) in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*) addressing the construction and operation of water recharge basins within the San Jacinto River and its effects on the federally endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*, "SBKR") and its designated critical habitat. During early phases of project construction, the incidental take limit for SBKR was exceeded. On January 29, 2008, your agency, the U.S. Army Corps of Engineers (Corps), requested reinitiation of formal consultation pursuant to 50 CFR § 402.16. On April 20, 2010, we issued a second non-jeopardy biological opinion (FWS-WRIV-08B0106-10F0650). In the 2010 biological opinion, the project site was located upstream of the project area evaluated in the 2006 biological opinion. This document represents our revised biological opinion based on updated species information obtained as a result of the reinitiated consultation and the return of the recharge basins to the location evaluated in the 2006 biological opinion.

Using the 2002 designated critical habitat for SBKR, we concluded in our 2006 biological opinion that the proposed action is not likely to result in the destruction or adverse modification of critical habitat for SBKR. While revised critical habitat was designated in 2008, a court ruling in 2011 vacated the 2008 critical habitat designation and reinstated the 2002 critical habitat. Because 1) the proposed project has been returned to the same location evaluated in our 2006 biological opinion, 2) designated critical habitat for SBKR and its primary constituent elements (PCEs) are the same as those analyzed in 2006, 3) adverse effects of the recharge basins and associated infrastructure and maintenance on the PCEs of critical habitat have not changed since 2006, and 4) minimization measures in the current project description now provide substantially increased benefit to those PCEs, we conclude that the currently proposed action is not likely to

result in the destruction or adverse modification of critical habitat for SBKR. As a result, this biological opinion does not address further the effects of the proposed project on critical habitat.

This biological opinion is based on information provided in the *Hemet/San Jacinto Integrated Recharge and Recovery Program Biological Assessment, July 31, 2005,* prepared by HELIX Environmental Planning, Inc., site visits, meetings, correspondence, notes, other information compiled during the course of discussions with your agency and representatives from the non-Federal applicant, Eastern Municipal Water District (EMWD or "Applicant"), and information available in our files. The complete project file addressing this consultation is maintained at the Carlsbad Fish and Wildlife Office (CFWO).

Consultation History

On June 29, 2011, EMWD notified the Service that abundant kangaroo rat sign was found on the recharge project site and that the small mammal biologist for the project expected the take threshold provided in the incidental take statement in the 2010 biological opinion would be exceeded. A site visit was conducted on July 12, 2011, to evaluate kangaroo rat sign on site (e.g., burrows, runs, dust baths) and to assess the nearly completed perimeter exclusion fence. A decision was made to complete the exclusion fence, but to cut ground-level "windows" in it every 30 meters to allow small animal movement in and out of the project site.

Because the number of kangaroo rat burrows on site (more than 150) suggested that the project area supported more SBKR than anticipated in our 2010 biological opinion, we recommended the reinitiation of formal consultation during a conference call with the Corps, Service, and EMWD and their consultant on July 15, 2011. During the same conference call, we requested additional trapping be conducted to determine: 1) if the number of SBKR in the action area as defined in the 2010 BO exceeded the number identified in the incidental take statement; and 2) if the number of SBKR increased throughout the confluence area (i.e., the portion of the San Jacinto River from the in-stream mining pit downstream to the Main Street Bridge where Bautista Creek, Poppet Creek, and the Meridian Channel enter the river) or only at the proposed water recharge basin site. During the conference call, we agreed that data from an ongoing trapping effort being conducted by the Western Riverside County Biological Monitoring Program (Monitoring Program) along the San Jacinto River in the project area would be used and that the Monitoring Program effort would be supplemented by funding from EMWD. Trapping was conducted between July 17 and July 30, 2011. We received the trapping results on August 3, 2011. The Corps reinitiated consultation on August 12, 2011.

A conference call with the Corps, Service, EMWD and their consultant, and Lake Hemet Municipal Water District (LHMWD) was held on August 24, 2011, to discuss the survey results that indicated that the incidental take threshold identified in the 2010 BO would be exceeded and that the number of SBKR had increased throughout the confluence area. On September 20, 2011, Service staff met with the Corps, EMWD and their consultant, LHMWD, Western Riverside County Regional Conservation Authority (RCA), Endangered Habitats League (EHL), San Bernardino County Chapter of the Audubon Society (SB Audubon), and representatives of

the Soboba Band of Luiseño Indians (Soboba Tribe) to discuss project alternatives and the new information provided by the recent SBKR surveys.

A field meeting was held on September 27, 2011, to assess the habitat value for SBKR of the area offered for conservation by EMWD and LHMWD under the terms of their Memorandum of Agreement with EHL and SB Audubon for SBKR and to visit the originally proposed project site and identify potential benefit to reconfiguring the basin layout. As a result of a follow-up conference call on October 4, 2011, with the Corps, EMWD and their consultant, LHMWD, RCA, EHL, SB Audubon, and representatives of the Soboba Tribe, the project location would revert to the 2006 location, and configuration and performance standards were identified for the proposed conservation area.

Following a field meeting on October 12, 2011, we received a revised project description without conservation measures on October 17, 2011. Trapping in the proposed conservation area was conducted the week of October 17, 2011. We transmitted a draft of the project description for this biological opinion to the Corps and EMWD on November 3, 2011, and following communication between the Service and EMWD staff, agreement on the revised project description was reached on December 19, 2011. We sent a draft of this reinitiated biological opinion to the Corps on December 21, 2011.

PROJECT DESCRIPTION

The project objective is to address a final Tribal water rights settlement agreement that calls for EMWD and LHMWD to supply 7,500 acre feet of water annually to the Soboba Band of Luiseño Indians (Tribe) as described in the Soboba Settlement Act, Public Law 110-297, signed on July 31, 2008. Construction of recharge basins within the San Jacinto River was identified by EMWD as the preferred method to accomplish the project objective. The Corps proposes to issue a permit that will authorize EMWD to impact approximately 15.86 acres of jurisdictional waters of the U.S. during construction and operation of groundwater recharge basins within the San Jacinto River floodplain in unincorporated Riverside County, California. The Corps permit duration for the action is through 2035.

The project site is the same location evaluated in 2006. EMWD will construct and operate a series of recharge basins and associated infrastructure within a 35-acre area within the San Jacinto River extending from the Meridian Channel upstream just beyond the existing 5-acre EMWD test recharge pond (Figure 1). The 5-acre test pond was originally constructed as a temporary facility and was the subject of a previous consultation (FWS-WRIV-1045.1, "test pond consultation"), but will be incorporated into the proposed action.

To construct the new recharge basins, existing alluvium from within the project footprint will be graded to form a bermed perimeter to each basin. The outer berm of the recharge basins will be constructed 20 feet inside the edge of the 35-acre recharge area. The berm will be up to 5 feet high from the basin bottoms and 10 to 15 feet wide on top with 2:1 to 3:1 (horizontal:vertical) side slopes. The 20-foot wide perimeter around the outer berm will provide a maintenance

corridor for berm repairs and ensure the outer berm and operations and maintenance activities do not encroach on surrounding habitat. Interior berms used to create individual recharge basins within the outer berm, will be a mix of berms constructed of similar dimension to the outer perimeter berm and smaller inverted "V"-shaped berms constructed up to 5 feet high with 1:1 and 2:1 side slopes as required by function and existing topography. During construction, operation, and maintenance, recharge basins will be accessed along existing roads. River flows associated with greater than 10-year storms are expected to partially or entirely wash out the recharge basins. Following such storm events, recharge basins will be re-graded and berms reconstructed, and all maintenance and re-grading will be confined to the same 35-acre project footprint.

Recharge basin operations will follow a cycle of filling, infiltration, drying, and cleaning. Water will be discharged into the active recharge basins to infiltrate into the groundwater basin. During infiltration, sediment deposition and microbial and vegetative growth may clog the recharge basins and reduce infiltration rates. The recharge basins will be cleaned as needed to maintain infiltration rates. Cleaning will involve drying the recharge basins to kill aquatic plants and microbes and subsequent scraping and re-grading of the basin bottoms. Recharge basin filling and infiltration will occur year-round during years of plentiful water availability, though some recharge basins may not be used during years of low water availability. The outer perimeter berm and outer perimeter access area will be maintained weekly or as needed year-round to remove vegetation, repair damage resulting from rainfall or incidental runoff, and to ensure consistent sediment compaction to maintain the integrity of the recharge facilities and operations.

In addition to recharge basins, the project includes installation of a series of wells and pipelines. The wells allow for extraction of groundwater and monitoring of recharge operations. Pipelines will be installed to convey extracted groundwater to EMWD's existing potable water distribution system. Recharge pipelines will be installed to provide water to the recharge basins.

Water from the State Water Project will be conveyed to the recharge area via the existing San Jacinto Valley Raw Water Pipeline ("SJV Pipeline", call-outs 4 and 5, Figure 2). A segment of this pipeline follows the proposed Ramona Expressway between Esplanade Avenue and Washington Avenue (call-out 5, Figure 2). Two proposed lateral pipelines will be constructed and connected to this reach of the SJV Pipeline to deliver recharge water to the recharge basins. One lateral will be constructed across Site 4 (call-out 9, Figure 3), which is also the site of both an extraction and a monitoring well. The second lateral will be constructed across Site 5 (call-out 8, Figure 3), which is a monitoring well site. The lateral pipes will be installed underground within the riverbed and will diverge into a pipeline network within the recharge basin project footprint to deliver water to the recharge basins. Construction and subsequent maintenance of each lateral pipeline will impact 0.09 acres of land within the riverbed.

Access to the north end of the recharge area will be via an existing ramp down the west levee and existing dirt road to Well 14 (call-out 14, Figure 3). Access to the south end of the recharge area will be via an existing ramp down the west levee and existing road to the previous recharge test ponds (call-out 3, Figure 3). Unauthorized access to the ramps from the top of the levee is

restricted by locked steel tube gates. The ramps are constructed of native sandy soil. Ongoing maintenance of each of these access routes will affect 0.06 acres. The pipeline laterals and access routes will impact a total of 0.30 acres of land within the floodplain.
The project requires three extraction and three monitoring wells outside the bed of the San Jacinto River at four separate sites. All three of the extraction wells were constructed under the 2006 biological opinion and are operational. Well 90 (call-out 10, Figure 3) is located outside the action area west of the river, while Well 91 is located at Site 4 (call-out 9, Figure 3) and Well 92 is located at Site 6 (call-out 7, Figure 3).

Two of the three monitoring wells will be installed within Sites 4 and 5 (call-outs 9 and 8 in Figure 3), and co-located with other project facilities. The third monitoring well will be built outside of SBKR occupied habitat. The well sites are separated from the active floodplain by a levee. Each well site includes an area to be used for construction of a future replacement extraction well because EMWD anticipates that the wells will have a useful lifespan of between 20 and 40 years. Construction and maintenance of monitoring wells on Sites 4 and 5 will affect 0.91 acres and 0.96 acres respectively.

Storage for equipment and materials associated with recharge operations and maintenance will be located at Site 8 (call-out 6, Figure 3). This area was graded under the 2010 biological opinion and consists of 2.33 acres of permanent impact.

To transport water from individual well sites to EMWD's distribution system and to deliver water from the SJV Pipeline to the recharge basins, EMWD has or will construct pipelines and associated infrastructure along the undeveloped right-of-way for the future extension of the Ramona Expressway (call-outs 4 and 5, Figure 2). Facilities located along the right-of-way are outside of the conservation area, except as noted below.

A 12-inch blowoff pipeline will be constructed from Well 92 at Site 6 to the existing Well 11 pipeline at the Washington Street Booster (Call out 5, Figure 2). Pipeline construction and maintenance will impact 0.94 acres along the right-of-way. Maintenance of the existing Well 11 pipeline segment within the floodplain between the west river levee and Well 11 (call-out 9, Figure 3) will affect 0.33 acres of land within the active floodplain.

Two all-weather (gravel) access roads were constructed under the 2006 biological opinion in the respective rights-of-way of the future Esplanade Avenue extension and Ramona Expressway realignment. The first road starts from existing pavement to Site 4. The second road connects Site 6 to the Washington Booster. Both roads will be maintained until the planned future roads (Esplanade Avenue extension and Ramona Expressway realignment) are built.

Project infrastructure has or will be installed and maintained in the access roads. This infrastructure includes a 12-inch blow-off pipeline from Site 6 to the Washington Booster; an underground power feed to Site 4 along the Esplanade Avenue extension (call-out 4, Figure 2); a power feed from the Washington Booster (call-out 5, Figure 3) to Site 6 (call-out 7, Figure 3); an 18-inch discharge pipeline to convey groundwater extracted from Site 4 (Well 91) to water

delivery pipelines in Mountain Avenue (call-out 4, Figure 2); and a 24-inch recharge pipeline lateral segment between the SJV Pipeline and Sites 4 and 5 (call-outs 8 and 9, Figure 3). In total, the pipelines, access routes, and associated infrastructure will affect 3.13 acres within the future Ramona Expressway and Esplanade Avenue rights-of-way. (These impacts are outside of the proposed conservation areas.)

EMWD conducts routine maintenance and operations activities of existing facilities that are not specifically included in the project, but may affect SBKR within the project area. Existing facilities within the conservation area include: Well 14 with pipeline, chlorination facility, and access road (call-out 14, Figure 3); Conjunctive Use monitoring wells (call-out 2, Figure 3) with in the 35-acre recharge area; and Well 11 with pipeline and access road (call-out 4, Figure 3). In addition, a new extraction well with pipelines and access road (call-out 2, Figure 4) and a new monitoring well with access are planned on a LHMWD property adjacent in the conservation area (call-outs 2 and 3, Figure 4). The area affected for access, operations, and maintenance of facilities within the defined conservation area is approximately 1.33 acres.

Existing facilities in the project area, but outside of the conservation area include: the San Jacinto Valley Pipeline and an 18-inch raw groundwater pipeline and related infrastructure along the future Ramona Expressway right-of-way (call-outs 2, 4, and 5, Figure 4) Washington Booster, Corwin Booster, Well 36 and related pipelines (call-out 6, Figure 2); Cienega Well Field with extraction and monitoring wells, blow-off pond, pipelines, and access (call-out 1, Figure 4); Grant Avenue Recharge Ponds operations area with ponds, pipelines, river water diversion gates, canal, power feeds, soils stockpile area, access roads, and the Grant Booster (call-out 5, Figure 4).

Conservation Measures

1. Impacts to SBKR habitat will be offset through conservation and management of approximately 532 acres along the San Jacinto River (Figure 1). The Conservation and Management Area includes property owned by EMWD, LHMWD, and Riverside County Flood Control and Water Conservation District (RCFCD). All EMWD- and LHMWD-owned properties within the Conservation and Management Area will be protected by a conservation easement(s) that names the RCA as the beneficiary. The EMWD- and LHMWD-owned lands are encumbered by existing flood control easements. Properties within the Conservation and Management Area owned by RCFCD will be managed by the RCA for the benefit of SBKR. A Cooperative Agreement among the RCFCD, EMWD, LHMWD, and RCA will provide that the RCA manage the Conservation and Management Area for the benefit of SBKR. The language in the conservation easement(s) and the Cooperative Agreement will have the written approval of the Palm Springs Fish and Wildlife Office (PSFWO) prior to project implementation. The Conservation and Management Area will consist of 422.41 acres owned by EMWD, 69.27 acres owned by RCFCD, 24.66 acres owned by LHMWD, and 15.63 acres that was permanently set aside for SBKR by EMWD in association with test pond consultation. The conservation and

management area will be managed by the RCA for the benefit of SBKR as described in Conservation Measures 2 and 3;

a. SBKR Conservation and Management Area 1 (Figure1) will include SBKR habitat from the Bautista Creek confluence downstream to the Main Street Bridge. This area includes the project site, and 268 acres of occupied habitat to be managed for the benefit of SBKR. Approximately 204.19 acres of land owned by EMWD will be conserved and managed and 64.02 acres of land owned by the RCFCD will be managed within the floodplain from the confluence of Bautista Creek and San Jacinto River downstream to the Main Street bridge;

   Approximately12.5 acres of the area owned by EMWD is outside of the existing flood-control levee and is intended to function as upland refugia habitat because it is protected from flooding by the levee. (The calculated area excludes the well sites, pipeline, and the right-of-way of proposed Ramona Expressway.) Habitat restoration, as described in Conservation Measure 4, will be carried out in a 3.4-acre portion of the area outside of the levee;

b. SBKR Conservation and Management Area 2 will include SBKR habitat from the Tribal Lands boundary downstream of the Grant Avenue Recharge Ponds downstream to the Bautista Creek confluence. This area includes an EMWD operations area, the Cienega Well field that is not included in Conservation Management Area 2, and 105.5 acres owned by EMWD, LHMWD, and RCFCD. Approximately 75.59 acres of land owned by EMWD, and 24.6 acres owned by LHMWD, will be conserved and managed and 5.25 acres of land owned by RCFCD will be managed in SBKR Management Area 2. A portion of this area is occupied. The EMWD property includes 26.4 acres along the southern edge of the San Jacinto Aggregates Mining Inc. (SJAM) mine pit, which will be subject to vegetation restoration as described in Conservation Measure 4;

c. SBKR Conservation and Management Area 3 will include SBKR habitat from just east of the National Forest boundary downstream past the Grant Avenue Recharge Ponds. This area consists of 158.28 acres owned by EMWD that will be conserved and managed. The 15.63 acres of occupied SBKR habitat that was conserved for SBKR in association test pond consultation is included in this area. The southwestern portion of this area is occupied.

2. The RCA will serve as the reserve manager for the Conservation and Management Area and provide annual habitat management oversight on the property pursuant to Section 5.2 of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) (Dudek and Associates 2003). The RCA will maintain the biological values on the site, which now support scalebroom scrub and associated habitat. The habitats on the property also support known populations of SBKR, which the RCA will manage in accordance with the species-specific management activities detailed in Table 5-2 of the MSHCP. Management efforts undertaken by the RCA on the Conservation and Management Area,

including those described in Conservation Measure 3, and the results of those efforts will be included the MSHCP Annual Report and provided to EMWD. The EMWD will provide a one-time endowment in the amount of $1,500,000.00 to the RCA, in advance of ground disturbance by the project, to fund their perpetual habitat management of the three Conservation and Management Areas. The management costs for the first year will be provided up front.

3. To improve SKBR habitat conditions in the Conservation and Management Area, the RCA will conduct vegetation management actions in advance of, or in addition to, the activities described in Section 5.2 of the MSHCP. Vegetation management actions will be described in the RCA's Vegetation Control Work Plan. Management activities will be used to reduce or eliminate vegetative barriers to kangaroo rat movement and increase habitat quality by controlling nonnative grasses. Vegetation management activities will be conducted as needed, with the initial focus on areas that are currently overgrown or are a barrier to SBKR movement.

   The Vegetation Control Work Plan will be reviewed and approved by the PSFWO prior to initiation of project construction. The EMWD will provide a one-time endowment in the amount of $502,974.00 to the RCA, in advance of ground disturbance by the project to fund the management actions taken in advance or in addition to those required by the MSHCP. The management costs for the first year will be provided up front.

4. A total of 29.8 acres, including 3.4 acres northeast of Well Site 6 in Conservation and Management Area 1 and 26.4 acres in Conservation and Management Area 2 (Figure 5), will be restored in accordance with the Hemet/San Jacinto Integrated Recharge and Recovery Program Final Mitigation Plan (HELIX 2011).

5. To encourage SBKR movement between the active floodplain and habitat outside of the flood control levee, EMWD will provide three "habitat ramps" leading from the floodplain to the top of the levee. Two existing ramps (existing dirt roads) to the recharge site will serve as habitat ramps. One additional ramp will be constructed by EMWD to connect the 3.4-acre restoration area outside of the levee to the river. All ramp surfaces will be constructed of native soil and not be topped with decomposed granite, gravel, or another "all-weather" surface to encourage use by SBKR.

6. To enable SBKR across the Grant Avenue Recharge Ponds intake canal and facilitate SBKR movement and genetic exchange up and downstream from the recharge basins, EMWD will temporarily leave canal sediments within the intake canal, at the location shown on Figure 4, call-out 6 (approximately 33°45'09.67" N latitude and 116°52'28.09" W longitude), to create a roughly 10 foot-wide, flat surface or gentle slope, at the end of each winter recharge season;

   a. The flattened areas will be created after recharge activities are over for the season each year or by April 1, whichever happens later. The sediment in the canal will remain

until the beginning of the winter recharge season or December 1, whichever happens first, and;

b. This practice will continue as long as the Grant Avenue Recharge Ponds are in use. At no time in the future will the intake canal or its levels be hardened to make them impervious to water or weather.

7. To minimize incidental take of SBKR during initial recharge basin construction and return SBKR to an historically occupied area, EMWD will contract with Dr. Debra Shier, or another agreed upon scientist with demonstrable success relocating kangaroo rat populations, to capture SBKR from the footprint of the recharge basins and relocate them to the unoccupied portion of Conservation and Management Area 3. SBKR will be trapped and relocated, or taken into captivity for release in appropriate weather, prior to ground-disturbing activities as described in the translocation plan [Translocation of the Endangered San Bernardino Kangaroo Rat (*Dipodomys merriami parvus*)] prepared by Dr. Shier and dated December 16, 2011;

   a. Up to 300 SBKR will be trapped for relocation prior to vegetation clearance or other ground-disturbing activities. A period of up to 3 weeks with no precipitation will be needed to remove the SBKR from the project footprint. The entire project footprint will be cleared of vegetation the day after trapping efforts are completed;

   b. Captured SBKR will be held until weather conditions are appropriate for release; (i.e. overnight temperatures above 40°F most nights, and a period of 2 weeks without precipitation). Holding conditions are described in the translocation plan (see appendix);

   c. The captured animals will be released into 1 to 3 areas (depending on the number of animals captured). The relocation sites will be selected in the field jointly by Dr. Shier, or the agreed upon scientist, the RCA's land manager, and staff from the PSFWO. One of the relocation sites will be the north eastern terrace of the upstream-most parcel (Figure 6). The relocation site(s) will be prepared by the RCA to the specifications of Dr. Shier or the agreed upon scientist;

   d. The relocated animals will be monitored by Dr. Shier or another approved scientist for 5 years;

   e. EMWD shall enter into a contract to fund the 5-year translocation project with the San Diego Zoo Institute for Conservation Research, or other agreed upon entity or scientist in the amount of $363,899.34. A copy of that contract shall be provided to the PSFWO for approval prior to ground-breaking activities.

8. No new structures will be placed in the 35-acre recharge area, excepting pipelines to deliver water to the recharge basins.

9. EMWD will not channelize flows from the San Jacinto River or its tributaries to protect recharge basin berms. The basins will be constructed to withstand smaller (less than 10-year) flood events without channelization.

10. Prior to commencement of clearing and/or grading for each project element in suitable habitat, the construction footprint will be flagged by one or more PSFWO-approved biologists familiar with SBKR habitat requirements (SBKR biologist) to delineate the boundary of the construction footprint. The name, contact information, and qualifications of the SBKR biologist will be submitted to the PSFWO for approval. All movement of construction contractors, including ingress and egress of equipment and personnel, as well as any staging and storage areas, will be limited to the designated construction footprint. A SBKR biologist will be on site during initial clearing activities and at least 2 non-consecutive days each week during the remainder of construction activities to ensure that no impacts occur outside the construction footprint. Any material used to delineate the project boundary will be removed once construction is completed.

11. To minimize and track incidental take of SBKR during routine repairs (e.g. pipeline repair) in conservation areas outside of the flood control levee, EMWD will restore any habitat impacted by the repairs in a manner consistent with the Restoration Plan in conservation measure number 4 above.

    EMWD will impact no more than 0.33 acres of suitable SBKR habitat annually outside the flood control levee. Impacts will be photographed and described in a report submitted to the Service at the end of each calendar year.

12. To ameliorate impacts to SBKR and other species, EMWD and the SBKR biologist will ensure that any lighting used during facility construction or operation, including well sites, is directed away from the Conservation and Management Areas or any other surrounding habitat.

13. To ameliorate impacts to SBKR individuals during basin repair following floods, EMWD will reform the berms and basin within 60 days of when water ceases to flow across the recharge site.

14. To limit indirect impacts to SBKR habitat downstream of the recharge basins, EMWD will clean basins of fines regularly and specifically prior to the rainy season. All fines will be hauled off site.

15. The SBKR biologist will have the authority to halt work if it is determined that the construction activities have exceeded the authorized footprint or minimization measures are not being followed.

16. Best management practices to prevent discharge of hazardous materials associated with use and maintenance of construction equipment will be followed pursuant to the guidelines in the RCFCD management plans.

Action Area

According to 50 CFR § 402.02, pursuant to section 7 of the Act, the "action area" includes all areas to be affected directly or indirectly by the Federal action. Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon the action area. For purposes of our analysis, we have defined the action area to encompass the Conservation and Management Area, the recharge basin, and well sites and pipeline footprint in the San Jacinto River floodplain and in adjacent habitat outside of flood-control levees from the Main Street (Lake Park Drive) bridge upstream to the San Jacinto Aggregate Mine Inc, mine (Figure 1). The action area encompasses approximately 580 acres. The action area considered in this biological opinion is larger than the action area considered in the 2010 biological opinion because the proposed conservation area is larger.

STATUS OF THE SPECIES

Listing Status

SBKR was emergency listed as endangered on January 27, 1998 (Service 1998a), and listed as endangered on September 24, 1998 (Service 1998b). Critical habitat for SBKR was initially proposed on December 8, 2000 (65 FR 77178), and designated on April 22, 2002 (67 FR 19812). Critical habitat for the SBKR was subsequently re-proposed on June 19, 2007, and a final designation of the revised critical habitat was published on October 17, 2008 (72 FR 33808 and 73 FR 61936, respectively). In 2009, a lawsuit was filed challenging the 2008 critical habitat designation. On January 8, 2011, the court vacated the 2008 critical habitat designation and reinstated the 2002 critical habitat designation.

We completed a 5-year review of the status of SBKR in August 2009, which recommended no change in its listing status (Service 2009). Please see the recent 5-year review for more specific information on the subspecies description, habitat affinities, life history, status and distribution, threats, and conservation needs of the SBKR across its current range (Service 2009). Additional information is also available in the 2002 final rule to designate critical habitat (67 FR 19816-19817). Both documents are available at http://www.fws.gov/ecos/speciesProfile.

Habitat Affinities

In our recent 5-year review and critical habitat rules, we described the preferred substrate used by SBKR as well-drained, sandy substrates where they are able to dig simple, shallow burrow systems (Service 2009). This preference has been further supported by recent studies in which the distribution and abundance of SBKR was negatively correlated with a high percentage of rock and cobble in the substrate (Service 2010), which is thought to prevent successful burrow

construction. Comparisons of capture locations over time suggest that SBKR may not use the rocky, active channel habitats year-round, but instead only for travel or seasonal foraging (Service 2010).

We have previously described the dominant vegetation type in which SBKR occurs as Riversidean alluvial fan sage scrub (Service 2002, Service 2009). We now use the term "scalebroom scrub" (*Lepidospartum squamatum* Alliance, Sawyer et al. 2009) to identify the dominant vegetation type in floodplain areas occupied by SBKR.

Within the geographic range of the SBKR, the appropriate mix of sandy soils and low density shrub cover most frequently occurs in scalebroom scrub. This vegetation community is found in braided channels (alluvial fans) that are created by sediment transport and scour from mountain drainages. Scalebroom scrub is characterized by low-growing shrubs and other perennial species tolerant of a relatively sterile, rapidly draining substrate and includes elements from chaparral, coastal sage scrub, and desert communities (Holland 1986). The three described phases (pioneer, intermediate, and mature) of scalebroom scrub correlate with flood intervals and overbank flows as determined by elevation and distance from the main river channel (Smith 1980, Hanes et al. 1989). Under natural conditions, flood waters periodically overtop or break out of scalebroom river channels in unpredictable spatial and temporal patterns that scour the vegetation and transport/deposit sands. The various stages of pioneer, intermediate, and mature scalebroom scrub, which SBKR relies upon, are dependent on differences in flooding frequency and intensity within the floodplain (Burk et al. 2007). Apart from the disturbance-associated rejuvenation of the vegetation, scalebroom scrub is highly correlated with changes in soil texture and organic matter associated with flooding events in the floodplain (Burk et al. 2007). In this regard, even small flood events can improve SBKR habitat within the alluvial river channels by washing fine sediments and organic particles from the sand dominated substrates required by SBKR.

SBKR density is highest in areas with low to moderate (30 to 50 percent) perennial vegetative cover and greater than 40 percent bare ground although this subspecies can occur within areas supporting higher or lower shrub cover. Areas with a dense cover (greater than 60 percent) of nonnative annual plants and/or litter are typically either unoccupied by SBKR or occupied at low densities. Suitable shrub habitat for SBKR can contain a range of herbaceous vegetation cover and sand depth (McKernan 1997, MEC Analytical Systems 2000a).

High densities of SBKR have been documented in pioneer and intermediate scalebroom scrub, which generally correlate with areas that have been more-recently disturbed by floods (within the last 40 to 70 years) (McKernan 1997). The pioneer phase is subject to frequent disturbance, and vegetation is characterized by sparse shrub and forb cover (Smith 1980, Hanes et al. 1989). The intermediate phase, which has an intermediate density of shrubs and sparse forb cover, is typically found between the active river channel and mature floodplain terraces at higher elevations. The late successional or mature phase occurs in areas infrequently affected by flooding (e.g., upper alluvial terraces) and, as a result, has the densest shrub cover (Smith 1980, MEC Analytical Systems 2000b). Areas with mature, dense shrub cover are generally occupied at low densities by SBKR with animals found in scattered microsites (pockets or patches) with

more-open shrub cover and loose, sandy soils (Braden and McKernan 2000). Areas that receive annual or nearly annual flooding are classified as open channel and are not suitable for SBKR.

The presence of all successional stages of scalebroom scrub is required to maintain SBKR persistence through flooding cycles (Service 2002). Large flooding events can temporarily eliminate SBKR from densely occupied habitat in pioneer and intermediate successional scalebroom scrub. During these flooding events, upland terraces with mature scalebroom scrub act as refuge ("upland refugia") for SBKR. In manipulated systems, areas that were historically within the floodplain, but are now protected from flooding by flood-control structures, may function as upland refugia depending on their connectivity to the remaining floodplain. As flood waters subside and scalebroom scrub begins to return, SBKR will naturally disperse from unaffected mature scalebroom scrub and recolonize the preferred pioneer phase of scalebroom scrub. With favorable climatic conditions, SBKR density within the lower floodplain will increase dramatically. Because mature scalebroom scrub supports only low densities of SBKR, persistence is dependent upon immigration from higher density occupied habitat in pioneer and intermediate scalebroom scrub. Therefore, areas that include a mosaic of scalebroom scrub successional stages have increased ability to support populations through such events.

Distribution in the Vicinity of the Action Area

The San Jacinto River population, including the river and major tributaries (e.g., Bautista Creek), represents the only SBKR population in Riverside County and southern limit of the range. SBKR occur within the floodplain along a linear distance of 13 miles. At the time of listing, this population was estimated to include 350 acres of occupied habitat. This population has been affected by flood control projects and subsequent agricultural and residential development in upland areas, in-stream aggregate mining, water conservation projects, and OHV use.

