

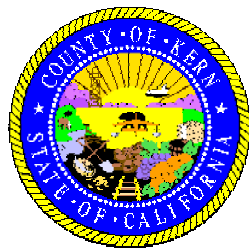
# Draft Environmental Impact Report

SCH#2005091117

*Volume I*  
*Chapters 1 through 10*

**Antelope Valley Water Bank Project**  
*(By Western Development and Storage, LLC)*

**Specific Plan Amendment No. 13, Map 232**  
**Specific Plan Amendment No. 2, Map 233**  
Alteration of Boundaries of  
Agricultural Preserve No. 24 – Inclusion



Kern County  
Planning Department  
Bakersfield, California

April 2006

**PLANNING DEPARTMENT**

**TED JAMES, AICP, Director**

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BAKERSFIELD, CA 93301-2323

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**RESOURCE MANAGEMENT AGENCY**

**DAVID PRICE III, RMA DIRECTOR**

Community & Economic Development Department

Engineering & Survey Services Department

Environmental Health Services Department

Planning Department

Roads Department

April 10, 2006

ADDRESSEE LIST (See Distribution List)

Re: **Draft Environmental Impact Report for Antelope Valley Water Bank by Western Development and Storage (Specific Plan Amendment No. 13, Map 232, Specific Plan Amendment No 2, Map 233; Agricultural Preserve No. 24 - Inclusion -Willow Springs Specific Plan)**

Dear Interested Party:

Kern County has prepared a Draft Environmental Impact Report for the construction and operation of facilities to recharge and store imported surface water beneath agricultural properties in the west end of the Antelope Valley in Willow Springs. The proposed recharge and recovery area is a 21 square mile area (13, 440 acres) bounded by Rosamond Boulevard on the north, Avenue A to the south, 170<sup>th</sup> street west to the west and 100<sup>th</sup> Street west. Implementation of the project requires an amendment of the Willow Springs Specific Plan to change approximately 640 acres of residential and industrial designations to agricultural land use.

This Department, as Lead Agency, has determined that preparation of an Environmental Impact Report would be appropriate for the referenced projects. Enclosed is a copy of the Draft Environmental Impact Report (DEIR).

If we have not received a reply from you by **May 24, 2006, at 5:00 P.M.**, we will assume that you have no comments regarding this Draft EIR.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Kohler", is written over a horizontal line.

Don Kohler  
Planner 1

I:\WP\Lists\leirdk3-05.lst  
PP05283  
(9/13/05 pd); (4/5/06 jc)

Los Angeles County  
Department of Regional Planning  
320 West Temple Street, Room 1390  
Los Angeles, CA 90012

U.S. Department of Interior/BLM  
Ridgecrest Field Office  
300 South Richmond Road  
Ridgecrest, CA 93555

China Lake Naval Weapons Center  
Commanding Officer Code (832120D)  
Real Estate/Mail Stop 4003  
China Lake, CA 93555-6108

Edwards Air Force Base  
AFFTC/XRX Bldg 0001, Rm 110  
#1 South Rosamond Boulevard  
Edwards AFB, CA 93524-1936

U.S. Environmental Protection Agency  
Region IX Office / Attn: David Tomsovic  
75 Hawthorn Street /Mail CMD -2  
San Francisco, CA 94105

U. S. Fish & Wildlife Service  
San Joaquin Valley Branch Chief  
2800 Cottage Way #W-2605  
Sacramento, CA 95825-1846

U.S. Department of Agriculture  
Natural Resources Conservation Service  
5000 California Avenue, Suite 100  
Bakersfield, CA 93309-0711

U.S. Army Corps of Engineers  
Attn: Regulatory Branch/Planning Division  
1325 "J" Street, Rm 1320  
Sacramento, CA 95814

Kern County Agriculture Department

Kern County Air Pollution Control District

Community Development

Kern County Administrative Officer

Kern County Engineering & Survey Svcs/  
Floodplain

Kern County Engineering & Survey Svcs/  
Survey

Kern County Env Health Services  
Department

Kern County Fire Department

Kern County Library  
Beale

**\*\*\*\*HARD COPY \*\*\***

Kern County Library  
Beale/Director

Kern County Parks and Recreation

Resource Management Agency  
Special Projects/Fiscal Analysis

Kern County Sheriff's Department

Kern County Roads Department

Kern County Waste Management  
Department

Kern County Library  
Rosamond

Southern Kern Unified School District  
P.O. Box CC  
Rosamond, CA 93560

Kern County Superintendent of Schools  
Attention Schifra Walder  
1300 - 17th Street  
Bakersfield, CA 93301

**\*\*\*\*HARD COPY \*\*\***

KernCOG

Local Agency Formation Commission  
5300 Lennox Avenue, Suite 303  
Bakersfield, CA 93309

Antelope Valley-East Kern  
Water Agency  
6500 West Avenue N  
Palmdale, CA 93551

Kern County Water Agency  
P.O. Box 58  
Bakersfield, CA 93302-0058

Rosamond Community Services District  
3179 - 35th Street West  
Rosamond, CA 93560

Kern Mosquito Abatement District  
4705 Allen Road  
Bakersfield, CA 93312-3429

National Audubon  
P.O. Box 160697  
Sacramento, CA 95816-0694

Desert Tortoise Preserve Committee  
4067 Mission Inn Avenue  
Riverside, CA 92501

Native American Heritage Council  
of Kern County  
P.O. Box 1507  
Bakersfield, CA 93302

SBC California  
Attention Cindy Lee  
1250 East Ashlan Avenue  
Fresno, CA 93704

Sierra Club/Kern Keaweah Chapter  
Arthur Unger

Southern California Edison  
Planning Department  
421 West "J" Street  
Tehachapi, CA 93561

Southern California Gas Company  
1510 North Chester Avenue  
Bakersfield, CA 93308

Southern California Gas Co.  
Attention Trans. Dept.  
9400 Oakdale Avenue  
Chatsworth, CA 91313-6511

Smart Growth Coalition  
441 Vineland Road  
Bakersfield, CA 93307

Mary Ann Lockhart  
P.O. Box GG  
Frazier Park, CA 93225

Stationary Resource Division (CAR Board)  
Attention Barbara Fry  
P.O. Box 2815  
Sacramento, CA 95812

Southern San Joaquin Valley  
Archaeological Information Center - CSUB  
9001 Stockdale Highway  
Bakersfield, CA 93311

Caltrans District 6  
Planning/Land Bank Bldg.  
P.O. Box 12616  
Fresno, CA 93778

State Clearinghouse/Planning & Research  
P.O. Box 3044  
Sacramento, CA 95812-3044  
CERTIFIED MAIL

California State University Bakersfield  
Library  
9001 Stockdale Highway  
Bakersfield, CA 93309

Department of Conservation/Division of  
Oil, Gas, & Geothermal Resources  
4800 Stockdale Highway, Suite 417  
Bakersfield, CA 93309

State Fish and Game  
1130 East Shaw, Suite 206  
Fresno, CA 93710

Calif. Dept. of Health Services  
Drinking Water Field Operations Branch  
1040 East Herndon Avenue, Suite 205  
Fresno, CA 93720-3158

State Dept of Health Serv/Drinking Water  
Jesse Dhaliwal  
1200 Discovery Drive, Ste 100  
Bakersfield, CA 93309

Office of Historical Preservation  
Nick Del Cioppo  
P.O. Box 942896  
Sacramento, CA 94296-0001

Calif. Dept. of Parks and Recreation  
San Joaquin District  
P.O. Box 205  
Friant, CA 93626

California Regional Water Quality  
Control Board/Lahontan Region  
15428 Civic Drive, Suite 100  
Victorville, CA 92392

Department of Water Resources  
San Joaquin District  
3374 East Shields Avenue, Rm A-7  
Fresno, CA 93726

State Dept. of Conservation  
Environmental Affairs  
801 "K" Street, MS 24-02  
Sacramento, CA 95814-3514

Gordon Hess  
San Diego County Water Authority  
4677 Overland Avenue  
San Diego, CA 92123

Dick Diamond  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92618-3102

Antelope Valley East Kern Water Agency  
West Avenue N  
Palmdale, CA 93551



Palmdale Water District  
2029 East Avenue Q  
Palmdale, CA 93550

Littlerock Creek Irrigation District  
35141 - 87th Street E  
Littlerock, CA 93543

Rosamond Community Services Dist  
3179 - 35th Street W  
Rosamond, CA 93560

Los Angeles County Water Works Dist  
Dept of Public Works  
900 South Fremont  
Alhambra, CA 91803

Quartz Hill Water District  
42141 - 50th Street West  
Quartz Hill, CA 93536

Los Angeles Dept of Water & Power  
111 North Hope Street, Room 1460  
Los Angeles, CA 90012-2694

LA County Farm Bureau  
41228 - 12th Street West, Suite A  
Palmdale, CA 93551

AV Building Industry Association  
104 E Avenue K4, Suite B  
Lancaster, CA 93535

LA County Board of Supervisors  
Attn:Norm Hickling  
1113 West Avenue, M-4 Suite A  
Palmdale, CA 93551

White Fence Farms Mutual Water Dist  
41901 - 20th Street West  
Palmdale, CA 93551

City of Lancaster  
44933 Fern Avenue  
Lancaster, CA 93534

City of Palmdale  
38250 Sierra Highway  
Palmdale, CA 93550

California Water Service Company  
5015 West Avenue L-14, Ste 2  
Quartz Hill, CA 93536

Grimmway Farms  
David Rizzo  
PO Box 893  
Lancaster, CA 93535

Antelope Valley Chapter BIA  
104 East Avenue K-4, Ste B  
Lancaster, CA 93535

Los Angeles Department of Public Works  
900 S. Fremont Avenue  
Alhambra, CA 91803

Los Angeles County Regional Planning Dept.  
Hall of Records (13th Floor)  
320 West Temple Street  
Los Angeles, CA 90012

City of Lancaster Public Works  
44933 N. Fern Avenue  
Lancaster, CA 93534

City of Lancaster Planning Department  
Attn: Randy Williams  
44933 Fern Avenue  
Lancaster, CA 93534

City of Palmdale Public Works  
Attn: Leon Swain  
38250 Sierra Highway  
Palmdale, CA 93550

Judith Fuentes  
47458 - 92nd Street West  
Antelope Acres, CA 93536

Dept. of Water Resources/Div of Land &  
Right of Way - Conny Anderson  
PO Box 942836  
Sacramento, CA 94236

Los Angeles County Water Works District  
900 South Fremont  
Alhambra, CA 91803

Tejon Ranch  
Dennis Mullins  
P.O. Box 1000  
Lebec, CA 93243

Jan de Leeuw  
Cuddy Valley Statistical Consulting  
11667 Steinhoff Road  
Frazier Park, CA 93222

County of Orange Planning and Dev Services  
Environmental Planning  
300 North Flower, Room 122  
Santa Ana, CA 92705

San Diego County Planning and Land Use  
Dept  
5201 Ruffin Road, Suite B  
San Diego, CA 92123

Antelope Valley Mosquito Abatement  
District  
42624 6<sup>th</sup> Street  
Lancaster, CA 93535

Antelope Valley Air Quality Management  
District  
43301 Division Street, Suite 206  
Lancaster, CA 93535-4649

## DRAFT ENVIRONMENTAL IMPACT REPORT

### NOTICE OF AVAILABILITY FOR PUBLIC REVIEW

This is to advise that the Kern County Planning Department has prepared an Environmental Impact Report for the project identified below. As mandated by State law, the minimum public review period for this document is 45 days. The document and documents referenced in the Draft EIR are available for review at the Planning Department, 2700 "M" Street, Suite 100, Bakersfield, CA 93301.

A public hearing has been scheduled with the Kern County Planning Commission to receive comments on the document on: July 27, 2006 at 7:00 p.m. or soon thereafter, Chambers of the Board of Supervisors, First Floor, Kern County Administrative Center, 1115 Truxtun Avenue, Bakersfield, California.

The comment period for this document closes on **May 24, 2006**. Testimony at future public hearings may be limited to those issues raised during the public review period either orally or submitted in writing by 5:00 p.m. the day the comment period closes.

**Project Title:** (a) Specific Plan Amendment No. 13, Map No. 232; (b) Specific Plan Amendment No. 2, Map No. 233; (c) Alteration of the Boundaries of Agricultural Preserve No. 24 - Inclusion - Willow Springs Specific Plan (Antelope Valley Water Bank by Western Development and Storage, LLC [PP05283]).

**Project Location:** The area proposed for recharge and recovery facilities is bounded by Rosamond Avenue to the north; Avenue A to the south (Kern County–Los Angeles County Line); 170th Street West to the west; and 100th Street West to the east; being portions of Section 30 and Section 31, of T9N, R14W, SBB&M and a portion of Section 25 of T9N, R15W, SBB&M, County of Kern, State of California.

**Project Description:** (a) and (b) Amend the Willow Springs Specific Plan from Map Code(s) 8.5/2.85 (Resource Management - Noise/Military Flight Operations) to Map Code(s) 8.1/2.85 (Intensive Agriculture - Noise/Military Flight Operations) on approximately 300 acres; from Map Code(s) 8.5/2.85/2.6 (Resource Management - Noise/Military Flight Operations - Erosion Hazard) to Map Code(s) 8.1/2.85/2.6 (Intensive Agriculture - Noise/Military Flight Operations - Erosion Hazard) on approximately 50 acres; from Map Code(s) 5.3/4.4/2.85 (Residential - Maximum 10 Units/Net Acre - Comprehensive Planning Area - Noise/Military Flight Operations) to Map Code(s) 8.1/4.4/2.85 (Intensive Agriculture - Comprehensive Planning Area - Noise/Military Flight Operations) on approximately 320 acres; and from Map Code(s) 7.1/4.4 (Light Industrial - Comprehensive Planning Area) to Map Code(s) 8.1/4.4 (Intensive Agriculture - Comprehensive Planning Area) on approximately 320 acres; (c) Inclusion of approximately 635 acres within the boundaries of an Agricultural Preserve

The applicant is proposing to develop a facility to store imported surface water underground, beneath properties in eastern Kern County at the west end of the Antelope Valley, for recovery when needed.

The project would entail importing water from the State Water Project (SWP) via the East Branch of the California Aqueduct to the project site for recharge and storage underground. When needed, stored water would be recovered for delivery to various water agencies, such as those in Kern County and Los Angeles County.