In the vicinity of the action area, SBKR are known to occur along Bautista Creek, though the SBKR along this tributary are separated from the larger concentrations of SBKR within the action area by a cement-lined channel, agricultural operations, and residential development (PCR Services Corporation, Inc. 1999). In addition, SBKR have been captured in scattered pockets downstream of the action area from below the Main Street Bridge to the confluence of Potrero Creek and San Jacinto River (Ecological Sciences Inc. 2008, Entrix 2010).

In 2009, an additional area of occupied habitat was identified across the northeastern levee that separates Soboba tribal property from the active floodplain of the confluence area. This patch surrounds the trailer park on Soboba tribal fee property along Main Street Drive and is contiguous to the action area for this biological opinion. Several SBKR observations were made during trapping efforts from August through October (Entrix 2010). The trapping effort was conducted in association with a Soboba Tribal Fee-to-Trust action. As part of that fee-to-trust action 29.88 acres of upland habitat located adjacent to the San Jacinto River, above the flood control levee will be conserved and managed.

Threats to the Species in the Vicinity of the Action Area

Threats to SBKR in the vicinity of the action area include habitat loss, destruction, degradation, and fragmentation due to aggregate mining operations, flood control projects, ground-water pumping, groundwater recharge, road crossings, OHV use, agriculture, and urbanization.

Loss and fragmentation of habitat for SBKR continues as the human population increases and urbanization expands in southern California. The population of Riverside County in 2000 was approximately 1.5 million people, which is expected to double by 2020 to reach approximately 3.5 million by 2030 and approximately 4.5 million by 2040, according to forecasts by the Southern California Association of Governments (SCAG). The projected population growth is nearly a 400 percent increase over the next 40 years. Most of southern California's growth over the next 40 years is expected to occur in the Inland Empire (San Bernardino and Riverside Counties) (SCAG 2001).

The SBKR population remaining in the San Jacinto River has been fragmented by flood control structures (e.g. Bautista Creek debris basin and flood control channel, Meridian Channel), an abandoned in-stream aggregate mining pit and groundwater recharge activities (Grant Avenue Recharge Ponds intake canal). The remaining SBKR occurrences are at risk due to their small size and isolation. Small populations have a higher probability of extinction than larger populations because their low abundance renders them susceptible to: 1) demographic variability in which reproduction and survival rates fall too low to sustain a limited population; 2) environmental variability due to changes in habitat parameters, predators, competitors, parasites, and disease; 3) natural catastrophes such as floods and droughts; and 4) genetic variability that results from changes in gene frequencies following founder events or inbreeding (Shaffer 1981). SBKR appear particularly vulnerable to population isolation because their life history necessarily subjects them to environmental variability (maturation of scalebroom scrub) and natural catastrophes (flood and drought). With an intact network of accessible habitat patches, events that cause local extirpation are quickly overcome by dispersal from neighboring patches, but recolonization following local extirpation becomes less likely with increased population isolation (Fahrig and Merriam 1994). Small population and isolation together are especially problematic because small populations are particularly vulnerable to local extirpation, and increased isolation reduces the likelihood of demographic augmentation or reintroduction from nearby occupied habitat.

Flood control projects, intended to protect agricultural and residential development, have constrained the historic floodplain, and the subsequent agricultural operation and residential development have degraded or eliminated habitat that likely included all stages of scalebroom scrub. SBKR habitat has been constrained by channelization along lengthy stretches of the San Jacinto River. The combination of a concrete channel and development for residential and agricultural uses has effectively fragmented patches of suitable scalebroom scrub in Bautista Creek and the San Jacinto River and eliminated most of the upland refugia habitat associated with the river OHV activity degrades habitat quality by removing vegetation and disturbing soil within most of the areas that supports early successional scalebroom scrub and areas of refugia

habitat with mature scalebroom scrub. Construction and operation of current and former water recharge projects have altered flow patterns and degraded and eliminated habitat within the historic floodplain.

The function of fluvial processes within in the San Jacinto River has been degraded by the operation of an in-stream aggregate mining operation. Although the mining operation was terminated in 2008, a large mining pit remains within the active floodplain. This mining pit has severely altered the fluvial dynamics that historically maintained the braided channels within the San Jacinto River and has caused significant head-cutting upstream. Residential development and water recharge projects reduced the area covered by braided channels and a mosaic of scalebroom scrub successional stages, and upstream channel downcutting from the mining operation has eliminated fluvial dynamics that could maintain any remaining areas with braided channels. Fluvial processes have also been altered downstream from the mining operation; however, braided channels and a diverse scalebroom scrub assemblage remain due to the influence of sediment-rich flows from Bautista and Poppet creeks.

Conservation Needs in the Vicinity of the Action Area

To maintain or improve the status of SBKR, occupied areas need to be protected and managed to increase the distribution and abundance of the species. Populations in the San Jacinto River and its tributaries should be independently viable with stable or increasing numbers (i.e., exhibiting demonstrable long-term reproductive success). The natural ecosystem processes necessary to maintain viable, dynamic mosaics of habitat for SBKR must be maintained or improved in each conservation area. Such conservation need includes maintenance of a natural fluvial regime or a managed alternative that periodically results in scouring, sand transport and deposition, and plant community responses similar to those achieved under a natural fluvial regime. Long-term viability for all populations also depends on maintenance of adjoining occupied refugia habitat outside of active floodplains to provide sources of animals to recolonize pioneer and intermediate scalebroom scrub following major flooding events.

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 that are contemporaneous with the consultation in progress.

The SBKR population in the San Jacinto River and its tributaries is one of the three largest remaining populations of SBKR. It is the only population outside of the watershed of the Santa Ana River. The action area supports the two largest concentrations of SBKR in the San Jacinto River watershed. These are located in the confluence area and on the south side of the floodplain upstream of the Grant Avenue Recharge Ponds. Because the action area for the proposed project

contains most of the distribution of the San Jacinto River SBKR population, the status of that population is more fully discussed here.

On June 22, 2004, a section 10(a)(l)(B) permit was issued for the MSHCP (Dudek and Associates 2003, Service 2004). The MSHCP was designed to address the impacts of urbanization on "covered species" in a 1.2 million-acre plan area. The MSHCP established a multiple species conservation program to minimize and mitigate habitat loss and the incidental take of covered species in association with activities covered under the permit. The SBKR, which is a covered species, is subject to impacts associated with development and other "covered activities" conducted by the Permittees outside of the defined MSHCP Conservation Area. The known SBKR locations and habitat along the San Jacinto River, including the area of the proposed action, were anticipated to be included in the MSHCP Conservation Area as either new reserve lands or existing Public/Quasi Public Lands as part of MSHCP permit implementation (Service 2004).

Upon issuance of the 2006 biological opinion, occupied habitat was eliminated outside of the levee near the proposed recharge basin footprint. Construction of Well Site 4, which was addressed in the 2006 biological opinion, eliminated 0.86 acres of occupied-SBKR habitat. Construction of Well Site 6, which was not addressed in the 2006 biological opinion, eliminated 0.84 acres of SBKR habitat.

Since the 2006 biological opinion was issued, additional biological information has been generated. Trapping was conducted in 2008 for the 2010 biological opinion and trapping was conducted in the action area in 2011 to provide data for abundance and distribution estimates throughout the action area. We now have estimates for the total number of SBKR within the action area and where these individuals are concentrated.

Within the floodplains of the San Jacinto River and its tributaries, SBKR have been detected on multiple occasions since formal surveys began in the late 1980s. Although small patches of occupied habitat have been detected downstream (Helix Environmental Planning, Inc. 2005, 2006; Ecological Sciences, 2008) and upstream (AMEC Earth and Environmental 2005, MSHCP Biological Monitoring Program 2011 unpublished data) of the action area along the San Jacinto River, recorded SBKR observations are concentrated within the action area, specifically within the confluence area (i.e. the area where Bautista Creek, Poppet Creek, and Meridian Channel enter the river) and upstream of the Grant Avenue Recharge Ponds. SBKR persistence within the smaller habitat patches within and adjacent to the action area depends upon immigration from the two larger habitat patches (i.e., confluence area and upstream of the Grant Avenue Recharge Ponds) because the extent and suitability of these smaller habitat areas are limited due to flood control and water recharge projects, OHV use, aggregate mining, the presence of nonnative annual grasses, and indirect effects of mining on fluvial processes.

Prior to the trapping program described below, no reliable estimates of SBKR density existed for the action area and adjacent portions of the San Jacinto River, though based on a combination of trapping and habitat assessment, McKernan (1997) concluded that density and total population

size was smaller in the San Jacinto River than the other two large core populations (Santa Ana River and Cajon/Lytle creeks). McKernan (1997), Dudek and Associates (1999), and Helix Environmental Planning (2003) each estimated that approximately 350 acres of occupied habitat remain along the San Jacinto River. Although the estimated distribution of occupied SBKR habitat varied substantially in these reports due to changes in the distribution of pioneer and intermediate scalebroom scrub following flooding events, all occupied habitat was thought to be within or near the action area defined for this opinion.

For the purposes of the 2010 biological opinion, EMWD conducted an SBKR trapping program in 2008 to provide more accurate information than was previously available. The goal of this trapping effort was to estimate SBKR distribution and abundance throughout the action area. As the basis for extrapolation of results to each trapping area, grids were randomly placed within the trapping areas (except for Well Sites 4 and 5) and collectively covered a minimum of 10 percent of each trapping area. For Well Sites 4 and 5, grids were set out within or as close as possible to the project footprint. For areas not sampled directly, density estimates were extrapolated by averaging the density estimates from neighboring trapping areas. To ensure equal comparisons and because all trapping was not conducted at the same time of year, density and abundance estimates were based solely on captures of SBKR adults.

After it was apparent that the take allocated in the 2010 biological opinion likely would be exceeded, we requested additional trapping be conducted to determine if the increase in kangaroo rat sign in the recharge basin footprint was the result of an increase in SBKR numbers in the confluence area or if the increase in kangaroo rat sign represented local colonization by refugee animals from the higher-than-average 2009 and 2010 river flows or both. It was agreed that data from the existing Monitoring Program effort would be used. Use of the Monitoring Program data necessitated a change in sampling protocol from the 2008 effort. Grids were randomly placed in the confluence area (from the gravel mine downstream to the Main Street Bridge). In a separate effort, the Conservation and Management Area upstream of the confluence of Bautista Creek was also trapped. The Conservation and Management Area is long and linear, so trapping grids were randomly placed in four geographically stratified areas. Some portions of the Conservation and Management Area were not sampled directly, for those areas, density estimates were extrapolated by averaging the density estimates from neighboring trapping areas.

Both the 2008 and 2011 trapping efforts yielded abundance indices. However, the change in sampling methods (trap distribution and grid size) between the 2008 and 2011 trapping efforts means that the data yielded in those efforts are not precisely comparable and for evaluation purposes, they should be considered relative measures of abundance, not precise values.

SBKR are relatively easy to capture using typical small mammal live-trapping techniques (Service, 2010), and high recaptures of marked animals suggest that both trapping programs were efficient at detecting individuals within the survey grids. Therefore, SBKR abundance and distribution estimates were probably not significantly biased due to poor detectability of animals.

Using mark-recapture methods, accurate estimation of density relies on knowledge of the effective trapping area for each trapping grid, which includes the area within the grid itself and the area surrounding the grid from which animals are drawn to traps (White et al. 1982). Because the effective trapping area can be difficult to estimate, we defined the trapping area as the area within the grid footprint itself. In reality, some SBKR are likely to have had use areas that extended beyond or only partially overlapped the grid within which they were captured. Thus the effective trapping area for many, if not all, of the grids is likely to have extended beyond the footprint of the grid. This conclusion is particularly true of the 2011 effort, because the grid size was relatively small. Our estimates, therefore, likely overestimate SBKR density within each sample grid (White et al. 1982, Service 2006). We recognize that an estimate of individuals is based on a snapshot in time. However, these estimates represent the best information available for evaluating project impacts and, by assuming the effective trapping area was roughly equal for all grids in each effort (not across trapping efforts), a direct comparison of abundance across the sample areas can be made.

We estimate that there are approximately 370 acres of occupied habitat and 4,815 SBKR individuals in the action area (Table 1). Of the estimated number of individuals, 2,966 SBKR occupy the confluence area (SBKR Management Area 1 and the recharge basin site); including 516 within the proposed recharge basin footprint and 141 within the upland refugia outside of the flood control levee. An estimated 1,849 SBKR inhabit the approximately 102 acres within the action area upstream of the Bautista Creek confluence (SBKR Management Areas 2 and 3).

Confluence Area (SBKR Conservation and Management Area 1)

The confluence area is the area of the river from the SJAM mine downstream to the Main Street Bridge (Figure 1). The confluence area includes land within the active San Jacinto River floodplain, as defined by an existing flood control levee, and adjacent undeveloped upland refugia habitat. The proposed recharge basin footprint and proposed SBKR Conservation and Management Area 1 are within the confluence area (Figure 1). The existing well sites and associated infrastructure, and pipeline alignments are within the upland refugia portion of the confluence area.

Confluence Area- Floodplain

The active floodplain within the confluence area includes a mix of open channel and all stages of scalebroom scrub (pioneer, intermediate and mature) necessary to support SBKR. Based on aerial photography, the floodplain in this area was historically substantially wider, but levees have confined the floodplain to its existing width of approximately 1,411 feet by 1962 (KCT Consultants, Inc. 1998). The SJAM mine pit captures most flows from the San Jacinto River; however, flows from Bautista and Poppet creeks maintain scouring and sediment deposition patterns so that the various stages of scalebroom scrub are sustained. During large flood events, water overtops the mining pit causing bank to bank flooding in the confluence area floodplain that can result in a temporary loss of scalebroom scrub.

Based on the 2011 sampling effort, we determined that 194 acres of occupied habitat remain within the confluence area floodplain. We estimate that 2780 adult SBKR inhabit the active floodplain of the confluence area (Table 1).

The trapping results show that SBKR density is unevenly distributed within the confluence area floodplain (Figure 7; Table 1). SBKR density is lowest (estimated at 1.7 to 2.5 animals per acre) along the northeastern bank of the floodplain, where the low-flow channel restricts vegetative growth. Along the southwestern bank, SBKR density is highest on the low terrace near the confluence with Bautista Creek (an estimated 25.7 animals per acre), and drops moving downstream to the Meridian Channel (an estimated 16.2 animals per acre), and towards the main street bridge (an estimated 5.7 animals per acre). The low terrace near the confluence with Bautista Creek is the project site evaluated in the 2010 biological opinion. The density of SBKR found on this terrace in 2011 demonstrates the importance of in-stream terraces during moderate flood events.

Confluence Area- Upland Refugia

A flood control levee near the southwestern edge of the confluence area separates the upland refugia from the active floodplain (Figure 3). The flood-control levee is sloped at approximately 2:1, constructed of grouted rip-rap, and is approximately 20-feet high on the floodplain side. Along the upland refugia side, the earthen levee has a slope of 3:1 and is approximately 10-feet high.

The upland refugia have experienced varying levels of habitat degradation in the recent past and can be divided into 3 distinct areas. We estimate that 9.1 acres of relatively undisturbed, occupied SBKR habitat remain that support a high density of SBKR (see trapping results below). An additional 3.4 acres of land remains undeveloped (Figure 5), but due to recent agricultural use this area will not support SBKR without a targeted habitat restoration program. The proposed Ramona Expressway alignment is known to be occupied by SBKR. Project-related infrastructure will be installed in these areas.

In 2011, only one grid was placed in the upland refugia just outside of Well Site 5, which was constructed at the time of trapping. Prior to construction of Well Site 4, a total of 13 SBKR were trapped within the project footprint and released in neighboring habitat. The density derived from the 2011 abundance index is consistent with the density estimate calculated in 2008 (approximately 15 animals per acre).

Using the trapping results from the well sites, we estimate 141 adult SBKR inhabit the 9.1 acres of relatively undisturbed upland refugia within the confluence area. The density of SBKR within the upland refugia is high given our understanding of SBKR life history. In the absence of recent floods, we would expect lower densities in upland refugia than active floodplains.

Existing habitat fragmentation has impaired the function of upland refugia for SBKR in the confluence area. The Meridian Channel bisects the remaining SBKR habitat within the upland

refugia, and we expect little to no SBKR movement across the channel because the channel is a concrete-sided box. When we issued the 2006 biological opinion, we did not identify the Meridian Channel as an impassable barrier for SBKR. Thus, the upland refugia is separated into a section northwest of the Meridian Channel and a section southwest of the channel with limited access across the flood control levee to each section (Figure 3). SBKR from the parcel northwest of the Meridian Channel may now follow the alignment of the channel and cross into and out of the floodplain downstream of its outlet where a 1,107-foot strip of levee separates the floodplain from the upland refugia. Well Sites 4 and 6, the buildings and surrounding near-vertically sloped gravel borders, impede or eliminate SBKR movement. SBKR movement between known occupied habitat within the floodplain and the upland refugia southeast of the Meridian Channel is limited to an approximately 1,854-foot strip of land. Any other potential movement corridors between the floodplain and upland refugia require SBKR to move through degraded areas that have recently been used for agriculture or have otherwise been disturbed such that they are no longer suitable for SBKR. Although we are not aware of any data that quantify the impact of levees on SBKR movement for this, or any other, population, we expect that the steep slopes and grouted rip-rap (on the floodplain side) impede movement between the floodplain and upland refugia to some degree.

SBKR Conservation and Management Area 2

The 1.6-mile stretch of the San Jacinto River between the Grant Avenue Recharge Ponds and the confluence area contains the abandoned gravel mine and the Cienega Well field (Figure 1). Natural river hydrology has been severely affected by the in-stream mining pit. The mining pit has effectively lowered the river channel elevation and increased stream flow velocities that in turn have increased the rate of sediment scouring. These effects have resulted in significant head cutting upstream of the gravel mine along the entire length of the river in SBKR Conservation and Management Area 2.

This stretch is the most patchily occupied portion of the action area. The stretch contains a mix of suitable and occupied areas vegetated by intermediate to mature scalebroom scrub and unsuitable areas where there is enough moisture for the development of riparian trees and areas heavily invaded by nonnative annuals. Based on the 2010 trapping results, we estimate that SBKR Conservation and Management Area 2 support a total of 749 adult SBKR within 52.75 acres (50 percent of the area). Estimated densities range from 5 to 25 animals per acre. This stretch connects the two most densely populated portions of the river (i.e. confluence area and upstream of the Grant Avenue Ponds). Connectivity is confined by the in-stream mining pit and the Cienega Well field. Incision of the river channel upstream of the mine pit has significantly lowered the elevation of the low-flow channel and left the SBKR in SBKR Conservation and Management Area 2 upstream of the mine on a perched terrace. Head-cutting in the river has also caused storm water runoff from an adjacent neighborhood to develop a deeply incised erosional feature. This feature creates an additional barrier to SBKR movement.

Upstream of the Cienega Well field are abandoned recharge basins that were historically operated by the Fruitvale Municipal Water Company. Remnant infra-structure (berms, pipes)

exist in the central portion of this area. Two urban storm drains discharge flows across this area and provide desirable scouring and sediment transport. In addition, nonnative grasses and mustard (*Hirschfeldia incana*) have heavily invaded this stretch. Approximately 20 acres of this area is above the mapped FEMA 100-year floodplain and though, occupied, this area is impacted by nonnative grasses. Long-term persistence of SBKR in the area is doubtful without control of invasive nonnative species.

SBKR Conservation and Management Area 3

SBKR Conservation and Management Area 3 includes the stretch of the San Jacinto River floodplain that extends from the confluence of the San Jacinto River and Indian Creek, upstream past the Grant Avenue Recharge Ponds to the limits of the proposed conservation. This area includes an existing 15-acre conservation area conserved consistent with the terms of the test pond consultation (Figure 1). We estimate that the Grant Avenue Recharge Pond area supports a total of 1100 adult SBKR within 49 acres of suitable habitat (31 percent of Conservation and Management Area 3). Our estimate is based on the 2011 trapping effort.

Conservation and Management Area 3 includes a matrix of unsuitable (heavily invaded by nonnative grasslands, open channels where there is little or no vegetative cover or cobbley soil or riparian) and suitable (intermediate to mature scalebroom scrub) SBKR habitat. The Grant Avenue Recharge Ponds were constructed in the early 1950s and have been operated as a recharge facility ever since. The presence of the basins has confined and narrowed the flow patterns adjacent to the recharge area. To support recharge operations, natural flows are diverted into the recharge basins from the San Jacinto River via an intake canal. The intake canal is a barrier to SBKR movement. One dirt road crosses this facility.

Head cutting from the mine has lowered the elevation of the low-flow channel of the river. This ongoing impact has required that EMWD move the diversion from the river into the intake canal upstream to achieve gravity flows into the recharge ponds. The diversion into the intake canal is currently in an area vegetated by tree-dominated riparian vegetation. The lower river elevation also has entrained upstream fluvial processes, which has limited the development of pioneer or early successional scalebroom scrub. Additionally, loss of broadly distributed disturbance by water flow patterns has resulted in the successful colonization of most of the area by nonnative grasses. Few patches of pioneer scalebroom scrub remain in the action area upstream of the Grant Avenue Recharge Ponds. The lack of pioneer scalebroom scrub in Conservation and Management Area 3 may account for the reduced occupation (about 70 percent) of the area. As a result, we anticipate that without management the remaining intermediate scalebroom scrub will convert to mature scrub over time and support fewer SBKR.

Overall Summary of SBKR Habitat within the Action Area and Changes from the 2008 and 2010 Analyses

The results of the 2008 surveys conflict with some assumptions used in our original analysis of the proposed project for the 2006 biological opinion. Based on habitat conditions and the limited

survey information available at the time, we initially expected that SBKR abundance within the floodplain was sufficient to sustain a population over the long-term even with the loss of individuals within the 35 acres of ponds; however, the 2008 data indicated that approximately 372 SBKR existed in the confluence area, which left the floodplain SBKR susceptible to extirpation due to small population size. The 2011 data indicated that there were more than 2,000 SBKR in the confluence area.

Based on existing habitat conditions throughout the confluence area, we originally assumed that SBKR were evenly distributed throughout the floodplain and that density within the upland refugia was low. However, both the 2008 and 2011 survey results conflict with this assumption. SBKR densities within the floodplain were found to be lowest along the northeastern bank of the floodplain, where the low-flow channel restricts vegetative growth. In 2008 SBKR density was found to be relatively low near the confluence of Bautista Creek (Survey Area D, Figure 7), highest in the central portion of the southwestern bank, and intermediate farther downstream near the Main Street Bridge (Survey Area B, Figure 7). In 2011 after 2 winters of moderately high flows, SBKR densities were again the lowest along the northeastern bank of the floodplain, but in contrast with the 2008 distribution, SBKR density on the terrace near the confluence of Bautista Creek was very high (Survey Area D, Figure 7). SBKR density then tapered to high in the central portion of the southwestern bank, and intermediate farther downstream near the Main Street Bridge (Survey Area B, Figure 7).

The proposed recharge basin footprint includes less than 10 percent of the confluence area floodplain. The project site considered in the 2010 biological opinion supported 3 percent of the SBKR in the confluence area. The 2011 survey data indicated that that same area supported 1,087 SBKR, or 38 percent of the animals in the confluence area. The currently proposed project area is estimated to support 516 SBKR or 18 percent of the animals in the confluence area.

Also, we expected in our 2006 biological opinion that no more than 3 SBKR would occur within the entire 5-acre area proposed for construction of wells and associated pipelines in the adjoining upland habitat. Trapping data from 2008 and 2011 indicated a density of more than 15 animals per acre (15.6 and 15.5 respectively) in the upland refugia areas.

We considered the confluence area to be central to the survival of the SBKR population in San Jacinto River in our 2006 biological opinion. Both the 2008 and 2011 trapping data support this assertion. We originally considered the area important because it: 1) is within the widest stretch of active floodplain in the San Jacinto River that supports SBKR and contains the largest contiguous stretch of occupied habitat; 2) is the only occupied area in the river that maintains fluvial processes that support all phases of scalebroom scrub; 3) is consistently occupied by SBKR according to trapping results from the mid-1980s to the present; 4) likely serves as the source that maintains SBKR in other habitat patches; and 5) maintains connectivity to occupied habitat in upper terraces that are not subject to frequent flooding.

The 2008 trapping results indicated that the confluence area supported more than 50 percent of the SBKR individuals in the floodplain portion of the action area and more than 75 percent of the

individuals when combined with the adjacent upland refugia habitat. In the 2010 biological opinion, we assumed that the distribution of occupied habitat within the confluence area would vary over time according to flooding history but that large areas of contiguous occupied habitat persist in most years, which is consistent with trapping results (Dudek and Associates 1994, 1997, 1998, 2000; Vergne 2000; Helix Environmental Planning Inc. 2003). This expectation was borne out by the 2011 trapping data, which indicate that the confluence area contains almost 58 percent of the SBKR individuals in the floodplain portion of the action area and more than 60 percent of the individuals when combined with the adjacent upland refugia habitat (Table 1).

Within the remaining floodplain, the SJAM mine pit causes severe long-term habitat degradation (Army Corps of Engineers 1996, Predischarge Notification 96 00397 RRS; KCT Consultants, Inc. 1998). This operation has created a large pit within the San Jacinto River channel. By lowering the channel, the pit increases upstream flow velocities, which has led to severe head-cutting within the channel. Therefore, nearly all upstream flows are now constrained to the deep channel and do not break out into the braided channels that support typical SBKR habitat. Typical flows are trapped in the pit and do not deposit sediment or scour areas downstream in the confluence area. Larger flows overtop the pit and scour vegetation downstream, though these flows are starved of sediments, which fall to the bottom of the pit.

Because Bautista and Poppet creeks flow into the confluence area, scour and sediment deposition continue during smaller flood events and areas of pioneer and intermediate scalebroom scrub are maintained. However, the loss of historic fluvial processes from the San Jacinto River may result in significant sediment loss and subsequent habitat degradation in the long term. The sediment-starved flows from the San Jacinto River likely overwhelm the effects of sediment deposition from the tributaries during larger events. Finally, the mined pit and intake canal for the Grant Avenue Recharge Ponds largely isolate SBKR in the confluence area from those in the pond area. Aggregate mining operations ceased in 2008, and we expect that natural sediment deposition will eventually fill in the mine pit and largely restore natural fluvial dynamics; however, natural restoration of in-stream mine pits can take decades, depending on the sediment load of the river (Langer 2003). Thus, while the impacts of the mining operation to SBKR are not expected to be permanent, we cannot reasonably anticipate that connectivity and natural fluvial process will be restored to the benefit of SBKR for several decades.

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action that will be added to the environmental baseline. 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, are later in time, and are still reasonably certain to occur.

Direct Effects

As we described in our 2006 biological opinion, the proposed project will impact approximately 35 acres of land within the San Jacinto floodplain. Approximately 5 of those acres were impacted for a 5-acre test recharge project. As detailed in the revised project description above, an additional 0.30 acres will be impacted by pipeline laterals and access routes within the floodplain, while routine maintenance and operations activities will impact another 0.28 acres within the floodplain. This area represents roughly 30.5 acres or approximately 10.5 percent of the existing feeding, breeding, sheltering, and dispersal SBKR habitat within the confluence area. This area would be affected for the term of the Corps permit.

Under the 2006 biological opinion, CFWO estimated take as low and unquantifiable. The 2008 survey data and relocation of the project footprint resulted in an expected take of 11 individuals or 1.6 percent of the animals estimated to be present in the confluence area. The 2011 survey results indicate that the project site considered in the 2010 biological opinion is disproportionately important to SBKR in and/or after moderate storm events. To reduce the potential for take and preserve the terrace, the project was returned to its originally proposed location. The area considered as the project site in the 2010 biological opinion is within the area proposed for conservation in this action.

SBKR numbers in the action area are significantly higher in 2011 than they were in 2008. SBKR distribution also shifted. In 2008, we estimated that 263 acres in the confluence area were occupied. We expect that this is primarily the result of two successive above-average rainfall years, which resulted in increased food availability and a shift to higher ground to avoid storm flows. We estimate that 516 SBKR occur within the proposed recharge basin footprint, which translates into roughly 18 percent of the population in the confluence area floodplain. We presume that SBKR are not occupying the remnants of the test recharge ponds in the proposed project foot print.

Floodplain Impacts

The presence of the 35-acre recharge basins in the floodplain of the river will limit the river flow patterns during small to moderate flood events, which will limit scouring and sediment deposition most years (most years have low or moderate flow events). Without the periodic scouring and sediment deposition from small to moderate flood events, the alluvial scrub downstream of the recharge basins could mature over time and support fewer SBKR. The severity of this effect will depend on the frequency and severity of larger flow events during the life of the project. The recharge basins are expected to erode and collapse during larger-than-10-year-flow events. Scouring and deposition can be expected to occur during those larger events in the downstream area that is shielded from fluvial process by the recharge basins in low-to-moderate-flow years, thereby rejuvenating downstream habitat for the SBKR.

Upland Refugia Impacts

As we described in the 2006 and 2010 biological opinions, approximately 3.14 acres of upland habitat will be temporarily disturbed during the construction of pipelines and other infrastructure within the future Esplanade Avenue and Ramona Expressway rights-of-way. EMWD may conduct routine maintenance activities within the upland refugia following construction of the facilities. These impacts will be limited to 0.33 acres annually for the term of the permit. These impacts are expected to be in different locations each year.

Offsetting Measures

Conservation and Management

To offset the loss of occupied habitat in the project considered in the 2006 biological opinion EMWD committed to the protection and management of 116.9 acres of land in four conservation areas along the San Jacinto River. The project description in the 2010 biological opinion included the protection and management of 182.0 acres, habitat restoration, and a commitment to provide for the management of the conservation areas consistent with section 5.2 of the MSHCP in addition to specific monitoring measures.

To offset the loss of floodplain habitat during operation of the recharge project, the current project description includes the permanent conservation and management of 447.08 acres, management of an additional 69.27 acres, management of 15.63 acres of existing conservation, consistent with section 5.2 of the MSHCP, and the restoration of 29.8 acres of scalebroom scrub. Management includes provisions for ongoing vegetation control activities to improve habitat quality for SBKR in the Conservation and Management Area. The Conservation and Management Area provides for unified management of 532 acres of habitat along a 5-mile stretch of the floodplain of the San Jacinto River. All but 12.5 of these acres are within the active floodplain of the San Jacinto River.

Given the dynamic nature of alluvial floodplains, habitat conditions and SBKR concentrations are expected to shift within the Conservation and Management Area. Although SBKR are currently concentrated on the south side of the confluence area and upstream of the Grant Avenue Recharge Ponds, future flood events will likely alter the landscape and SBKR will be concentrated in other locations within the floodplain. Thus the loss of any large block of habitat within the floodplain, regardless of its current condition, is likely to be significant at some point. This is illustrated by the decision to minimize the impact of basin construction in the 2010 biological opinion by moving the project footprint based on 2008 survey data, only to have survey results from 2011 indicate an increase in SBKR density of two orders of magnitude. The significant impact of the loss of the large heavily occupied 35-acre block of SBKR habitat is offset by the conservation and management of SBKR habitat within the larger floodplain matrix contained in the 532-acre Conservation and Management Area.