**Anticipated Significant Impacts on Environment:** Air Quality

**For further information, please contact** Don Kohler, Planner 1 ((661) 862-8787).

TED JAMES, AICP, Director  
Planning Department

DK:jc (4/5/06)

cc: County Clerk (2) (with fee)  
Environmental Status Board  
Sierra Club/Kern Kaweah Chapter  
Communities for a Better Environment  
Calif. Rural Legal Assist. Foundation

California Native Plant Society/Kern Chapter  
Kern County Archaeological Society  
Native American Heritage Pres. Council/Kern County  
Supervisorial District No. 2

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EIR 3-05  
PP05283  
(9/13/05 pd) (4/5/06 jc)

Rosamond Disposal  
1731 Sierra Highway  
Rosamond, CA 93560

Eastern Kern Resource  
Conservation District  
P.O. Box 626  
Inyokern, CA 93527

Southern San Joaquin Valley  
Archaeological Information Center/CSUB  
9001 Stockdale Highway  
Bakersfield, CA 93311

Aerial Acres Water System  
P.O. Box 1112  
North Edwards, CA 93523

Airway Mutual Water Company  
PO Box 451  
Rosamond, CA 93560

Antelope Mutual Water Company  
Lake Hughes, CA 93532

Antelope Park Mutual Water Company  
PO Box 1712  
43337 N. 18th Street West  
Lancaster, CA 93539

Antelope Valley Progressive Club  
810 East 84th Street  
Los Angeles, CA 90001

Antelope Valley United Water Purveyors  
Jim Barletta, President  
3507 E. Avenue H-4  
Lancaster, CA 93535

Aqua J. Water company  
9133 East Avenue J  
Lancaster, CA 93539

Averydale Mutual Water Company  
3507 East Avenue H-10  
Lancaster, CA 93534

Association of Irrigation Water Users  
Jim Payne  
3721 Knox Avenue  
Rosamond, CA 93560-6410

Baxter Mutual Water Company  
12501 East Avenue H  
Lancaster, CA 93535

Big Rock Mutual Water Company  
Route 1, Box 25  
Llano, CA 93536

Belch Flat Mutual Water Company  
46201 Kings Canyon Road  
Lancaster, CA 93536

Boron Community Service Dist.  
Russ Terrill  
P.O. Drawer B  
Boron, CA 93516

California City Planning Dept.  
21000 Hacienda Blvd.  
California City, CA 93515

Colorado Mutual Water Company  
43841 N. 90th Street East  
Lancaster, CA 93535

Crestmore Village Water Company  
42975 Staffordshire Drive  
Lancaster, CA 93534

Desert Lake Community Services District  
PO Box 567  
Boron, CA 93596

Edgemont Acres Water Company  
P.O. Box 966  
North Edwards, CA 93523

Edwards Air Force Base  
95 CEG/CERF  
225 N. Rosamond Blvd., Bldg 3500  
Edwards AFB, CA 93524-8540

El Dorado Mutual Water Company  
PO Box 900519  
Palmdale, CA 93590

40th Street Mutual Water Company  
43031 N. 40th Street East  
Lancaster, CA 93534

Golden Valley Municipal Water District  
Caravann Inn  
Gorman, CA 93536

Green Grove Mutual Water Company  
3157 East Avenue I  
Lancaster, CA 93534

Green Valley County Water District  
39520 Calle Casada  
Green Valley, CA 91350

J. L. Ralphs Water Company  
49744 Gorman Post Road  
Gorman, CA 93536

Lake Elizabeth Mutual Water Company  
14960 Elizabeth Lake Road  
Lake Elizabeth, CA 93532

Lancaster Mutual Water Company  
PO Box 25  
54654 N. 20th Street East  
Lancaster, CA 93534

Land Projects Mutual Water Company  
8810 West Avenue E-8  
Antelope Acres, CA 93536

Landale Mutual Water Company  
PO Box 5808  
Lancaster, CA 93539

Little Baldy Water Company  
PO Box 7  
30716 Largo Vista Lane  
Llano, CA 93544

Llano Del Rio Water Company  
32810 S. 165th Street East  
Llano, CA 93544

Llano Mutual Water Company  
Route 1, Box 25  
32810 South 165th Street East  
Llano, CA 93544

L.A. County Water Works District  
260 E. Avenue K-8  
Lancaster, CA 93535

Mojave Public Utility Dist.  
15844 "K" Street  
Mojave, CA 93501

North Edwards Water Dist.  
13005 Claymine Road  
P.O. Box 1147  
North Edwards, CA 93523

Palm Ranch Irrigation District  
PO Box 3396  
Quartz Hill, CA 93586-0396

Reesdale Mutual Water Company  
PO Box 496  
Lancaster, CA 93534

Rosamond Community Services Dist.  
PO Box H  
3179 - 35th Street West  
Rosamond, CA 93560

Showdown Acres Mutual Water Company  
PO Box 900669  
Palmdale, CA 93590

16th Street East Tract Company  
44601 N. 16th Street East  
Lancaster, CA 93535

Sleepy Valley Water Company  
14220 Sierra Highway  
Mint Canyon, CA 91390

Spring Valley Ranch Tract Water Company  
43164 Lake Hughes Road  
Lake Hughes, CA 93532

Sundale Mutual Water Company  
PO Box 551  
Lancaster, CA 93535

Sunnyside Farms Mutual Water Company  
PO Box 901025  
Palmdale, CA 93590

Tehachapi-Cummings County Water Dist.  
Robert Jaspas, General Manager  
P.O. Box 326  
Tehachapi, CA 93561

Tierra Bonita Mutual Water Company  
5606 East Avenue K  
Lancaster, CA 93535

Tweedy Lake Corporation  
24303 West Pine Canyon Road  
Lake Hughes, CA 93532

Valencia Water Company  
24631 Avenue Rockefeller  
Valencia, CA 91355

W & S Mutual Water Company  
1055 El Medio  
Pacific Palisades, CA 90272

West Valley County Water District  
25315 Ideal Avenue  
Lancaster, CA 93536

Westside Park Mutual Water Company  
1216 West Avenue J, Ste 500  
Lancaster, CA 93534

White Fence Farms Mutual Water Co., #1 & #2  
Attn: John Vickestad  
41901. 20th Street West  
Palmdale, CA 93551

Wilsona Garden Mutual Water Company  
17135 East Avenue L  
PO Box 85  
Lancaster, CA 93535

Forecast Land Company  
PO Box 5553  
Sherman Oaks, CA 91413

Kern County Farm Bureau  
801 South Mt. Vernon Avenue  
Bakersfield, CA 93307

R. L. Abott & Associates  
5060 California Avenue, Ste 910  
Bakersfield, CA 93309

Santa Rosa Rancheria  
Clarence Atwell  
P.O. Box 8  
Lemoore, CA 93245

Tule River Indian Tribe  
Neil Peyron  
P.O. Box 589  
Porterville, CA 93258

Tejon Indian Tribe  
Kathy Morgan  
2234 - 4th Street  
Wasco, CA 93280

Joyce LoBasso  
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Bakersfield, CA 93309

261 350 21 00 6  
ABDELHAK MAHMOUD  
P O BOX 12424  
MARINA DEL REY CA 90295

261 196 08 00 5  
ALESSO LAWRENCE V & MARDEAN TR  
P O BOX 1839  
LANCASTER CA 93539-1839

359 314 07 00 4  
ALFONSO ALMA T & ANGELITA S  
1941 E GEMINI ST  
WEST COVINA CA 91792

359 140 05 00 1  
AQUINO TINA M  
27827 OLD STAGE RD  
OAK RUN CA 96069

359 041 15 00 8  
ARCURI DOMINICK & FIDELA  
15981 GASKELL RD  
ROSAMOND CA 93560

359 041 27 00 3  
ARCURI DOMINICK F & FIDELA  
15981 GASKELL RD  
ROSAMOND CA 93560

359 140 09 00 3 **DUP**  
ARCURI DOMINICK F & FIDELA  
15981 GASKELL RD  
ROSAMOND CA 93560

359 041 26 00 0 **DUP**  
ARCURI DOMINICK F & FIDELA  
15981 GASKELL RD  
ROSAMOND CA 93560

359 041 24 00 4  
ARCURI DOMINICK F & FIDELA  
15981 GASKELL 1750 RD  
ROSAMOND CA 93560

359 041 25 00 7  
ARCURI DOMINICK FRANK & FIDELA  
15981 GASKELL RD  
ROSAMOND CA 93560

261 350 16 00 2  
BALLESTEROS BALDOMERO ET AL  
P O BOX 11  
KAHUKU HI 96731

359 313 05 00 1  
BAUTISTA LOLITA R  
4727 WHITETAIL LN  
SAN JOSE CA 95138-2472

261 120 31 00 8  
BEREA BRYAN  
11132 STRATFORD WY  
GARDEN GROVE CA 92840-1128

261 120 40 00 4  
BIGELOW JAMES S & JEAN K TR  
421 O FARRELL DR  
BENICIA CA 94510

261 120 07 00 9  
BLAIRE TRUST DTD  
6725 VISTA ST  
SAN GABRIEL CA 91775

359 041 22 00 8  
BRYAN BARBARA LIVING TRUST  
302 W RIVERSIDE DR  
CARLSBAD NM 88220

359 041 23 00 1 **DUP**  
BRYAN BARBARA LIVING TRUST  
302 W RIVERSIDE DR  
CARLSBAD NM 88220

359 041 21 00 5 **DUP**  
BRYAN BARBARA LIVING TRUST  
302 W RIVERSIDE DR  
CARLSBAD NM 88220

359 041 20 00 2 **DUP**  
BRYAN BARBARA LIVING TRUST  
302 W RIVERSIDE DR  
CARLSBAD NM 88220

261 196 10 00 0  
BUJULIAN BROTHERS INC  
291 N 6TH AV  
KINGSBURG CA 93631

261 120 04 01 9  
BULTMAN FAMILY TRUST  
7218 MEADOWBROOK WY  
BAKERSFIELD CA 93309

359 041 08 00 8  
C R NIKKEL FAMILY INVESTMENTS  
2358 WEGIS AV  
BAKERSFIELD CA 93314-8823

359 041 14 00 5  
CAFARO TONY A & ANNABELLA L  
2808 WEST AVENUE K-4  
LANCASTER CA 93536

261 194 36 00 2  
CALANDRI JOHN & BARBARA J TR  
6135 WEST AVENUE, M 8  
PALMDALE CA 93551

261 194 28 00 9 **DUP**  
CALANDRI JOHN & BARBARA J TR  
6135 WEST AVENUE M 8  
PALMDALE CA 93551

261 194 29 00 2 CALANDRI JOHN & BARBARA J TR 6135 WEST AVENUE M 8 PALMDALE CA 93551	<b>DUP</b>	261 194 37 00 5 CALANDRI JOHN & BARBARA TR 6135 WEST AVENUE M 8 PALMDALE CA 93551	359 312 01 00 2 CANEDA FAMILY TRUST 5539 PIERCY AV LAKEWOOD CA 90712-1464
261 120 38 00 9 CARDINAL PETER A & LINDA M 525 LUCINDA LN MECHANICSBURG PA 17055		359 140 17 00 6 CENTURY WESTERN CORP 13273 VENTURA BL, # 209 STUDIO CITY CA 91604	359 140 16 00 3 CENTURY WESTERN CORP 13273 VENTURA BL, # 209 STUDIO CITY CA 91604
359 303 01 00 6 CHANG PATRICIA & CATHERINE P 776 LA VINA LN ALTADENA CA 91001		359 303 06 00 1 CHANG YUDOR JOB 925 VIA AMADEO SAN DIMAS CA 91773-3931	261 120 04 04 6 COHN CHARLES TR 425 CALIFORNIA ST, # 440 SAN FRANCISCO CA 94104-2102
261 120 39 00 2 COLLINS BARBARA ALICE 2319 M ST FORT SMITH AR 72901		261 350 32 00 8 CUNANAN NOEL D & FLORDELIZA S 4104 JOSH DR KILEEN TX 76542	359 140 06 00 4 DIEHL ALAN V & GRAMSE P A ET AL 1393 COUNTRY RANCH RD WESTLAKE VLG CA 91361
359 140 07 00 7 DIEHL FAMILY TR 1393 COUNTRY RANCH RD WESTLAKE VLG CA 91361		261 120 04 07 3 EISNER ELSIE S P O DRAWER J J SANTA BARBARA CA 93101	261 120 04 03 7 ESPERANZA TR 2225 GREEN ACRES DR VISALIA CA 93291
359 041 30 00 1 ESPINOSA ALVARO & EVANGELINA 2619 GRIFFIN AV LOS ANGELES CA 90031		359 020 09 00 8 EYHERABIDE JUANITA TR 5284 KENT DR BAKERSFIELD CA 93306-3908	359 020 11 00 3 EYHERABIDE RAYMOND JR 5284 KENT DR BAKERSFIELD CA 93306-3908
359 140 27 00 5 FERDINAND J F & MARGUERITE TR 1749 CAMINO PRIMAVERA BAKERSFIELD CA 93306-4164		359 140 35 00 8 FLORES NOLAN C & MERILYN A 748 HAMILTON WY BATAVIA IL 60510	359 140 12 02 9 FUSANO ANGELINA 15067 COLBALT ST SYLMAR CA 91342
359 305 05 00 2 GEMENIANO BERNALDO & VIOLETA 555 SILVER FOX CT WALNUT CA 91789-4246		261 194 39 00 1 GONZALEZ ENRIQUE & MARIA TRUST 12979 ARROYO ST SAN FERNANDO CA 91340	261 194 38 00 8 GONZALEZ ENRIQUE & MARIA TRUST 12979 ARROYO ST SAN FERNANDO CA 91340
359 140 19 00 2 GS EQUITY RESOURCES II INC P O BOX 8159 CALABASAS CA 91372-8159		261 120 04 02 8 HUBBARD HUGH & TAHITI HAI INC 22608 OCEAN AV TORRANCE CA 90505	359 140 28 00 8 KAULUKUKUI SUZETTE K 16424 S DENKER AV GARDENA CA 90247
359 140 31 00 6 KUSANO TAMOTSU & KAY K 12 MAIKAI ST HILO HI 96720-5364		359 140 25 00 9 LA ROCCA FAMILY TRUST P O BOX 1172 ROSAMOND CA 93560	359 140 20 00 4 LA ROCCA FAMILY TRUST P O BOX 1172 ROSAMOND CA 93560

261 196 07 00 2 LANE GEORGE M 44909 W 10TH ST LANCASTER CA 93534		359 305 04 00 9 LAYON ROBERTO L & MERCEDES G 12448 SENDA RD SAN DIEGO CA 92128-3015		359 041 09 00 1 LEE ANDREW W & SARAH P 39 OAK GATE PL PLEASANT HILL CA 94523
359 041 10 00 3 LEE HAGUN & TUCK HYUNG TRUST 4493 ALTA TUPELO DR CALABASAS CA 91302-2514		261 120 04 06 4 LELAND STANFORD JR UNIV TRS 2770 SAND HILL RD MENLO PARK CA 94025-7020		261 120 08 00 2 LIN FMLY TR 2226 35TH AV SAN FRANCISCO CA 94116
359 140 23 00 3 LISKO LYNNE E FMLY TR 553 W PUENTE ST, # 1 COVINA CA 91722		359 140 08 00 0 LOMBARDO FMLY REV LIV TR 19111 COLCHESTER LN HUNTINGTON BCH CA 92646		359 313 08 00 0 LOTITO FRANK & MARY 11242 PEORIA ST SUN VALLEY CA 91352-1632
261 120 27 00 7 MANGIONE CHRISTINE V TR 309 BLACKSHEAR AV LOS ANGELES CA 90022		359 140 26 00 2 MARCOGLIESE JULES 330 W WARREN WY ARCADIA CA 91007		359 140 18 00 9 MARCOGLIESE JULES 330 WARREN WY ARCADIA CA 91007
359 140 24 00 6 MARCOGLIESE JULES 330 WARREN WY ARCADIA CA 91007	<b>DUP</b>	359 140 12 01 0 MARCOGLIESE JULES 818 W 155TH ST ROSAMOND CA 93560		359 041 29 00 9 MARITORENA LIVING TRUST 300 E PANAMA RD BAKERSFIELD CA 93307
359 041 31 00 4 MARITORENA LIVING TRUST 300 E PANAMA RD BAKERSFIELD CA 93307	<b>DUP</b>	359 041 32 00 7 MARITORENA LIVING TRUST 300 E PANAMA RD BAKERSFIELD CA 93307	<b>DUP</b>	359 313 01 00 9 MARQUEZ JIMMY M & TERESITA C 1381 PLAZA VISTA SAN DIEGO CA 92114
359 305 06 00 5 MELATT MARILOU D 11894 VIA HACIENDA EL CAJON CA 92019-4097		261 120 36 00 3 MERIT LAND INV CO LLC P O BOX 6367 ALTADENA CA 91003-6367		261 120 28 00 0 MOFFETT JAMES S JR & BARBARA A 102-E SOUTH FORK DR PHOENIX AZ 85048
261 120 04 08 2 MOORE NORMA ET AL 20 E CARRILLO ST. SANTA BARBARA CA 93102		261 120 37 00 6 MURNANE JERRY & JOYCE FMLY TR 42250 W 20TH ST LANCASTER CA 93534		359 140 33 00 2 NAKASONE DAVID Y & EDITH M 5090 LIKINI ST, APT 301 HONOLULU HI 96818-2375
359 314 08 00 7 NAKPAWAN CHALIT & AURORA L 19066 BRASILIA DR NORTHRIDGE CA 91326-1520		359 314 01 00 6 NAKPAWAN CHALIT & AURORA L 19066 BRASILIA DR NORTHRIDGE CA 91326-1520	<b>DUP</b>	359 350 02 00 3 NARAGHI HASHEM SEPARATE TR 17500 E KEYES RD DENAIR CA 95316
359 350 01 00 0 NARAGHI HASHEM SEPARATE TR 17500 E KEYES RD DENAIR CA 95316	<b>DUP</b>	359 350 09 00 4 NARAGHI HASHEM PROPERTY TR 17500 E KEYES RD DENAIR CA 95316	<b>DUP</b>	359 350 10 00 6 NARAGHI HASHEM SEPARATE TR 17500 E KEYES RD DENAIR CA 95316