The natural fluvial process in the proposed Conservation and Management Area have been impaired by flood control structures, water recharge activities and the presence of the in-stream mining pit. Vegetation management activities can compensate for the impairment to some degree. Nonnative annuals can be suppressed and post-mature scale broom scrub can be mechanically thinned. The rejuvenation of alluvial soils by large flow events can not readily be mimicked by management activities, but periodic large storm events will still provide these ecological services.

The project has provided funds for the implementation of a Vegetation Control Work Plan by the RCA. Management activities conducted under the Vegetation Control Work Plan are in addition to the Management Activities described in Section 5.2 of the MSHCP. The additional management activities will focus on the improvement of SBKR habitat by the suppressing nonnative annuals and eliminating thinning stands of yerba santa (*Eriodictyon californicum*) or scalebroom. We expect the vegetation management activities will mimic the scalebroom scrub successional process that has been lost by the impairment of natural fluvial processes. This management will improve the overall quality of the habitat for SBKR in the Conservation and Management Area. We expect that areas suitable for occupation will increase in size over time. The Vegetation Control Work Plan will prioritize weed control on the release sites of the translocation project described below.

Upland Refugia

Large storm events, though important and desirable for alluvial soils regeneration, pose an inundation threat to SBKR. The proposed Conservation and Management Area includes three refugia areas where SBKR can be expected to survive large storm events; aproximately12.5 acres outside of the flood control levees in the confluence area and; approximately 10 and 20 acres above the mapped FEMA 100-year floodplain in Conservation and Management Areas 3 and 2 respectively. The upland refugium in Conservation and Management Unit 2 is occupied at low densities. The upland refugium in Conservation and Management Area 3 (Figure 6) is not occupied, but will be a receiving site for the SBKR translocation project described below. The upland refugia in Conservation and Management Areas 2 and 3 are connected to the larger river floodplain via lower terraces. We expect that SBKR populations will be able to survive large storm events in the three upland refugia areas and repopulate portions of the floodplain where SBKR have been extirpated due to flooding.

Translocation

To minimize the loss of individual SBKR during construction of the recharge basins and improve the distribution of SBKR in the proposed conservation area, the project site will be trapped and up to 300 individuals will be captured, marked and translocated into prepared sites upstream of the Grant Avenue Recharge Ponds on land that is to be conserved and managed for SBKR in perpetuity. The translocation project will be carried out by Dr. Shier of the San Diego Zoo Institute for Conservation Research, or another agreed upon scientist, as described in the translocation plan (see appendix). The captured SBKR will be relocated into areas that are now

unsuitable due to the presence of nonnative annuals (primarily grasses). The nonnative vegetation will be controlled prior to release and maintained at a density of less than 20 percent cover. The relocated animals will be held in captivity until weather conditions are appropriate for introduction into the prepared release sites. Translocated SBKR will initially be held in acclimation cages on the release sites. The translocated animals will be monitored at regular intervals (e.g., 1 month, 3 months, 6 months) post-release for the first year and once annually for 5 years to determine if the translocated animals and or their offspring persist. This method of translocation has been employed experimentally with Stephens' kangaroo rat (*Dipodomys stephensi*) and is showing success 3 years post-release (Shier 2009, 2010, 2011). The proposed release sites are within the area surveyed by the Monitoring Program and were found to be unoccupied. They were occupied at the time of listing (McKernan 1997).

Connectivity

To increase the permeability of the Grant Avenue Recharge Pond intake canal for SBKR, EMWD will alter their end-of-season management practices to provide for movement of SBKR across the intake canal when it is not in use. During the recharge season, (approximately December to April) water is conveyed from the river to the recharge basins via the intake canal. To maintain the flow of water through the canal, EMWD must remove accumulated sediment though out the recharge season. To facilitate SBKR movement across the canal, EMWD will allow river sediment to fill the canal at the end of each recharge season and the berms that edge the canal will be contoured into a gentle slope. The resulting crossing area will be 10 feet wide in the area identified in Figure 4, call-out 6. This area was selected for the crossing because the habitat on both sides of the intake canal at that location is in good condition, with little nonnative plant cover. The accumulated sediment will be used to provide a crossing at the end of every recharge season (approximately April 1). The sediment will then be removed from the canal and berms reformed at the start of the subsequent recharge season (approximately December 1). SBKR have been captured in reproductive condition during all months of the year, but reproduction peaks in June and July (Service 2009), so the additional crossing will be available to dispersing juvenile SBKR from the late spring through late fall when most of the young are produced.

The only available means of crossing the canal for SBKR now is an existing dirt road located in about the middle of the canal just south of the tribal lands boundary. SBKR can also go around the canal in the low-flow channel of the river. The change in management of the canal will provide an opportunity to cross the intake canal in an area where the existing habitat is good on both sides of the canal. Other areas were examined for the creation of additional crossings, but riparian, tree-dominated vegetation occurs on the north side of the canal for much of the reach closest to the river, making the presence of a new crossing for SBKR undesirable. The additional crossing will allow for genetic exchange across the canal and improve connectivity between the two largest concentrations of SBKR in the river.

The project will also improve connectivity between the two largest concentrations of SBKR in the action area by providing for the restoration of 24 acres of SBKR in Conservation and

Management Area 2. The restoration area is on the terraces between the active channel and the upland refugium in northern edge of the proposed conservation (Figure 5). The restoration of scalebroom scrub will improve habitat connectivity between the low-flow channel up to the upland refugium (north- south) and from the Grant Avenue Recharge Pond area to the confluence area (east-west).

Connectivity between the upland refugia and floodplain in the confluence area is hampered by the grouted flood control levee. The project access roads will provide three ramps across the grouted face of the levee. Each access road/ramp will go from the flood plan to the top of the levee (which is not grouted), allowing SBKR to move between the floodplain and the upland refugia on natural surfaces.

Summary

With or without the proposed project, SBKR in the action area are subject to two risks of extirpation. First, small populations may go extinct due to random stochastic variation or a series of poor reproductive years. Second, the interaction between in-wash habitat and upland refugia may cease to function effectively and render the population extremely vulnerable to extirpation during large flooding events. If the adjacent scalebroom scrub outside the levees no longer consistently supports SBKR or loses its connectivity to the floodplain habitat and/or if the two upstream area that are above the mapped FEMA 100-year floodplain are not managed or otherwise made suitable for SBKR, then the SBKR occupying the floodplain population will become extremely vulnerable to extirpation following large flooding events. The existing barriers to connectivity in the action area (the in-stream mining pit, the erosional feature east of the Cienega Well field, and the Grant Avenue Recharge Ponds intake canal) exacerbate both of these risks.

The conservation measures associated with the proposed project address both of these risks and offset project-related effects as well as providing measures to increase habitat connectivity for SBKR in the action area. The conservation and management of 532 acres proposed by the project will bring approximately 5 miles of the length of the river under management for the benefit of SBKR. Vegetation management will include the elimination of vegetative barriers to kangaroo rat movement (primarily by the thinning of thick stands of yerba santa and the control of nonnative annuals). We expect the vegetation management activities to increase the area of occupiable SBKR habitat, providing areas for dispersing young to occupy. Vegetation management will also improve the quality of the habitat in the two portions of the proposed conservation area that are above the 100-year floodplain. Both of those areas are connected to the river via lower terraces, the western one, in SBKR Conservation and Management Area 2 is currently sparsely occupied and the northeastern terrace, in SBKR Conservation and Management Area 3 currently unoccupied, but will be a receiving site for translocated SBKR.

The project is addressing barriers to SBKR movement by providing a means for dispersing SBKR to cross the Grant Avenue Recharge Ponds intake canal and restoring 24 acres of habitat around the Cienega Well field where connectivity is restricted by the presence of the former in-

stream mining pit. Connectivity between the active floodplain in and the refugia areas outside of the flood control levee in the confluence area will also be ensured by the proposed project via the construction and maintenance of dirt ramps that will allow SBKR to navigate the grouted face of the levee. The improved connectivity will provide for dispersal and genetic exchange reduces vulnerability of isolated stochastic events.

As with our 2006 and 2010 biological opinions, we anticipate that the management actions (e.g., habitat restoration, weed control, trash removal, access restriction) will improve habitat quality for the SBKR in the conservation areas. With improved habitat quality, we anticipate that average SBKR density will be maintained over time and that the distribution of SBKR in the Conservation and Management Area will improve. Thus, over the long term, we expect the 5-mile stretch of the river included in the Conservation and Management Area to maintain its function as the primary core area for SBKR breeding, feeding and sheltering along the San Jacinto River.

Indirect Effects

As we concluded in the 2006 and 2010 biological opinions, SBKR may create burrows in berms or inactive basins once recharge basins are constructed. However, given the presence of higher quality habitat in the immediate surroundings, we anticipate that few SBKR will establish burrows in groundwater basins except in years when high population density forces individuals to establish burrows in suboptimal habitat. Any burrows that are established within the recharge basins and/or lower portions of the berms will collapse or flood during the filling of the basins with water, and individual SBKR will be drowned or displaced. Similar to natural conditions in scalebroom scrub, all SBKR burrows in berms will collapse and individuals will be drowned or displaced during 10-year or larger flood events.

EMWD has proposed numerous conservation measures to reduce the indirect effects of the project. Such measures include the construction of habitat ramps leading from the floodplain to the top of the levee, no new permanent structures in the floodplain (excepting pipelines to deliver water to the recharge basins), pre-construction translocation of SBKR, and directing lighting used during facility construction or operation away from Conservation Areas or any other surrounding habitat.

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.

The MSHCP addressed the cumulative impacts of residential, urban, and agricultural development on wildlife resources at a region-wide level, while establishing a Conservation Area for the protection and management of covered species, including the SBKR. At this time, we are

not aware of any future State, Tribal, local, or private projects in the action area that would not be addressed through compliance with the MSHCP.

Effect on Recovery

According to section 2(b), the primary purposes of the Act are to provide a means whereby the ecosystems upon which listed species depend may be conserved, and to provide a program for the recovery of listed species. Under section 2(c), Congress established a policy requiring all Federal agencies to use their authorities in seeking to recover listed species in furtherance of the purposes of the Act. Consistent with these purposes and Congressional policy, sections 3(5), 4(f), 7(a)(1), the implementing regulations to section 7(a)(2) at 50 CFR § 402.02 and related preamble at 51 FR 19926 (June 3, 1986) generally require Federal agencies to further the survival and recovery of listed species in the use of their authorities. According to these mandates, our analysis below assesses; (1) whether the proposed action adequately offsets its adverse effects to the environmental baselines for the SBKR, and (2) the extent to which the proposed action would cause "significant impairment of recovery efforts" or adversely affect the "species' chances for survival to the point that recovery is not attainable" (51 FR 19926).

While the Service has not developed a recovery plan for the SBKR, our conservation and recovery strategy is to conserve and manage as much remaining habitat as possible according to our 5-year review for the subspecies (Service 2009). In particular, the 5-year review contains recommendations for actions that should be implemented over the next 5 years to assist in SBKR recovery. The 5-year review also recommends that the Service work with partners to identify opportunities for habitat management, restoration, and enhancement, and to protect additional SBKR habitat. Habitat protection must include upland refugia to support SBKR during floods, and occupied floodplains and adjacent upland habitats should be conserved to ensure protection of populations large enough to remain viable in the long term (Service 2009). However, owing to the lack of adequate demographic data, we do not know how large a sustainable SBKR population must be or how large a habitat area is needed to support a viable population.

Overall, implementation of the proposed project will result in a substantial increase in permanently conserved SBKR habitat including designated critical habitat. In addition, included in the permanently conserved habitat are two areas that are above the FEMA-mapped 100-year floodplain that are still connected to the active river channel via lower terraces. These areas will be managed to control nonnative weeds and are expected to function as upland refugia for the SBKR. The project will also be responsible for increasing connectivity between potentially isolated areas of know occupation, by habitat restoration, management of the Grant Avenue Recharge Ponds intake canal and the provision of ramps between occupied areas inside and outside of the river levee. Additionally the translocation of up to 300 SBKR into restored habitat upstream of the Grant Avenue Recharge Ponds will increase the distribution of SBKR in the San Jacinto River and return SBKR to a terrace above the 100-year floodplain. The proposed project will result in the active management for the benefit of SBKR along a 5-mile stretch of the San Jacinto River. This area includes the two largest concentrations of animals on the river. We believe that the proposed conservation measures avoid and minimize adverse effects to SBKR

that may be in the action area to the maximum extent possible. Not only will this proposed action not impede recovery of SBKR, we conclude that the proposed conservation measures are likely to contribute to recovery.

CONCLUSION

After reviewing the current status of the SBKR, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the proposed action is not likely to jeopardize the continued existence of the SBKR. We reached this conclusion by considering the following:

1. Loss of the 35 acres of SBKR habitat in the river floodplain during the term of the project in the action area will be minimized by the permanent conservation and management of 447 acres combined with the management of 85.9 additional acres including approximately 32.5 acres of upland refugia along a 5-mile stretch of the San Jacinto River that will support SBKR;

2. Project impacts will result in the loss of more than 560 individuals of the estimated 4,815 SBKR in the action area. This loss will be minimized by the translocation of up to 300 of those individuals into unoccupied restored habitat upstream. We anticipate that with the improvements in habitat connectivity and habitat quality, the population in the confluence area will remain both large enough to survive stochastic events and connected to the other population center in river. We therefore do not expected proposed project to appreciably reduce the species' distribution or reproductive potential.

3. We anticipate that the three upland sites within the Conservation and Management Area will function as habitat and will provide refugia for SBKR during large flood events in the floodplain.

4. We anticipate that the proposed habitat management including the additional vegetation management, access control, conservation of 477.08 acres and other conservation measures will sustain or increase the distribution of SBKR within the 532-acres to be managed for the benefit of SBKR in along the San Jacinto River.

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 species, respectively, without special exemption. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Harm is further defined by us to include significant habitat modification or degradation that actually kills or injures a listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by us as an action that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to,

breeding, feeding, or sheltering. 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) of the Act, such incidental take is not considered a prohibited taking under the Act, provided that such taking is in compliance with this incidental take statement.

The measures described below are nondiscretionary and must be implemented by the Corps or Applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity that is covered by this incidental take statement. If the Corps or Applicant fails to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse. To monitor the impacts of incidental take, the Corps or Applicant must report the progress of the action and its impact on the species to our agency as specified in the incidental take statement [50 CFR § 402.14(i)(3)].

AMOUNT OR EXTENT OF TAKE

The disturbance of 35 acres of occupied SBKR habitat in the floodplain and 3.14 acres in the upland area from vegetation clearing, soil manipulation, and infrastructure installation may result in accidental death or injury of all SBKR within the footprint of the recharge basin and its associated infrastructure from crushing, trampling, or burial. Additionally maintenance activities, the reforming of berms and basins after large storm events, and/or ground disturbance, including trenching for infrastructure (pipeline) maintenance or repair, may result in accidental death or injury to any SBKR within the footprint of maintenance or repair activities. Maintenance and repair activities will occur periodically throughout the period of the permit for the recharge activities.

Up to 300 juvenile and adult SBKR will be removed from the recharge basin project footprint and translocated into prepared sites in suitable habitat upstream. We expect incidental take of remaining individual SBKR will be difficult to detect because SBKR burrow underground and project-related injuries or deaths may be masked by seasonal or annual fluctuations in numbers. Because immature SBKR are almost never found during surveys, we assume virtually all will be killed or injured by construction activities within the Development Project footprint. While we cannot provide the precise number of SBKR that may be taken, we have estimated the number of adult SBKR in the project footprint in the floodplain to be between 520 and 600. This estimate is based on density estimates in the project footprint derived from the 2011 survey results. We do not expect the remnant recharge test ponds to support as many SBKR as the rest of the project site. In the upland area, we estimate that up to 48 adult SBKR could be in the area where infrastructure installation will occur. This estimate is based on the density estimates for the adjacent upland refugia areas.

Although reproductive behavior peaks in June and July, SBKR in breeding condition have been found throughout the year (Service 2009). Therefore, we anticipate that immature SBKR (pups) will be underground in burrows during all phases of construction and will be taken during project

construction. Assuming a 1:1 sex ratio, and that all 324 adult females have a maximum litter size of 3 kits per female (Service 2009), up to 972 pups could be present within burrows. Although it is unlikely that all female SBKR within the project footprint would be of reproductive age during construction, we cannot determine the extent to which we may have overestimated the actual number of breeding SBKR within the construction footprint. Though we likely have overestimated the number of pups that could be taken during project implementation, we have no other information with which to further refine our analysis. Moreover, dependent upon the season, some unknowable number of juveniles (young SBKR mature enough to be above ground) may be active outside the burrows at the time of trapping and relocation activities and, therefore, captured and relocated to nearby suitable habitat.

Using our best professional judgment, we have established the following take threshold for SBKR which, if exceeded, will trigger reinitiation of consultation. Incidental take of SBKR is anticipated and exempted as follows:

The following levels of incidental take (harm, death, or injury as defined in CFR 50 § 17.3) are anticipated and authorized.

- We anticipate that up to 972 of the SBKR pups residing in underground burrows within the construction footprint will be crushed and buried due to construction activities within the project footprint. While take in the form of harm, injury, or death for 972 SBKR pups is exempted, the take threshold will be exceeded if grading or disturbance occurs beyond the defined 35-acre project site.

- We anticipate that up to 50 percent, or 300 individuals, of the estimated 600 juvenile and/or adult SBKR residing within the recharge basin footprint could be captured and held for translocation. The trapping, capture, holding, and translocation of up to 300 individual SBKR is authorized with the translocation plan (see appendix). We expect that some of the relocated individuals could be killed or injured during the translocation process. The 300 remaining individuals left within the footprint will be crushed and buried due to project construction activities. If the grading or ground disturbance occurs beyond the delineated 35-acre project footprint, the take threshold will be exceeded.

- Following construction of the facility SBKR may be harmed or killed during routine operation and maintenance activities (e.g. pipeline repair). EMWD will record and report the extent of suitable habitat impacted during these activities. We anticipate that 5 SBKR per year may be harmed or killed during the maintenance of infrastructure in the upland area. If more than 0.33 acres of SBKR habitat are disturbed in any calendar year the take threshold will be exceeded.

Disposition of Sick, Injured or Dead Specimens

This office is to be notified within 3 working days if any SBKR are found dead or injured as a direct or indirect result of the implementation of this project. Notification must include the date,

time, and location of any SBKR and any other pertinent information. Dead animals should be collected in an appropriate manner only by a biologist approved by the Service. The office contact person is Karin Cleary-Rose of the PSFWO at 760-322-2070, extension 206.

EFFECT OF THE TAKE

In the accompanying biological opinion, the Service determined that this level of anticipated take in not likely to result in jeopardy to the SBKR or destruction or adverse modification of its critical habitat when one of the reasonable and prudent alternatives is implemented.

REASONABLE AND PRUDENT MEASURES

We believe the following reasonable and prudent measures are necessary and appropriate to minimize the take of the SBKR.

1. The Corps and/or EMWD shall ensure that disturbances from construction and maintenance activities and other anthropogenic disturbances to the SBKR are minimized.

2. The Corps and/or EMWD shall ensure that impacts to SBKR are minimized during pre-construction capture and relocation efforts.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, the Corps or EMWD must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are nondiscretionary.

1.1 Prior to vegetation clearing or ground disturbing activities in areas with habitat for listed species, the Corps and/or EMWD shall provide our office with the name(s), address(es), and telephone number(s) of a field contact representative (biological monitor) responsible for overseeing compliance with protective measures for the listed species. The biological monitor(s) shall have the authority to halt/suspend all associated project activities which may be in violation of the terms and conditions of the biological opinion, or to avoid or minimize the unanticipated incidental take of listed species, for as long as necessary to resolve the situation through consultation with this office. The biological monitor must be experienced with alluvial fan sage scrub habitats and the SBKR.

1.2 With prior notification from us, the Corps and/or EMWD shall ensure that we are given the right to access and inspect the project site for compliance with the project description and the terms and conditions of the biological opinion during the implementation of the proposed action.

1.3 The Corps and/or the EMWD shall ensure that the limits of construction are marked prior to ground-disturbing activities and made clearly visible to personnel on foot and to heavy

equipment operators. The biological monitor will contact our office to verify that the limits of construction have been properly staked and are readily identifiable. The Corps shall ensure that all movement of employees, construction contractors and subcontractors, and equipment, including ingress and egress of equipment and personnel, shall be limited to existing roads and designated construction limits. This condition shall apply to post-storm basin repair.

1.4 The Corps and/or the EMWD shall ensure that post-storm basin repair activities take place within 60 days of when water ceases to flow across the recharge site.

2.1 Prior to ground-disturbing activities and after the limits of construction have been identified. The Corps and/or the EMWD shall provide for the capture and removal of up to 300 SBKR from the proposed project site. Up to 3 weeks with no precipitation may be required for this activity.

2.2 After the capture and removal of SBKR from the project site, the Corps and/or the EMWD shall ensure that of the vegetation is removed from the site in the day following the completion of the capture and removal process.

2.3 The Corps and/or the EMWD shall ensure that the Service is notified within 1 working day if captured SBKR are injured or die during the period of captivity.

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, help implement recovery plans, or to develop information.

Past and present disturbances due to flood control, groundwater recharge, aggregate mining, and OHV use have severely degraded the remaining SBKR habitat along the San Jacinto River. Impacts to pioneer and intermediate scalebroom scrub have been especially severe, and it is likely that these impacts eliminated large areas that once supported the highest density of SBKR along the river. We recommend initiation of projects that will restore the natural hydrological processes that maintain braided channels with scalebroom scrub where feasible within the San Jacinto River.

In light of the Corps' efforts to establish a Special Area Management Plan for the San Jacinto River, we recommend the Corps work cooperatively with the Soboba Tribe, RCA, and our agency to restore the abandoned sand mining pit located upstream of the San Jacinto/Bautista Creek confluence. Restoration of the abandoned sand mining pit will assist in sustaining the San Jacinto River population of SBKR and benefit the aquatic resources in this area.

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

REINITIATION NOTICE

This concludes formal consultation on the proposed action outlined in your request. 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. Specifically, the analysis for this biological opinion assumes that floodplain downstream of the proposed recharge basin will continue to support scalebroom scrub vegetation. Should the project cause hydrologic changes that result in a conversion of this area to riparian vegetation, reinitiation of consultation may be warranted.

If you should have any questions pertaining to this biological opinion or the consultation process, please contact Karin Cleary-Rose of the PSFWO at 760-322-2070, extension 206 (777 East Tahquitz Canyon Way, Suite 208, Palm Springs, California 92262).

Sincerely,

Jim A. Bartel
Field Supervisor

cc:
Joe Lewis, Eastern Municipal Water District, Perris, CA
Steve Neudecker, Helix Environmental Planning Inc., La Mesa, CA
Jeff Brandt, California Department of Fish and Game - Region 6, Ontario, CA
Tobin White, Soboba Band of Luiseño Indians, San Jacinto, CA

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Table 1. SBKR abundance and density estimates based on 2011 capture data.

Location	Area in acres	Estimated number of SBKR[a]	Estimated density per Acre[a]
Confluence Area Floodplain	**290.71**	**2782.2**	**9.94**
Proposed Recharge Basins[b]	31.9	516.6	16.2
Test Recharge Basins[c]	3.4	2	0.6
Survey Area A	34.3	216.3	6.3
Survey Area B	44.1	255.6	5.8
Survey Area C	32.3	83.22	2.6
Survey Area D	42.4	1087.3	25.8
Survey Area E	52.0	89.3	1.7
Survey Area F	22.9	259.6	11.3
Conservation and Management Area Outside of Areas Surveyed[d]	27.4	272.3	9.94
Confluence Area Upland Refugia[e]	**9.1**	**141.05**	**15.5**
Impact Areas			
Well Site 4 (Downstream)	0.9	11.8	13.3
Proposed Well Site 5 (Upstream)	1.1	17.8	16.3
Potential Future Well Site (Upstream)	0.8	13.0	16.3
Conservation and Management Area 2	**105.5**	**749.0**	**7.1**
Conservation and Management Area 3	**142.8**	**1100**	**7.7**

[a] Abundance and density estimates assume no SKBR were trapped from outside grids.
[b] Recharge basin alignment as described in 2006 and 2011 biological opinions.
[c] Test Recharge Ponds were not sampled separately in 2011 sampling effort estimate is from 2008 effort.
[d] Values extrapolated from the average density in the confluence area.
[e] Downstream areas are northwest of the Meridian Channel, and Upstream Areas are southwest of the Meridian Channel. Density values in upland Refugia conservation calculated based on 2011 trapping results. All other values calculated using 2008 data. Does not include 3.4-acre restoration site.

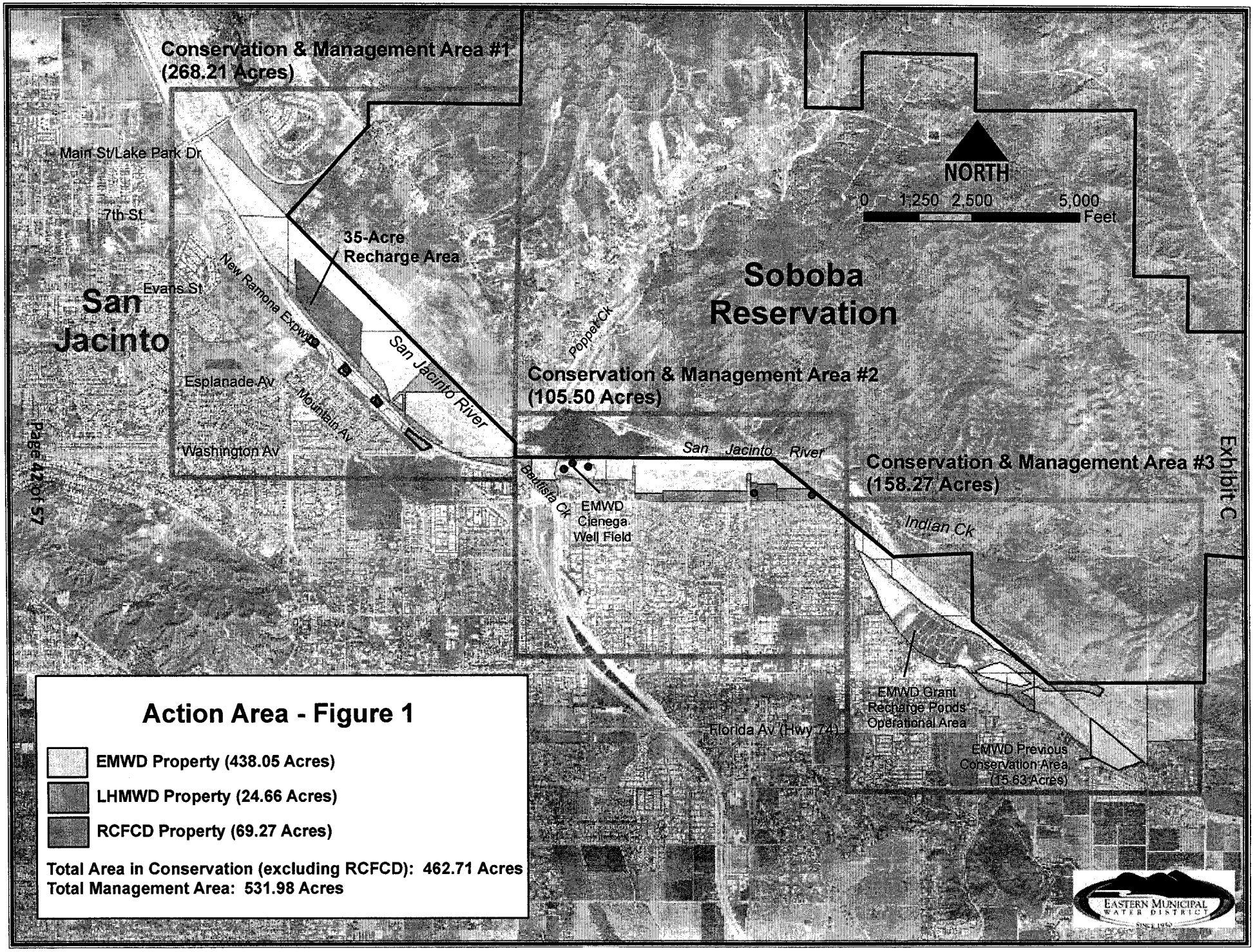
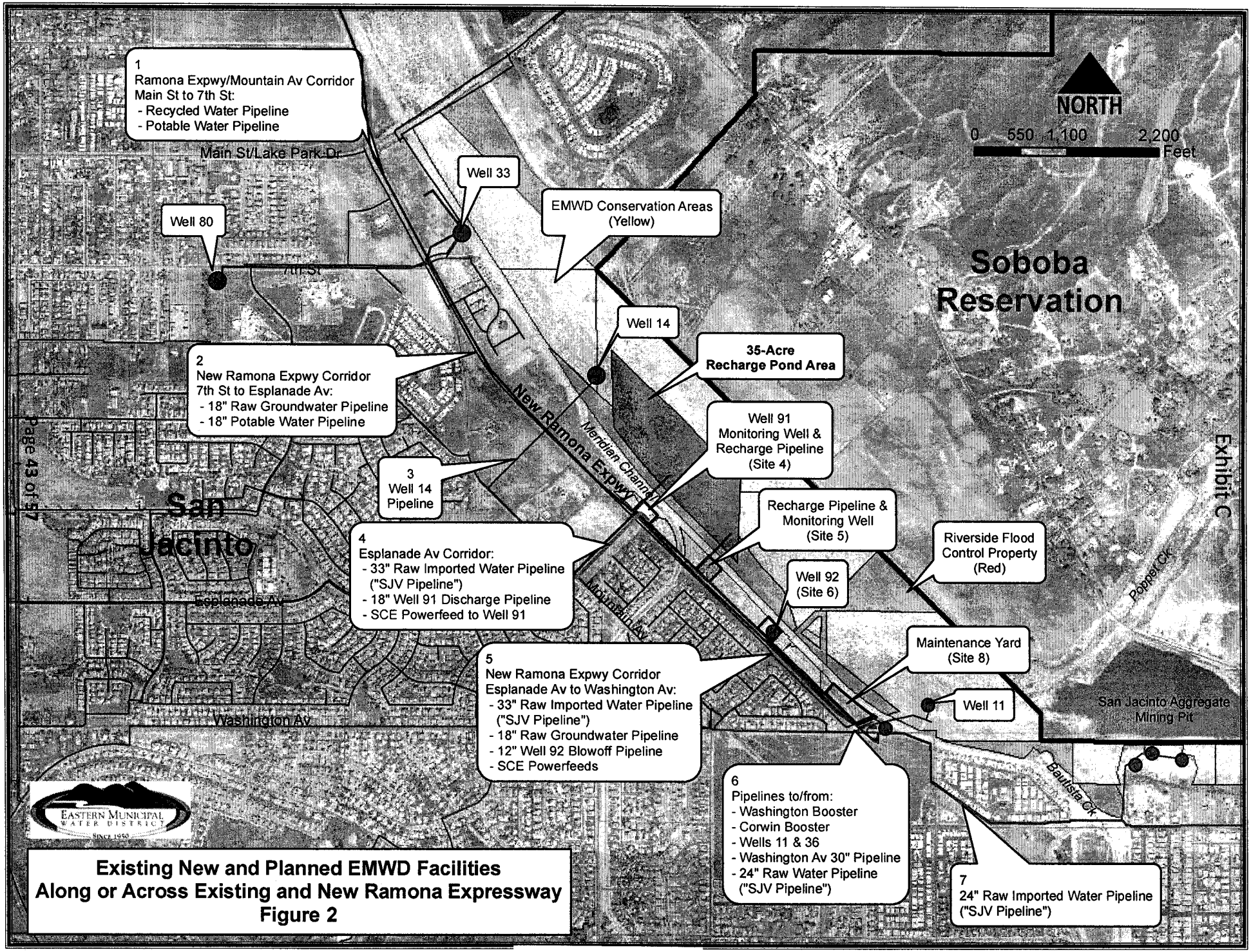
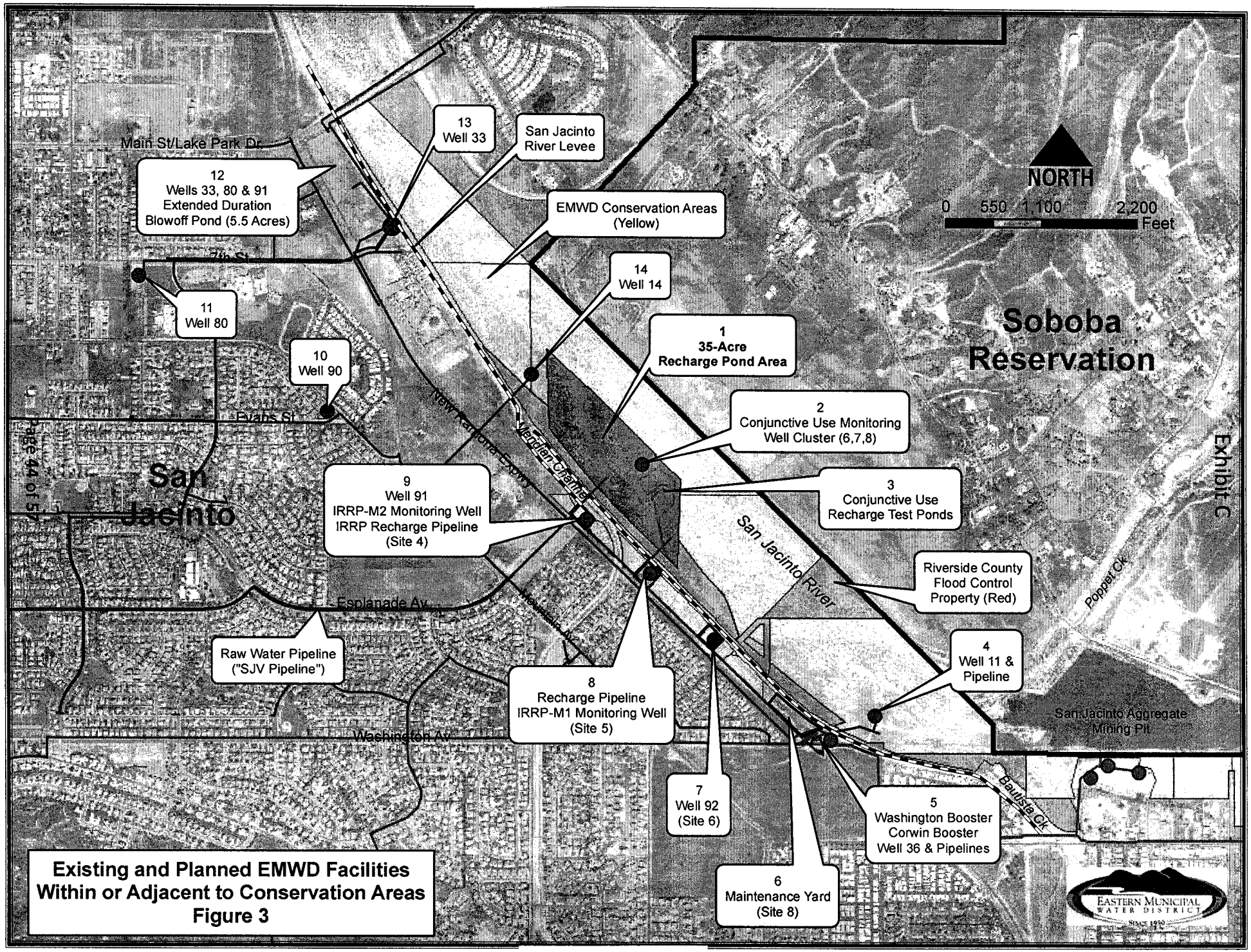