359 360 02 00 6 NARAGHI HASHEM SEPARATE TR 17500 E KEYES RD DENAIR CA 95316	<b>DUP</b>	359 370 10 00 2 NARAGHI HASHEM SEPARATE TR 17500 E KEYES RD DENAIR CA 95316	<b>DUP</b>	359 370 09 00 0 NARAGHI HASHEM SEPARATE TR 17500 E KEYES RD DENAIR CA 95316	<b>DUP</b>
359 370 02 00 9 NARAGHI HASHEM SEPARATE TR 17500 E KEYES RD DENAIR CA 95316	<b>DUP</b>	359 360 09 00 7 NARAGHI HASHEM SEPARATE TR 17500 E KEYES RD DENAIR CA 95316	<b>DUP</b>	359 360 01 00 3 NARAGHI HASHEM SEPARATE TR 17500 E KEYES RD DENAIR CA 95316	<b>DUP</b>
359 370 01 00 6 NARAGHI HASHEM SEPARATE TR 17500 E KEYES RD DENAIR CA 95316	<b>DUP</b>	359 360 10 00 9 NARAGHI HASHEM SEPARATE TR 17500 E KEYES RD DENAIR CA 95316	<b>DUP</b>	359 304 03 00 9 NEE/LME FAMILY TR 8521 SHEFFIELD RD SAN GABRIEL CA 91775	
359 041 07 00 5 NIKKEL M & C ET UX FAM TR ET AL 2358 WEGIS AV, R9 BAKERSFIELD CA 93314-8823		359 313 04 00 8 PAEZ BERNARDO O & MELINDA A TR 2376 DEL AMO BL TORRANCE CA 90501		359 313 03 00 5 PAEZ BERNARDO O & MELINDA A TR 2376 DEL AMO BL TORRANCE CA 90501	<b>DUP</b>
359 140 22 00 0 PARADIS WILLIAM C FMLY TR 82362 COCHRAN DR INDIO CA 92201		359 140 30 00 3 PARKER MILDRED H & MONA L 86-235 LEILEHO PL WAIANAE HI 96792		261 120 29 00 3 POLANSKI JOSEPH & FRANCES TR 12121 COPPER CREEK DR KELLER TX 76248	
359 041 13 00 2 POPINJAY CORP 1601 F ST, FLR 2 BAKERSFIELD CA 93301		359 305 03 00 6 QUINES CANDIDO P & FELIPA G 1495 NW TREMAINE CT BEAVERTON OR 97005		359 041 28 00 6 RECA CORP 9364 WEST AVENUE G LANCASTER CA 93534	
261 120 04 05 5 REGENTS OF THE UNIVERSITY CA 2199 ADDISON ST BERKELEY CA 94704-1153		359 140 14 00 7 REINKE LUCY C TR 2200 W ACACIA AV, # C202 HEMET CA 92545-6754		261 120 35 00 0 RICE RUSSELL W & BEVERLY J 9 TONY ST WILLIAMSTON SC 29697	
359 041 05 00 9 ROBERTSON ELAINE E REV TRUST 5104 LEIGH AV SAN JOSE CA 95124		359 020 10 00 0 SAWYERS SUE ANN 300 SPRUCE ST WILLITS CA 95490		261 120 34 00 7 SCOTT WILLIAM 1946 VEDANTA PL HOLLYWOOD CA 90068-3920	
261 120 32 00 1 SHOEMAKER FAMILY TR 44321 NORTH KIRKLAND AV LANCASTER CA 93534		261 120 26 00 4 SIMONIAN WILLIAM M & VICTORIA TR 9759 EL ARCO DR WHITTIER CA 90603-1303		261 350 18 00 8 SOUTHERN CALIF EDISON CO 2244 WALNUT GROVE AV QD2D GO1 ROSEMEAD CA 91770	
261 350 33 00 1 SOUTHERN CALIF EDISON CO 2244 WALNUT GROVE AV QD2D GO1 ROSEMEAD CA 91770	<b>DUP</b>	261 350 17 00 5 SOUTHERN CALIF EDISON CO P O BX 800 ROSEMEAD CA 91770		359 313 02 00 2 STA ROMANA FELINA V 3270 EARLMAR DR LOS ANGELES CA 90064-4713	

261 196 06 00 9 STAUBLI M W & TEMPLEMAN NANCY 800 PRINCETON RD WILMINGTON DE 19807-2950	261 196 05 00 6 STAUBLI M W & TEMPLEMAN NANCY 800 PRINCETON RD WILMINGTON DE 19807-2950	<b>DUP</b>	261 196 01 00 4 STAUBLI M W & TEMPLEMAN NANCY 800 PRINCETON RD WILMINGTON DE 19807-2950	<b>DUP</b>
359 140 36 00 1 SUDA CALVIN J P O BOX 416 MAKAWAO MAUI HI 96768	359 303 05 00 8 TAN ROMEO A & HERMOSA B 881 GREEN ST E PALO ALTO CA 94303-1948		359 303 04 00 5 TAN ROMEO A & HERMOSA B 881 GREEN ST E PALO ALTO CA 94303-1948	<b>DUP</b>
359 140 15 00 0 THOMSON ROBERT B 4481 BOARDWALK LN SANTA MARIA CA 93455-6645	359 313 07 00 7 TOLENTINO ELIEZER & REMEDIOS 2059 ESTRADO DR CORONA CA 92882-3999		359 313 06 00 4 TOLENTINO ELIEZER R & REMEDIOS 2059 ESTRADO DR CORONA CA 92882-3999	
359 304 02 00 6 TORRES RUBEN & FLORIDA G 1693 WEST WABASH ST RIALTO CA 92376	359 304 01 00 3 VALERA JOVEN U & ROSALINA R 149 WHELAN CT MOUNTAINVIEW CA 94043		359 041 01 00 7 VAM DAN CRAIG A & MARTA L 7316 W AVENUE D-8 LANCASTER CA 93536	
261 196 09 00 8 VAN DAM CRAIG & MARTA 7316 W AVENUE D-8 LANCASTER CA 93536	359 041 11 00 6 VAN DAM DELMAR D & GERTRUDE TR 9753 E AVENUE F-8 LANCASTER CA 93535-7913		261 196 04 00 3 VAN DAM DELMAR D & GERTRUDE TR 9753 EAST AVE F-8 LANCASTER CA 93535	
359 041 18 00 7 VAN DAM DELMAR D & GERTRUDE TR 9753 EAST AVE F-8 LANCASTER CA 93535	<b>DUP</b>	359 041 17 00 4 VAN DAM DELMAR D & GERTRUDE TR 9753 EAST AVENUE F-8 LANCASTER CA 93535	359 041 12 00 9 VAN DAM DELMAR D & GERTRUDE TR 9753 EAST AVENUE F-8 LANCASTER CA 93535	<b>DUP</b>
261 196 03 00 0 VAN DAM FAMILY TRUST 9753 EAST AVENUE F-8 LANCASTER CA 93535	261 196 02 00 7 VAN DAM FAMILY TRUST 9753 EAST AVENUE F-8 LANCASTER CA 93535	<b>DUP</b>	261 196 11 00 3 VAN DAM GARY & DEBBIE 9753 E AVENUE F 8 LANCASTER CA 93535	
359 140 21 00 7 VERGONA JOHN P O BOX 8387 NEWPORT BEACH CA 92658-8387	261 120 05 00 3 WAY DONALD H P O BOX 370155 RESEDA CA 91337-0155		261 120 06 00 6 WAY DONALD H P O BOX 370155 RESEDA CA 91337-0155	<b>DUP</b>
359 041 04 00 6 WELCH BARBARA 1580 SHADOWRIDGE DR, APT 269 VISTA CA 92081	359 041 03 00 3 WELCH BARBARA 1580 SHADOWRIDGE DR, APT 269 VISTA CA 92081	<b>DUP</b>	359 041 02 00 0 WELCH BARBARA 1580 SHADOWRIDGE DR, APT 269 VISTA CA 92081	<b>DUP</b>
359 303 02 00 9 YAMAUCHI FAMILY TR 423 DENSLOW AV LOS ANGELES CA 90049	359 303 03 00 2 YAMAUCHI FLOYD S FAMILY TR 423 DENSLOW AV LOS ANGELES CA 90049	<b>DUP</b>	261 194 40 00 3 YOUNG LEWIS B & DIANE M 2337 WEST AVENUE I LANCASTER CA 93534	

261 194 42 00 9  
YOUNG LEWIS B & DIANE M  
2337 WEST AVENUE I  
LANCASTER CA 93534

**DUP**

261 194 43 00 2  
YOUNG LEWIS B & DIANE M  
2337 WEST AVENUE I  
LANCASTER CA 93534

**DUP**

261 194 41 00 6  
YOUNG LEWIS B & DIANE M  
2337 WEST AVENUE I  
LANCASTER CA 93534

**DUP**

359 314 02 00 9  
ZACARIAS QUINTIN & REMEDIOS  
3123 MT ISABEL DR  
SAN JOSE CA 95148

359 041 01 00 7  
VAM DAN CRAIG A & MARTA L  
7316 W AVENUE D-8  
LANCASTER CA 93536

**SITE**

359 041 11 00 6  
VAN DAM DELMAR D & GERTRUDE TR  
9753 E AVENUE F-8  
LANCASTER CA 93535-7913

**SITE**

Form A

Notice of Completion & Environmental Document Transmittal

SCH # 2005091117

Mail to: State Clearinghouse, PO Box 3044, Sacramento, CA 95812-3044 916/445-0613

Project Title: Antelope Valley Water Bank by Western Development and Storage, LLC

Lead Agency: Kern County Planning Department Contact Person: Don Kohler
Mailing Address: 2700 M Street, Suite 100 Phone: (661) 862-8787
City: Bakersfield Zip: 93301 County: Kern

Project Location:

County: Kern City/Nearest Community: Rosamond
Cross Streets: Avenue "A" and 170th Street West Zip Code: 93560 Total Acres: 13,440
Assessor's Parcel No. Section: 25, 30, 31 Twp. 9N Range: 14/15w Base: SBB&M
Within 2 Miles: State Hwy #: 138 Waterways:
Airports: Skyotte Ranch Railways: Schools:

Document Type:

CEQA: [ ] NOP [ ] Supplement/Subsequent EIR NEPA: [ ] NOI Other: [ ] Joint Document
[ ] Early Cons (Prior SCH No.) [ ] EA [ ] Final Document
[ ] Neg Dec [ ] Other [ ] Draft EIS [ ] Other
[ x ] Draft EIR [ ] FONSI

Local Action Type:

[ ] General Plan Update [ ] Specific Plan [ ] Rezone [ ] Annexation
[ x ] General Plan Amendment [ ] Master Plan [ ] Prezone [ ] Redevelopment
[ ] General Plan Element [ ] Planned Unit Development [ ] Use Permit [ ] Coastal Permit
[ ] Community Plan [ ] Site Plan [ ] Land Division (Subdivision, etc.) [ ] Other

Development Type:

[ ] Residential: Units Acres
[ ] Office: Sq.ft. Acres Employees
[ ] Commercial: Sq.ft. Acres Employees
[ ] Industrial: Sq.ft. Acres Employees
[ ] Educational
[ ] Recreational
[ x ] Water Facilities: Type Water Bank MGD
[ ] Transportation: Type
[ ] Mining: Mineral
[ ] Power: Type Watts
[ ] Waste Treatment: Type
[ ] Hazardous Waste: Type
[ ] Other:

Funding (approx.): Federal \$ State \$ Total \$

Project Issues Discussed in Document:

[ x ] Aesthetic/Visual [ x ] Flood Plain/Flooding [ ] Schools/Universities [ x ] Water Quality
[ x ] Agricultural Land [ ] Forest Land/Fire Hazard [ ] Septic Systems [ x ] Water Supply/Groundwater
[ x ] Air Quality [ x ] Geologic/Seismic [ ] Sewer Capacity [ ] Wetland/Riparian
[ x ] Archeological/Historical [ x ] Minerals [ x ] Soil Erosion/Compaction/Grading [ x ] Wildlife
[ ] Coastal Zone [ x ] Noise [ ] Solid Waste [ x ] Growth Inducing
[ x ] Drainage/Absorption [ x ] Population/Housing Balance [ x ] Toxic/Hazardous [ x ] Landuse
[ ] Economic/Jobs [ x ] Public Services/Facilities [ x ] Traffic/Circulation [ x ] Cumulative Effects
[ ] Fiscal [ ] Recreation/Parks [ x ] Vegetation [ ] Other

Present Land Use/Zoning/General Plan Designation:

Ag & Vacant/A(Exclusive Ag), E(Estate), FPS(Flood Pain Sec)/8.5 (Resource Mgmt), 7.1(Light Ind), 5.3 (Residential), 4.4, 2.85, 2.6.

Project Description: 4.4(Comp. Plan Area), 2.85(Military Flight), 2.6(Flood Hazard)

The applicant, Western Development and Storage, LLC (WDS) is proposing to construct the Antelope Valley Water Bank Project. The purpose of the project is to recharge and store imported surface water beneath properties in the west end of the Antelope Valley. January 2004

# Reviewing Agencies Checklist

Form A, continued

**KEY**  
**S** = Document sent by lead agency  
**X** = Document sent by SCH  
 ✓ = Suggested distribution

- Resources Agency
- Boating & Waterways
- Coastal Commission
- Coastal Conservancy
- Colorado River Board
- Conservation
- Fish & Game
- Forestry & Fire Protection
- Office of Historic Preservation
- Parks & Recreation
- Reclamation Board
- S.F. Bay Conservation & Development Commission
- Water Resources (DWR)

**Business, Transportation & Housing**

- Aeronautics
- California Highway Patrol
- CALTRANS District # 6
- Department of Transportation Planning (headquarters)
- Housing & Community Development

**Food & Agriculture**

**Health & Welfare**

Health Services

**State & Consumer Services**

- General Services
- OLA (Schools)

**Environmental Protection Agency**

- Air Resources Board
- California Waste Management Board
- SWRCB: Clean Water Grants
- SWRCB: Delta Unit
- SWRCB: Water Quality
- SWRCB: Water Rights
- Regional WQCB # (Lahanton)

**Youth & Adult Corrections**

Corrections

**Independent Commissions & Offices**

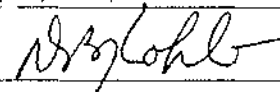
- Energy Commission
- Native American Heritage Commission
- Public Utilities Commission
- Santa Monica Mountains Conservancy
- State Lands Commission
- Tahoe Regional Planning Agency

Other

**Public Review Period** (to be filled in by lead agency)

Starting Date April 10, 2006

Ending Date May 24, 2006

Signature 

Date April 10, 2006

**Lead Agency** (Complete if applicable):

Consulting Firm: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Contact: \_\_\_\_\_

Phone: (\_\_\_\_) \_\_\_\_\_

**Applicant:** \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: (\_\_\_\_) \_\_\_\_\_

**For SCH Use Only:**

Date Received at SCH \_\_\_\_\_

Date Review Starts \_\_\_\_\_

Date to Agencies \_\_\_\_\_

Date to SCH \_\_\_\_\_

**Clearance Date** \_\_\_\_\_

Notes: \_\_\_\_\_

# **Draft Environmental Impact Report**

**SCH#2005091117**

***Volume I  
Chapters 1 through 10***

**Antelope Valley Water Bank Project**  
*(By Western Development and Storage, LLC)*

**Specific Plan Amendment No. 13, Map 232  
Specific Plan Amendment No. 2, Map 233  
Alteration of Boundaries of  
Agricultural Preserve No. 24 – Inclusion**

*Prepared by:*

Kern County Planning Department  
Bakersfield California  
Public Services Building  
2700 M Street, Suite 100  
Bakersfield, CA 93301-2370  
Contact: Don Kohler  
661/862-8787

*Technical Assistance by:*

Jones & Stokes  
2600 V Street  
Sacramento, CA 95818-1914  
Contact: Jim James  
916/737-3000

April 2006

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# Acronyms and Abbreviations

μ/m <sup>3</sup>	micrograms per cubic meter
ACBM	asbestos-containing building material
af	acre-feet
AFB	Air Force Base
ALUCP	Kern County Airport Land Use Compatibility Plan
ATSDR	Agency for Toxic Substances and Disease Registry
AVAQMD	Antelope Valley Air Quality Management District
AVEK	Antelope Valley East Kern Water Agency
AVMAD	Antelope Valley Mosquito Abatement District
BACT	best available control technology
bgs	below the ground surface
BMPs	Best Management Practices
Bolthouse	W.M. Bolthouse Farms, Inc.
CAAQS	California ambient air quality standards
Cal ARP	California Accidental Release Prevention Program
California Register	California Register of Historical Resources
CARB	California Air Resources Board
CBSC	California Building Standards Code
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CMLUCA	California Military Land Use Compatibility Analyst
CNEL	Community noise equivalent level
CNPS	California Native Plant Society

CO	carbon monoxide
COG	Council of Governments
COHb	concentration of carboxyhemoglobin
Corps	U.S. Army Corps of Engineers
CUP	conditional use permit
CUPA	Certified Unified Program Agency
DB	Decibels
DBA	A-weighted decibel
DFG	California Department of Fish and Game
Diamond	Diamond Farming Company
diesel PM	particulate emissions from diesel-fueled engines
DOF	Department of Finance
DWR	California Department of Water Resources
E	Estate
EA	Exclusive Agriculture
EDR	Environmental Data Resources
EIR	environmental impact report
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
Flood Plain Secondary	FPS
FR	Federal Register
FTIP	Federal Transportation Improvement Program
General Construction Permit	NPDES General Permit for Storm Water Discharges Associated with Construction Activities
general WDRs	general waste discharge requirements
H <sub>2</sub> S	Hydrogen sulfide
HCD	Housing and Community Development Department
HI	Hazard Index
Kern COG	Kern Council of Governments
LAA	Los Angeles Aqueduct
L <sub>dn</sub>	Day-Night Level
L <sub>eq</sub>	Equivalent sound level
LOS	Level of service
MBTA	Migratory Bird Treaty Act

MDAB	Mojave Desert Air Basin
MOCP	Monitoring and Operational Constraints Plan
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NAWS	Naval Air Warfare Station
NCCP	Natural Community Conservation Planning
NEPA	National Environmental Policy Act
NO <sub>2</sub>	nitrogen dioxide
NOAA	National Oceanographic and Atmospheric Administration
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NWPs	Nationwide Permits
OEHHA	California Office of Environmental Health Hazard Assessment
OSHA	Occupational Safety and Health Administration
PM10	particulate matter 10 microns in diameter or less
PM2.5	particulate matter 2.5 microns in diameter or less
Ppm	parts per million
Project	Antelope Valley Water Bank Project
PVC	Polyvinyl chloride
RHAP	Regional Housing Allocation Plan
RHNA	Regional Housing Needs Assessment
ROG	reactive organic gases
ROWD	report of waste discharge
RTECS	Registry of Toxic Effects of Chemical Substances
SCAG	Southern California Association of Governments
SEAs	Significant Ecological Areas
SEATAC	Significant Ecological Area Technical Advisory Committee
SIDS	Sudden Infant Death Syndrome
SIP	state implementation plan
SJVAB	San Joaquin Valley Air Basin
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	oxides of sulfur
SPCC	Storage Tank Spill Prevention Control and Countermeasure Plan

SPCCP	Spill Prevention Control and Countermeasures Plan
State Water Board	State Water Resources Control Board
Superfund	Comprehensive Environmental Response, Compensation, and Liability Act
SWP	State Water Project
SWPPP	stormwater pollution prevention plan
TACs	toxic air contaminants
TDS	total dissolved solids
Unified Program	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
VMT	vehicle miles traveled
VOCs	volatile organic compounds
WDS	Western Development and Storage, LLC
WSSP	Willow Springs Specific Plan

## 1.1 Introduction

This document is a draft Environmental Impact Report (EIR) analyzing the potential environmental impacts of the Antelope Valley Water Bank Project (Project), which has been proposed by Western Development and Storage, LLC (WDS), the applicant.

The Kern County Planning Department (Planning Department) has prepared this document in compliance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 *et seq.*), which requires state and local agencies to consider and disclose the environmental consequences of projects over which they have discretionary authority before taking action on those projects. Kern County is the Lead Agency under CEQA because the Project would require the County to amend the Willow Springs Specific Plan (WSSP) and include approximately 640 acres into Agricultural Preserve No. 24.

Consistent with CEQA requirements, the purpose of this document is to:

- identify potential direct and indirect environmental impacts associated with the Project,
- identify potential contributions of the Project to cumulative regional impacts in the Project area,
- evaluate the potential for growth inducement as a result of the Project,
- describe mitigation measures that would avoid significant Project impacts or reduce them to a less-than-significant level, and
- discuss potential Project alternatives that would avoid or reduce one or more of the identified significant Project impacts.

This draft EIR evaluates the potential impacts of the Project in relation to the following categories:

- agricultural resources,
- air quality,
- biological resources,

- cultural resources,
- geology and soils,
- hazards and hazardous materials,
- hydrology and water quality,
- mineral resources,
- noise,
- land use and planning,
- population and housing,
- transportation and traffic, and
- utilities and services.

This document also is intended to supply the information necessary to support applications for the permits that will be required to implement the Project once the environmental review process is completed.

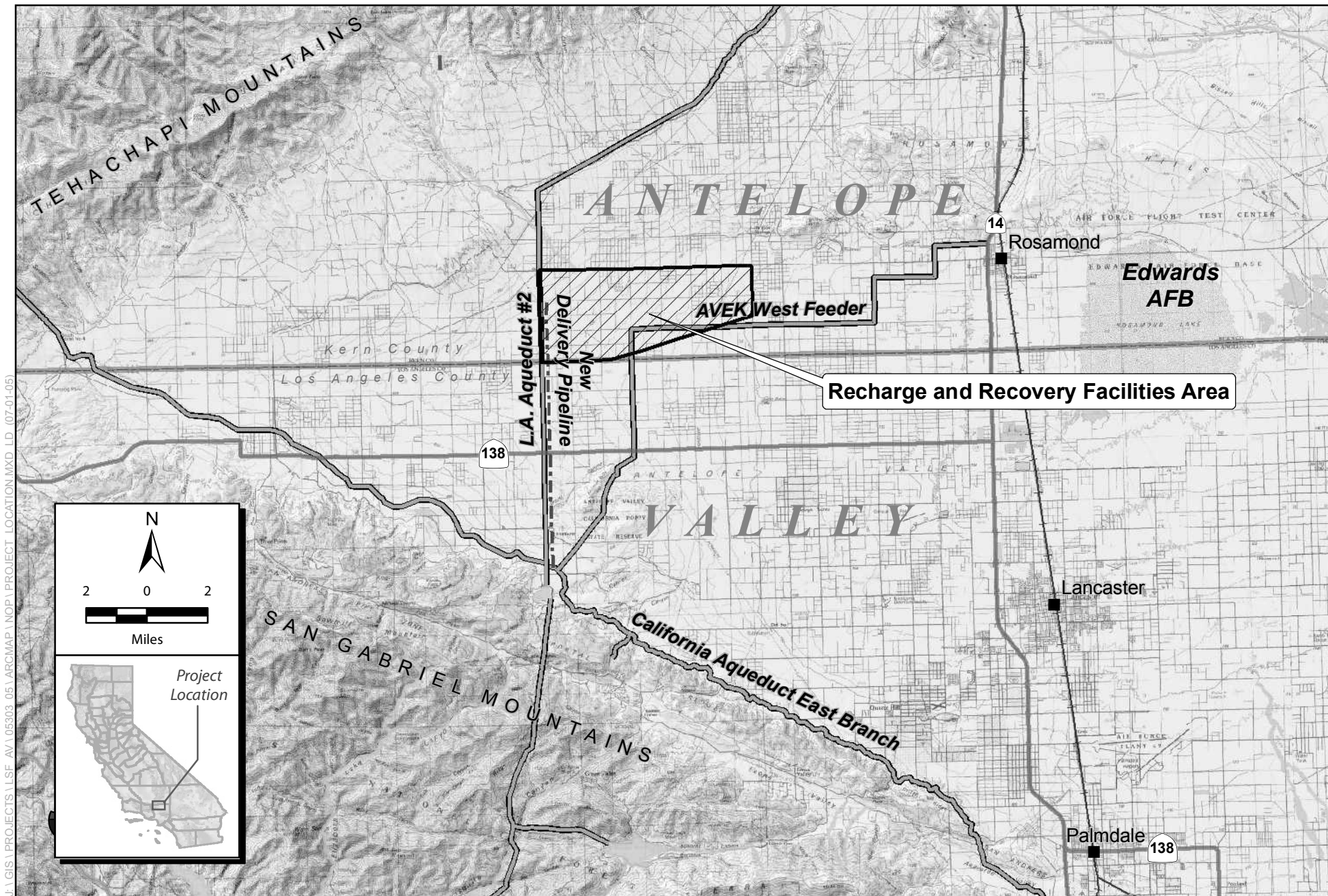
## 1.2 Project Summary

The applicant proposes to develop facilities to recharge and store imported surface water beneath properties in the west end of the Antelope Valley, California (Figure 1-1 and Figure 1-2). When needed, the stored water would be recovered using groundwater wells. The recovered water would be delivered to water users.

The area proposed for recharge facilities is zoned as A (Exclusive Agriculture), E (Estate), and FPS (Flood Plain Secondary) Districts but also includes approximately 640 acres of residential and industrial designations under the WSSP. Implementation of the Project would require:

- amendment of the WSSP to change various map code designations (Specific Plan Amendment No. 13, Map 232; and Specific Plan Amendment No. 2, Map 233);
- inclusion of approximately 640 acres into Agricultural Preserve No. 24 (Agricultural Preserve No. 24—Inclusion);
- construction of wells, facilities, and accessory structures needed for ongoing maintenance and operation necessary to transport water; and
- authorization and permits from various affected agencies.

The Project would entail importing water from the State Water Project (SWP) via the East Branch of the California Aqueduct to the Project site for recharge and storage underground (Figure 1-1). When needed, stored water would be recovered for delivery to various water agencies, such as those in Kern, Los Angeles, and Orange Counties. A committee composed of local and other



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**Figure 1-1**  
**Project Location**

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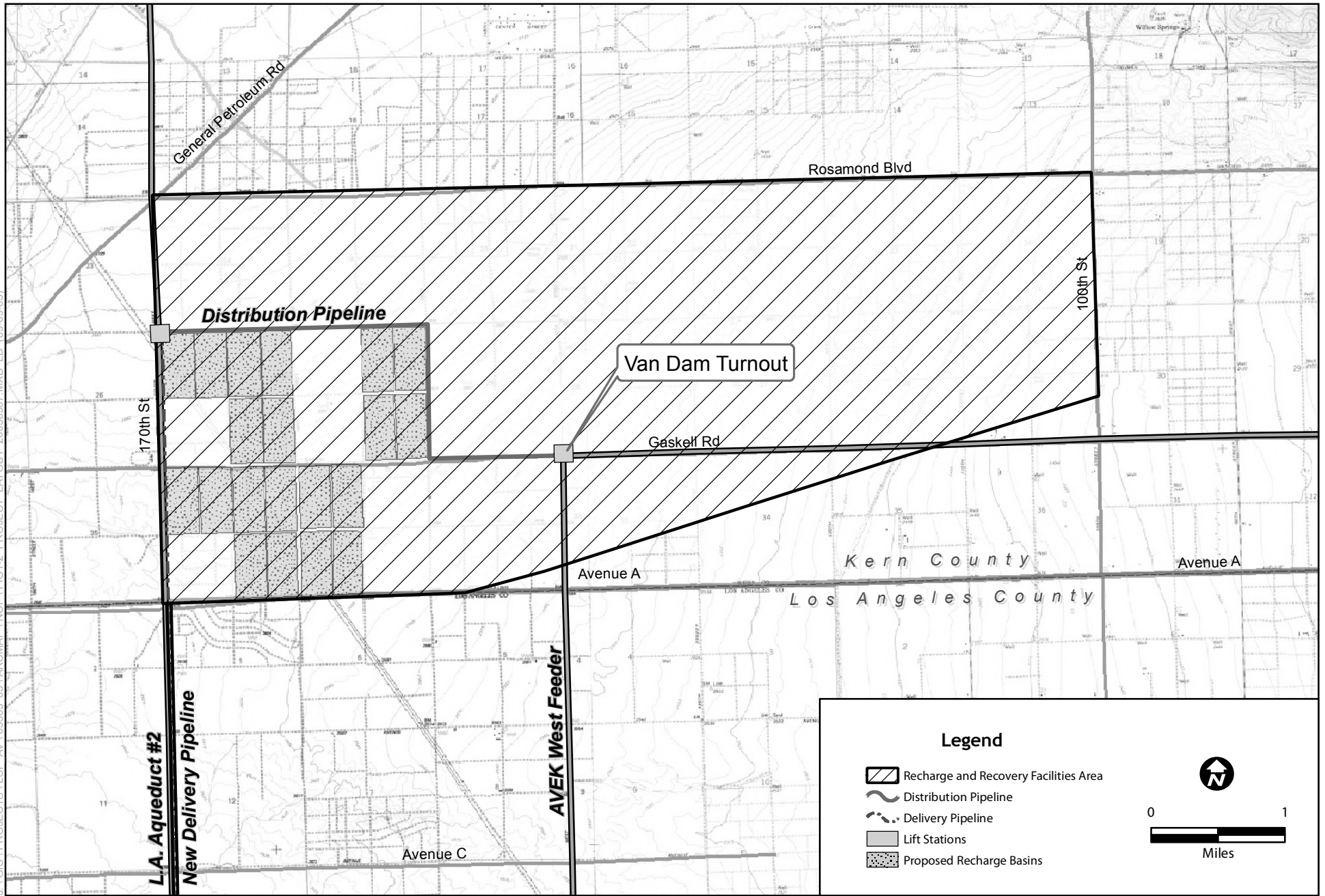


Figure 1-2  
Project Layout



interested representatives would be established to monitor and, if necessary, constrain the impacts of recharge, storage, and recovery operations.

## 1.3 Project Objectives

The applicant states that the primary purpose of the Project is to provide additional water storage to supply the needs of Antelope Valley and, potentially, other regions of southern California through facilities that are of sufficient size and scope to be both cost effective and environmentally sound. WDS conducted an assessment of water storage needs and constraints and identified western Antelope Valley as having suitable geographic and geologic features for such a project.

The applicant intends to either transfer the Antelope Valley Water Bank to a public agency or agencies, or partner with such agencies and potentially other water suppliers, wholesalers, and retailers to develop and/or operate the Antelope Valley Water Bank.

In general, imported SWP water would be recharged when available (typically during wet years) and recovered when needed. To accomplish this purpose, the applicant has the following objectives for the Project:

1. To import SWP water when it is available (typically wet years) for recharge and storage underground, and then recover it when needed.
2. To leave some of the recharged water in the aquifer to aid in recovery or to slow the decline of the water table.
3. To continue farming Project lands using organic farming practices when the land is not being used for recharge purposes.
4. To construct a project that is designed to enhance water supply reliability and flexibility in a cost-effective and environmentally sound manner, help reduce the rate of aquifer overdraft, allow continuation of agricultural uses on Project lands, and encourage conjunctive use, where appropriate.

Important characteristics of the Project are summarized in Table 1-1.

**Table 1-1.** Important Characteristics of the Project

Item	Project
Objectives	Enhance water supply reliability and flexibility through a facility that is of sufficient size and scope to be both cost effective and environmentally sound; reduce the rate of aquifer overdraft; and encourage conjunctive use, where appropriate
Source of recharge water	State Water Project
Recharge basin area	Approximately 1,500 acres
Total capacity	500,000 af of total storage capacity
Annual capacity	100,000 af
Instantaneous recharge capacity	Approximately 350 cfs
Instantaneous recovery capacity	Approximately 250 cfs
Wells for recovery of stored surface water	Approximately 30 to 40 new wells; use of existing wells as appropriate
Project participants	Municipal water agencies, such as those in Kern, Los Angeles, and Orange Counties
Overdraft recovery	10% of recharged water left behind for overdraft recovery
Monitoring committee	Impacts on groundwater levels and water quality would be monitored by a committee, which may include, among others, representatives from the owner/operator, neighboring land owners, Rosamond Community Service District, Antelope Valley State Water Project Contractors Association, and Kern County and Los Angeles County representatives.

af = acre-feet  
cfs = cubic feet per second

## 1.4 Overview of Proposed Project and Alternatives

This draft EIR analyzes the potential impacts of the Project and five alternatives:

- Alternative A: no project
- Alternative B: other locations in or near Antelope Valley,
- Alternative C: use of injection wells to place imported surface water into the aquifer,
- Alternative D: traditional (surface) reservoirs to store imported surface water, and
- Alternative E: in-lieu recharge.