Conservation & Management Area #1
(268.21 Acres)
Main St/Lake Park Dr
7th St
Evans St
San Jacinto
35-Acre
Recharge Area
New Ramona Expwy
San Jacinto River
Esplanade Av
Mountain Av
Washington Av
Soboba
Reservation
Poppet Ck
Conservation & Management Area #2
(105.50 Acres)
San Jacinto River
Conservation & Management Area #3
(158.27 Acres)
Bautista Ck
EMWD
Cienega
Well Field
Indian Ck
EMWD Grant
Recharge Ponds
Operational Area
Florida Av (Hwy 74)
EMWD Previous
Conservation Area
(15.63 Acres)
NORTH
0 1,250 2,500 5,000
Feet
Action Area - Figure 1
EMWD Property (438.05 Acres)
LHMWD Property (24.66 Acres)
RCFCD Property (69.27 Acres)
Total Area in Conservation (excluding RCFCD): 462.71 Acres
Total Management Area: 531.98 Acres
EASTERN MUNICIPAL WATER DISTRICT

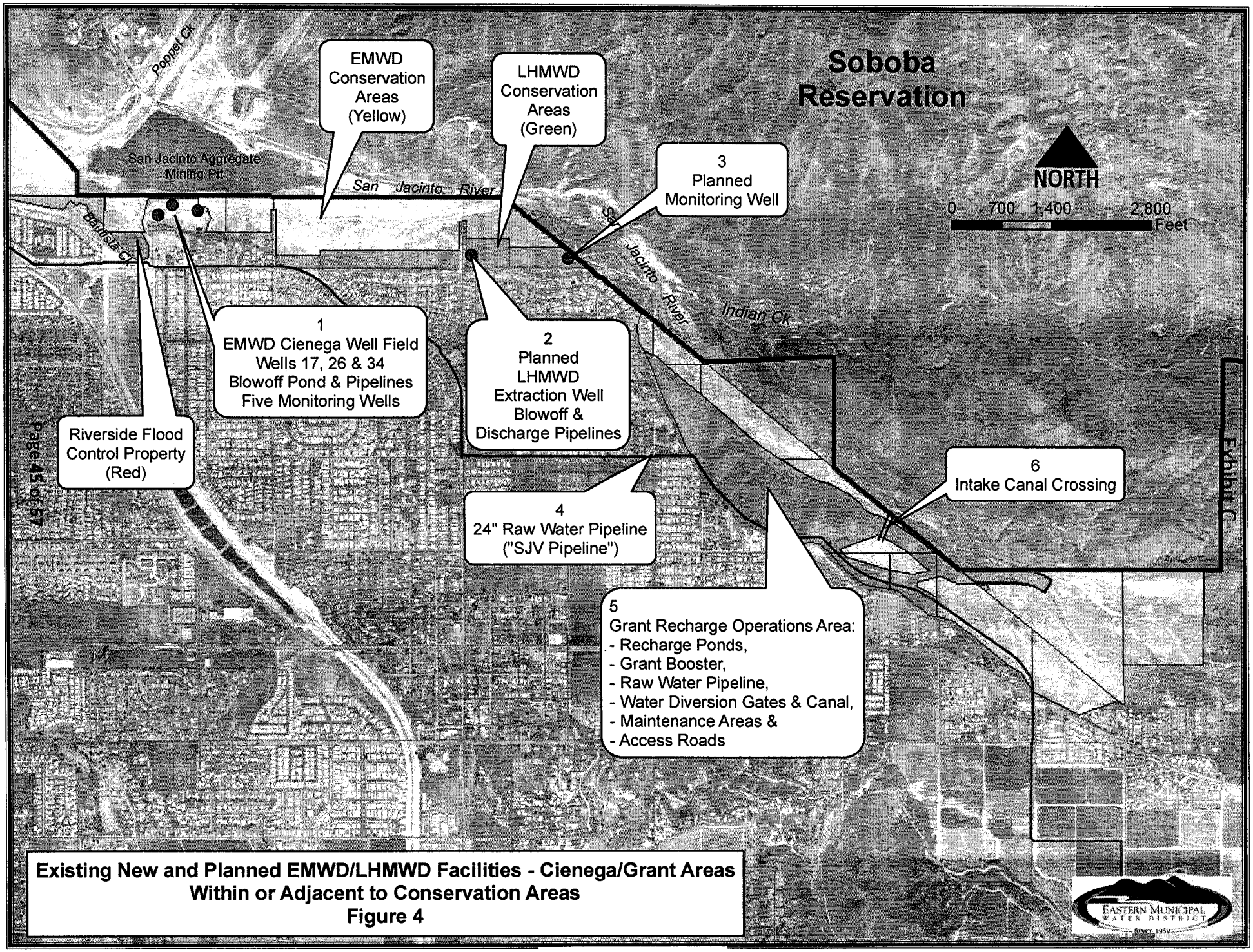
EXHIBIT C



Existing New and Planned EMWD Facilities
Along or Across Existing and New Ramona Expressway
Figure 2

EXHIBIT C


13
Well 33
San Jacinto
River Levee
Main St/Lake Park Dr
12
Wells 33, 80 & 91
Extended Duration
Blowoff Pond (5.5 Acres)
EMWD Conservation Areas
(Yellow)
NORTH
0 550 1,100 2,200
Feet
7th St
11
Well 80
14
Well 14
1
35-Acre
Recharge Pond Area
Soboba
Reservation
10
Well 90
2
Conjunctive Use Monitoring
Well Cluster (6,7,8)
Evans St
San
Jacinto
9
Well 91
IRRP-M2 Monitoring Well
IRRP Recharge Pipeline
(Site 4)
3
Conjunctive Use
Recharge Test Ponds
San Jacinto River
Riverside County
Flood Control
Property (Red)
Esplanade Av
Raw Water Pipeline
("SJV Pipeline")
8
Recharge Pipeline
IRRP-M1 Monitoring Well
(Site 5)
4
Well 11 &
Pipeline
San Jacinto Aggregate
Mining Pit
Washington Av
7
Well 92
(Site 6)
5
Washington Booster
Corwin Booster
Well 36 & Pipelines
6
Maintenance Yard
(Site 8)
Existing and Planned EMWD Facilities
Within or Adjacent to Conservation Areas
Figure 3
EASTERN MUNICIPAL WATER DISTRICT



Existing New and Planned EMWD/LHMWD Facilities - Cienega/Grant Areas Within or Adjacent to Conservation Areas
Figure 4

EXHIBIT C

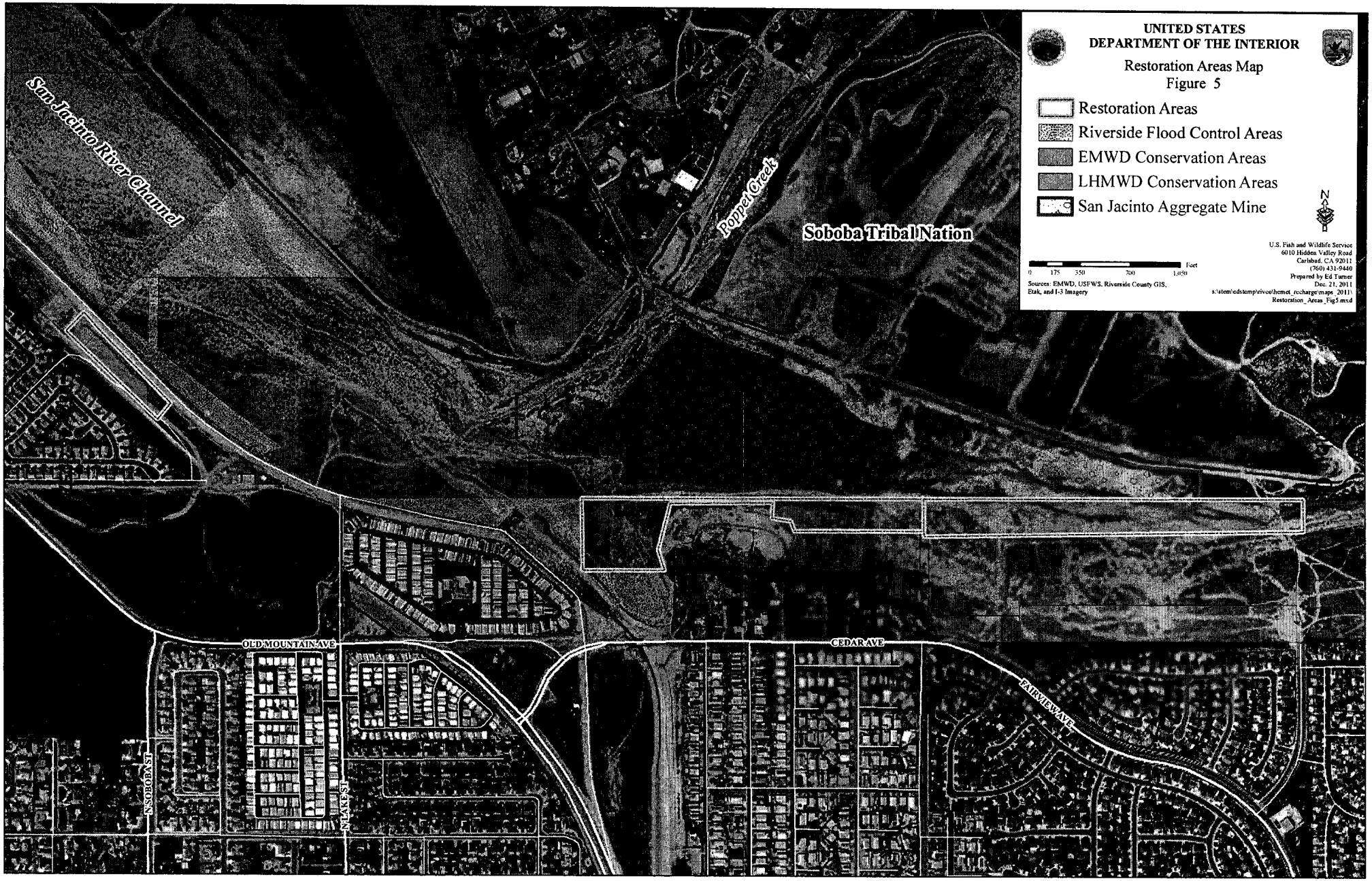
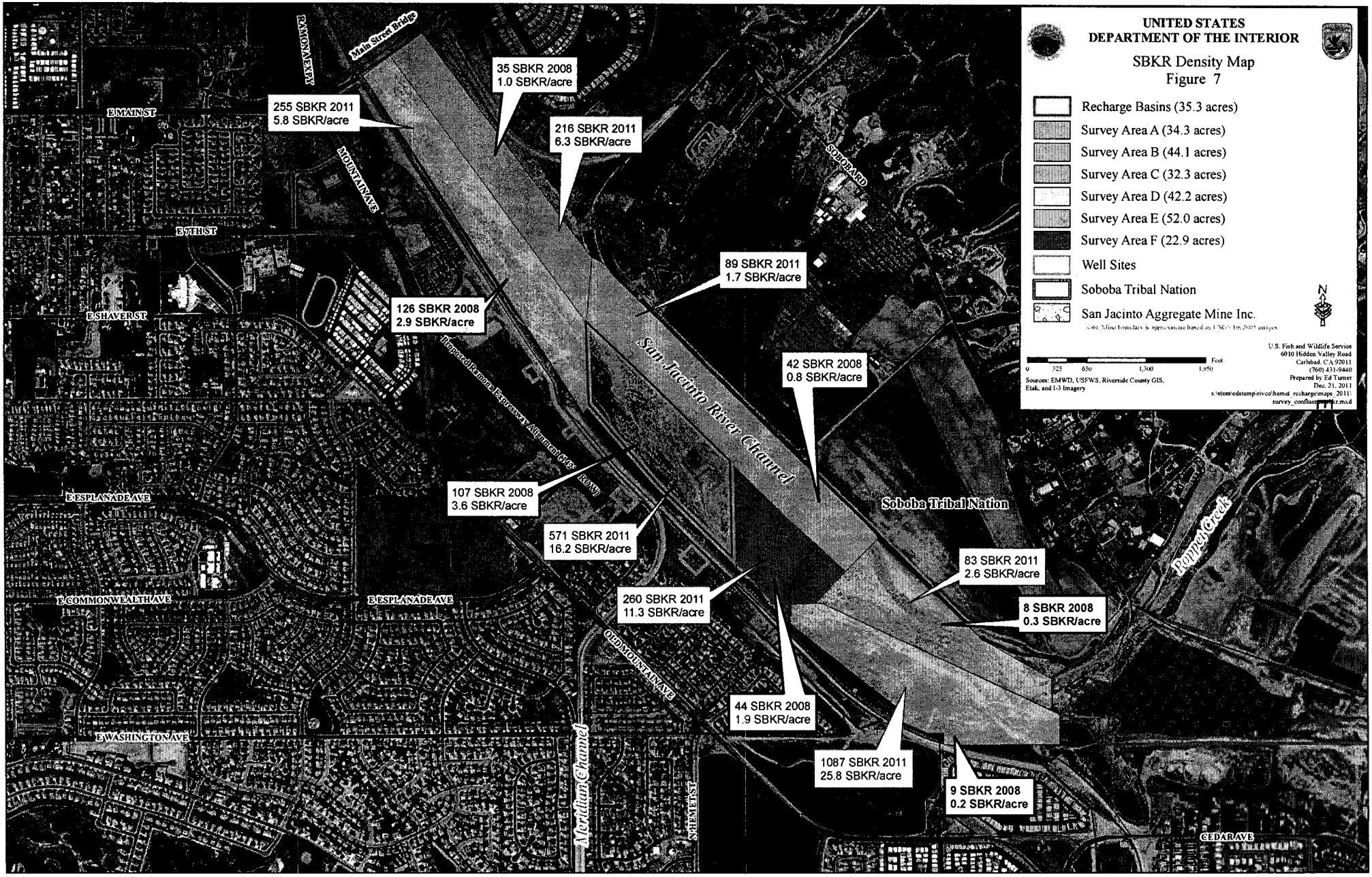

San Jacinto River Channel
Poppet Creek
Soboba Tribal Nation
OLD MOUNTAIN AVE
CEDAR AVE
FAIRVIEW AVE
S SOBOBA ST
N LAKE ST
UNITED STATES
DEPARTMENT OF THE INTERIOR
Restoration Areas Map
Figure 5
Restoration Areas
Riverside Flood Control Areas
EMWD Conservation Areas
LHMWD Conservation Areas
San Jacinto Aggregate Mine
N
0 175 350 700 1,050 Feet
Sources: EMWD, USFWS, Riverside County GIS, Etak, and I-3 Imagery
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, CA 92011
(760) 431-9440
Prepared by Ed Turner
Dec. 21, 2011
s:\stem\edstemp\rivco\hemet_recharge\maps_2011\Restoration_Areas_Fig5.mxd

EXHIBIT C


UNITED STATES
DEPARTMENT OF THE INTERIOR
Restoration Areas Map
Figure 6
Northeast Terrace
EMWD Conservation Areas
N
Feet
0 40 80 160 240
Sources: EMWD, USFWS, Riverside County GIS, Bing, and I-5 Imagery
San Jacinto River Channel

EXHIBIT C


UNITED STATES
DEPARTMENT OF THE INTERIOR
SBKR Density Map
Figure 7
Recharge Basins (35.3 acres)
Survey Area A (34.3 acres)
Survey Area B (44.1 acres)
Survey Area C (32.3 acres)
Survey Area D (42.2 acres)
Survey Area E (52.0 acres)
Survey Area F (22.9 acres)
Well Sites
Soboba Tribal Nation
San Jacinto Aggregate Mine Inc.
Sources: EMWD, USFWS, Riverside County GIS, Etak, and I-3 imagery
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, CA 92011
(760) 431-9440
Prepared by Ed Turner
Dec. 21, 2011
255 SBKR 2011
5.8 SBKR/acre
35 SBKR 2008
1.0 SBKR/acre
216 SBKR 2011
6.3 SBKR/acre
89 SBKR 2011
1.7 SBKR/acre
126 SBKR 2008
2.9 SBKR/acre
42 SBKR 2008
0.8 SBKR/acre
107 SBKR 2008
3.6 SBKR/acre
571 SBKR 2011
16.2 SBKR/acre
260 SBKR 2011
11.3 SBKR/acre
83 SBKR 2011
2.6 SBKR/acre
8 SBKR 2008
0.3 SBKR/acre
44 SBKR 2008
1.9 SBKR/acre
1087 SBKR 2011
25.8 SBKR/acre
9 SBKR 2008
0.2 SBKR/acre
Main Street Bridge
RAMONA EXPY
E MAIN ST
MOUNTAIN AVE
E 7TH ST
E SHAVER ST
SOBOBA RD
San Jacinto River Channel
Proposed Ramona Expressway Alignment (100' ROW)
Soboba Tribal Nation
Poppet Creek
E ESPLANADE AVE
E COMMONWEALTH AVE
E WASHINGTON AVE
OLD MOUNTAIN AVE
Meridian Channel
CEDAR AVE

SAN DIEGO ZOO INSTITUTE FOR CONSERVATION RESEARCH

APPENDIX

TRANSLOCATION OF THE ENDANGERED SAN BERNARDINO KANGAROO RAT, (*DIPODOMYS MERRIAMI PARVUS*)

Principal Investigator: Dr. Debra M. Shier
Conservation and Research for Endangered Species
Division of Applied Animal Ecology
15600 San Pasqual Valley Road
Escondido, CA 92027

December 16, 2011

Federal Permit Number TE-142435-2; State SC -002508

I. INTRODUCTION

Translocations have been used as a management technique for decades to augment populations, or to reestablish extirpated populations. Despite the increasing popularity of this technique, many translocations are not successful (Griffith et al. 1989, Beck et al. 1994, Wolf et al. 1998). Translocations often fail for one of several reasons: limited understanding of the species' basic ecology and behavior; poor planning for the release strategy; and lack of post-release monitoring to determine success and identify problem areas for improvement. Because of continued habitat fragmentation, the survival of many endangered and threatened species may depend on translocation into protected habitat. In cases where a species range is reduced to one or a few extant populations, there is a critical need to establish new viable populations, spreading the risk over several areas so that a single catastrophic event cannot decimate the remaining population(s). Thus, it is imperative to determine the factors that influence the success of translocations.

Post-translocation mortality is highest in the first days to weeks following release as animals make settlement decisions and modify the release-site habitat to accommodate their needs. Problems associated with the initial establishment phase include: 1) post-release dispersal (i.e. long-distance movement away from the release site), 2) predation, 3) stress response to the novel environment, 4) poor foraging performance, and/or 5) competition for resources (e.g. territories) with conspecifics either residents or fellow releasees.

Among the proposed explanations for the high mortality during the establishment phase, post-release dispersal and predation are thought to be important factors. Immediate rejection of a release site indicated by post-release dispersal has been documented in many species (Griffith et al. 1989, Kleiman 1989, Short et al. 1992). In some cases, translocated animals travel all the way back to their natal habitat (i.e. "homing"; Miller and Ballard 1982, Fritts and Mech 1984). There are several reasons why releasees might choose to reject the release site. Releasees may disperse because they are not familiar with the individuals with whom they are released and thus no longer benefit from established social relationships (Shier 2006, In press). Releasees may be forced to settle away from the release site because they are at a disadvantage when competing for resources (e.g. territories) with conspecific residents (Maynard Smith and Parker 1976). Alternatively or in conjunction, releasees may judge the habitat to be unsuitable at the release site either because it is devoid of conspecifics (Conspecific attraction; Stamps 1988) or because the physical characteristics of the habitat are not of the same type as the source habitat on which they imprinted (Natal habitat preference induction; Davis and Stamps 2004, Stamps and Swaisgood 2005). Because mobility during dispersal events is often associated with predation risk (Daly et al. 1990), dampening dispersal can be critical for release success.

Many translocations have been conducted with several species of kangaroo rats including SBKR (e.g., Williams et al. 1993, O'Farrell 1994, Montgomery 1997, O'Farrell 1999, Spencer 2003, Montgomery 2004, Davenport 2007, Germano 2010). Unfortunately, these efforts have been largely ineffective, undocumented or included little to no evaluation of success. To date, there have been no documented cases in which a kangaroo rat translocation has successfully established a viable population that persisted over the long term. However, over the last 3 years, an effective and efficient translocation protocol has been developed for the Stephens' kangaroo rat (Shier 2009, 2010, 2011, Shier and Swaisgood In Press). This project uses an understanding of the species behavioral ecology, rigorous experimental design to develop translocation methodology and includes long term post-release monitoring to evaluate success and improve techniques. Currently, data indicate that founders have survived and successfully established

viable populations. At three years post-release, 1 release population is estimated at over 400 individuals (Shier 2011, In press). In particular, founder group composition appears to play a critical role in release success. However, the role of conspecific scent in kangaroo release success remains unclear. Results of scent placement during translocation of SKR yielded mixed results (Shier 2009, 2010). Translocation of SKR with conspecific scent improved settlement at the release site and short term survival in year 1, but not in year 2. In that study, conspecific scent was provided for all treatment animals (no animals received self-scented sand).

II. NATURAL HISTORY AND CONSERVATION STATUS OF SAN BERNARDINO KANGAROO RAT:

The San Bernardino kangaroo rat (*Dipodomys merriami parvus;* SBKR) is a nocturnal granivorous heteromyid rodent native to open riversidean alluvial fan sage scrub habitat. There are 19 recognized species of kangaroo rats (genus *Dipodomys*) belonging to the family Heteromyidae, SBKR is 1 of 19 subspecies of *D. merriami.* The subspecies status of SBKR is not contested, it is one of the most highly differentiated subspecies of Merriam's kangaroo rat and has achieved nearly a species ranking (Lidicker 1960).
Like other heteromyids, *D. merriami* is territorial, defending the core of their home range from conspecifics (Randall 1993). Yet, radio telemetry studies indicate *D. merriami* of both sexes have overlapping home ranges (Behrends et al. 1986a) and are considered more tolerant of conspecifics than larger cogeners (Randall 1993). Research on home range size reports variability in size from 0.09 ha to 0.48ha with no sex differences in home range size (Behrends et al. 1986a). Reproduction typically occurs December through May, but reproductive timing may depend on weather and food availability (Behrends et al. 1986a). Of the species of kangaroo rat studied, all have been shown to sandbathe both to maintain pelage condition and for communication with conspecifics (Eisenberg 1963b). *D. merriami* appears to rely on sandbathing to maintain familiarity with neighbors and territorial spacing (Randall 1989, 1991b)

San Bernardino kangaroo rat was federally listed as endangered in 1998 (USFWS 1998) due to estimated habitat loss of 96% from historical range estimates (Service 2009). The primary threat to the species is urban development along with related mining and water development activities in the San Bernardino and San Jacinto Valleys. There are only 7 remaining populations, 4 of which are small (less than 8ha). All are isolated and at risk of extirpation by stochastic environmental events (Service 2009).

III. OBJECTIVES

I propose to translocate SBKR as part of a conservation measure in response to Eastern Municipal Water District's water recharge project in the San Jacinto River. The proposed project will break ground in early spring 2012 and impact an estimated 500 SBKR (Cleary Rose, USFWS, pers.comm). Translocation of a subset of these animals will aid in recovery of the species by: 1) reducing take associated with the recharge project, 2) establishing 2-3 new occupied sites in the vicinity of an existing population and 3) providing protection for the species in the event of a 100 year storm because one release site will be located on a plateau within the species historic range but above flood level. Further, this study will provide information required to develop more effective translocation methodology for the species, genus and other imperiled Heteromyids in California.

IV. PROPOSED PROJECT

Experimental Translocation
Hypothesis Testing to Maximize Translocation Success

Will scent cues facilitate settlement and release success?

In a seminal paper, Stamps (1988) proposed that even in "territorial" species, habitat settlement was socially facilitated. Ecologists had long believed in the "ideal free distribution" of animals on the landscape, wherein population density directly reflected habitat quality. Dispersing individuals were envisioned to settle in the most suitable habitat and to avoid settling in close proximity to conspecifics, which were thought of as competitors for resources. Territories should clump close together only where density of resources was high. Stamps found that *Anolis* lizards actively preferred to settle adjacent to conspecifics and proposed that dispersers used the presence of conspecifics as cues to territory quality. Taking a more behavioral perspective than that of ecologists, Stamps suggested that dispersing individuals lack knowledge of habitat suitability, and could most easily assess habitat quality by its correlations with the presence of other conspecifics. Thus, dispersers may follow the "rule-of-thumb" that if other conspecifics are present, then the area must be relatively safe and contain appropriate resources (*Conspecific attraction* hypothesis). Since the hypothesis was proposed, tests in a variety of vertebrate species support the notion that conspecific attraction is present in a widely distributed behavioral phenomenon even in relatively asocial species (Stamps 2001).

Often animals use cues of conspecifics to assess presence (e.g., acoustic or chemical signals). Conservation behaviorists already have used knowledge of species-specific cues to facilitate habitat selection for conservation (reviewed in Griffith et al. 1989). Such manipulations can be quite simple and cost-effective; for example, using model decoys, (Jeffries and Brunton 2001), song playback (Ward and Schlossberg 2004), or in the case of griffon vultures, painting the ground white to mimic the accumulation of feces in a breeding colony (Sarrazin et al. 1996).

Evidence from some species suggest that the distribution of an animal's own scent rather than that of a conspecific prior to its release into a novel environment may have beneficial consequences for several reasons (Swaisgood 2007). For example, for territorial animals that use scent to maintain territorial spacing, scent placement to establish territories in advance of release may be an effective method of facilitating post-release settlement (*Territorial Establishment* hypothesis). But this hypothesis waits controlled experimentation.

In the family Heteromyidae, both the dorsal sebaceous gland and the perineal region contain scents or oils that are transferred to the substrate during sandbathing (Eisenberg 1963a). These oils not only contribute to maintaining a healthy pelage (Eisenberg 1963a, Randall 1993), but are also used for olfactory communication (Eisenberg 1963a, 1963b, Randall 1991b, 1994a). Sandbathing has been shown to communicate species, sex and individual identity at sandbathing sites and is used for neighbor recognition and territorial spacing (Randall, 1993).