## Proposed Project

### Proposed Discretionary Actions

As part of the proposed Project, the applicant is requesting approval of an amendment to the WSSP and an inclusion into Agricultural Preserve No. 24. Each of these requests is described below.

#### Willow Springs Specific Plan Amendment

Land uses allowed in the Project site are established and guided by the Land Use Element of the WSSP. This document controls the type, intensity, and distribution of land uses in a 79-square mile area in the eastern area of the Kern County General Plan. The WSSP was adopted in 1992 and identified a mix of residential, industrial, comprehensive planning requirements, and resource management uses for the area, combined with designations identifying constraints because of military flight corridors and soil erosion (Figure 1-3). The Project is requesting amendments to the WSSP as follows (Figure 1-4):

- Map Codes 5.3/4.4/2.85 (Residential—maximum 10 units per net acre; Comprehensive Plan Area; Military Flight Operations [60 dB]) to 8.1/4.4/2.85 (Intensive Agriculture—minimum 20-acre parcel size; Military Flight Operations [60 dB]) on approximately 320 acres.
- Map Codes 7.1/4.4 (Light Industrial; Comprehensive Plan Area) to 8.1 (Intensive Agriculture—minimum 20-acre parcel size) on approximately 320 acres.
- Map Codes 8.5/2.85 (Resource Management—minimum 20- or 80-acre parcel size; Military Flight Operations (60 decibels [dB])) to 8.1/2.85 (Intensive Agriculture—minimum 20-acre parcel size; Military Flight Operations [60 dB]) on approximately 300 acres.
- Map Codes 8.5/2.85/2.6 (Resource Management—minimum 20- or 80-acre parcel size; Military Flight Operations [60 dB]; Flood Hazard) to 8.1/2.85/2.6 (Intensive Agriculture—minimum 20-acre parcel size/Military Flight Operations [60 dB]; Flood Hazard) on approximately 50 acres.

The parcels proposed for recharge basins are currently zoned as A (Exclusive Agriculture) and FPS (Flood Plain Secondary Combining) Districts, which are consistent with the proposed designations. Although the broader recharge and recovery area includes parcels zoned E (Estate), the applicant shall constrain development of recovery wells to parcels that are zoned A (Exclusive Agriculture) (Figure 1-5). The recharge and recovery components planned for the facility area are an allowable use in the A zone district.

## Agricultural Preserve Inclusion

The proposed land use designation change from residential and industrial to 8.1 (Intensive Agriculture) within the existing A (Exclusive Agriculture) zoning requires an alteration of the boundaries of Agricultural Preserve No. 24 to include approximately 640 acres. Agricultural preserves have been established for the purpose of implementing the local Williamson Act Land Use Contract program, and only property designated for conforming agricultural uses may qualify.

## Project Location

The Project area is located in an unincorporated area of eastern Kern County with conveyance facilities in northern Los Angeles County, about 10 miles west of the unincorporated community of Rosamond (Figure 1-1). Avenue A, the county line between Kern County and Los Angeles County, lies immediately south of the area proposed for the recharge and recovery facilities (Figure 1-2).

The area proposed for recharge and recovery facilities is bounded by:

- Rosamond Boulevard to the north,
- Avenue A to the south (Kern County/Los Angeles County line),
- 170th Street West to the west, and
- 100th Street West to the east (Figure 1-2).

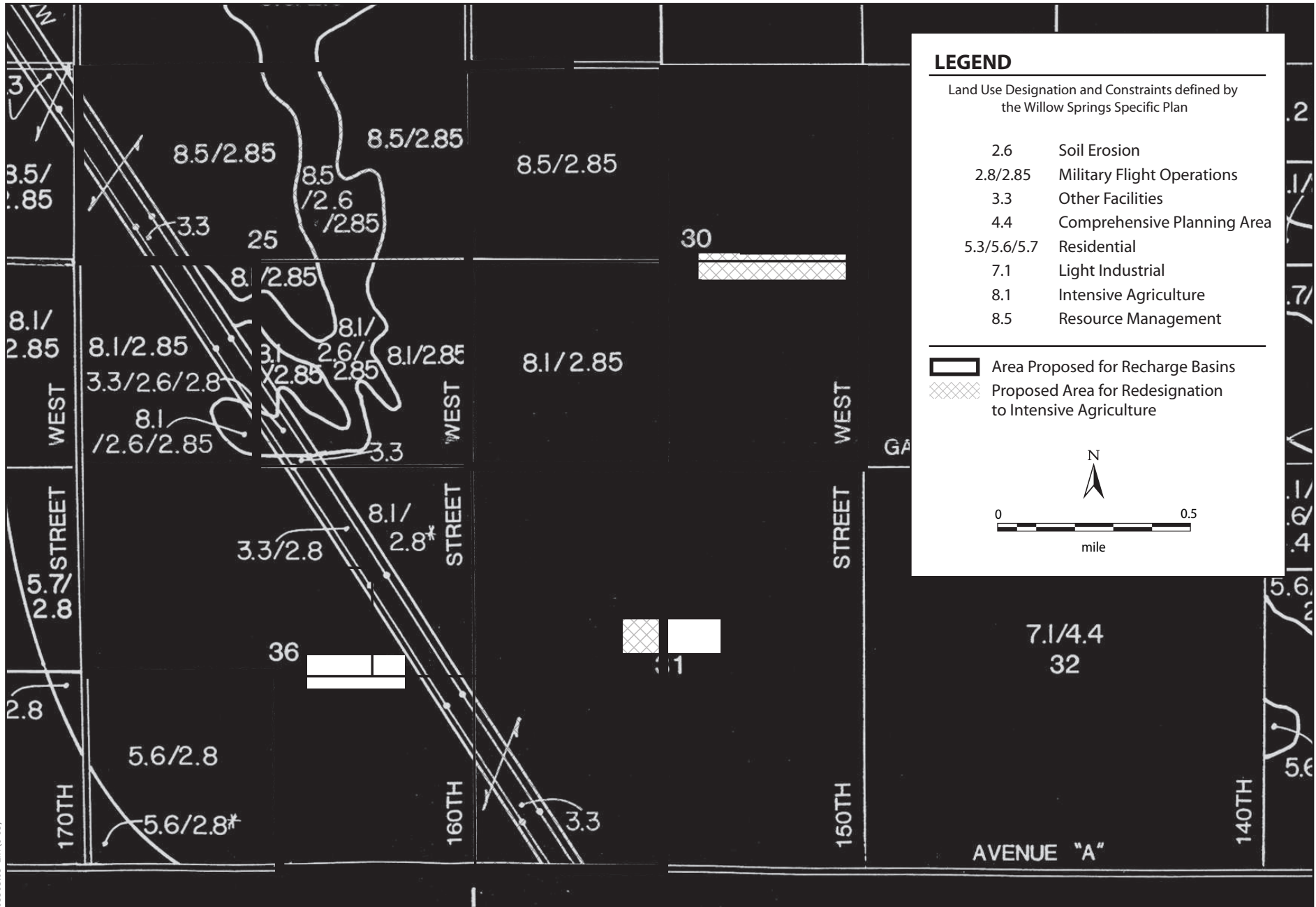
Recharge and recovery facilities include a distribution/recovery pipeline, recharge basins, recovery wells, and recovery pipelines. The land in the recharge and recovery facilities area is made up of farmland and undeveloped land. The recharge and recovery facilities would be located within a 21-square mile area (13,440 acres), with the recharge basins occupying 1,200 to 1,500 acres within the 1,920-acre recharge basin window. The remainder of the 21-square mile area would not be disturbed, except for the pipeline alignments and wellhead areas.

An 8.75-mile-long pipeline would be constructed to deliver water to and from the California Aqueduct. The new delivery pipeline would be aligned parallel to an existing pipeline (Los Angeles Aqueduct #2 [LAA #2]), which passes just west of the area proposed for recharge basins and runs through Los Angeles County (Figure 1-2). The land along the proposed pipeline alignment is predominantly agricultural or not developed.

## Project Facilities

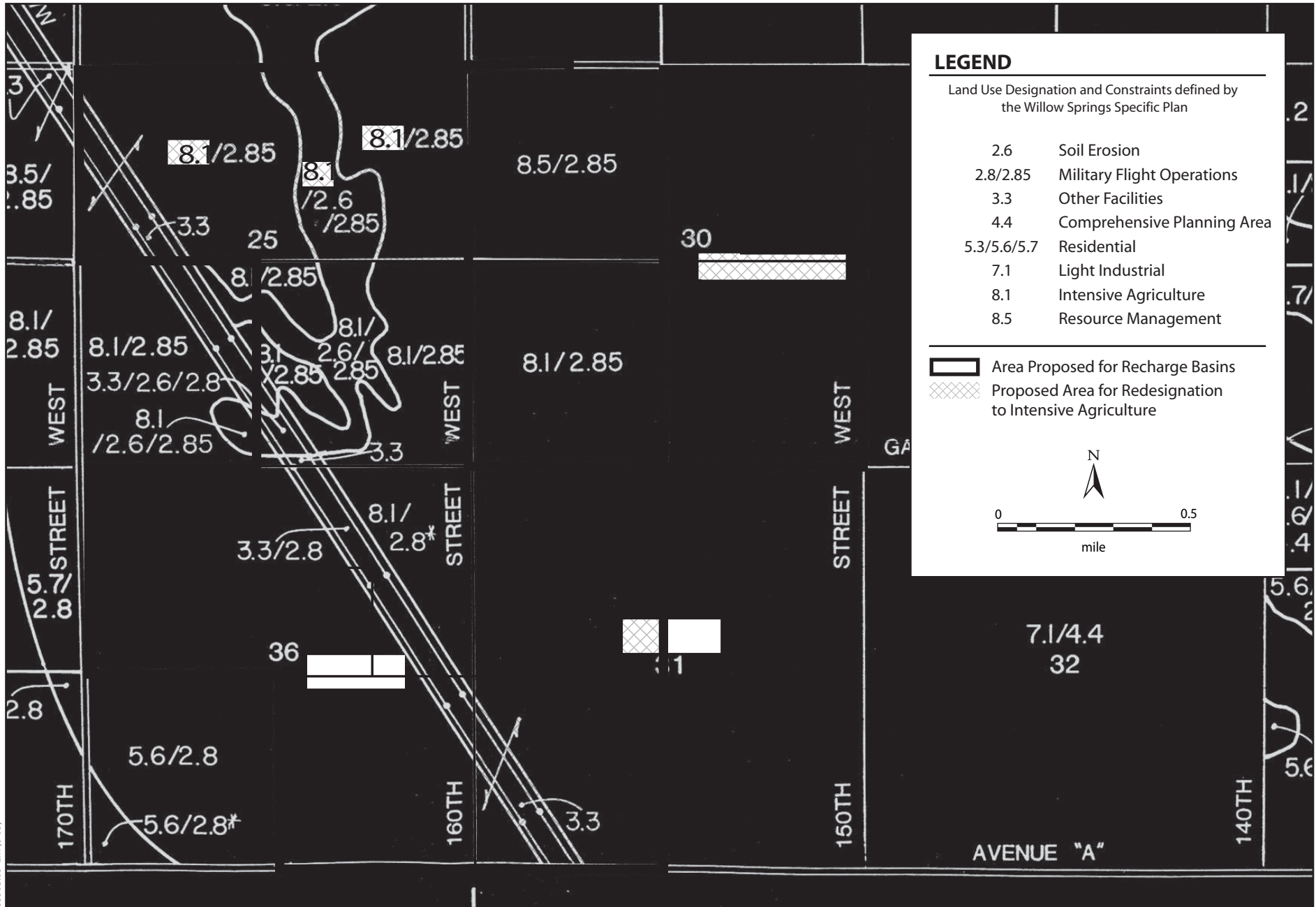
### Project Phasing

The Project is proposed to be constructed in two phases. Phase 1 would involve construction of only the recharge and recovery facilities connecting to the



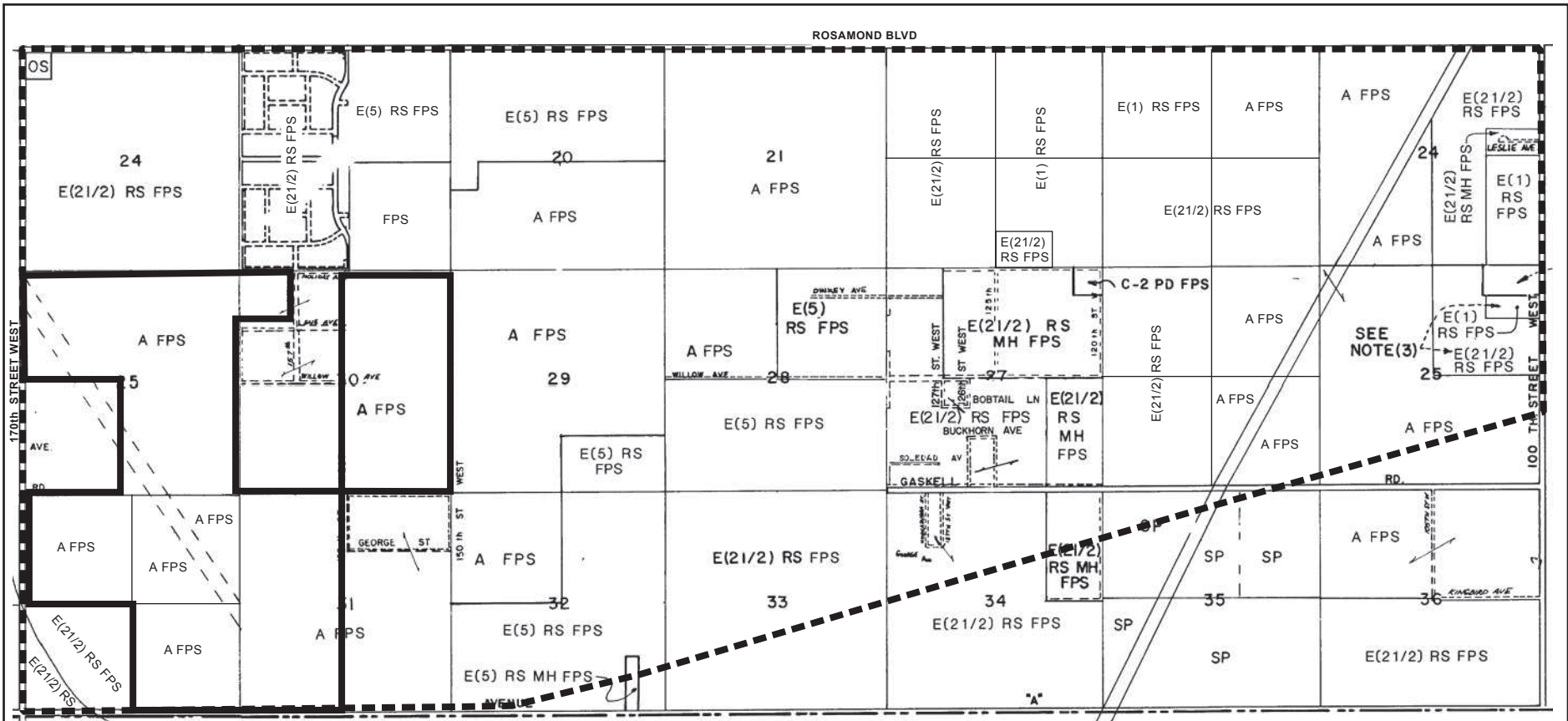
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**Figure 1-3**  
**Willow Springs Specific Plan**  
**Current Land Use Designation Map**





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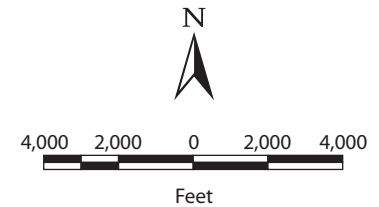
**Figure 1-4**  
**Willow Springs Specific Plan**  
**Project-Proposed Land Use Designation Map**



**LEGEND**

- A - Exclusive Agriculture
- C - Commercial
- E - Estate (1/4 to 20 acre areas)
- FPS - Floodplain (Secondary Combining)
- MH - Mobilehome Combining
- O - Open Space
- PD - Precise Development Combining
- RS - Residential Suburban Combining
- SP - Special Planning

-  Area Proposed for Recharge Basins
-  Recharge and Recovery Facilities Area



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**Figure 1-5  
Kern County Zoning Designations**



Antelope Valley East Kern Water Agency (AVEK) West Feeder. This would allow the recharge and recovery facilities to be operated within the current capacity of the AVEK West Feeder.

Phase 2 would involve connecting the recharge and recovery facilities to the California Aqueduct to increase the total capacity of the Project by constructing the previously mentioned new pipeline, approximately 8.75 miles long, parallel to the existing LAA #2 alignment. Figure 1-2 shows both Phase 1 and Phase 2 components.

## Phase 1 Facilities

Major facilities that would be constructed and operated during Phase 1 of the Project are described below and include:

- a two-way, 4-mile-long pipeline to distribute water from and recover water to the AVEK West Feeder (Figure 1-2);
- distribution canals and recharge basins (with peripheral berms and internal water checks);
- recharge basins on 1,200 to 1,500 acres;
- up to 17 new recovery wells and pumps, with use of existing wells as appropriate; and
- approximately 7 miles of recovery pipelines to convey water from the recovery wells back to the AVEK West Feeder via the distribution/recovery pipeline.

## Distribution/Recovery Pipeline

SWP water would be delivered to the recharge basins via the AVEK West Feeder. The AVEK West Feeder currently connects to the California Aqueduct south of the Project area (Figure 1-1). There is an existing diversion valve (Van Dam Turnout) near the intersection of Gaskell Road and 140th Street West, approximately 1 mile east of the proposed location of the recharge basins (Figure 1-2).

To connect the recharge basins to the AVEK West Feeder (and the California Aqueduct), a pipeline approximately 4 miles long would be installed from the Van Dam Turnout to the northwest corner of the recharge basin area, just east of LAA #2 (Figure 1-2). This distribution/recovery pipeline would be aligned along existing roadways. The Van Dam Turnout may be upgraded with a pump (known as a lift station) to allow delivery of water to the westernmost recharge basins if pressure on the AVEK West Feeder is insufficient. The upgraded turnout also would allow recovered water to be delivered back into the AVEK West Feeder.



## Distribution Canals

Three earthen canals with trapezoidal cross sections would extend southward from the distribution pipeline (and one would extend westward) to deliver water to the recharge basins. Typical irrigation turnouts would be installed to feed water into the recharge basins.

## Recharge Basins

Basins would be constructed to recharge SWP water in currently dewatered portions of the underlying aquifer. The applicant estimates that 11 basins would be constructed, most 160 acres in size and one 40 acres, totaling approximately 1,482 acres. These basins would be used to percolate delivered SWP water into currently dewatered portions of the underlying aquifer.

On basin peripheries where distribution canals are present, the canal berms would also serve as peripheral basin berms. On other peripheries, additional berms would be constructed. Within the basins, water checks would be constructed prior to each recharge episode to accommodate the gently sloping basin floors.

## Recovery Wells

When needed, the stored water would be recovered using groundwater wells similar to those already in use in the area for agriculture. Both existing and new wells would be used to recover stored water. The applicant estimates that approximately 10 existing wells would be used and that 30 to 40 new wells ultimately would need to be constructed. The recovery wells would be constructed by drilling to a depth approximately 700 feet below ground surface.

During Phase 1, approximately 10 to 17 new wells would be installed in and adjacent to the recharge basins, with wells added in later years as needed.

## Recovery Pipelines

The recovered water would be collected via a system of buried pipelines for delivery back into the AVEK West Feeder. During Phase 1, approximately 7 miles would be installed. All recovery pipelines would be aligned beneath agricultural land or roadway shoulders. Most recovery pipelines would be located on land owned by third parties, and easements or access agreements would be required for their construction.

## Phase 2 Facilities

Phase 2 of the Project would entail the development of additional recharge and recovery capacity beyond that provided by the AVEK West Feeder.

The applicant proposes to construct a new 8.75-mile-long pipeline parallel to LAA #2 to allow delivery of SWP water from the California Aqueduct to recharge facilities for storage and delivery of recovered water back to the California Aqueduct. This work would involve connecting the south end of the new delivery pipeline to the California Aqueduct and the north end to the distribution/recovery pipeline installed during Phase 1. Lift stations (pumps) would be installed at one or potentially both each ends of the new delivery pipeline.

Up to 30 new recovery wells and pumps would be installed as needed to increase the recovery capacity of the Project. Phase 2 wells would be located to the east and northeast of the recharge basins (i.e., downgradient relative to the direction of groundwater flow) within the area defined for recharge and recovery facilities (Figure 1-2). The construction of wells would be restricted to areas zoned for agriculture. Up to 11 miles of additional recovery pipelines would be installed during Phase 2.

## **Project Service Buildings and Roads**

The existing shops, storage buildings, and houses located within the area proposed for recharge facilities are adequate for Project needs. There are several fenced, gravel, and dirt parking areas around each of the buildings. No improvements are required because the Project needs are identical to those of a farm operation. Detailed equipment and pump work would be outsourced to contractors. The Project would be accessed from Avenue A or 170<sup>th</sup> Street, which are paved. Existing dirt roads within the area proposed for recharge facilities are adequate for Project needs. No new roads are proposed.

## **Construction Schedule**

Phase 1 of the Project would begin within 6 months of EIR certification to allow for finalization of permitting and Phase 1 design. Construction of the distribution/recovery pipeline, distribution canals, and recharge basins is anticipated to require about 6 months, depending on availability of materials.

Following the recharge season of 2006–2007, the first group of approximately 10 to 17 recovery wells and recovery pipelines would be installed between and adjacent to the recharge basins.

Phase 2 of the Project would not begin until after at least 1 full year of Phase 1 operations and would require approximately 12 months to complete.

## **Project Operations**

As proposed, the Project would receive imported SWP water via the East Branch of the California Aqueduct. Project participants who have existing entitlements

to available SWP water would provide the water. The Project would be designed to receive water at a rate of up to 350 cubic feet per second (cfs) and to recharge up to 100,000 acre-feet (af) per year, contingent on the wheeling capacity in the AVEK West Feeder and Phase 2 pipelines.

Surface water recharged into the basins would percolate through the subsurface for storage in dewatered portions of the underlying aquifer. The total storage capacity of the Project would be 500,000 af. Recharge activities would occur primarily during the winter and early spring. The recharge basins would be used for organic farming for a minimum of 8 months of the year, when not required for recharge activities. Additionally, sustainable farming practices and farm economics dictate that land may need to be idled at times; however, Project lands would not be converted to nonagricultural uses.

When needed, the stored water would be recovered using groundwater wells. The recovered water would be conveyed via the new Project pipelines into either the AVEK West Feeder or the California Aqueduct for delivery to water users. The recovery of stored water would be limited to 90 percent of the amount recharged, thereby helping the underlying aquifer to recover from past overdraft and reduce the rate of current overdraft.

## Monitoring Committee

Recharge operations would cause the water table to rise above baseline conditions, and recovery operations would cause water levels to decline back to near baseline conditions. Over the long run, water levels would rise above baseline conditions because 10 percent of all recharged water would be left behind to aid in overdraft recovery. Monitoring of water levels would be required to track water storage and recovery and to protect adjacent agricultural operations.

As part of the Project, the applicant has proposed that a monitoring committee be formed to monitor the impact of operations on groundwater levels and quality and to ensure that adjacent landowners are protected. Composition of the monitoring committee would include the following representatives:

- the owner/operator;
- the Rosamond Community Service District;
- the Antelope Valley State Water Project Contractors Association (a joint powers authority made up of AVEK, Palmdale Water District, and Littlerock Creek Irrigation District);
- neighboring landowners and other selected representatives; and
- Kern County and Los Angeles County representatives.

The monitoring committee would meet monthly during recharge/recovery periods and semiannually during other periods when the Project is not in operation.

## **1.5 Environmental Impacts**

### **Impacts Not Considered Further in This Environmental Impact Report**

Section 15128 of the State CEQA Guidelines requires that an EIR contain a statement briefly indicating the reasons that various possible new significant effects of a project were determined not to be significant and therefore not discussed in detail in the EIR.

Kern County has engaged the public to participate in the scoping of the environmental document. Comments received during scoping have been considered in the process of identifying issue areas that should receive attention in the EIR. The contents of this Draft EIR were established based on an Initial Study/Notice of Preparation (Appendix A) prepared in accordance with the State CEQA Guidelines, as well as public and agency input that were received during the scoping process.

Those specific issues found during preparation of the Initial Study/Notice of Preparation to have no impact or less-than-significant impacts do not need to be addressed in this EIR. Based on the findings of the Notice of Preparation and the results of scoping, a determination was made that potential impacts related to aesthetics and public services would be less than significant. Accordingly, issues related to aesthetics, public services, and recreation are not discussed in this EIR.

### **Impacts of the Proposed Project**

Sections 4.1 through 4.13 provide a detailed discussion of the environmental setting, impacts associated with the proposed Project, and mitigation measures designed to reduce significant impacts to a less-than-significant level, where feasible. The impacts, mitigation measures, and residual impacts of the proposed Project are summarized in Table 1-2 at the end of this Executive Summary and are discussed further below.

## **Less-than-Significant Impacts (Including Significant Impacts That Can Be Mitigated, Avoided, or Substantially Lessened)**

The Draft EIR addresses all potentially significant environmental impacts that Kern County identified during the Notice of Preparation and scoping process. After further study and environmental review in the Draft EIR, the following environmental impacts were determined to be significant unless mitigation is incorporated into the proposed Project. The mitigation measures that were identified to reduce impacts of the proposed Project to less-than-significant levels are discussed in Chapter 4 and are summarized in Table 1-2. Environmental impacts for the following issues would be reduced to less-than-significant levels with the incorporation of mitigation measures:

- agricultural resources,
- biological resources,
- cultural resources,
- geology and soils,
- hazards and hazardous materials,
- hydrology and water quality,
- land use and planning,
- mineral resources,
- noise,
- population and housing,
- transportation and traffic, and
- utilities and service systems.

## **Unavoidable Significant Adverse Impacts**

Section 15126.2(b) of the State CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. This draft EIR identifies mitigation measures that will avoid or reduce all identified impacts below a significant level, except for a cumulative net increase in criteria air pollutants for which the Project region is in nonattainment. The Project site is located in the Mojave Desert Air Basin (MDAB), which is in nonattainment for ozone and nitrogen oxides (NO<sub>x</sub>). Thus, despite the reduction in potential emissions achievable through implementation of emission control and mitigation measures, the Project will nonetheless result in a net increase in particulate matter and ozone precursors. Therefore, this impact would be significant and unavoidable.

Potential environmental effects of the proposed Project and proposed mitigation measures are discussed in detail in Chapter 4 of this EIR.

## Significant Cumulative Impacts

According to Section 15355 of the State CEQA Guidelines, the term cumulative impacts "...refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Individual effects that may contribute to a cumulative impact may be from a single project or a number of separate projects. Individually, the impacts of a project may be relatively minor, but when considered along with impacts of other closely related or nearby projects, including newly proposed projects, the effects could be cumulatively considerable.

As noted above, the Project would result in a cumulative net increase in criteria air pollutants for which the Project region is in nonattainment. This impact is significant and unavoidable.

## Growth Inducement

Section 15126.2(d) of the State CEQA Guidelines provides the following direction regarding analysis of growth-inducing impacts:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may further tax existing community service facilities so consideration must be given to this impact. Also discuss the characteristic of some projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

The Kern County General Plan and Willow Springs Specific Plan recognize that certain forms of growth are beneficial, both economically and socially. CEQA associates development of new utilities and other infrastructure and public services with growth inducement.

The Project could remove or reduce an obstacle to some level of growth. It cannot be known precisely when and where future growth may occur in Kern County, Antelope Valley, Los Angeles County, Orange County, or San Diego County. It is, however, reasonable to assume that most of the growth would occur in accordance with current city and county general plans. By providing increased water supply reliability, the Project could enable such jurisdictions to approve a larger aliquot of their planned growth than might have been possible

without the Project. Removal or reduction of an obstacle to growth could accommodate growth that has already been planned for in those areas.

It is therefore concluded that the proposed Project could be growth-inducing; it would not directly involve new development or an increase in population but could remove or reduce an obstacle to growth.

## Irreversible Impacts

Section 15126.2(c) of the State CEQA Guidelines defines the nature of an irreversible impact as an impact that uses non-renewable resources during the initial and continued phases of the project. Irreversible impacts can also result from damage caused by environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified.

Construction of the Project would result in an irreversible commitment of energy resources, primarily in the form of fossil fuels (e.g., fuel, oil, natural gas, gasoline) for construction equipment. During the operations of the proposed Project, oil, gas, propane, and other non-renewable resources would be consumed. Therefore, an irreversible commitment of non-renewable resources would occur as a result of long-term operation under the proposed Project. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the Kern County General Plan and Willow Springs Specific Plan, as a matter of public policy, those commitments have been determined to be acceptable. The Kern County General Plan and Willow Springs Specific Plan ensure that any irreversible environmental changes associated with those commitments will be minimized.

## Alternatives to the Proposed Project

In addition to the Project, this draft EIR analyzes the potential impacts of five alternatives:

- Alternative A—No Project,
- Alternative B—Other Locations in or near Antelope Valley,
- Alternative C—Use of Injection Wells to Place Imported Surface Water into the Aquifer,
- Alternative D—Aboveground Storage (traditional [surface] reservoirs to store imported surface water), and
- Alternative E—In-Lieu Recharge.

The following paragraphs summarize the five alternatives.

## **Alternative A: No Project**

*No project* would mean that a project to store available SWP water underground in the western Antelope Valley would not be developed. The WSSP would not be amended, and 640 acres would not be included in Agricultural Preserve No. 24. The properties would continue to be used primarily for agriculture.

## **Alternative B: Other Locations in or near Antelope Valley**

This alternative would entail construction of a similar project at a different location that can feasibly receive SWP water, store it, and have the water be recoverable and feasibly returnable to the SWP. Based on selection criteria described in Appendix B, WDS considered eight specific locations in greater detail. Three locations had highly permeable near-surface soils—the proposed Project location, a site approximately 7 miles west of the proposed Project, and a site approximately 7 miles southwest of the proposed Project.

## **Alternative C: Use of Injection Wells**

This alternative would entail the installation of injection wells for recharge, rather than infiltration basins. Based on extrapolation of pilot tests performed in Lancaster, WDS estimated that approximately 189 injection wells would be needed to provide the same recharge capacity as the proposed Project and that the capital costs of building an injection well system would be more than \$91 million. Additionally, imported water would have to be treated before being injected in order to remove suspended solids that would otherwise clog the well or the aquifer formation. Therefore, a water treatment system would need to be constructed and then operated for the duration of the Project.

## **Alternative D: Aboveground Storage**

This alternative would entail construction of a reservoir at a location with suitable characteristics. The topography and soil permeability of the proposed Project site are not suitable for a reservoir.

A specific location for an off-stream reservoir has not been proposed in Antelope Valley; however, the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) and the California Department of Water Resources (DWR) have considered facilities of similar capacity for the southern San Joaquin Valley. With a capacity of 450,000 af, the Yokohl Valley Reservoir is an example of such a project. As envisioned, water from the Friant-Kern Canal, when available, would be pumped to the reservoir. When needed, the water would be released from the reservoir back to the Friant-Kern Canal via Yokohl Creek. Initial investigations that assessed the feasibility of the Yokohl Valley Reservoir found



it would have a surface area of approximately 4,550 acres and would require a total of 9,280 acres of land acquisition. Construction costs were estimated to be \$350 million, exclusive of land acquisition, reservoir clearing, road construction or relocation, and needed environmental mitigation (Montgomery Watson Harza 2003)

Lake Isabella, constructed by the U.S. Army Corps of Engineers (Corps) in 1953, is another example of a Kern County reservoir. Its capacity of 568,000 af is comparable to that of the Project. Lake Isabella has a surface area of approximately 14,000 acres (Reclamation 2005).

## **Alternative E: In-Lieu Recharge**

In-lieu recharge refers to the practice whereby overlying pumpers, most often farmers, substitute imported surface water supplies for those supplies that otherwise would have been pumped from the underlying aquifer. Water supplies banked by in-lieu means are not physically introduced into the aquifer (except for a small quantity), but instead a like amount of water is not pumped from the groundwater basin. Water customers are offered surface water supplies at rates that are competitive with the cost of pumping groundwater. This price incentive encourages them to purchase surface water supplies, which are banked, instead of pumping groundwater.