I propose to use the impending water project impact area to salvage SBKR and conduct a science by management study. Specifically, I will examine the effectiveness of scent placement on release success in SBKR by testing the *Conspecific Attraction* and *Territorial Establishment* hypotheses. Because SBKR is territorial but among the most conspecific tolerant of Heteromyids, I predict scent placement will directly affect post-release settlement and survival.

Translocation Methods

Source Population

The source population will be salvage animals from the development impact zone within the San Jacinto river drainage. Take of the animals from these sites will be provided for under the biological option (Cleary Rose, pers. comm., USFWS).

Release Sites

I propose to translocate animals to one to three sites within the species historic range and within the same river drainage, but out of the development impact zone. Exact release site determination will be made in collaboration with biomonitors from the Palm Springs FWS). The site(s) will contain habitat (e.g. vegetation and soil) characteristics similar to that of the source population, but may need to be treated with fire, grazing or mowing and hand raked to remove annual grasses and create open ground between shrubs. Sites will be prepared for "soft release" in order to limit dispersal and allow SBKR to acclimate to the new site. One acclimation cage will be installed for each animal translocated. Acclimation cages will be spaced 10 m apart in neighbor group clusters of 25 per group. Acclimation cages will consist of an underground nest chamber (15 cm diameter x 20 cm) set 0.5 m underground, two cardboard tubes (5 cm diameter) lined with sand to provide traction, which will connect the nest chamber to the surface, and an above-ground wire retention cage (.3 m x .3 m x .3 m). One tube will be plugged during the acclimation period. This design will allow movement of kangaroo rats between nest chamber and the above-ground retention cage, but will limit escape during the acclimation period (Shier 2009, 2010, 2011, Shier and Swaisgood In Press).

Study Subjects

Subjects will be approximately 150-300 wild-caught SBKR divided into three treatment groups: 1) SELF-SCENTED: translocated to an acclimation cage with surrounding sand imbued with the individuals own scent to establish a virtual scent territory in advance of release (n = 50-100), 2) or CONSPECIFIC SCENTED: translocated to an acclimation cage with surrounding sand imbued with conspecific scent (n = 50-100), or 3) UNSCENTED: translocated with sand imbued with water (i.e. no kangaroo rat scent control; n = 50-100).

Capturing and holding animals for release

We will trap, mark (ear tag and possibly pit tag), age, and sex all captured SBKR. We will assign animals to burrows via trapping locations and create a map of the spatial organization of residents at the salvage location. We will classify animals as adults if they are $\geq$ 1 year of age and juveniles if they are newly emergent young. The ratio of adults to juveniles and males to females will be determined by the natural variation in the field. We will need a period of up to 3 weeks with no precipitation to remove all SBKR from the impact zone.

We will temporarily hold animals in a temperature controlled facility until weather conditions are suitable for release. Upon capture, animals will be checked for physical condition

(e.g. pelage condition and ectoparasites), dusted with commercial flea powder if deemed necessary and transferred to a holding cage (approximately 37 x 23 x 25 cm) with a glass nesting jar, natural bedding material (e.g. Carefresh) and a 12 cm section of 5cm PVC to serve as an artificial burrow entrance. Holding cages will be located on racks in the holding facility such that all cages are easily accessible and in view for observation. During holding, ½ cup of mixed seed (raw oats/white millet) will be provided daily and a small piece of lettuce every other day.

Release to new site

Once all salvage animals are captured and the weather conditions met, they will be transported to acclimation-cages at the release site in groups of 100. We will need a period of 2 weeks without precipitation when overnight temperatures are above 40F most nights for each group to be moved. We will place each animal in a separate acclimation-cage for 1 week. We will transfer all animals in neighbor groups and replicate spatial arrangement of the source site. Upon placing animals into acclimation we will distribute small piles of scent-imbued sand (collected from each animal's holding cage) in a 20-m radius from the acclimation cage for SELF SCENTED and CONSPECIFIC SCENTED groups. As a control, the same sand type imbued with water will be distributed in an identical pattern for control animals. Animals will be fed a seed mix daily and a piece of lettuce every other day while in acclimation cages. At the end of the acclimation period, the above-ground portion of the acclimation-cages will be removed. We will continue to supplement animals until rains produce sufficient food resources (approximately 1-3 months).

Postrelease Behavior

We will observe the kangaroo rats during the first 2-3 hours following release from the acclimation-cages and document the presence or absence of the following behaviors: foraging, digging, sandbathing, ranging outside release site, intraspecific interactions. We will observe focal SBKR behavior 1-2 times/week for the first 4 weeks.

Settlement and Survival

We will retrap release sites at regular intervals (e.g. 1 month, 3 months, 6 months) post-release and then once annually for 5 years to determine population viability.

Final Reports

I will provide a final report to FWS annually to which discusses the methods and results of the proposed project. The report will include an introduction, discussion of methods, results, and a discussion of findings. Recommendations will be made for future directions.

Qualifications of the Principal Investigators

Dr. Shier received her graduate training in behavioral ecology and wildlife conservation at University of California, Davis. She has been studying captive breeding/reintroduction and translocation methodologies with small mammals for the last 17 years and has been working at the San Diego Zoo Institute for Conservation Research since 2006. She holds federal and state

permits to translocate endangered heteromyids in southern California, including the critically endangered Pacific Pocket Mouse, Stephens' Kangaroo Rat and the San Bernardino Kangaroo Rat. Dr. Shier has studied translocation strategies in the endangered Stephens' kangaroo rat since 2008 and published her results in Conservation Biology.

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Exhibit D

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

REPLY TO
ATTENTION OF

February 24, 2012

Office of the Chief
Regulatory Division

Joseph Lewis
Eastern Municipal Water District
PO Box 8300
Perris, California 92572-8300

Dear Mr. Lewis:

Reference is made to your request of December 6, 2011, to amend Permit No. SPL-2004-01197, which authorized you to discharge fill material into waters of the United States, in association with the Hemet San Jacinto Water Recharge and Recovery Project, in the San Jacinto River within Riverside County, California. This permit was originally issued on July 18, 2007. Due to unexpected issues with compliance with the Endangered Species Act, a Biological Opinion (BO) for the action was amended and the permit was modified and reissued on November 3, 2010, and then modified December 27, 2010. These modifications generally changed the location of the project site. Subsequently, again due to unexpected issues with compliance with the amended BO, the BO was again amended (FWS-WRIV-4051.5) and finalized on December 23, 2011. As a result of this new and most recent amended BO, the project site has been returned to the original location as permitted in the original permit issued July 18, 2007.

Under the provisions of 33 Code of Federal Regulations 325.7(b), your permit is modified as follows:

Specifically, you are authorized to:

1. Return the project site to the original location as permitted on July 18, 2007, and implement the project as described in the enclosed amended Permit No. SPL-2004-00197. The terms and conditions of Permit No. SPL-2004-01197 have been modified and/or amended based on the new location, the new amended BO, and compliance with prior conditions. These amended and/or modified conditions will become the binding conditions of this permit.

Two copies of the permit are enclosed. Please sign both copies and return them to my attention at the address on this letterhead. If there are conditions within the permit that prevent you from signing this permit as presented here, please contact James Mace of my staff at 951-276-6624x263 or via email at James.E.Mace@usace.army.mil.

Upon receiving both copies of this permit signed by you, a final copy signed by me (or my designee) will be returned to you and copies of the permit will be forwarded to the following

parties: Ecological Services Field Office, U.S. Fish and Wildlife Service, Attn: Mr. Ken Corey, 777 East Tahquitz Canyon Way Suite 208, Palm Springs, California 92011; U.S. Environmental Protection Agency, Attn: Mr. Jason Brush, Supervisor, Wetlands Regulatory Office (WTR-8), 75 Hawthorne Street, San Francisco, California 94105; California Department of Fish and Game, Attention: Scott Dawson, 3602 Inland Empire Blvd., Suite C-220, Ontario, California 91764.

Thank you for participating in our regulatory program. If you have any questions, please contact James Mace of my staff at 951-276-6624x263 or via e-mail at James.E.Mace@usace.army.mil.

Please be advised that you can now comment on your experience with Regulatory Division by accessing the Corps web-based customer survey form at: http://per2.nwp.usace.army.mil/survey.html.

Sincerely,

David J. Castanon
Chief, Regulatory Division

Enclosure(s)

MAIL		ADD. INFO	
RD		ORIG	
CI		W/O	
EN	X	W/E	X
EX		W/CK	
FI		W/ENV	
HR		W/MAP	X
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OP			
RD			
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LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS

DEPARTMENT OF THE ARMY PERMIT

Permittee: Eastern Municipal Water District; Mr. Joseph Lewis

Permit Number: SPL-2004-01197-JEM

Issuing Office: Los Angeles District

Note: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The authorized project is to construct, operate, and maintain the Hemet San Jacinto Water Recharge and Recovery Project (Recharge Project), an approximately 35-acre recharge project in the San Jacinto River, extending from the Meridian Channel upstream just beyond the existing EMWD test recharge pond (Figures 1-7, attached). The Recharge Project site, and impacts to waters of the U.S., are the same as was originally authorized by this permit on July 18, 2007. As previously authorized, the Recharge Project will permanently impact 15.86 acres of waters of the U.S. (for the life of the project).

No new water supply pipeline construction across the San Jacinto Valley is authorized under this permit. Furthermore, maintenance activities outside the 35-acre recharge basins footprint, including any grading necessary to redirect the San Jacinto River low-flow channel away from the recharge basins (estimated up to 1.0 acre of periodic and temporary impacts to waters of the U.S.) are not authorized under this permit.

This DA permit does not impose any condition or requirement on the Riverside County Flood Control and Water Conservation District (RCFCWCD). Given that the Corps is not party to the conservation easements associated with this project (related to compliance with the Fish and Wildlife Service's Western Riverside County Multiple Species Habitat Conservation Plan and specific BO for the Recharge Project), prohibited activities on these easements is not addressed. However, this DA permit is not intended nor should it be interpreted to limit the RCFCWCD from conducting flood control operations or maintenance of the riverbed or river levees for which it is responsible. Moreover, this DA permit is not intended to obviate the need for the RCFCWCD

to apply for and obtain authorization from the Corps for activities and projects subject to regulation pursuant to the Corps' Clean Water Act section 404 authority.

Project Location: The proposed project is located in western Riverside County approximately 35 miles southeast of the City of Riverside, 40 miles southeast of the City of San Bernardino, and 80 miles east of Los Angeles. Authorized facilities would be located within or near the cities of Hemet and San Jacinto, including land adjacent to the Soboba Indian Reservation. The majority of project facilities will be located within or adjacent to the San Jacinto River, just downstream from the river's confluences with Poppet and Bautista Creeks.

Permit Conditions:

General Conditions:

1. The time limit for completing the authorized activity ends on December 31, 2035. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification from this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished with the terms and conditions of your permit.

Special Conditions:

1. For originally permitted impacts to 16.6 acres of waters of the U.S., Special Condition 1 of the original permit (dated July 18, 2007) required either onsite mitigation or the purchase of mitigation credit from a Corps-approved mitigation bank or payment though an in-lieu fee program approved by the Corps for restoration, creation, and/or enhancement of 8.0 acres of waters of the U.S. On August 7, 2007, the Permittee provided documentation of the payment of $363,184.00 to the Santa Ana Watershed Protection Authority (SAWPA; receipt No. A1545245, and SAWPA0038) to accept the burden of 8.0 acres of mitigation. Additionally, SAWPA notified the Corps they accepted this mitigation burden specifically for this permitted action (SPL-2004-01197). As such, Special Condition 1 of this permit has been satisfied.

2. The Permittee shall clearly mark the limits of the workspace with flagging or similar means to ensure mechanized equipment does not enter preserved waters of the U.S. and riparian wetland/habitat areas shown in various locations on Figures 3-6 (enclosed). Adverse impacts to waters of the U.S. beyond the Corps-approved construction footprint are not authorized. Such impacts could result in permit suspension and revocation, administrative, civil or criminal penalties, and/or substantial, additional, compensatory mitigation requirements.

3. Within 45 calendar days of completion of authorized work in waters of the U.S., the Permittee shall submit to the Corps Regulatory Division a post-project implementation memo indicating the date authorized impacts to waters of the U.S. ceased.

4. Within one (1) year of project decommissioning or after one (1) year of non-operation, whichever occurs first, the Permittee shall submit to the Corps a draft Reclamation Plan. With written approval from the Corps, this may not be required after one year of non-operation, if operation is still intended but reasonable circumstances suspend operation (e.g. additional ESA consultations). The Reclamation Plan shall include detailed steps and a schedule by which the Permittee will return the project site to pre-project conditions. Upon receiving, in writing (by letter or e-mail), Corps approval of the final Reclamation Plan, the Permittee shall fully implement the final, Corps-approved Reclamation Plan.

5. This Corps permit does not authorize you to take any threatened or endangered species, in particular the San Bernardino kangaroo rat (*Dipodomys merriami parvus*, "SBKR") or adversely modify its designated critical habitat. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g. ESA Section 10 permit, or a Biological Opinion (BO) under ESA Section 7, with "incidental take" provisions with which you must comply). The enclosed FWS BO (FWS-WRIV-4051.5) contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. The FWS is the appropriate authority to determine the compliance with the terms and conditions of its BO and with the ESA.

Further Information:

1. Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:

( ) Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measure ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give you favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

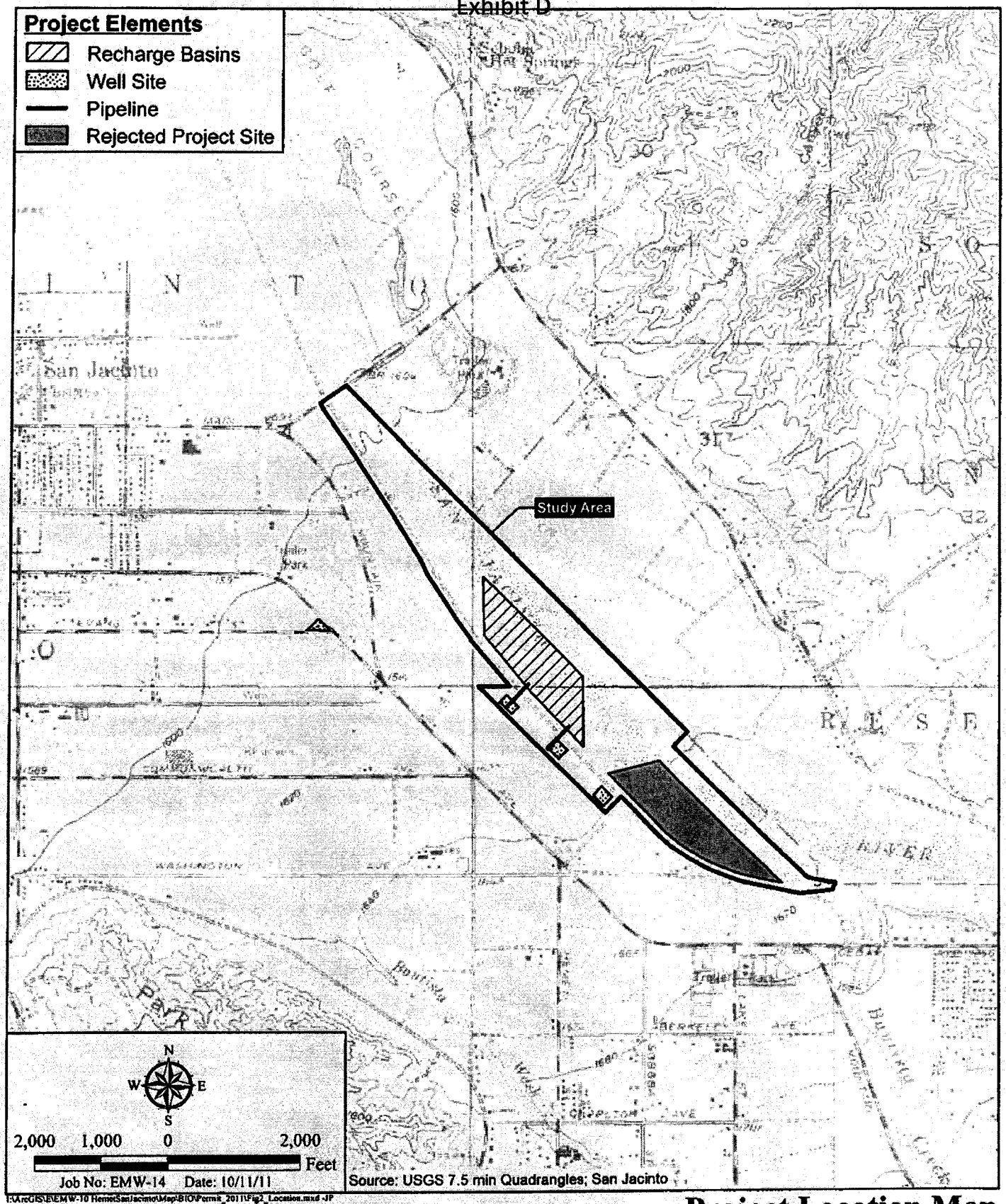
PERMITTEE _____ DATE _____

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

David J. Castanon
Chief, Regulatory Division _____ DATE _____

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

TRANSFEREE _____ DATE _____



I:\ArcGIS\EMW-10 Hemet\San Jacinto\Map\BIO\Permit_2011\Fig2_Location.mxd -JP

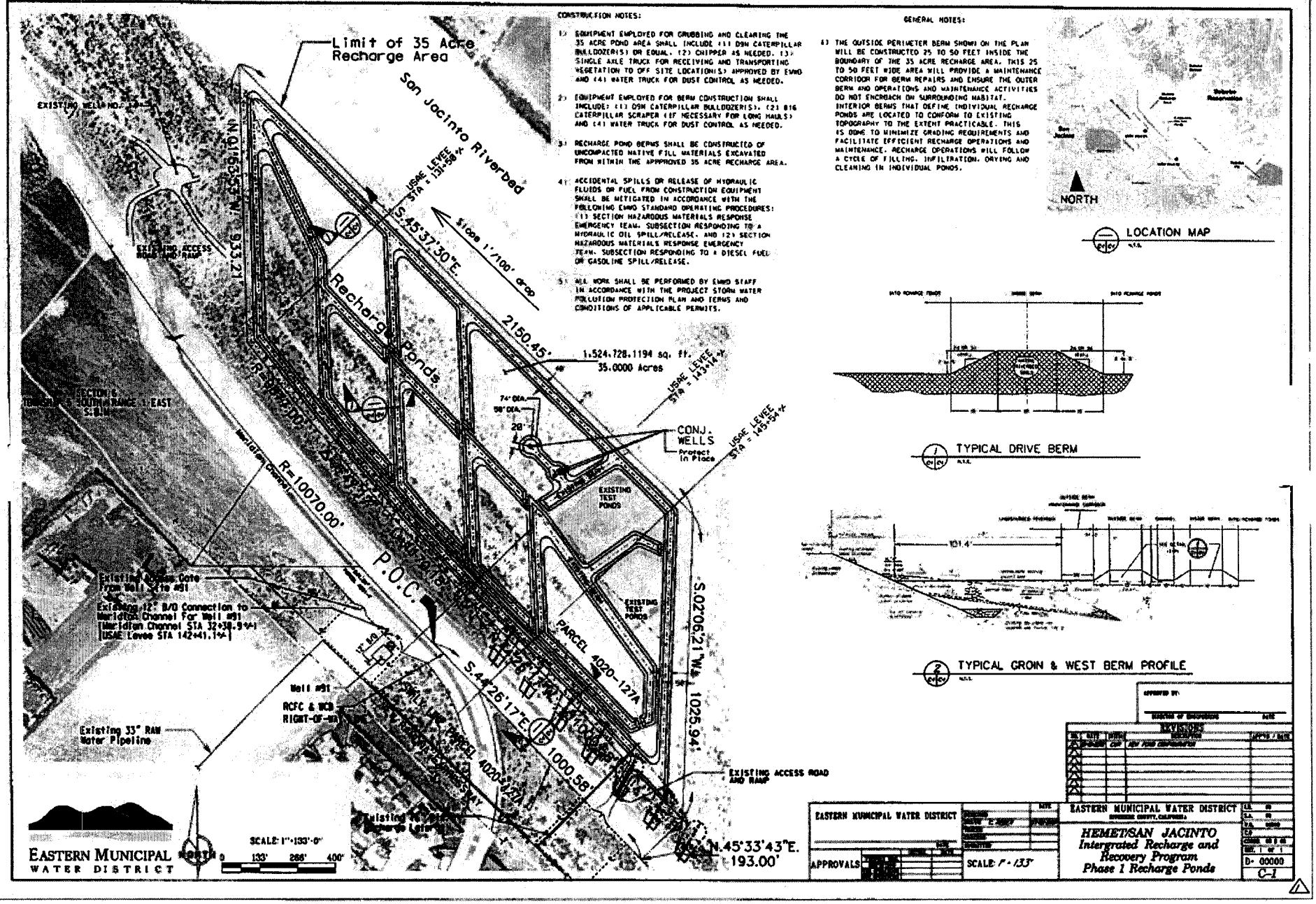
Project Location Map

HEMET/SAN JACINTO INTEGRATED RECHARGE AND RECOVERY PROGRAM

HELIX Environmental Planning

Figure 2

EXHIBIT D



CONSTRUCTION NOTES:

1) EQUIPMENT EMPLOYED FOR GRUBBING AND CLEARING THE 35 ACRE POND AREA SHALL INCLUDE (1) D9N CATERPILLAR BULLDOZER(S) OR EQUAL, (2) CHIPPER AS NEEDED, (3) SINGLE AXLE TRUCK FOR RECEIVING AND TRANSPORTING VEGETATION TO OFF SITE LOCATION(S) APPROVED BY EMWD AND (4) WATER TRUCK FOR DUST CONTROL AS NEEDED.

2) EQUIPMENT EMPLOYED FOR BERM CONSTRUCTION SHALL INCLUDE: (1) D9N CATERPILLAR BULLDOZER(S), (2) 816 CATERPILLAR SCRAPER (IF NECESSARY FOR LONG HAULS) AND (4) WATER TRUCK FOR DUST CONTROL AS NEEDED.

3) RECHARGE POND BERMS SHALL BE CONSTRUCTED OF UNCOMPACTED NATIVE FILL MATERIALS EXCAVATED FROM WITHIN THE APPPROVED 35 ACRE RECHARGE AREA.

4) ACCIDENTAL SPILLS OR RELEASE OF HYDRAULIC FLUIDS OR FUEL FROM CONSTRUCTION EQUIPMENT SHALL BE MITIGATED IN ACCORDANCE WITH THE FOLLOWING EMWD STANDARD OPERATING PROCEDURES: (1) SECTION HAZARDOUS MATERIALS RESPONSE EMERGENCY TEAM, SUBSECTION RESPONDING TO A HYDRAULIC OIL SPILL/RELEASE, AND (2) SECTION HAZARDOUS MATERIALS RESPONSE EMERGENCY TEAM, SUBSECTION RESPONDING TO A DIESEL FUEL OR GASOLINE SPILL/RELEASE.

5) ALL WORK SHALL BE PERFORMED BY EMWD STAFF IN ACCORDANCE WITH THE PROJECT STORM WATER POLLUTION PROTECTION PLAN AND TERMS AND CONDITIONS OF APPLICABLE PERMITS.

GENERAL NOTES:

1) THE OUTSIDE PERIMETER BERM SHOWN ON THE PLAN WILL BE CONSTRUCTED 25 TO 50 FEET INSIDE THE BOUNDARY OF THE 35 ACRE RECHARGE AREA. THIS 25 TO 50 FEET WIDE AREA WILL PROVIDE A MAINTENANCE CORRIDOR FOR BERM REPAIRS AND ENSURE THE OUTER BERM AND OPERATIONS AND MAINTENANCE ACTIVITIES DO NOT ENCROACH ON SURROUNDING HABITAT. INTERIOR BERMS THAT DEFINE INDIVIDUAL RECHARGE PONDS ARE LOCATED TO CONFORM TO EXISTING TOPOGRAPHY TO THE EXTENT PRACTICABLE. THIS IS DONE TO MINIMIZE GRADING REQUIREMENTS AND FACILITATE EFFICIENT RECHARGE OPERATIONS AND MAINTENANCE. RECHARGE OPERATIONS WILL FOLLOW A CYCLE OF FILLING, INFILTRATION, DRYING AND CLEANING IN INDIVIDUAL PONDS.

LOCATION MAP

TYPICAL DRIVE BERM

TYPICAL CROWN & WEST BERM PROFILE

EASTERN MUNICIPAL WATER DISTRICT

APPROVALS

SCALE: 1" = 133'

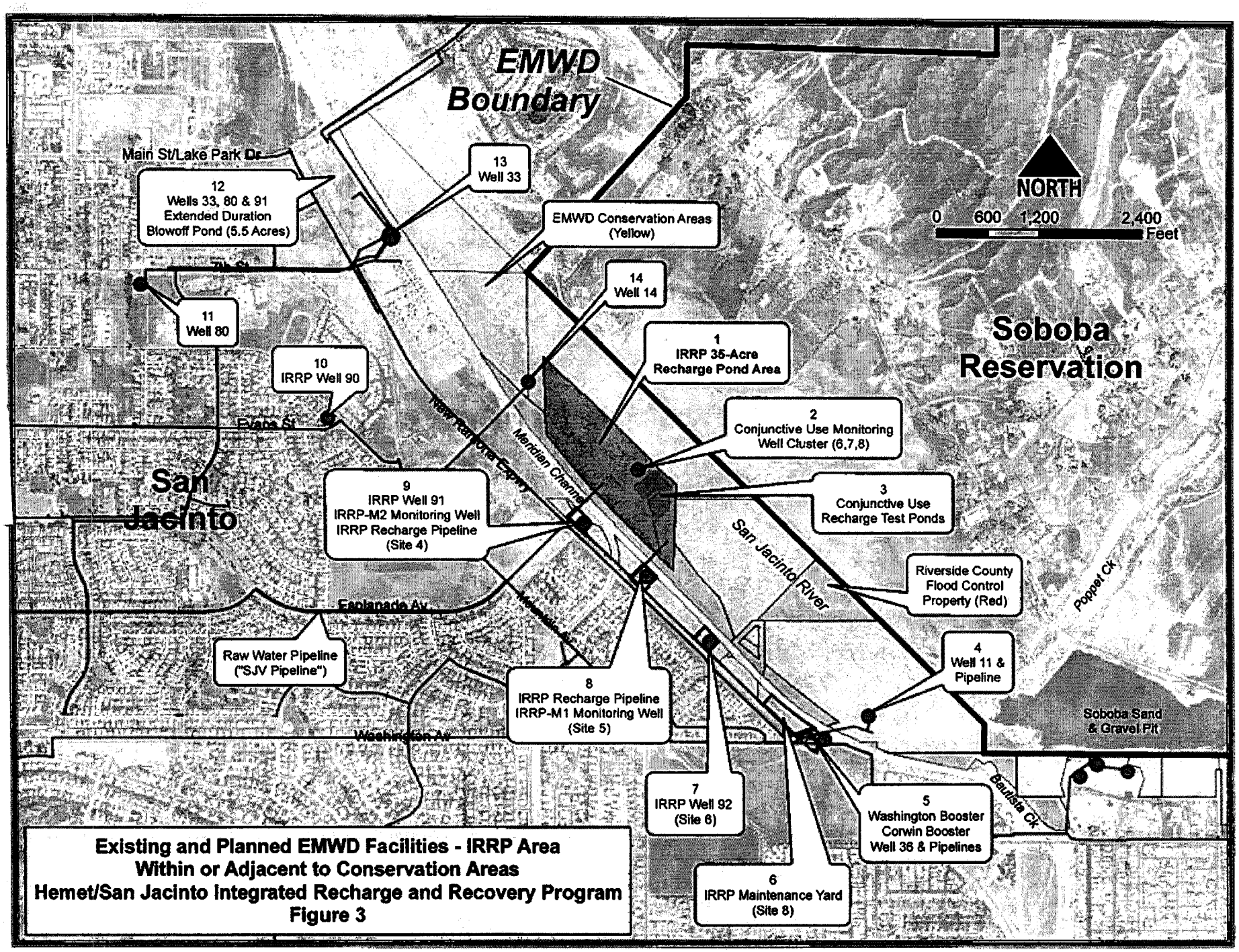
EASTERN MUNICIPAL WATER DISTRICT

HEMET/SAN JACINTO Intergrated Recharge and Recovery Program Phase 1 Recharge Ponds

D- 00000

C-1

EXHIBIT D


EMWD Boundary
Main St/Lake Park Dr
12
Wells 33, 80 & 91
Extended Duration
Blowoff Pond (5.5 Acres)
13
Well 33
EMWD Conservation Areas
(Yellow)
14
Well 14
11
Well 80
10
IRRP Well 90
1
IRRP 35-Acre
Recharge Pond Area
Soboba
Reservation
2
Conjunctive Use Monitoring
Well Cluster (6,7,8)
Ramona Expwy
Meridian Channel
Esplanade Av
San
Jacinto
9
IRRP Well 91
IRRP-M2 Monitoring Well
IRRP Recharge Pipeline
(Site 4)
3
Conjunctive Use
Recharge Test Ponds
San Jacinto River
Riverside County
Flood Control
Property (Red)
Poppet Ck
Esplanade Av
Raw Water Pipeline
("SJV Pipeline")
4
Well 11 &
Pipeline
8
IRRP Recharge Pipeline
IRRP-M1 Monitoring Well
(Site 5)
Soboba Sand
& Gravel Pit
Washington Av
7
IRRP Well 92
(Site 6)
Bautista Ck
5
Washington Booster
Corwin Booster
Well 36 & Pipelines
6
IRRP Maintenance Yard
(Site 8)
NORTH
0 600 1,200 2,400
Feet
Existing and Planned EMWD Facilities - IRRP Area
Within or Adjacent to Conservation Areas
Hemet/San Jacinto Integrated Recharge and Recovery Program
Figure 3