## **Comparison of Proposed Project and Alternatives**

The proposed Project and alternatives (except Alternative A) would result in a cumulatively considerable net increase of criteria pollutants for which the region is in non-attainment under applicable federal or state ambient air quality standards. This cumulative impact would be significant and unavoidable for all alternatives. With implementation of the proposed mitigation, all other significant potential impacts associated with the proposed Project would be reduced to less-than-significant levels. In terms of effects on the environment, none of the alternatives would feasibly attain most of the basic objectives of the Project and avoid or substantially lessen any of the significant effects of the Project.

The proposed Project and alternatives are compared in greater detail in Chapter 6, "Alternatives."

## **Alternative A (No-Project Alternative)**

If the Project is not constructed, the potential adverse impacts related to the Project would not occur. Air quality and noise impacts associated with ongoing agricultural operations, however, would continue. The No-Project Alternative would not satisfy the Project objectives.

## **Alternative B: Other Locations in or near Antelope Valley**

Alternative B would result in similar types of environmental impacts, but the proposed Project offers greater storage capacity than alternate locations that have been identified. Potential impacts on biological resources could be greater than those of the proposed Project because development on the alternative locations would disturb natural habitat. Potential impacts on cultural resources could be greater than those of the proposed Project because the alternative locations are located closer to the foothills, where such resources are more likely to be present.

## **Alternative C: Use of Injection Wells**

Alternative C could reduce some potential impacts (e.g., on biological resources, cultural resources, geology and soils, traffic) that, with mitigation, would be less than significant. It would, however, increase other impacts (e.g., air quality, water quality, noise), including cumulative impacts, which would be significant and unavoidable. Additionally, because of the high costs of installing and operating injection wells, the applicant does not consider this alternative to be financially feasible.

## **Alternative D: Aboveground Storage**

Alternative D, because of its much larger project footprint, could result in greater adverse impacts related to agricultural resources, air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, traffic, and cumulative impacts. Additionally, because of the high capital costs of constructing a reservoir, the applicant does not consider this alternative to be financially feasible.

## **Alternative E: In-Lieu Recharge**

Alternative E could result in greater adverse impacts related to hydrology and water quality. With respect to other environmental considerations, however, it is an attractive alternative. Although in-lieu banking is a feasible alternative to direct recharge under the right conditions, the overall agricultural demand in the Antelope Valley would not allow for the amount of recharge proposed by the Project. This alternative does not meet the Project objectives concerning capacity, reliability, and flexibility.

## Environmentally Superior Alternative

An EIR must identify the environmentally superior alternative to the proposed project. Alternative A, No Project, would be environmentally superior to the proposed Project on the basis of the minimization or avoidance of physical environmental impacts. The State CEQA Guidelines require that, if the no-project alternative is found to be environmentally superior, “the EIR shall also identify an environmentally superior alternative among the other alternatives” (State CEQA Guidelines, Section 15126.6[e][2]). In terms of effects on the environment, the environmentally superior alternative that meets most of the Project objectives is Alternative E, In-Lieu Recharge.

## 1.6 Areas of Known Controversy

Written agency and public comments received during the public review period are provided in Appendix A. In summary, the following issues were identified during scoping, and, where appropriate, are addressed in the relevant sections of the Draft EIR:

- Agricultural Resources
  - Effects of new wells and pipelines on existing agricultural practices
  - Effects of a rising water table on vegetation
- Air Quality
  - Dust emissions
- Geology/Soils
  - Erosion and sediment control
  - Land subsidence
  - Earthquake hazards
  - Potential for basin failures and resultant flooding
- Hazards and Hazardous Materials
  - Potential groundwater contamination associated with Edwards Air Force Base
  - Potential attraction of birds to recharge basins and resulting bird air strike hazards
  - Control of hazardous materials used in the Project area
  - Site security for both humans and animals
  - Mosquito production in the recharge basins
- Hydrology and Water Quality

- ❑ Capacity of the aquifer to store water
- ❑ Diversion of flood waters
- ❑ Potential water quality impacts on groundwater
- ❑ Regulatory oversight for potential groundwater impacts
- ❑ Use of groundwater to support organic farming operations
- ❑ Ability to recover stored water
- ❑ Concerns about the injection of imported surface water into the aquifer
- ❑ Groundwater basin adjudication
- ❑ Effects of the Project on groundwater elevations
- ❑ Ultimate users of the stored water
- ❑ Transfers of water from northern California to Antelope Valley
- ❑ Evaporative losses of water
- Land Use and Planning
  - ❑ Compatibility of recharge facilities with agriculture
- Noise
  - ❑ Noise impacts resulting from the Project
- Population and Housing
  - ❑ Number of employees
- Utilities and Services
  - ❑ Use of the Los Angeles Aqueduct to deliver water
  - ❑ Power sources for new wells
  - ❑ Access roads

**Table 1-2.** Summary of Potential Impacts and Mitigation Measures

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.1 AGRICULTURAL RESOURCES</b>			
<b>4.1-1:</b> Convert Important Farmland to Nonagricultural Use ( <i>temporary impacts</i> associated with Project construction)	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.1-1:</b> Convert Important Farmland to Nonagricultural Use ( <i>periodic impacts</i> associated with flooding of the recharge basins)	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.1-1:</b> Convert Important Farmland to Nonagricultural Use ( <i>permanent impacts</i> related to wellhead and aboveground infrastructure construction)	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.1-2:</b> Conflict with Existing Agricultural Zoning or Williamson Act Contracts	No Impact	No additional mitigation is proposed	NA
<b>4.1-3:</b> Involve Other Changes in the Existing Environment That, Because of Their Location or Nature, Could Result in Conversion of Farmland to Nonagricultural Use	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.1-4:</b> Potential Adverse Soil and Crop Effects from Elevated Groundwater Levels	Significant	<b>4.1-1:</b> The Antelope Valley Water Bank monitoring committee will develop a monitoring procedure to discern whether recharge-induced shallow water tables are rising toward the root zones of adjacent farmlands and, if so, whether they would adversely affect crop production. If the monitoring committee concludes that crops may be (or have been) affected, the committee will require the owner/operator to constrain or adjust the locations of recharge operations to prevent the impact or to reimburse the affected farmer for the impact that has occurred.	Less than significant
<b>4.1-5:</b> Cause the Cancellation of an Open Space Contract Made Pursuant to the California Land Conservation Act or Farmland Security Zone Contract for Any Parcel of 100 or More Acres	No Impact	No additional mitigation is proposed	NA

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.2 AIR QUALITY</b>			
<b>4.2-1:</b> Short-Term Increase in PM10 Emissions from Construction Activities	Significant	<p><b>4.2-1:</b> The following control measures for construction emissions of PM10 are recommended by the KCAPCD for land preparation and/or demolition. The following dust control measures will be implemented:</p> <ol style="list-style-type: none"> <li>1. All material excavated or graded will be sufficiently watered to prevent excessive dust. Watering will occur as needed with complete coverage of disturbed areas. Watering will occur a minimum of twice daily on unpaved/untreated roads and on disturbed areas with active operations.</li> <li>2. All clearing, grading, earth moving and excavation activities will cease during periods when dust plumes of 20 percent or greater opacity affect public roads or occupied structures.</li> <li>3. All material transported off site will be either sufficiently watered or securely covered to prevent excessive dust.</li> <li>4. If more than 5,000 cubic yards of fill material will be imported or exported from the site, then all haul trucks will be required to exit the site via an access point where a gravel pad or grizzly has been installed.</li> <li>5. Areas disturbed by clearing, earth moving or excavation activities will be minimized at all times.</li> <li>6. Stockpiles of dirt or other fine loose material will be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust.</li> <li>7. Where acceptable to the fire department, weed control will be accomplished by mowing instead of discing, thereby leaving the ground undisturbed and with a mulch covering.</li> </ol>	Less than significant

**Table 1-2.** Continued

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.2-2:</b> Increase in Pollutant Emissions as a Result of Operation and Maintenance	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.2-3:</b> Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project Region Is in Non-attainment under an Applicable Federal or State Ambient Air Quality Standard (Including Releasing Emissions that Exceed Quantitative Thresholds for Ozone Precursors)	Significant	<b>4.2-1:</b> see above <b>4.2-2:</b> Reduce Emissions Associated with Idling Equipment. The owner/operator will require that all diesel engines be shut off when not in use to reduce emissions from idling.	Significant and unavoidable
<b>4.3 BIOLOGICAL RESOURCES</b>			
<b>4.3-1:</b> Potential Loss or Temporary Disturbance of Annual Grassland and Agricultural Habitats	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.3-2:</b> Potential Temporary Disturbance of Rabbitbrush Scrub Habitat	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.3-3:</b> Potential Loss or Temporary Disturbance of up to 19 Acres of Joshua Tree Woodland Habitat	Significant	<b>4.3-1:</b> Impacts on the Joshua Tree Woodland habitat shall be minimized to the extent possible during the design phase by making minor adjustments to the corridor width to avoid Joshua trees. A corridor plan shall be developed showing the location of all Joshua trees and, after review and recommendation by a qualified biologist, trees to be avoided are to be clearly identified.  <b>4.3-2:</b> Joshua tree woodland habitat located in or adjacent to the construction corridor or site will be protected by placing orange construction barrier fencing or stakes and flags, including buffer zones where appropriate. The locations of these resources will be clearly identified on the construction drawings and marked in the field by the environmental monitor. Fencing or other barriers will remain in place until all construction and restoration work that involves heavy equipment is complete. Construction vehicles, equipment, or materials will not be parked or stored within the fenced area. No signs, ropes, cables, or other items will be attached to individual Joshua trees.	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.3-4:</b> Temporary Disturbance of 0.19 Acre of Ephemeral Drainages	Significant	<b>4.3-3:</b> Prior to any work in or near ephemeral drainages, the applicant will apply to DFG for a streambed alteration agreement and to the Lahontan Regional Water Quality Control Board for a water quality certification or waiver and will abide by any measures that those agencies may impose.	Less than significant
<b>4.3-5:</b> Potential Loss or Disturbance of Swainson’s Hawk Nests during Construction	Significant	<p><b>4.3-4:</b> If construction activities occur during the Swainson’s hawk nesting season (March 1–September 15), the Project will provide a qualified biologist to conduct preconstruction surveys to locate all active nest sites within 0.5 mile of the construction area.</p> <p>If occupied Swainson’s hawk nests are found, the Project, in consultation with DFG, shall establish a buffer zone around active Swainson’s hawk nests in the vicinity of the Project area. The buffer zone shall be marked with specific identifiable flagging or fencing. Construction activities shall be restricted from the buffer around the active nests until after chicks have fledged.</p> <p>Whenever construction occurs within 0.25 mile of an active nest, a biological monitor shall observe the nesting hawks for stressed/detrimental behavior that threatens nest success. If there appears to be a threat to nesting success resulting from construction activity within the 0.25-mile buffer, work shall be halted until the hawk’s behavior normalizes. The most obvious and dangerous “detrimental behavior” occurs when the hawk is scared off the nest. If that occurs (even momentarily), construction shall stop immediately within 0.25 mile of the nest for at least 1 hour after the hawk returns to the nest and her behavior appears to normalize. When construction resumes, if the hawk is scared off the nest a second time, construction will be prohibited within that 0.25-mile zone until having consulted with DFG to discuss further options. Other stressors/detrimental behaviors that the monitor shall look for include the hawk</p>	Less than significant



Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>being off the eggs while still on the nest (e.g., circling/walking around the nest and calling). The biological monitor shall also watch for signs that the hawks are paying attention to construction instead of behaving normally (e.g., sitting calmly on the nest, watching out for or scaring away potential predators).</p>	
<p><b>4.3-6:</b> Potential Disturbance of Nesting Swainson’s Hawks as a Result of Project Operations and Maintenance</p>	<p>Less than significant</p>	<p>No additional mitigation is proposed</p>	<p>Less than significant</p>
<p><b>4.3-7:</b> Potential Loss or Disturbance of Burrowing Owl Nests and Burrows during Construction</p>	<p>Significant</p>	<p><b>4.3-5:</b> Preconstruction surveys shall be conducted by a qualified biologist within the work area and a 250-foot buffer to locate active burrowing owl burrows. The Project will provide a qualified biologist to conduct these preconstruction surveys for active burrows according to DFG guidelines. The preconstruction surveys will include a nesting season survey and a wintering season survey the season immediately preceding construction. If no burrowing owls are detected, no further mitigation is required.</p> <p><b>4.3-6:</b> If burrowing owls are detected within 250 feet of proposed construction within the Project area, the following measures will be implemented.</p> <ul style="list-style-type: none"> <li>• Occupied burrows will not be disturbed during the nesting season (February 1–August 31).</li> <li>• When destruction of occupied burrows is unavoidable during the non-nesting season (September 1–January 31), unsuitable burrows will be enhanced (enlarged or cleared of debris).</li> </ul> <p>If owls must be moved away from the Project area, passive relocation techniques (e.g., installing one-way doors at burrow entrances) will be used instead of trapping. At least 1 week will be necessary to accomplish passive relocation and allow owls to acclimate to alternate burrows.</p>	<p>Less than significant</p>

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		If avoidance is the preferred method of dealing with potential impacts, no disturbance should occur within 160 feet of occupied burrows during the non-breeding season (September 1–January 31) or within 250 feet during the breeding season.	
<b>4.3-8:</b> Potential Disturbance of Burrowing Owl Nests as a Result of Project Operations and Maintenance	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.3-9:</b> Potential Disturbance to Special-Status Bird Nests during Construction	Significant	<p><b>4.3-7:</b> A qualified biologist shall conduct preconstruction surveys each construction year to locate all active nest sites within 0.25 mile of the Project area.</p> <p>Direct disturbance, including activities in the immediate vicinity of active nests, shall be avoided during the breeding season (March through August) where feasible. No-disturbance buffers shall be established around each active nest to avoid disturbing nesting birds where feasible. The size and configuration of buffers shall be based on the proximity of active nests to construction, existing disturbance levels, topography, the sensitivity of the species, and other factors, and shall be established through coordination with DFG representatives on a case-by-case basis. Where it is determined to be infeasible to schedule construction to avoid constructing within 300 feet of an active nest, the Project shall monitor nest status to determine whether construction is disturbing nesting activities. If it is determined by a qualified biologist that the construction is adversely affecting nesting activities, construction within 300 feet shall cease pending completion of nesting activities.</p>	Less than significant
<b>4.3-10:</b> Potential Loss of Foraging Habitat for Mountain Plovers and Long-Billed Curlews as a Result of the Recharge Basins	Less than significant	No additional mitigation is proposed	Less than significant