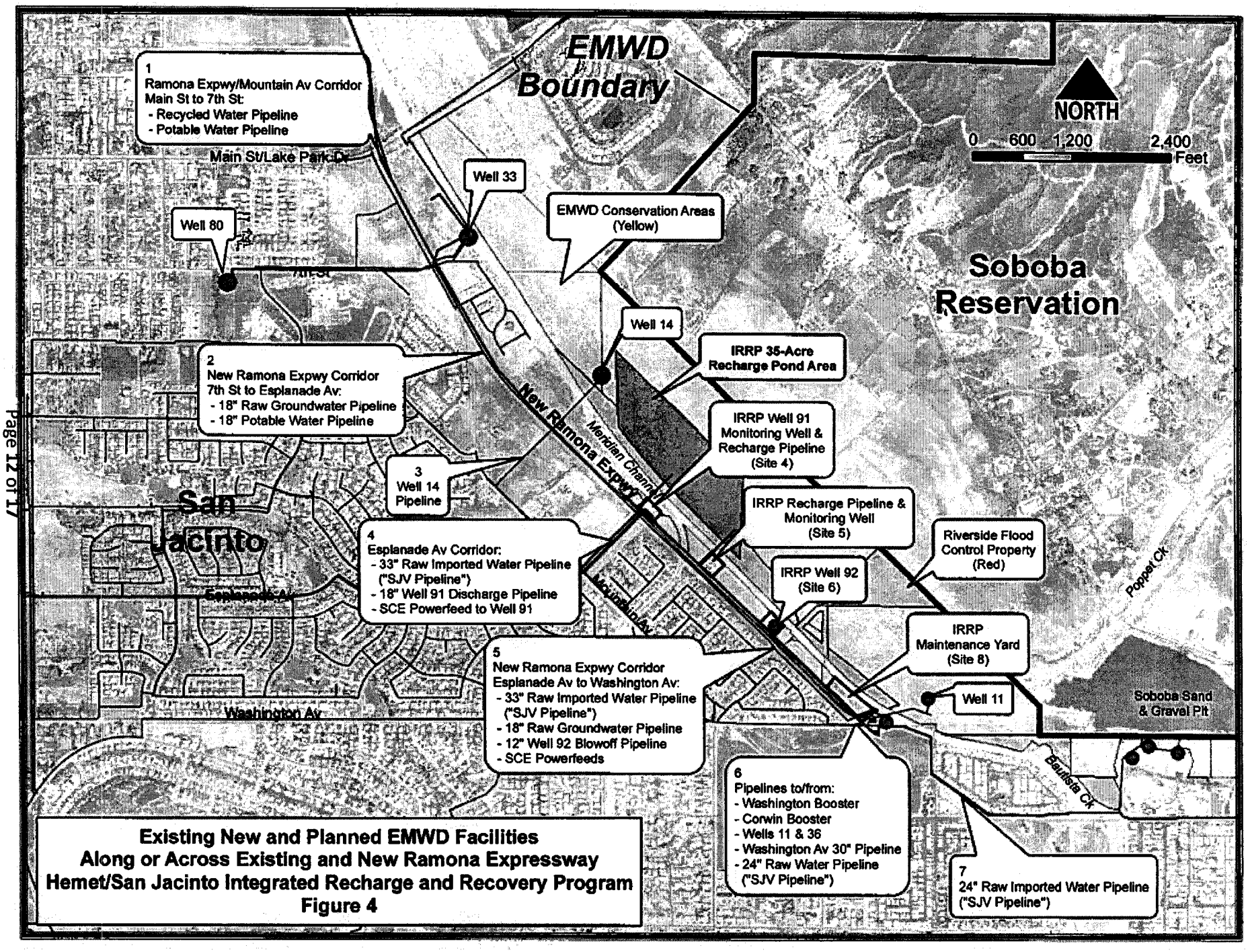
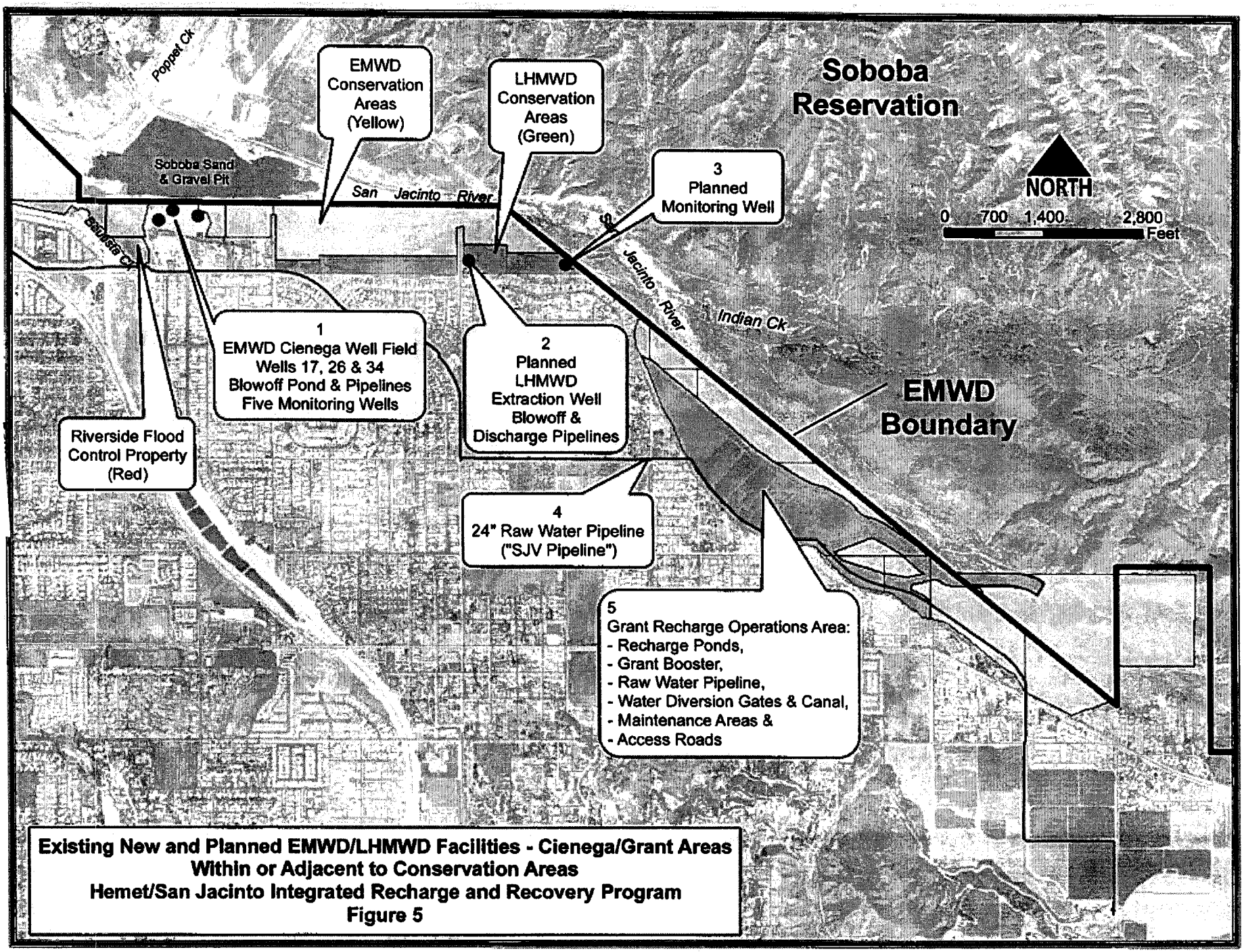
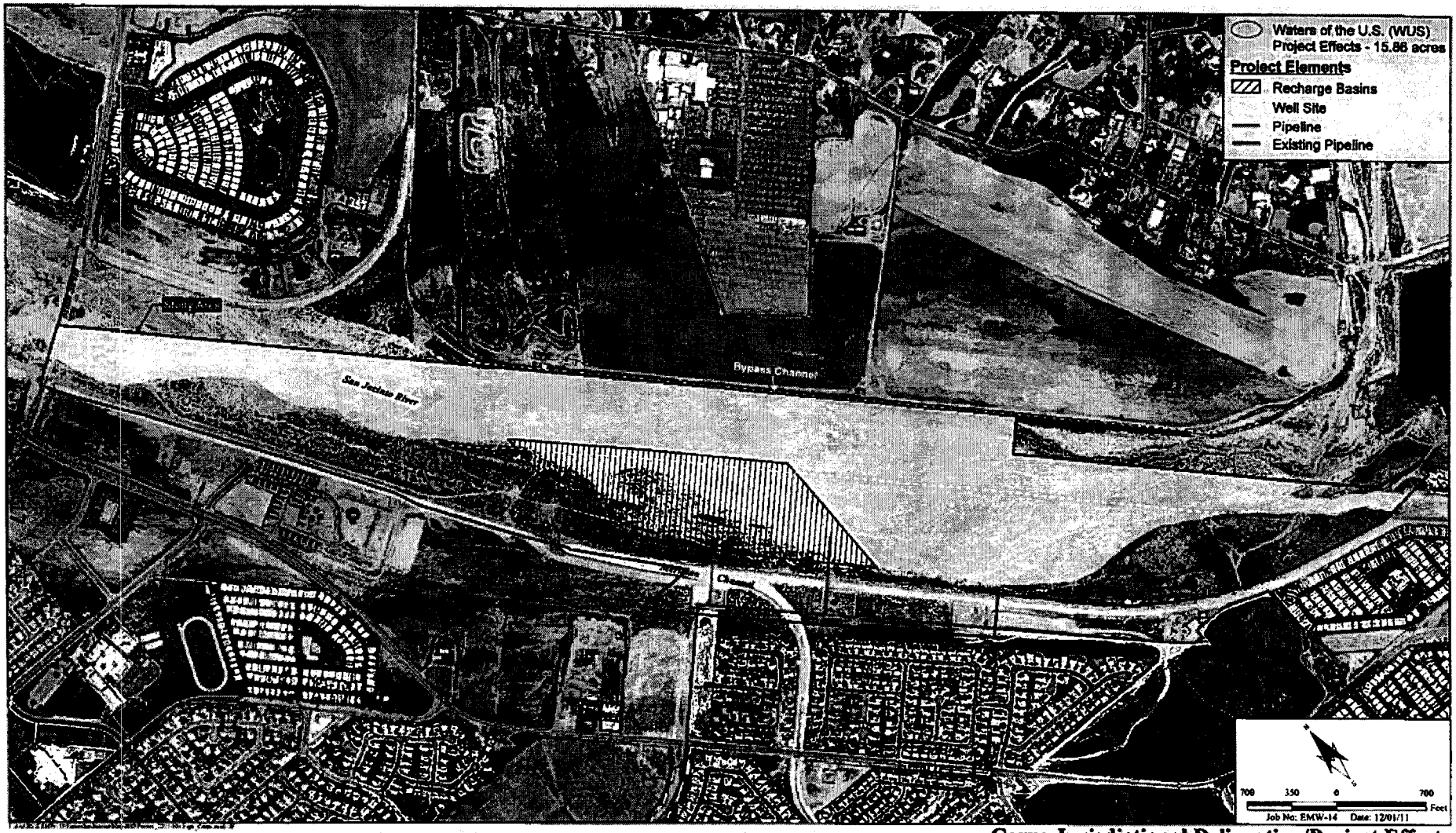

EMWD Boundary
NORTH
0 600 1,200 2,400 Feet
1
Ramona Expwy/Mountain Av Corridor
Main St to 7th St:
- Recycled Water Pipeline
- Potable Water Pipeline
Main St/Lake Park Dr
Well 33
Well 80
EMWD Conservation Areas (Yellow)
Soboba Reservation
Well 14
IRRP 35-Acre Recharge Pond Area
2
New Ramona Expwy Corridor
7th St to Esplanade Av:
- 18" Raw Groundwater Pipeline
- 18" Potable Water Pipeline
New Ramona Expwy
Meridian Channel
IRRP Well 91 Monitoring Well & Recharge Pipeline (Site 4)
3
Well 14 Pipeline
San Jacinto
IRRP Recharge Pipeline & Monitoring Well (Site 5)
Riverside Flood Control Property (Red)
4
Esplanade Av Corridor:
- 33" Raw Imported Water Pipeline ("SJV Pipeline")
- 18" Well 91 Discharge Pipeline
- SCE Powerfeed to Well 91
Esplanade Av
Mountain View
IRRP Well 92 (Site 6)
Poppet Ck
IRRP Maintenance Yard (Site 8)
5
New Ramona Expwy Corridor
Esplanade Av to Washington Av:
- 33" Raw Imported Water Pipeline ("SJV Pipeline")
- 18" Raw Groundwater Pipeline
- 12" Well 92 Blowoff Pipeline
- SCE Powerfeeds
Well 11
Soboba Sand & Gravel Pit
Washington Av
Bautista Ck
6
Pipelines to/from:
- Washington Booster
- Corwin Booster
- Wells 11 & 36
- Washington Av 30" Pipeline
- 24" Raw Water Pipeline ("SJV Pipeline")
7
24" Raw Imported Water Pipeline ("SJV Pipeline")
Existing New and Planned EMWD Facilities
Along or Across Existing and New Ramona Expressway
Hemet/San Jacinto Integrated Recharge and Recovery Program
Figure 4

EXHIBIT D



Existing New and Planned EMWD/LHMWD Facilities - Cienega/Grant Areas Within or Adjacent to Conservation Areas
Hemet/San Jacinto Integrated Recharge and Recovery Program
Figure 5

EXHIBIT D



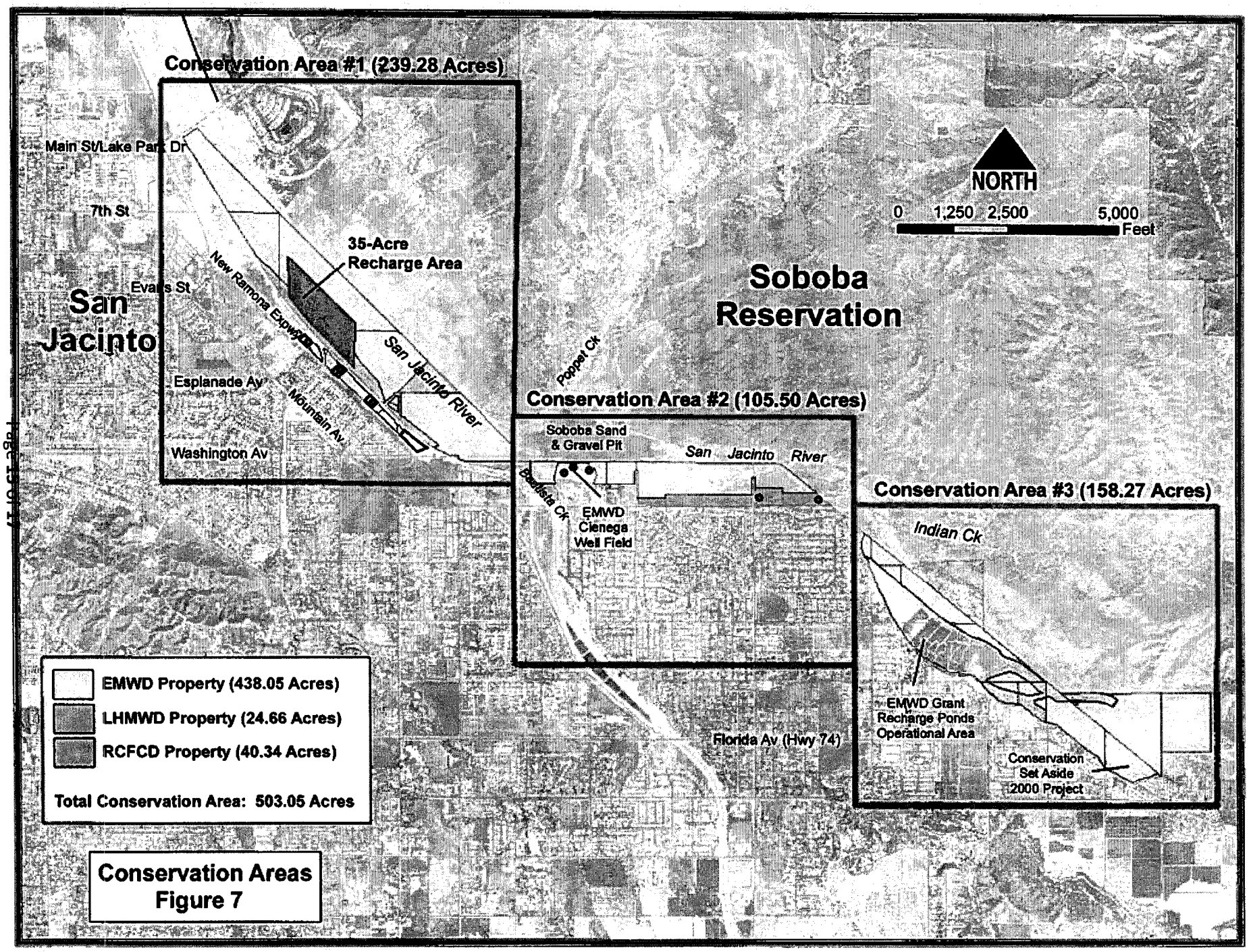
Corps Jurisdictional Delineation/Project Effects

HEMET/SAN JACINTO INTEGRATED RECHARGE AND RECOVERY PROGRAM

HELIX Environmental Planning

Figure 6

EXHIBIT D


Conservation Area #1 (239.28 Acres)
Main St/Lake Park Dr
7th St
Evans St
San Jacinto
35-Acre Recharge Area
New Ramona Expwy
San Jacinto River
Esplanade Av
Mountain Av
Washington Av
Soboba Reservation
Poppet Ck
Conservation Area #2 (105.50 Acres)
Soboba Sand & Gravel Pit
San Jacinto River
Bautista Ck
EMWD Cienega Well Field
Conservation Area #3 (158.27 Acres)
Indian Ck
EMWD Grant Recharge Ponds Operational Area
Conservation Set Aside 2000 Project
Florida Av (Hwy 74)
NORTH
0 1,250 2,500 5,000
Feet
EMWD Property (438.05 Acres)
LHMWD Property (24.66 Acres)
RCFCD Property (40.34 Acres)
Total Conservation Area: 503.05 Acres
Conservation Areas
Figure 7

LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS

NOTIFICATION OF COMMENCEMENT OF WORK FOR DEPARTMENT OF THE ARMY PERMIT

Permit Number: *SPL-2004-01197*
Name of Permittee: *Eastern Municipal Water District - Joseph Lewis*
Date of Issuance: *February 24, 2012*

Date work in waters of the U.S. will commence: _____
Estimated construction period (in weeks): _____
Name & phone of contractor (if any): _____

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this permit you may be subject to permit suspension, modification, or revocation.

I hereby certify that I, and the contractor (if applicable), have read and agree to comply with the terms and conditions of the above referenced permit.

_____ _____
Signature of Permittee Date

At least ten (10) days prior to the commencement of the activity authorized by this permit, sign this certification and return it using any ONE of the following three (3) methods:

(1) E-MAIL a statement including all the above information to:
James.E.Mace@usace.army.mil
OR
(2) FAX this certification, after signing, to: 951-276-6641
OR
(3) MAIL to the following address:

U.S. Army Corps of Engineers
Riverside Regulatory Field Office
1451 Research Park Drive, Suite 100
Riverside, CA 92507-2154

LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS

NOTIFICATION OF COMPLETION OF WORK AND CERTIFICATION OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT

Permit Number: *SPL-2004-01197*
Name of Permittee: *Eastern Municipal Water District - Joseph Lewis*
Date of Issuance: *February 24, 2012*

Date work in waters of the U.S. completed: _____
Construction period (in weeks): _____
Name & phone of contractor (if any): _____

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this permit you may be subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of said permit.

_____ _____
Signature of Permittee Date

Upon completion of the activity authorized by this permit, sign this certification and return it using any ONE of the following three (3) methods:

(1) E-MAIL a statement including all the above information to:
James.E.Mace@usace.army.mil
OR
(2) FAX this certification, after signing, to: 951-276-6641
OR
(3) MAIL to the following address:

U.S. Army Corps of Engineers
Riverside Regulatory Field Office
1451 Research Park Drive, Suite 100
Riverside, CA 92507-2154

Exhibit E

California Regional Water Quality Control Board
Santa Ana Region

Matthew Rodriquez
Secretary for
Environmental Protection

3737 Main Street, Suite 500, Riverside, California 92501-3348
Phone (951) 782-4130 • FAX (951) 781-6288
www.waterboards.ca.gov/santaana

Edmund G. Brown Jr.
Governor

January 5, 2012

Joe Lewis
Eastern Municipal Water District
2270 Trumble Road
PO Box 8300
Perris, CA 92572

AMENDED CLEAN WATER ACT SECTION 401 WATER QUALITY STANDARDS CERTIFICATION FOR THE SAN JACINTO RIVER INTEGRATED RECHARGE AND RECOVERY PROJECT, CITY OF SAN JACINTO (ACOE REFERENCE NO. 200401197 – DPS) (SARWQCB PROJECT NO. 332007-09)

Dear Mr. Lewis:

On December 5, 2011, we received a request for amendment of Eastern Municipal Water District's (EMWD) Clean Water Act Section 401 Water Quality Standards Certification (Certification) for the San Jacinto River Integrated Recharge and Recovery Project (ACOE Reference No. 200401197 – DPS). The previously amended Certification was issued on August 24, 2010.

The Hemet-San Jacinto Integrated Recharge and Recovery Program was initially authorized by the U.S. Army Corps of Engineers (Corps) under Individual Permit SPL-2004-1197, issued July 18, 2007 and its 401 Water Quality Certification (ACOE Reference No. 2004-1197), issued June 27, 2007.

On November 6, 2006, the U.S. Fish and Wildlife Service (Service) issued a non-jeopardy biological opinion (FWS-WRIV-4051.5) in accordance with Section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*) addressing the San Jacinto Integrated Recharge and Recovery Program's construction and operation of water recharge basins within the San Jacinto River and their effects on the federally endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*; "SBKR") and its designated critical habitat.

During early phases of project construction in 2008, the incidental take limit for SBKR was exceeded and work was halted. On January 29, 2008, the Corps requested reinitiation of formal consultation pursuant to 50 CFR § 402.16. On April 20, 2010, the Service issued a second non-jeopardy biological opinion (FWS-WRIV-08B0106-10F0650). In accordance with the 2010 biological opinion, the project site was relocated upstream of the proposed project area evaluated in the 2006 biological opinion, and compensatory mitigation was increased to 186 acres.

On June 29, 2011, prior to resuming construction activities, EMWD notified the Service that there was abundant kangaroo rat sign on the recharge project site required by the Service in their 2010 biological opinion, and that the project's small mammal biologist expected the take threshold provided in the incidental take statement of the biological opinion would be exceeded. A site visit was conducted on July 12, 2011 to evaluate kangaroo rat sign on the site (burrows, runs, dust baths) and to assess the perimeter exclusion fence, which was almost completed. As a result of the more than 150 kangaroo rat burrows on site, it was evident that the project area apparently supported more SBKR than anticipated. The Service recommended reinitiation of formal consultation on July 15, 2011 and the Corps reinitiated consultation on August 12, 2011.

Under an amended U.S. Army Corps of Engineers (Corps) Individual Permit (200401197-DPS), construction of the recharge basins and associated facilities would require modifications to 15.86 acres of Waters of the U.S. (WUS) comprised of Riversidean alluvial fan sage scrub.

In summary, the recharge and recovery program is the same as permitted in 2007. At the direction of the Service, the location for the proposed 35 acres of recharge basins has been returned to the location originally certified in 2007. This measure is being taken to avoid and minimize the Project's effects on the SBKR. Compensatory mitigation has been increased, also at the direction of the Service.

A final Environmental Impact Report (EIR SCH No. 2003121068) was certified for this project in 2004. An addendum to that EIR was adopted on June 24, 2010 and a subsequent addendum was adopted on November 16, 2011. We received a copy of the Notice of Determination on December 8, 2011.

This letter responds to your request for amendment to the existing certification that the redesigned project, described in your 2011 application and summarized below, will comply with State water quality standards outlined in the Water Quality Control Plan for the Santa Ana River Basin (1995) and subsequent Basin Plan amendments:

Project Description:

Construction of 35-acres of groundwater recharge basins located along the south levee of the San Jacinto River, associated pipelines, extraction and monitoring wells, and other infrastructure. The basins will be constructed by grading the River's streambed into berms to contain the water; there will be no import or export of fill material. The berms will be constructed such that they are subject to complete washout in order to prevent overtopping the levees. Water for recharge will be imported via the State Water Project.

The project includes follow-on maintenance of streambed basins and berms, including maintaining infiltration rates and the removal of vegetation that would otherwise evapotranspire the water, making it unavailable for recharge.

The project's objective is to address a final Tribal water rights settlement agreement that calls for the EMWD and the Lake Hemet Municipal Water District (LHMWD) to supply 7,500 acre feet of water annually to the Soboba Band of Luiseño Indians (Tribe) as described in the Soboba Settlement Act, Public Law 110-297, signed on July 31, 2008. The project is funded in part by a grant from the Department of Water Resources.

The project is located in an un-sectioned portion of Townships 4 and 5 South, Range 1 East, of the U.S. Geological Survey San Jacinto, California, 7.5-minute topographic quadrangle map 33° 46' 26.83" North latitude and 116° 55' 27.54" West longitude).

Receiving water:	San Jacinto River.
Fill area:	15.86 acres of permanent impact to wetland (3,460 linear feet total).
Dredge/Fill volume:	N/A
Federal permit:	U.S. Army Corps of Engineers Individual Permit.

You have proposed to mitigate water quality impacts as described in your Certification application. The proposed mitigation is summarized in part below:

Onsite Water Quality Standards Mitigation Proposed:

- Silt fences, fiber rolls, and other erosion source control and treatment best management practices (BMPs) will be employed. Additional BMPs will be identified in the project Storm Water Pollution Prevention Plan (SWPPP).

Offsite Water Quality Standards Mitigation Proposed:

- An in-lieu fee will be paid to the Riverside County Regional Parks and Open Space District towards the eradication of 8-acres of invasive plant species in the Santa Ana River.
- 438-acres of land, within three conservation areas and including a biological buffer zone identified by the Fish and Wildlife Service in BO/ITS No. FWS-WRIV-08BO106-10F0650, will be preserved and managed in perpetuity by the Riverside Conservation Authority for the conservation of habitat for the San Bernardino Kangaroo Rat and the preservation of portions of the San Jacinto River and its floodplain.

On August 7, 2007, an in-lieu fee was paid to the Riverside County Regional Parks and Open Space District towards the eradication of 8-acres of invasive plant species in the Santa Ana River watershed.

Appropriate Best Management Practices will be implemented to reduce construction-related impacts to Waters of the State. This project affects an area that is more than one acre. Therefore, coverage under the State Water Resources Control Board's General Permit for Storm Water Discharges Associated with Construction Activity, Water Quality Order 2009-0009, is required.

De-watering discharges from the proposed project may be regulated under Regional Board Order No. R8-2009-0003, General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (*De Minimis*) Threat to Water Quality. For more information, please review Order No. R8-2009-0003 at www.waterboards.ca.gov/santaana

You have applied for an amended individual permit from the U.S. Army Corps of Engineers in compliance with Section 404 of the Clean Water Act. You have applied for a Streambed Alteration Agreement with the California Department of Fish and Game. Pursuant to CEQA, the Eastern Municipal Water District certified an Environmental Impact Report on August 9, 2004. An addendum to that EIR was adopted on June 24, 2010, and again on November 16, 2011 and a copy of the Notice of Determination was received by this office on December 8, 2011.

In the issuance of this Certification, the Executive Officer has considered those sections of the District's Environmental Impact Report and its Addendum that relate to water quality. Based on the mitigation proposed and the conditions set forth in this Certification, impacts to water quality will be reduced to a less than significant level and beneficial uses will be protected. The Regional Board independently finds that changes or alterations have been required or incorporated into the project that avoid or mitigate impacts to water quality to a less than significant level.

This 401 Certification is contingent upon the execution of the following conditions:

1) Eastern Municipal Water District shall provide evidence of the preservation and permanent management of the proposed 438-acre conservation areas to the Executive Officer not later than January 2, 2013.

2) This Water Quality Certification is subject to the acquisition of all local, regional, state, and federal permits and approvals as required by law. Failure to meet any conditions contained herein or any the conditions contained in any other permit or approval issued by the State of California or any subdivision thereof may result in the revocation of this Certification and civil or criminal liability.

3) The applicant must comply with the requirements of the applicable Clean Water Act Section 404 permit.

4) A copy of this Certification and any subsequent amendments must be maintained on site for the duration of work as a denoted element of any project SWPPP or WQMP.

Under California Water Code, Section 1058, and Pursuant to 23 CCR §3860, the following shall be included as conditions of all water quality certification actions:

(a) Every certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Section §13330 of the Water Code and Article 6 (commencing with Section 3867) of this Chapter.

(b) Certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a FERC license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to Subsection §3855(b) of this Chapter and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

(c) Certification is conditioned upon total payment of any fee required under this Chapter and owed by the applicant.

Although we anticipate no further regulatory involvement, if the above stated conditions are changed, any of the criteria or conditions as previously described are not met, or new information becomes available that indicates a water quality problem, we may formulate Waste Discharge Requirements.

In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under state law. For purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification.

In response to a suspected violation of any condition of this certification, the Santa Ana Regional Water Quality Control Board (Regional Board) may require the holder of any permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the Regional Board deems appropriate. The burden, including costs, of the reports shall be reasonable in relation to the need for the reports and the benefits to be obtained from the reports.

In response to any violation of the conditions of this certification, the Regional Board may add to or modify the conditions of this certification as appropriate to ensure compliance. Pursuant to California Code of Regulations Section 3857, we will take no further action on your application. Please notify our office five (5) days before construction begins on this project.

This letter constitutes a Water Quality Standards Certification issued pursuant to Clean Water Act Section 401. I hereby issue an order certifying that any discharge from the referenced project will comply with the applicable provisions of Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act, and with other applicable requirements of State law. This discharge is also regulated under State Water Resources Control Board Order No. 2003-0017-DWQ (Order No. 2003-0017-DWQ), "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received Water Quality Certification" which requires compliance with all conditions of this Water Quality Standards Certification. Order No. 2003-0017-DWQ is available at www.swrcb.ca.gov/resdec/wqorders/2003/wqo/wqo2003-0017.pdf

Should there be any questions, please contact Marc Brown at (951) 321-4584 or Mark Adelson at (951) 782-3234.

Sincerely,

Kurt V. Berchtold
Executive Officer

cc (via electronic mail):
U. S. Army Corps of Engineers, Los Angeles Office – Jim Mace
State Water Resources Control Board, OCC – David Rice
State Water Resources Control Board, DWQ-Water Quality Certification Unit – Nancy Dagle
California Department of Fish and Game, Ontario Office – Jeff Brandt
U.S. EPA, Supervisor of the Wetlands Regulatory Office WTR- 8 – Tim Vendlinski

x:\401\certifications\332007-09_san jacintoriver recharge_amendment_04jan12.doc

California Natural Resources Agency
DEPARTMENT OF FISH AND GAME
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-220
Ontario, CA 91764
(909) 484-0459
www.dfg.ca.gov

EDMUND G. BROWN, Jr., Governor
JOHN McCAMMAN, Director

January 25, 2012

Joe Lewis
Eastern Municipal Water District
P.O. Box 8300
Perris, CA 92572-8300

Subject: Amendment to the Master Agreement Notification No. 1600-2007-0033-R6 (Revision 2)
Hemet/San Jacinto Integrated Recharge and Recovery Program

Dear Mr. Lewis:

The Department of Fish and Game (Department) has received your request to amend the Streambed Alteration Agreement Notification No. 1600-2007-0033-R6 (Revision 3 Agreement) and the required fee in the amount of $560.25 for a major amendment. Your request to amend the Agreement includes a change in the location of the project, quantity of impacts, and quantity of mitigation. This amendment incorporates and replaces the previous amendment (Revision 3 Agreement) executed on August 31, 2010.

The Department hereby agrees to amend the agreement as follows:

Paragraph 3: WHEREAS, pursuant to Section 1605 of the California Fish and Game Code, the Operator, on the 28th day of November, 2011, notified the Department that to develop the Hemet/San Jacinto Integrated Recharge and Recovery Program under Lake or Streambed Alteration Agreement No.1600-2007-0033-R6 (Revision 3, dated August 30, 2010), additional changes were needed to reflect changed circumstances. The Program intends to divert or obstruct the natural flow of, or change the bed, channel, or bank of, or use material from the streambed(s) of the following water(s): San Jacinto River, northeast of the Ramona Expressway, immediately southwest of the Main Street Road crossing of the San Jacinto River, within the San Jacinto River, adjacent to and southwest of the Soboba Indian Reservation, tributary to Lake Elsinore, in the San Jacinto Valley near the Cities of Hemet and San Jacinto, County of Riverside, Townships 4 and 5 South, Ranges 1 East, San Jacinto California USGS quadrangle.

Condition 2: The project site is located within the San Jacinto River, immediately downstream of confluence of Bautista Creek (Figure 1) at the original 2007 location. For the construction and 20 year operation of the Hemet/San Jacinto Integrated Recharge and Recovery Program project, the Operator is proposing to construct approximately 37.3 acres of recharge basins and supporting infrastructure for the purpose of aquifer recharge within the San Jacinto Watershed Groundwater Basin. To develop the recharge basins, the Operator proposes to permanently impact 36.3 acres of

jurisdictional areas, including 13.6 acres of alluvial fan sage scrub, and approximately one acre of jurisdictional areas to be temporarily affected as a result of planned post storm event re-alignment of the "low flow channel" to avoid the recharge basins. Total project impacts of 37.3 acres of jurisdictional areas are authorized under this agreement.

Condition 3: The Operator shall not impact more than 37.3 acres of Departmental jurisdictional waters, including 36.3 acres of permanent impacts, and 1 acre of temporary impacts. If impacts to drainages or riparian habitat exceed that authorized in Condition 2 of the Agreement, the Operator shall mitigate at a minimum 5:1 replacement-to-impact ratio for the impacts beyond those previously authorized by this Agreement and submit a new 1600 streambed alteration agreement application for the entire project. All mitigation shall be approved by the Department.

Condition 4: The Operator shall mitigate the project impacts to 37.3 acres of jurisdictional areas and habitats within the San Jacinto River by restoration and conservation in perpetuity of no less than 120 acres of jurisdictional stream channel and associated habitats within the San Jacinto River, and no less than eight (8) acres of off-site mitigation credits for riparian habitat restoration. The required 120 acres will be provided within 436 acres that together comprise three Conservation Areas. Except for uses appropriate to a conservation area as approved by the Department, the public shall not have access to the 436 acre mitigation area, and no additional activities shall be permitted within the area except the maintenance of the mitigation area, and the removal of exotic species, trash, and debris.

Impacts to DFG jurisdictional areas and habitats will be permanently offset through conservation and management of approximately 436 acres of land along the San Jacinto River. All EMWD-owned properties within the conservation areas will be protected by a conservation easement(s) that names the Western Riverside County Regional Conservation Authority (RCA) as the beneficiary.

DFG Jurisdictional Areas and Habitats	Permanent Impacts in Acres	Temporary Impacts in Acres	Total Impacts in Acres	DFG Required Mitigation
Alluvial Fan Sage Scrub (AFSS)	13.6	1	14.6	43.8 acres of AFSS habitat conservation
Vegetated Ephemeral Streambed	17.4		17.4	52.2 acres of AFSS habitat conservation
Disturbed Vegetated Ephemeral Streambed	5.3		5.3	16 acres of AFSS habitat conservation
Subtotal	**36.3**	**1**	**37.3**	**112 acres of AFSS habitat conservation**
Offsite Riparian Habitat Restoration				8 acres offsite riparian habitat restoration
TOTAL	**36.3**	**1**	**37.3**	**Total 120**

The RCA shall serve as the reserve manager of the 436-acre conservation area and provide annual habitat management oversight on the property pursuant to Section 5.2 of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP; Dudek and Associates 2003). The RCA shall maintain the biological values on conservation site, which now support primarily alluvial scrub vegetation and associated upland habitat. The EMWD will provide a one-time endowment in the approximate amount of $1,600,000 to the RCA, in advance of ground disturbance by the project, to fund their perpetual habitat management of the four conservation areas.

A total of 29.8 acres, including 3.4 acres northeast of Well Site 6 in Conservation Area 1 and 26.4 acres in Conservation Area 3, will be restored.

Condition 5: Prior to the initiation of any project activities in jurisdictional areas and no later than 90 days after signature to this agreement, the Operator shall submit to the Department for review and approval a Habitat Mitigation and Monitoring Plan designed to meet the overall mitigation goals identified in Condition 4 of this Agreement. The plan shall provide details on conservation, restoration, enhancement, and monitoring aspects of the mitigation. The plan shall include a plant palette, planting plan, monitoring and maintenance procedures/timeline, success standards and contingency measures, description of plans for invasive removal activities including monitoring and maintenance objectives to prevent the re invasion of undesirable plants for a minimum of five years. An annual report shall be submitted to the Department each year for a minimum of 5 years after conservation and enhancement or until the Department deems the San Jacinto River restoration site(s) successful. This report shall include (a) a description of the conservation and enhancement activities done the previous year (including revegetation and exotic species removal) and when they were conducted; (b) the survival, percent cover, and height of both tree and shrub species planted; the number by species of plants replaced, an overview of the revegetation effort, and the method used to assess these parameters shall also be included; (c) the report shall also include information regarding exotic vegetation removal including the amount removed, the amount removed and treated, frequency and timing of removal and treatment, disposal specifics, and a summary of the general success and failures or failure of the exotic removal plan. The report shall also include wildlife observed at the site during monitoring surveys including sensitive species and/or listed species. Photos from designated photo stations shall be included.

Condition 7: The restoration site shall meet all of the requirements below.

A. All plantings shall be derived from local stock (within 30 miles of the restoration site). Native shrub cover shall meet a minimum 30% cover, nonnative grass cover shall not exceed 20% cover, and bare ground shall encompass at least 40% cover in order for the Department to deem the restoration site successful. If the cover requirements have not been met,

the Permittee is responsible for replacement planting to achieve these requirements. Replacement plants shall be monitored with the same survival and growth requirements for 5 years after planting. Natural recruitment of native plants may be used to supplement replacement plants.

B. The restoration site shall not contain more than 5 percent exotic, invasive plant species for the Department to deem the restoration site successful. Exotic plant removal shall be conducted throughout the 5-year monitoring and maintenance period.

C. Irrigation of the restoration site may only be used to help the plants become established during the first two years following planting. Watering/irrigation of the site shall be discontinued at least two years prior to completion of the monitoring period for the site to be deemed successful by the Department.

Condition 9: An annual report shall be submitted to the Department each year for a minimum of 5 years after conservation and enhancement or until the Department deems the San Jacinto River restoration site(s) successful. At a minimum, this report shall include the following information: (1) a description of the restoration activities conducted during the previous year, including: (a) site preparation, (b) plant installation and an overview of the planting effort, (c) the number by species of plants replaced or naturally recruited, and (d) when the activities were conducted; (2) current site conditions, including: (a) the percent survival, percent cover, and height of both tree and shrub species planted, and (b) the methods used to assess these parameters; and (3) information regarding nonnative plant removal, including: (a) the methods used for removal, (b) the amount removed and/or treated, (c) the frequency and timing of removal and treatment, (d) disposal specifics, and (e) a summary of the general successes and failures or failure of the nonnative removal plan. The report shall also include wildlife species observed at the creation site during monitoring surveys including sensitive species and/or listed species. Photos from designated photo stations shall be included. The first annual report is due to the Department no later than September 30, 2012.

Condition 10: Pursuant to the California Fish and Game Code Section 1605 (g) every four years during the term of this Agreement, until the Agreement expires, a Status Report shall be submitted to the Department no later than 90 days prior to the end of each four year period (next status report due no later than May 01, 2013), and shall include the following information:

1) A copy of the original Agreement.

2) The status of the activity covered by the Agreement.

a. An evaluation of the success or failure of the measures in the Agreement to protect the fish and wildlife resources that the activity may substantially adversely affect.

b. A discussion of any factors that could increase the predicted adverse impacts on fish and wildlife resources, and a description of the resources that may be adversely affected.

c. Reports shall include photo documentation consisting of "before and after" photos of representative work areas in which maintenance was completed with hand tools, and all areas in which work involving heavy equipment occurred.

d. Upon receipt of the Status Report, the Department will contact the Operator to schedule an onsite inspection by Department staff, to confirm that the Operator is in compliance with the terms of this Agreement, and that the Agreement is adequately protecting fish and wildlife resources. These onsite inspections shall be conducted by Department staff every four years during the term of this Agreement, until the Agreement expires.

e. Following review of the Status Report and the onsite inspection, if the Department determines that the measures in the Agreement no longer protect the fish and wildlife resources that are being substantially adversely affected by the activity, the Department, in consultation with the Operator, and within 45 days of receipt of the report, shall impose one or more new measures to protect the fish and wildlife resources affected by the activity.

In addition to the above monitoring and reporting requirements, the Department requires that the Operator:

- Immediately notify the Department in writing if monitoring reveals that any of the protective measures were not implemented during the period indicated in this program, or if it anticipates that measures will not be implemented within the time period specified.

- Immediately notify the Department if any of the protective measures are not providing the level of protection that is appropriate for the impact that is occurring, and recommendations, if any, for alternative protective measures.

Condition 16: Deleted from Agreement

Condition 17: A conservation easement shall be placed on the all EMWD-owned properties within the 436-acre conservation area to protect fish and wildlife resources, in perpetuity. The easement shall be in favor of the Western **Riverside County Regional Conservation Authority (RCA)**, or other appropriate agency as determined by the Department, and shall be recorded within six (6) months of signing this agreement, or as extended by the Department. The Operator shall be responsible for all costs in recording and funding the easement. The Operator shall provide sufficient funds to manage the preserved area in perpetuity. The amount and type of the funding shall be approved by the appropriate agency as determined by the Department. An executed copy of the Conservation Easement shall be provided to the Department within six (6) months of signing this agreement.

ALL OTHER CONDITIONS IN THE AGREEMENT EXECUTED OCTOBER 9, 2007 REMAIN IN EFFECT UNLESS OTHERWISE NOTED HEREIN.

Copies of the Agreement and this amendment must be readily available at project worksites and must be presented when requested by a Department representative or agency with inspection authority.

If you have any questions regarding this matter, please contact me at the telephone number or e-mail address below.

Sincerely,

JEFF BRANDT
Senior Environmental Scientist
Habitat Conservation Department
JBRANDT@dfg.ca.gov
(909) 987-7161

cc: Stephen Neudecker, HELIX Environmental Planning, Inc.

ACKNOWLEDGEMENT

I hereby agree to the above-referenced amendment.

Print Name: _____ Date: _____

Signature: _____

Exhibit G

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

March 27, 2012

REPLY TO
ATTENTION OF

Office of the Chief
Engineering Division

Ms. Zully Smith
Chief, Operations & Maintenance Division
Riverside County Flood Control
Water Conservation District
1995 Market Street
Riverside, California 92501

Dear Ms. Smith:

This letter responds to your request for permission to alter or modify the San Jacinto River Levee by relocating the recharge basin on San Jacinto River near Hemet. In support of your request, you submitted permit application materials that were deemed complete on March 27, 2012. We have reviewed the design documents that you have submitted; find them to be acceptable; and have concluded that your proposed work would not adversely impact the structural integrity or the hydraulics of the flood risk management facility constructed by the U.S. Army Corps of Engineers (Corps).

Enclosed please find two copies of Corps permit number EE2010-63. This Permit is issued pursuant to Section 14 of the Rivers and Harbors Act of 1899, codified at 33 U.S.C. § 408 (Section 408). Please execute both copies of the enclosed Permit indicating your acceptance of its terms and conditions and return them to this office for execution. A copy of the fully executed Permit will be returned to you for your files providing final approval of your request.

This Permit to modify and/or alter the Project is conditioned upon your compliance with all of the stated conditions, both general and special. If you fail to comply with the terms and conditions of this Permit or if your activity changes in scope, size, or in any other substantive manner, you are required contact the Corps immediately prior to initiating or continuing work.

This Permit is effective only insofar as the jurisdiction of the Department of the Army applies to the Project. You may be required to obtain additional permits, comply with applicable laws or regulations as may be required by Federal, state, or local statutes, and/or acquire any necessary real estate rights or permissions from third parties necessary to commence the permitted actions.

Thank you for participating in the Section 408 permit process. If you have any questions, please contact Ms. Arnecia Williams, (213) 452-3747, arnecia.n.williams@usace.army.mil.

Sincerely,

Richard J. Leifield, P.E.
Chief, Engineering Division
Los Angeles District
U.S. Army Corps of Engineers

DEPARTMENT OF THE ARMY
33 U.S.C. § 408 PERMIT
U. S. Army Corps of Engineers
Los Angeles District

PERMITTEE/LOCAL SPONSOR: Riverside County Flood Control, Water Conservation District, *1995 Market Street, Riverside, California 92501*

PERMIT NUMBER: EE2010-63

ISSUING OFFICE: U.S. Army Corps of Engineers, Los Angeles District, Engineering Division

CORPS PERMIT COORDINATOR: Ms. Arnecia Williams, (213) 452-3747, arnecia.n.williams@usace.army.mil

AFFECTED FEDERAL PROJECT AND DESCRIPTION: San Jacinto River levee.

LOCATION: LAT 33°46'17.73"N LON - 116°55'13.32"W

APPROVED MODIFICATION OR ALTERATION OF THE FEDERAL PROJECT: The Hemet/San Jacinto Integrated Groundwater Recharge and Recovery Program propose to relocate the groundwater recharge pond. Previously, the Corps approved the concrete encasement on the San Jacinto River Levee to prevent damage to the levee due to potential hydraulic forces on the pipelines that will import water to the river for groundwater recharge. The new location of the recharge pond is adjacent to the proposed area from previous permit request.

PERMIT CONDITIONS

I. General Conditions

1. The United States shall not be responsible for damages to property or injuries to persons which may arise from or be incident to the construction, operation, maintenance, repair, rehabilitation and replacement of the Authorized Activity, or for damages to the Federal Project. Permittee shall hold the United States harmless from any and all such claims not including damages due to the fault or negligence of the United States or its contractors.

2. Permittee shall comply with all applicable federal laws and regulations and with all applicable laws, ordinances and regulations of the state, county and municipality wherein the Federal Project is located, including, but not limited to, those regarding construction, health, safety, water supply, sanitation, use of pesticides, and licenses or permits necessary for the Authorized Activity.

3. Permittee shall maintain the Authorized Activity in good condition and in conformance with the terms and conditions of this Permit. Permittee shall not be relieved of this requirement even if the Authorized Activity is abandoned. Should the Permittee wish to cease to maintain the Authorized Activity or desire to abandon it, Permittee must obtain from the Corps a modification of this permit, which may require additional construction activities to abandon the facility.

4. If previously unknown historic or archeological remains are discovered in carrying out the Authorized Activity, Permittee must cease activity, protect the site and immediately notify the Corps. The Corps will initiate Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

5. If the scope or details of the Authorized Activity change from the approved plans and specifications upon which this Permit is based, the Permittee must resubmit the permit application with the permit number and revisions clearly identified. Work associated with the Authorized Activity that does not pertain to the revised portion of the project, may continue while the revisions are being reviewed unless the Corps indicates otherwise.

6. Permittee shall keep the Permit Coordinator apprised of anticipated start and completion date of construction to the Permit Coordinator.

7. Permittee is required to invite the Permit Coordinator to an onsite kickoff meeting after the construction contract is awarded and prior to the date work is expected to begin. Permittee shall provide the Corps with the date, time and location of the meeting at least one week prior to the meeting, along with a copy of the construction schedule.

8. Permittee is required to allow Corps representatives to inspect the Authorized Activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of this Permit.

9. Permittee shall oversee the conduct of the work and ensure the Authorized Activity is being constructed in accordance with the approved plans and specifications.

10. Upon completion of the Authorized Activity, Permittee shall submit electronic copies of the as-built plans of the Authorized Activity to the Corps, which are signed by the Permitee's engineer of record. Electronic copies of the as-built plans shall be in pdf format.

11. **Granting of this Permit does not authorize work in waters of the United States. Work shall not begin in waters of the United States until Permittee first obtains a Department of the Army permit for activities which involve the discharge of dredge or fill material or the placement of fixed structures in the waters of the United States, pursuant to the provisions of Section 10 of the Rivers and Harbors Act of 3 March 1899 (33 USC 403), and Section 404 of the Clean Waters Act (33 USC 1344).**

12. Should construction activities fail to commence within two (2) years after execution of the effective date of this Permit, this Permit shall be temporarily revoked upon further examination by the Corps. Work shall not begin until the Corps has examined this Permit and determines that the Permit conditions are sufficient or until new Permit conditions are incorporated.

II. Special Conditions

None.

By signing this 33 U.S.C. Section 408 Permit, you are accepting the terms and conditions contained within the General Conditions and Special Conditions of this Permit.

Zully Smith
Chief, Operations & Maintenance Division
Riverside County Flood Control
Water Conservation District

4-2-12
Date

Richard J. Leifield, P.E.
Chief, Engineering Division
Los Angeles District
U.S. Army Corps of Engineers

4/4/12
Date

Exhibit G

Lotz, Ed

From: Williams, Arnecia <Arnecia.N.Williams@usace.army.mil>
Sent: Tuesday, May 15, 2012 10:26 AM
To: Lotz, Ed
Cc: Smith, Zully; Guirguis, Imad
Subject: RE: Hemet-San Jacinto Integrated Groundwater Recharge and Recovery Program (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Ed,

After we approved the permit (Corps File No. EE2010-63) with the relocated ponds, the Corps received a letter from Riverside County for the relocation of the water supply pipelines. The Corps does not feel an amendment is required for this permit. The permit conditions for permit EE2010-63 still apply and the method of construction listed in the permit shall be adhered to. Please let me know if you have any questions about this email or permit.

Thank you,
Arnecia

Arnecia Williams, AVS
SPL VE Program Manager
Permit Coordinator
USACE, Los Angeles District
Office: (213) 452-3747 / Fax: (213) 452-4248 Arnecia.N.Williams@usace.army.mil

Live well, Laugh often, & Love with all of your heart!

-----Original Message-----
From: Lotz, Ed [mailto:ELOTZ@rcflood.org]
Sent: Tuesday, May 15, 2012 8:24 AM
To: Williams, Arnecia
Cc: Smith, Zully; Guirguis, Imad
Subject: Hemet-San Jacinto Integrated Groundwater Recharge and Recovery Program

Arnecia,

We would appreciate your confirmation response for our record to this email of your phone message to me yesterday (5-14-12) that the Section 408 Permit (Corps File No. EE2010-63) issued to our District on 3-27-12 doesn't require amending for the relocation of the water supply pipelines to the relocated recharge ponds. The construction of the pipelines will be in accordance with the design approved by the Corps in the letter dated 5-11-11 to the District as stated in the 408 Permit. We will submit to the Corps as-built drawings of construction that involves the San Jacinto River Levee. Thank you, Ed Lotz, (951) 955-1266.

EXHIBIT H

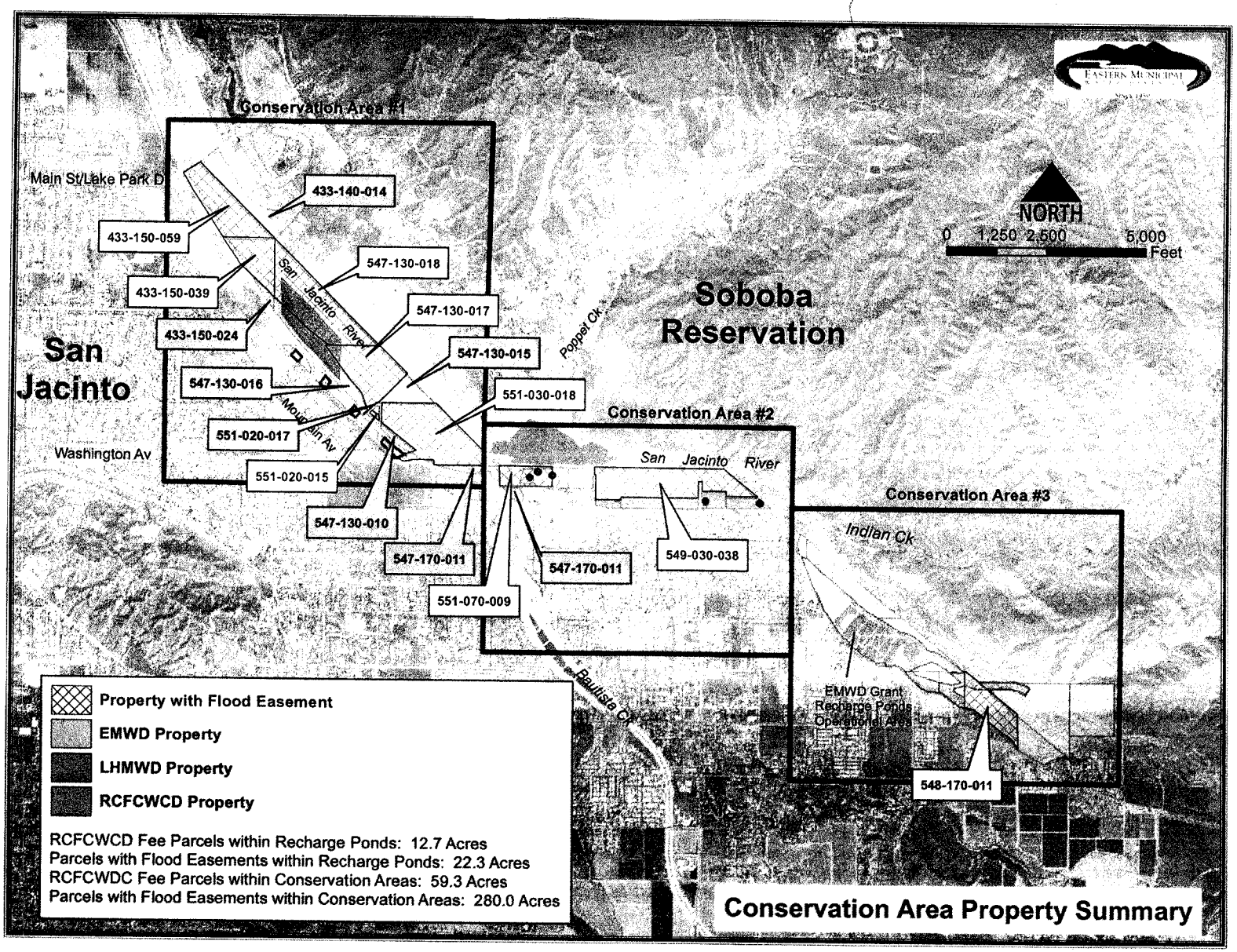
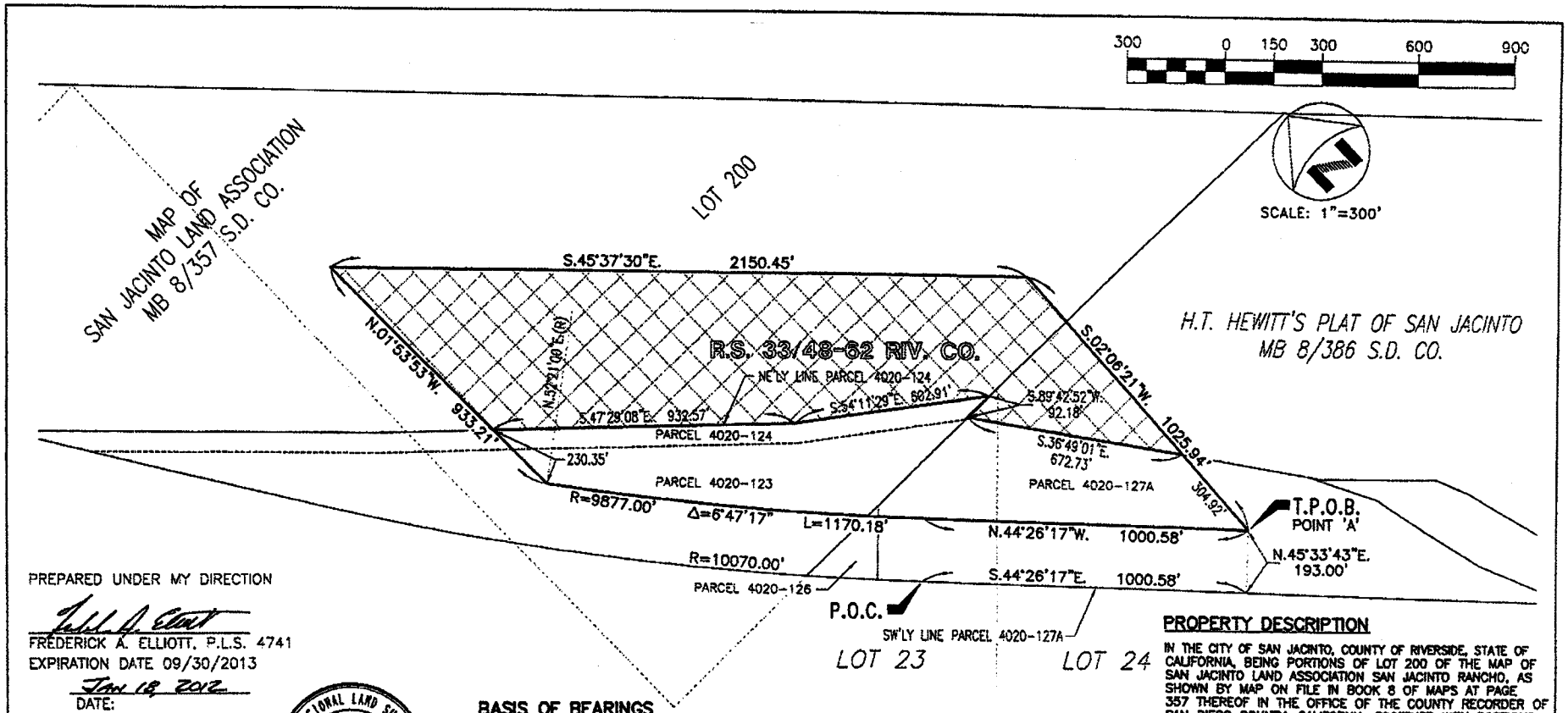

Conservation Area #1
Main St/Lake Park D
433-140-014
433-150-059
433-150-039
433-150-024
547-130-018
547-130-017
547-130-015
551-030-018
547-130-016
551-020-017
551-020-015
547-130-010
547-170-011
551-070-009
San Jacinto River
Mound Rin Av
Washington Av
Poppet Ck
Soboba Reservation
San Jacinto
Conservation Area #2
San Jacinto River
547-170-011
549-030-038
Conservation Area #3
Indian Ck
EMWD Grant Recharge Ponds Operational Area
548-170-011
Property with Flood Easement
EMWD Property
LHMWD Property
RCFCWCD Property
RCFCWCD Fee Parcels within Recharge Ponds: 12.7 Acres
Parcels with Flood Easements within Recharge Ponds: 22.3 Acres
RCFCWDC Fee Parcels within Conservation Areas: 59.3 Acres
Parcels with Flood Easements within Conservation Areas: 280.0 Acres
NORTH
0 1,250 2,500 5,000
Feet
Conservation Area Property Summary

EXHIBIT I



PREPARED UNDER MY DIRECTION

FREDERICK A. ELLIOTT, P.L.S. 4741
EXPIRATION DATE 09/30/2013

DATE: Jan 18, 2012

PREPARED BY:
KRIEGER & STEWART INCORPORATED
3602 University Ave · Riverside, CA 92501 · 951-684-5800

PROFESSIONAL LAND SURVEYOR
FREDERICK A. ELLIOTT
Exp. 9-30-13
4741
STATE OF CALIFORNIA

BASIS OF BEARINGS

THE BASIS OF BEARINGS IS THE SOUTHWESTERLY LINE OF PARCEL 4020-127A OF RECORD OF SURVEY ON FILE IN BOOK 33 OF RECORDS OF SURVEY AT PAGES 48 THROUGH 62, INCLUSIVE THEREOF, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA TAKEN AS S.44°26'17"E.

PROPERTY DESCRIPTION

IN THE CITY OF SAN JACINTO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, BEING PORTIONS OF LOT 200 OF THE MAP OF SAN JACINTO LAND ASSOCIATION SAN JACINTO RANCHO, AS SHOWN BY MAP ON FILE IN BOOK 8 OF MAPS AT PAGE 357 THEREOF IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, CALIFORNIA, TOGETHER WITH PORTIONS OF LOTS 23 AND 24 OF THE MAP OF H.T. HEWITT'S PLAT OF SAN JACINTO, AS SHOWN BY MAP ON FILE IN BOOK 8 OF MAPS AT PAGE 386 THEREOF IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, CALIFORNIA.

APN'S: PORTION OF 547-130-016, 017 & 018.
CONTAINING 22.31 ACRES (EMWD PORTION)
CONTAINING 12.69 ACRES (RCFC PORTION)
CONTAINING 35.00 ACRES (TOTAL)

FILE ID-

REVISIONS					REFERENCES		SCALE 1"=300'	DATE
NO.	DATE	INITIAL	DESCRIPTION	APP'VD	M.B. 8/357 S.D. CO.		DESIGNED KRIEGER & STEWART	
					M.B. 8/386 S.D. CO.		DRAWN MWE	01/18/12
					R.S. 33/48-62 RIV. CO.		TRACED	
							CHECKED FAE	
					APPROVALS		RECORDING DATA	
							INST. NO.	
					ENGINEERING	RIGHT OF WAY	DATE	

EASTERN MUNICIPAL WATER DISTRICT
RIVERSIDE COUNTY, CALIFORNIA

EXHIBIT "B" PLAT
PROPERTY OF:
EASTERN MUNICIPAL WATER DISTRICT & RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
PHASE 1 RECHARGE PONDS

APPROVED _____ EMWD DATE

W.O.
C.O.
COORD.
SHT. 1 OF 1

EXHIBIT I

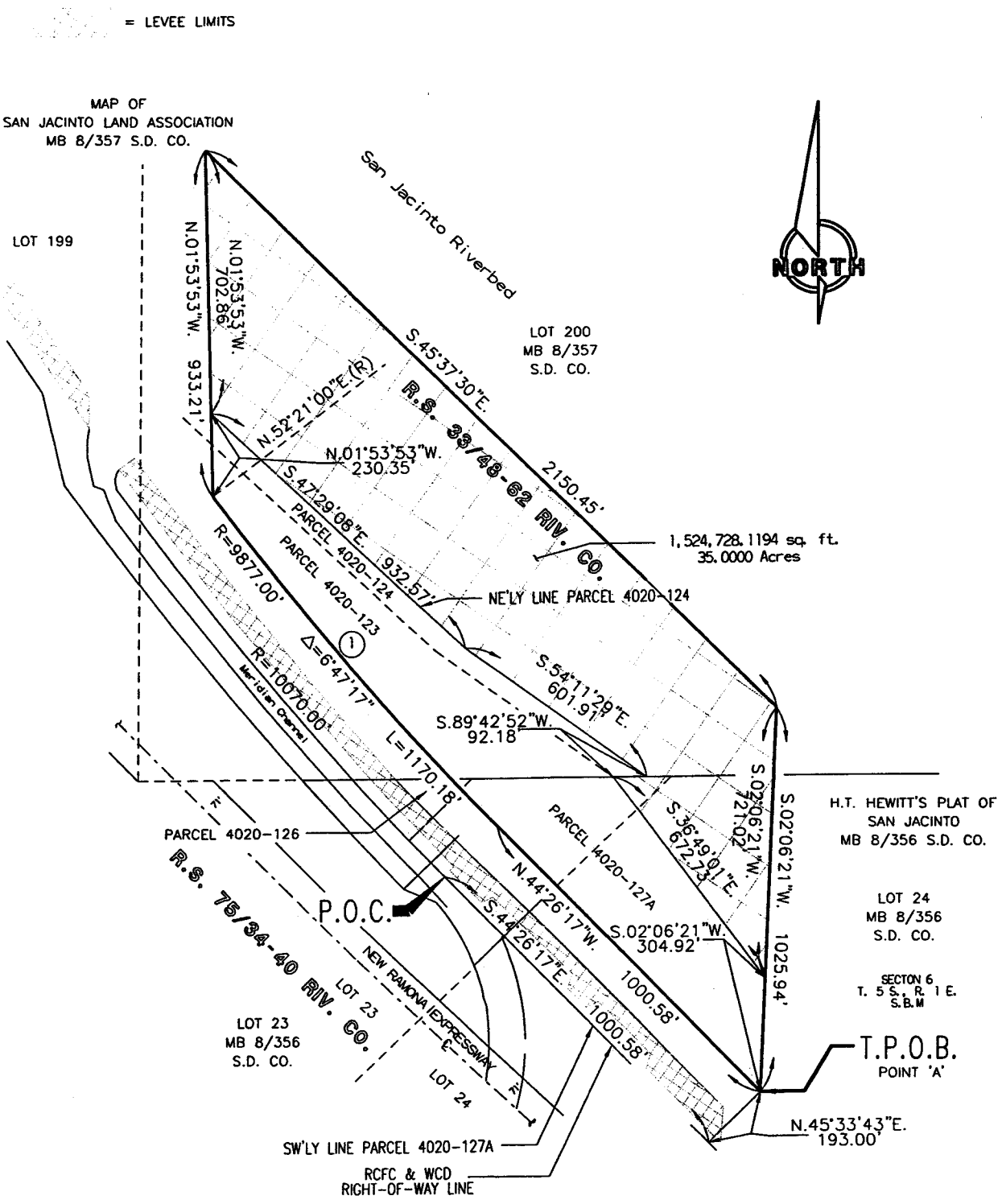

= LEVEE LIMITS
MAP OF
SAN JACINTO LAND ASSOCIATION
MB 8/357 S.D. CO.
LOT 199
San Jacinto Riverbed
NORTH
N.01°53'53"W. 933.21'
N.01°53'53"W. 702.86'
LOT 200
MB 8/357
S.D. CO.
S.45°37'30"E.
R.S. 33/48-62 RIV. CO.
2150.45'
N.52°21'00"E.(R)
N.01°53'53"W. 230.35'
S.47°29'08"E. 932.57'
1,524,728.1194 sq. ft.
35.0000 Acres
PARCEL 4020-124
NE'LY LINE PARCEL 4020-124
PARCEL 4020-123
R=9877.00'
Δ=6°47'17"
L=1170.18'
R=10070.00'
Meridian Channel
S.54°11'29"E. 601.91'
S.89°42'52"W. 92.18'
S.02°06'21"W. 121.02'
S.36°49'01"E. 672.73'
S.02°06'21"W. 1025.94'
H.T. HEWITT'S PLAT OF
SAN JACINTO
MB 8/356 S.D. CO.
PARCEL 4020-126
PARCEL 4020-127A
N.44°26'17"W.
S.44°26'17"E. 1000.58'
S.02°06'21"W. 304.92'
LOT 24
MB 8/356
S.D. CO.
SECTON 6
T. 5 S., R. 1 E.
S.B.M
P.O.C.
R.S. 75/34-40 RIV. CO.
NEW RAMONA EXPRESSWAY
LOT 23
LOT 23
MB 8/356
S.D. CO.
LOT 24
T.P.O.B.
POINT 'A'
N.45°33'43"E. 193.00'
SW'LY LINE PARCEL 4020-127A
RCFC & WCD
RIGHT-OF-WAY LINE

Exhibit J

No. 4-0-00020-3277

COUNTY OF RIVERSIDE, STATE OF CALIFORNIA
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

ENCROACHMENT PERMIT

Eastern Municipal Water District
Post Office Box 8300
Perris, CA 92572-8300

Attention: Joe Lewis

April 24, 2012

In compliance with your request of April 23, 2012 and subject to all the terms, conditions and restrictions written below or printed as general or special provisions on any part of this form

PERMISSION IS HEREBY GRANTED TO
Construct, operate and maintain the Hemet-San Jacinto Integrated Recharge and Recovery Program (HSJIRRP) Phase 1 Recharge Pond as shown on EMWD Drawing C-1 dated January 10, 2012. The location of the pond area in the San Jacinto River shall be surveyed in accordance with the attached Exhibit "B" dated January 18, 2012 prepared by Krieger & Stewart. District fee property in the pond area is 12.7 acres, however, none of this area is in the HSJIRRP Conservation Easement as stated on the attached EMWD exhibit titled Recharge Pond and Surrounding Property in Conservation.

The Corps approved the construction of the recharge ponds in the river in their Section 408 Permit (copy attached) issued to the District on April 4, 2012. Permittee is responsible for complying with all terms and conditions in the Section 408 Permit.

The Permittee is also responsible for implementing the requirements in the Storm Water Pollution Prevention Plan (SWPPP) dated April 24, 2012 prepared by Krieger & Stewart for the HSJIRRP and complying with the

This permit is to be strictly construed and no work other than that specifically mentioned above is authorized hereby. Performance of the work shall be deemed to be acceptance by the Permittee of all terms and conditions of this permit.

The permit shall be voided unless work herein contemplated shall have been completed before October 31, 2012

4-236 8

Drawing No(s) _____ Sheet(s) _____

RECOMMENDED FOR APPROVAL:

By _____
ED LOTZ
PERMIT ENGINEER

By _____
ZULLY SMITH
CHIEF OF OPERATIONS AND MAINTENANCE

EWL:rlp

APPROVED:

By _____
FOR WARREN D. WILLIAMS
GENERAL MANAGER-CHIEF ENGINEER

GENERAL PROVISIONS
Exhibit J

1. ACCEPTANCE OF PROVISIONS. It is understood and agreed by the Permittee that the performance of any work authorized under this permit shall constitute an acceptance of the provisions contained herein, and failure to comply with said provisions shall result in revocation of this permit by the Riverside County Flood Control and Water Conservation District.

2. NO PRECEDENT ESTABLISHED. This permit is granted with the understanding that this action is not to be considered as establishing any precedent on the question of the expediency of permitting any certain kind of encroachment to be erected within right-of-way of the Riverside Flood Control and Water Conservation District.

3. KEEP PERMIT ON WORK. This permit shall be kept at the site of the work and must be shown to any representative of the Riverside County Flood Control and Water Conservation District upon request.

4. PERMITS FROM OTHER AGENCIES. The party or parties to whom this permit is issued shall, whenever the same is required by law, secure the written order or consent to any work hereunder from the Public Utilities Commission of the State of California or any other public Board having jurisdiction, and this permit shall be suspended in operation unless and until such order or consent is obtained.

5. CLEAN UP RIGHT OF WAY. Upon completion of the work, all brush, timber, scraps and material shall be entirely removed and the right-of-way left in as presentable condition as before work started.

6. STANDARDS OF CONSTRUCTION. All work shall conform to recognized standards of construction.

7. SUPERVISION OF GRANTOR. All the work shall be done subject to the supervision of, and to the satisfaction of, the Riverside County Flood Control and Water Conservation District.

8. FUTURE MOVING OF INSTALLATION. It is understood by the Permittee that whenever construction, reconstruction or maintenance work on the right-of-way may require the installation provided for herein shall, upon request of the Riverside County Flood Control and Water Conservation District, be immediately moved by, and at the sole expense of, the Permittee.

9. LIABILITY FOR DAMAGES. The Permittee shall indemnify and hold the Riverside County Flood Control and Water Conservation District, its officers, agents, employees and independent contractors free and harmless from any liability whatsoever, based or asserted upon any act or omission of Permittee, its officers, agents, employees, subcontractors, independent contractors, guests and invitees, for property damage, bodily injury or death or any other element of damage of any kind or nature related to or in anywise connected with or arising from the Permittee's use of the premises ,including , but not limited to, the construction, operation and maintenance of the installation provided for herein on the District's right-of-way or any such claims that may arise out of the failure of such installation, the condition thereof or the obligations to be performed by the Permittee herein. The Permittee shall defend, at its expense, including attorney's fees, the Riverside County Flood Control and Water Conservation District, its officers, agents, employees and independent contractors, in any claim or legal action based upon such alleged acts or omissions.

10. SURVEY MONUMENTS. Riverside county Flood Control and Water Conservation District monuments and/or right-of-way markers placed for the convenience of the Permittee and monuments or right-of-way markers destroyed or requiring placement during or after completion of the work shall be done by the Riverside County Flood Control and Water Conservation District's survey crews and the Permittee shall pay to the Riverside County Flood Control and Water Conservation District any and all costs incurred in the placement or replacement of District monuments and/or right-of-way markers within 30 days of billing from the Riverside County Flood Control and Water Conservation District.

11. MAKING REPAIRS. The Permittee shall replace and restore the right-of-way at the place of the excavation to its condition prior to the making of the excavation.

12. CARE OF DRAINAGE. If the work herein contemplated shall interfere with the established drainage, ample provision shall be made by the Permittee to provide for it as may be directed by the grantor.

13. MAINTENANCE. The Permittee agrees by the acceptance of this permit to exercise reasonable care to maintain properly any encroachment placed by it in the right-of-way and to exercise reasonable care in inspecting for and immediately repairing and making good any injury to any portion of the right-of-way as a result of the work done under this permit, including any and all injury to the right-of-way which would not have occurred had such work not been done or such encroachment not placed therein.

14. PERFORMANCE WARRANTY. Bond may be required of the Permittee whenever in the judgment of the Riverside County Flood Control and Water Conservation district: it becomes necessary or advisable to guarantee performance.

15. DURATION. This permit may be cancelled by the Riverside County flood Control and Water Conservation District upon thirty days written notice to Permittee

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SPECIAL PROVISIONS

☐ 1. INSPECTION FEE REQUIRED BY GRANTOR. The Permittee shall deposit a sum in the amount of $_____ with the Riverside County Flood Control and Water Conservation District at least five working days prior to the anticipated start of work covered by this permit. Said amount is to cover the estimated cost of inspection, investigation, testing, etc., by the District of the work proposed under the permit.

☑ 2. NOTICE OF BEGINNING OF WORK. The Permittee shall advise the Chief Engineer in writing of the anticipated start of work covered by this permit. Said notice shall be delivered to the office of the Riverside County Flood Control and Water Conservation District at least five working days prior to the start of work.

Eastern Municipal Water District
Encroachment Permit No. 4-0-00020-3277
April 24, 2012

State Water Resources Control Board Order No. 2009-0009-DWQ Waste Discharge Requirements for Discharges of Storm Water Associated with Construction Activity.

The Permittee shall be solely responsible for all penalties and any liability provided by law resulting from the Permittee's failure to comply with the requirements of any applicable NPDES Permit, Water Discharge Requirements or waiver thereof. Penalties and liabilities include, but are not limited to fines, civil penalties and other damages whether assessed against the District, Contractor, Permittee or their successors in interest, including those levied under the Clean Water Act, Water Quality Control Act or local ordinance.

Construction, operation and maintenance of the recharge ponds shall be in compliance with the following list of documents:

- EMWD Notice of Determination for the HSJIRRP Second Addendum to the Final Environmental Impact Report (EIR) filed on November 17, 2011
- EMWD Second Addendum to the HSJIRRP Final EIR adopted on November 16, 2011
- EMWD Addendum to the HSJIRRP Final EIR adopted June 23, 2010
- Corps' letter dated February 24, 2012 to EMWD regarding the Corps' amendment to their Permit No. SPL-2004-01197 issued to EMWD for the HSJIRRP
- Department of Fish and Game's letter dated January 25, 2012 to EMWD regarding Fish and Game's amendment to master Agreement Notification No. 1600-2007-0033-R6 (Revision 2) issued to EMWD for the HSJIRRP.
- Santa Ana Regional Water Quality Control Board's letter dated January 5, 2012 to EMWD regarding SARWQCB's amended Clean Water Act Section 401 Water Quality Standards Certification issued to EMWD for the HSJIRRP.
- U.S. Fish and Wildlife Service's letter dated December 23, 2011 to the Corps regarding the Reinitiated Biological Opinion of the HSJIRRP
- Corps' letter dated March 27, 2012 to the District regarding the Corps' Permit No. EE2010-63 and Section 408 Permit to the District for the HSJIRRP groundwater recharge pond relocation.
- EMWD SWPPP dated April 24, 2012 for the Construction of the HSJIRRP prepared by Krieger & Stewart.

This encroachment permit is only for construction, operation and maintenance of the ponds. EMWD shall submit a separate permit application for other groundwater recharge components such as pipelines, river access ramps and fencing. These components shall also be reviewed and approved by the Corps.

The District will inspect the installation of the Best Management Practices (BMPs) required in the SWPPP during the recharge pond grading and notify the Permittee if the BMPs are inadequate. Inadequate BMPs may result in a slowdown of pond grading.

Prior to the issuance of the encroachment permit, the applicant or the contractor performing the work shall furnish a certificate of insurance specifying comprehensive liability limits of $2,000,000 per occurrence and $2,000,000 general aggregate. The applicant, the District, the County of Riverside

and any municipal corporation, within which the work is to be performed shall each be named as an additional insured. Alternatively, comprehensive liability limits shall be $1,000,000 per occurrence, with $2,000,000 general aggregate and a minimum of $2,000,000 excess liability. This insurance shall remain in effect for the duration of the work. Please reference the encroachment permit number (shown on your receipt for the initial deposit) on the certificate of insurance.

Permittee's attention is called to all General and Special Provisions found on the reverse side of Sheet 1 of this permit.

The District requires five (5) days written notice prior to commencing work. Notice shall be given by contacting the Permit Section at 951.955.1266 and submitting the completed attached Construction Starting Notice to the District.

Within 10 working days after completing construction, the Permittee shall fill out the attached Construction Completion Notice and submit it to the District. The District must receive the Construction Completion Notice before acceptance of the work authorized by this permit and before a refund of unused funds can be processed.

Exhibit J

CONSTRUCTION STARTING NOTICE

TO: Ed Lotz
Permit Engineer
Riverside County Flood Control
and Water Conservation District
1995 Market Street
Riverside, CA 92501

Work authorized under Encroachment Permit No. _____ is scheduled to begin on _____ (date) at approximately _____ (time) (a.m. / p.m.). In the event construction cannot start as proposed, we will notify the Riverside County Flood Control District of the starting time prior to the date shown above.

Remarks: _____

_____

_____

_____
(Company and Telephone)

_____
(Print Name and Signature)

CUT AND RETURN UPPER PART BEFORE CONSTRUCTION
CUT AND RETURN LOWER PART AFTER COMPLETION

CONSTRUCTION COMPLETION NOTICE

TO: Ed Lotz
Permit Engineer
Riverside County Flood Control
and Water Conservation District
1995 Market Street
Riverside, CA 92501

Work authorized under Encroachment Permit No. _____ on _____ (date issued) was completed on _____ (date) in accordance with the permit conditions.

Remarks: _____

_____

_____

_____
(Company and Telephone)

_____
(Print Name and Signature)

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

March 27, 2012

REPLY TO
ATTENTION OF

Office of the Chief
Engineering Division

Ms. Zully Smith
Chief, Operations & Maintenance Division
Riverside County Flood Control
Water Conservation District
1995 Market Street
Riverside, California 92501

Dear Ms. Smith:

This letter responds to your request for permission to alter or modify the San Jacinto River Levee by relocating the recharge basin on San Jacinto River near Hemet. In support of your request, you submitted permit application materials that were deemed complete on March 27, 2012. We have reviewed the design documents that you have submitted; find them to be acceptable; and have concluded that your proposed work would not adversely impact the structural integrity or the hydraulics of the flood risk management facility constructed by the U.S. Army Corps of Engineers (Corps).

Enclosed please find two copies of Corps permit number EE2010-63. This Permit is issued pursuant to Section 14 of the Rivers and Harbors Act of 1899, codified at 33 U.S.C. § 408 (Section 408). Please execute both copies of the enclosed Permit indicating your acceptance of its terms and conditions and return them to this office for execution. A copy of the fully executed Permit will be returned to you for your files providing final approval of your request.

This Permit to modify and/or alter the Project is conditioned upon your compliance with all of the stated conditions, both general and special. If you fail to comply with the terms and conditions of this Permit or if your activity changes in scope, size, or in any other substantive manner, you are required contact the Corps immediately prior to initiating or continuing work.

This Permit is effective only insofar as the jurisdiction of the Department of the Army applies to the Project. You may be required to obtain additional permits, comply with applicable laws or regulations as may be required by Federal, state, or local statutes, and/or acquire any necessary real estate rights or permissions from third parties necessary to commence the permitted actions.

Thank you for participating in the Section 408 permit process. If you have any questions, please contact Ms. Arnecia Williams, (213) 452-3747, arnecia.n.williams@usace.army.mil.

Sincerely,

Richard J. Leifield, P.E.
Chief, Engineering Division
Los Angeles District
U.S. Army Corps of Engineers

DEPARTMENT OF THE ARMY
33 U.S.C. § 408 PERMIT
U. S. Army Corps of Engineers
Los Angeles District

PERMITTEE/LOCAL SPONSOR: Riverside County Flood Control, Water Conservation District, *1995 Market Street, Riverside, California 92501*

PERMIT NUMBER: EE2010-63

ISSUING OFFICE: U.S. Army Corps of Engineers, Los Angeles District, Engineering Division

CORPS PERMIT COORDINATOR: Ms. Arnecia Williams, (213) 452-3747, arnecia.n.williams@usace.army.mil

AFFECTED FEDERAL PROJECT AND DESCRIPTION: San Jacinto River levee.

LOCATION: LAT 33°46'17.73"N LON - 116°55'13.32"W

APPROVED MODIFICATION OR ALTERATION OF THE FEDERAL PROJECT:
The Hemet/San Jacinto Integrated Groundwater Recharge and Recovery Program propose to relocate the groundwater recharge pond. Previously, the Corps approved the concrete encasement on the San Jacinto River Levee to prevent damage to the levee due to potential hydraulic forces on the pipelines that will import water to the river for groundwater recharge. The new location of the recharge pond is adjacent to the proposed area from previous permit request.

PERMIT CONDITIONS

I. General Conditions

1. The United States shall not be responsible for damages to property or injuries to persons which may arise from or be incident to the construction, operation, maintenance, repair, rehabilitation and replacement of the Authorized Activity, or for damages to the Federal Project. Permittee shall hold the United States harmless from any and all such claims not including damages due to the fault or negligence of the United States or its contractors.

2. Permittee shall comply with all applicable federal laws and regulations and with all applicable laws, ordinances and regulations of the state, county and municipality wherein the Federal Project is located, including, but not limited to, those regarding construction, health, safety, water supply, sanitation, use of pesticides, and licenses or permits necessary for the Authorized Activity.

3. Permittee shall maintain the Authorized Activity in good condition and in conformance with the terms and conditions of this Permit. Permittee shall not be relieved of this requirement even if the Authorized Activity is abandoned. Should the Permittee wish to cease to maintain the Authorized Activity or desire to abandon it, Permittee must obtain from the Corps a modification of this permit, which may require additional construction activities to abandon the facility.

4. If previously unknown historic or archeological remains are discovered in carrying out the Authorized Activity, Permittee must cease activity, protect the site and immediately notify the Corps. The Corps will initiate Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

5. If the scope or details of the Authorized Activity change from the approved plans and specifications upon which this Permit is based, the Permittee must resubmit the permit application with the permit number and revisions clearly identified. Work associated with the Authorized Activity that does not pertain to the revised portion of the project, may continue while the revisions are being reviewed unless the Corps indicates otherwise.

6. Permittee shall keep the Permit Coordinator apprised of anticipated start and completion date of construction to the Permit Coordinator.

7. Permittee is required to invite the Permit Coordinator to an onsite kickoff meeting after the construction contract is awarded and prior to the date work is expected to begin. Permittee shall provide the Corps with the date, time and location of the meeting at least one week prior to the meeting, along with a copy of the construction schedule.

8. Permittee is required to allow Corps representatives to inspect the Authorized Activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of this Permit.

9. Permittee shall oversee the conduct of the work and ensure the Authorized Activity is being constructed in accordance with the approved plans and specifications.

10. Upon completion of the Authorized Activity, Permittee shall submit electronic copies of the as-built plans of the Authorized Activity to the Corps, which are signed by the Permitee's engineer of record. Electronic copies of the as-built plans shall be in pdf format.

11. **Granting of this Permit does not authorize work in waters of the United States. Work shall not begin in waters of the United States until Permittee first obtains a Department of the Army permit for activities which involve the discharge of dredge or fill material or the placement of fixed structures in the waters of the United States, pursuant to the provisions of Section 10 of the Rivers and Harbors Act of 3 March 1899 (33 USC 403), and Section 404 of the Clean Waters Act (33 USC 1344).**

12. Should construction activities fail to commence within two (2) years after execution of the effective date of this Permit, this Permit shall be temporarily revoked upon further examination by the Corps. Work shall not begin until the Corps has examined this Permit and determines that the Permit conditions are sufficient or until new Permit conditions are incorporated.

II. Special Conditions

None.

By signing this 33 U.S.C. Section 408 Permit, you are accepting the terms and conditions contained within the General Conditions and Special Conditions of this Permit.

4-2-12

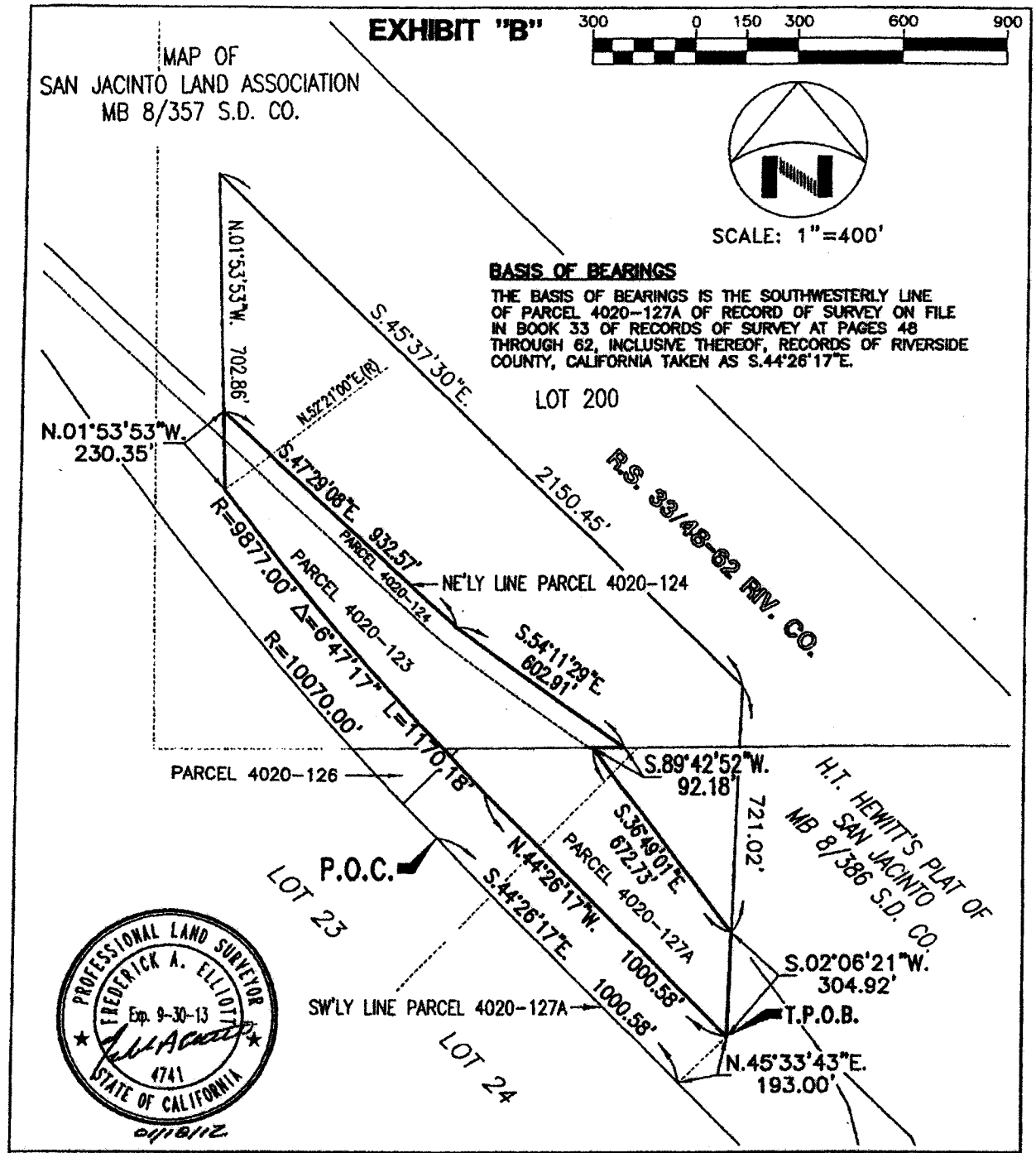
Zully Smith
Chief, Operations & Maintenance Division
Riverside County Flood Control
Water Conservation District

Date

4/4/12

Richard J. Leifield, P.E.
Chief, Engineering Division
Los Angeles District
U.S. Army Corps of Engineers

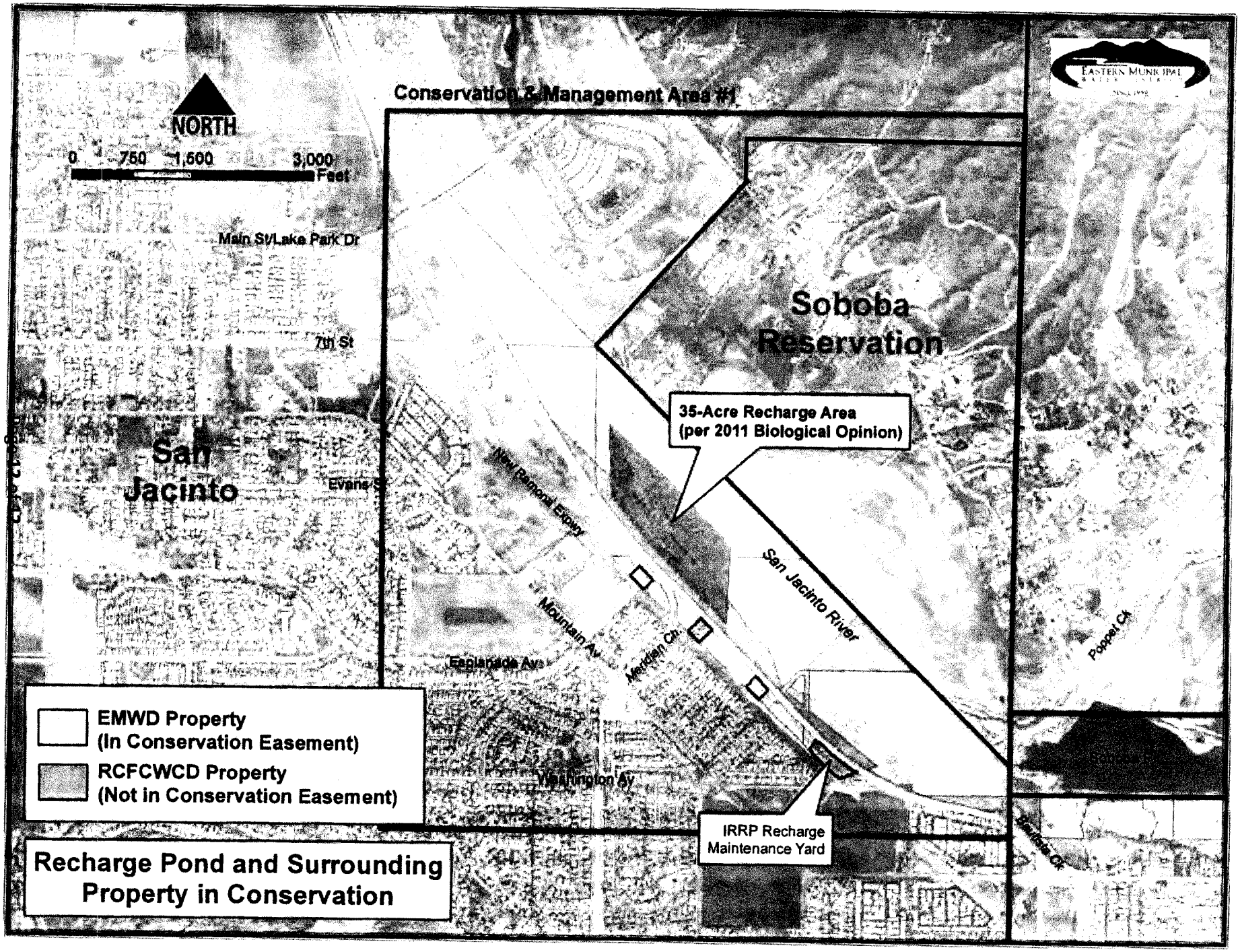
Date



This Plat is Solely an Aid in Locating the Parcel(s) Described in the Attached Document.

PREPARED BY:	RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT	EXHIBIT
KRIEGER & STEWART INCORPORATED 3602 University Ave. · Riverside, CA. 92501 · 951-684-6900	HEMET/SAN JACINTO INTEGRATED RECHARGE AND RECOVERY PROGRAM PHASE 1 RECHARGE PONDS	B
SCALE: 1"=400' DATE: 01/18/12 DRAWN BY: MWE CHECKED BY: FAE W.O.: 491-40.33		SHT 1 OF 1

EXHIBIT J


Conservation & Management Area #1
NORTH
0 750 1,500 3,000
Feet
Main St/Lake Park Dr
7th St
San Jacinto
Evans St
Soboba Reservation
35-Acre Recharge Area
(per 2011 Biological Opinion)
San Jacinto River
Mountain Av
Meridian Ch
Esplanade Av
Washington Av
IRRP Recharge Maintenance Yard
Poppet Ck
EMWD Property
(In Conservation Easement)
RCFCWCD Property
(Not in Conservation Easement)
Recharge Pond and Surrounding Property in Conservation