**Table 1-2.** Continued

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.3-11:</b> Potential Impacts to California Horned Lizards and California Legless Lizards during Construction	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.3-12:</b> Potential Disturbance to Roosting Bats during Construction of Recharge Basins	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.3-13:</b> Potential Impacts to American Badger and Southern Grasshopper Mouse during Construction of the Phase 2 Delivery Pipeline	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.3-14:</b> Potential Impacts on Desert Tortoise and Mohave Ground Squirrel	No Impact	No additional mitigation is proposed	—
<b>4.4 CULTURAL RESOURCES</b>			
<b>4.4-1:</b> Damage or Destroy a Significant Historical Resource	Significant	<p><b>4.4-1:</b> Prior to ground disturbance of the areas of the Project, identified on Figure 4.4-1 as not fully evaluated, a cultural resource survey and a written report shall be prepared. The report shall include findings and recommendations, if any, for further work to ensure protection of any discoveries. The report shall be submitted to the Kern County Planning Department, the Los Angeles County Planning Department, and the tribes identified by the Native American Heritage Commission for SB 18 consultation. All recommendations shall be incorporated into grading and construction plans.</p> <p><b>4.4-2:</b> A certified archaeologist shall monitor all Project-related initial ground-disturbing activities along the proposed Phase 2 delivery pipeline alignment between Avenue A and Avenue D. All discoveries shall be documented, and a report of findings prepared and submitted to <i>the Los Angeles County Planning Department and the tribes identified by the Native American Heritage Commission for SB 18 consultation.</i> Archaeological deposits shall be further evaluated for significance according to California Register criteria. Recovery of significant archaeological deposits shall</p>	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>occur using standard archaeological techniques, including but not limited to, manual or mechanical excavations, monitoring, soils testing, photography, mapping, or drawing to adequately recover the scientifically consequential information from and about the archaeological resource. An adequate sample of cultural materials shall be recovered. The applicant shall arrange for permanent curation of artifacts and documents in a repository consistent with the National Park Service guidelines for the curation of archaeological collections (36CFR79).</p> <p><b>4.4-3:</b> If buried cultural resources are uncovered during construction, all work shall be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological resource.</p> <p>In the event of an accidental discovery of any human remains in a location other than a dedicated cemetery, the steps and procedures specified in Health and Safety Code 7050.5, State CEQA Guidelines 15064.5(e), and Public Resources Code 5097.98 shall be implemented.</p>	
<p><b>4.4-2:</b> Damage or Destroy a Significant or Unique Paleontological Resource</p>	<p>Significant</p>	<p><b>4.4.4:</b> A qualified paleontologic monitor shall monitor excavation in areas identified as likely to contain paleontologic resources. These areas are defined as all areas within the proposed Project area where planned excavation would exceed depths of 5 feet. The drilling of wells is excluded from this provision, because mechanical drilling does not allow for fossil recovery. This monitoring shall be required along the proposed alignment of the Phase 2 delivery pipeline as well as areas within the recharge and recovery basins that would involve ground disturbance to a depth below 5 feet. The qualified paleontologic monitor shall retain the option to reduce monitoring if, in his or her professional opinion, sediments being monitored are previously disturbed.</p>	<p>Less than significant</p>

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>Monitoring may also be reduced if the potentially fossiliferous units, previously described, are not found to be present or, if present, are determined by qualified paleontologic personnel to have low potential to contain fossil resources.</p> <p>The monitor shall be equipped to salvage fossils and samples of sediments as they are unearthed to avoid construction delays and shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Because the older Quaternary deposits yield small fossils specimens likely to go unnoticed during typical large scale paleontological monitoring, matrix samples shall be collected and processed to determine the potential for small fossils to be recovered prior to substantial excavations in those sediments. If this sampling indicates these units do possess small fossils, a matrix sample of up to 6,000 pounds shall be collected at various locations, to be specified by the paleontologist, within the construction area. These matrix samples shall also be processed for small fossils.</p> <p>Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments, to recover small invertebrates and vertebrates. Specimens shall be curated into a professional, accredited museum repository with permanent retrievable storage.</p> <p>A report of findings, with an appended itemized inventory of specimens, shall be prepared. The report and inventory, when submitted to the Kern County Planning Department and Los Angeles County Planning Department, will signify completion of the program to mitigate impacts to paleontologic resources.</p>	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.5 GEOLOGY AND SOILS</b>			
<b>4.5-1:</b> Potential Exposure of Structures to Damage from Surface Fault Rupture	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.5-2:</b> Potential Exposure of Structures to Damage from Strong Seismic Groundshaking	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.5-3:</b> Potential Exposure of Structures to Damage from Seismic-Related Liquefaction	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.5-4:</b> Potential Damage from Subsidence Caused by Drafting Groundwater	No impact	No additional mitigation is proposed	NA
<b>4.5-5:</b> Potential Structural Damage Caused by Expansive Soil	No impact	No additional mitigation is proposed	NA
<b>4.5-6:</b> Potential Substantial Soil Erosion or Loss of Topsoil from Land Grading and Project Operation	Significant	<p><b>4.5-1:</b> Topsoil materials will be stripped from most areas to be graded, temporarily stockpiled, and reapplied as a top-dressing once final grade is attained.</p> <p>Temporary stockpiles will be watered to prevent topsoil loss from wind erosion.</p> <p>For soils having little organic matter in the surface layer and little evidence of soil profile development (i.e., similar texture between surface soil and substrate at depth), this measure will not need to be applied because it would provide little or no benefit. This determination will be made during preparation of a SWPPP.</p> <p><b>4.5-2:</b> To control water and wind erosion during construction of the Project, the owner/operator will prepare a Stormwater Pollution Prevention Plan (SWPPP) in compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Construction Permit. The Lahontan Regional Water Quality Control Board will administer the SWPPP. The SWPPP will prescribe temporary Best Management Practices (BMPs) to control wind and water erosion</p>	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>during and shortly after construction of the Project and permanent BMPs to control erosion and sedimentation once construction is complete. An erosion-control plan shall be prepared and submitted in conjunction with the application for a grading permit from Kern County Engineering and Survey Services Department. The SWPPP shall include:</p> <ul style="list-style-type: none"> <li>• areas where top-dressing will be applied after final grading and location and maintenance of temporary stockpiles,</li> <li>• where and how ephemeral watercourses will be protected from soil erosion and sedimentation;</li> <li>• whether nutrients in post-grading soils in basin bottoms should be supplemented to counter effects of soil disturbance to ensure that agricultural uses in them can continue, so that soils continue to be protected from erosive wind and water;</li> <li>• whether and where berms and pipeline backfill should be artificially revegetated (e.g., hydroseeded) to ensure protection of soils against wind and water; and</li> <li>• what performance standards are appropriate for plant cover in this environment to ensure soil protection, including a plant and seed list.</li> </ul>	
<b>4.6 HAZARDS AND HAZARDOUS MATERIALS</b>			
<b>4.6-1:</b> Potential for Disturbance of Hazardous Materials or Wastes during Construction	No impact	No additional mitigation is proposed	NA
<b>4.6-2:</b> Potential for Inadvertent Release of Hazardous Materials during Construction and Operation	Significant	<b>4.6-1:</b> Prior to any construction activities, the applicant shall develop and implement a Spill Prevention Control and Countermeasures Plan (SPCCP) to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. The plan and methods shall be in	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>conformance with all state and federal water quality regulations.</p>	
		<p>The applicable agency, Kern County Environmental Health Services Department and Los Angeles County Environmental Health Services, shall review the SPCCP before the onset of construction activities. The applicant shall provide for routine inspection of the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained and further ensure that contractors are notified immediately if there is a noncompliance issue and will require compliance.</p>	
		<p>The federal reportable spill quantity for petroleum products, as defined in EPA’s CFR (40 CFR 110), is any oil spill that 1) violates applicable water quality standards, 2) causes a film or sheen upon or discoloration of the water surface or adjoining shoreline, or 3) causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.</p>	
		<p>If a spill is reportable, the contractor’s superintendent shall notify the applicant who shall inform the applicable County agency and arrange for the appropriate safety and cleanup crews to ensure the spill prevention plan is followed. A written description of reportable releases must be submitted to the Regional Water Quality Control Board and the applicable County agencies. This submittal must include a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases would be documented on a spill report form.</p>	
		<p>If a spill has occurred, the applicant shall coordinate with responsible regulatory agencies to implement measures to control and abate contamination.</p>	



Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<p><b>4.6-3:</b> Potential to Increase the Risk of Wildlife Strikes to Aircraft</p>	<p>Significant</p>	<p><b>4.6-2:</b> Prior to application of water to the recharge basins, the Project operator will notify Skyotee Ranch Airport and the Flight Safety Office for the R-2508 Air Complex of anticipated recharge operations.</p> <p><b>4.6-3:</b> Whenever water is present in the recharge basins, the Project operator will monitor the basins for bird activity. Monitoring will be particularly important during initial application of water because prey animals fleeing the advancing water could attract predatory bird species. Additionally, the Project operator will maintain routine coordination with the local Audubon Society chapters in Bakersfield and Ridgecrest regarding when and where bird migration activity should be expected during periods of recharge activity.</p> <p>If large birds (e.g., geese, gulls, pelicans) or large flocks of small birds (e.g., starlings, blackbirds) are observed, the Skyotee Ranch Airport and the Flight Safety Office for the R-2508 Air Complex will be notified of the potential hazard immediately.</p> <p><b>4.6-4:</b> If flocks of large birds (e.g., geese, gulls, pelicans) or large flocks of small birds (e.g., starlings, blackbirds) are observed, the Applicant or the Project operator will harass the birds through legal means to discourage use of the recharge basins, such as use of pyrotechnic equipment or depredation permitted by the California Department of Fish and Game (DFG).</p>	<p>Less than significant</p>
<p><b>4.6-4:</b> Potential for Increase in Adult Mosquito Populations</p>	<p>Significant</p>	<p><b>4.6-5:</b> Prior to the issuance of a grading permit, the applicant shall enter into an agreement with an existing or new Mosquito Abatement District. The agreement will consist of a Project-specific mosquito abatement program that would allow the existing or new Mosquito Abatement District to access the Project site and would also include quantitative abatement thresholds and financial compensation requirements for Mosquito Abatement</p>	<p>Less than significant</p>

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>District activities, if necessary. The agreement shall be to the satisfaction of the Kern County Environmental Health Services Department.</p> <p>The Mosquito Abatement District would monitor mosquito larvae production in the recharge basins, drainages, and distribution. Larvae populations would be tracked using methods and thresholds approved by the Mosquito Abatement District, and suppression measures would be employed when thresholds are exceeded.</p>	
<b>4.7 HYDROLOGY AND WATER QUALITY</b>			
<p><b>4.7-1:</b> Degradation of Water Quality Resulting from Construction Runoff</p>	<p>Significant</p>	<p><b>4.7-1:</b> To reduce or eliminate construction-related water quality effects, before onset of any construction activities, the owner/operator or its contractor will obtain coverage under the NPDES General Construction Permit. The owner/operator will be responsible for ensuring that construction activities comply with the conditions in this permit, which will require development of a SWPPP, implementation of BMPs identified in the SWPPP, and monitoring to ensure that effects on water quality are minimized.</p> <p>As part of this process, the owner/operator will implement erosion and sediment control BMPs in areas with potential to drain to surface water. These BMPs will be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMPs to be implemented as part of this mitigation measure may include, but are not limited to, the following measures.</p> <p>As part of this process, the owner/operator will implement erosion and sediment control BMPs in areas with potential to drain to surface water. These BMPs will be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMPs to be implemented as</p>	<p>Less than significant</p>

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>part of this mitigation measure may include, but are not limited to, the following measures.</p> <ul style="list-style-type: none"> <li>• Temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed to control erosion from disturbed areas.</li> <li>• Drainage facilities in downstream offsite areas will be protected from sediment using BMPs acceptable to the Lahontan Regional Water Quality Control Board.</li> </ul> <p>The owner/operator or its agent will perform routine inspections of the construction area to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The owner/operator will notify its contractors immediately if there is a noncompliance issue and will require compliance.</p> <p><b>4.7-2:</b> Prior to any construction activities, the applicant shall develop and implement a Spill Prevention Control and Countermeasures Plan (SPCCP) to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. The plan and methods shall be in conformance with all state and federal water quality regulations.</p> <p>The applicable agency, Kern County Environmental Health Services Department and Los Angeles County Environmental Health Services, shall review the SPCCP before the onset of construction activities. The applicant shall provide for routine inspection of the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained and further ensure that contractors are notified immediately if there is a noncompliance issue and will require compliance.</p> <p>The federal reportable spill quantity for petroleum products, as defined in EPA’s CFR (40 CFR 110), is any</p>	

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>oil spill that 1) violates applicable water quality standards, 2) causes a film or sheen upon or discoloration of the water surface or adjoining shoreline, or 3) causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.</p> <p>If a spill is reportable, the contractor’s superintendent shall notify the applicant who shall inform the applicable County agency and arrange for the appropriate safety and cleanup crews to ensure the spill prevention plan is followed. A written description of reportable releases must be submitted to the Regional Water Quality Control Board and the applicable County agencies. This submittal must include a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases would be documented on a spill report form.</p> <p>If a spill has occurred, the applicant shall coordinate with responsible regulatory agencies to implement measures to control and abate contamination.</p>	
<b>4.7-2:</b> Depletion of Groundwater Supplies within Antelope Valley	Beneficial	No additional mitigation is proposed	NA
<b>4.7-3:</b> Substantial Impacts on Surrounding Groundwater Wells Attributable to Recovery Operations	Significant	<p><b>4.7-3:</b> A monitoring committee shall be formed to monitor the impact of operations on groundwater levels and quality and to ensure that adjacent landowners are protected. The monitoring committee would be responsible for development of a detailed monitoring and operational constraints plan and would ensure that it is implemented. The plan shall include the following:</p> <ul style="list-style-type: none"> <li>• monitoring recovery operations to ensure that 10 percent of the stored water is left behind to help alleviate overdraft;</li> </ul>	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<p><b>4.7-4:</b> Substantially Alter the Existing Drainage Pattern or Contribute to Existing Local or Regional Flooding</p>	No impact	<ul style="list-style-type: none"> <li>• monitoring water quality in recovered water and in groundwater flowing away from the Project to ensure that water quality remains appropriate for designated beneficial uses;</li> <li>• during recharge operations, monitoring water levels in perimeter wells, and shutting down recharge operations in the event that offsite water levels rise to within 20 feet of the ground surface; and</li> <li>• during recovery operations, monitoring water levels in offsite wells and adjusting operations, providing compensation, or providing an alternate source of water in the event that water levels drop to unacceptable levels in offsite wells as a consequence of operations.</li> <li>• Composition of the monitoring committee shall include the following representatives:                             <ul style="list-style-type: none"> <li>• the owner/operator,</li> <li>• the Rosamond Community Service District,</li> <li>• the Antelope Valley State Water Project Contractors Association (a joint powers authority including AVEK, Palmdale Water District, and Littlerock Creek Irrigation District),</li> <li>• neighboring landowners and/or other selected representatives, and</li> <li>• Kern and Los Angeles County representatives.</li> </ul> </li> </ul> <p>The monitoring committee would meet monthly during recharge/recovery periods and semiannually during other periods when the Project is not in operation.</p>	NA

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.7-5: Potential Impacts on Groundwater or Surface Water Quality from Recharge or Recovery Operations	Significant	4.7-1: see above 4.7-2: see above	Less than significant
<b>4.8 LAND USE AND PLANNING</b>			
4.8-1: Physically Divide an Established Community	No impact	No additional mitigation is proposed	NA
4.8-2: Conflict with Any Applicable Land Use Plan, Policy, or Regulation of an Agency	Less than significant	No additional mitigation is proposed	Less than significant
4.8-3: Conflict with Any Applicable Habitat Conservation Plan or Natural Community Conservation Plan	No impact	No additional mitigation is proposed	NA
<b>4.9 MINERAL RESOURCES</b>			
4.9-1: Potential Loss of Availability of Sand and Gravel Resources	No impact	No additional mitigation is proposed	NA
<b>4.10 NOISE</b>			
4.10-1: Exposure of Residences to Noise from Grading and Construction Activities	Significant	4.10-1: If residences are present within the threshold distances determined above, the construction contractor will employ noise-reducing construction practices so that noise from construction does not exceed Kern County noise-level standards at adjacent residences. Measures to be implemented may include the following: <ul style="list-style-type: none"> <li>• providing construction equipment with sound-control devices no less effective than those provided on the original equipment (no equipment will have an unmuffled exhaust);</li> <li>• restricting construction to beyond 2,800 feet from residences during nighttime hours (10 p.m. to 7 a.m.) and beyond 1,200 feet at all other times; and</li> <li>• in the event that construction activities occur close to sensitive noise receptors, implementing appropriate additional noise mitigation measures, including but not limited to:</li> </ul>	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> <li>- changing the location of stationary construction equipment,</li> <li>- shutting off idling equipment,</li> <li>- rescheduling construction activity,</li> <li>- notifying adjacent residents in advance of construction work, and</li> <li>- installing acoustic barriers around stationary construction noise sources.</li> </ul>	
<b>4.10-2:</b> Exposure of Residences to Noise from Well Drilling Operations	Significant	<p><b>4.10-2:</b> If sensitive noise receptors are present within the threshold distances cited above, the drilling contractor will employ noise-reducing construction practices so that noise from drilling does not exceed Kern County noise-level standards at adjacent residences. Measures to be implemented may include the following:</p> <ul style="list-style-type: none"> <li>• restricting well drilling to beyond 1,800 feet from residences during nighttime hours (10 p.m. to 7 a.m.), and 700 feet during daytime hours; or</li> <li>• using sound attenuation enclosures around noise-generating elements of the drilling operation.</li> </ul>	Less than significant
<b>4.10-3:</b> Exposure of Residences to Noise from Operation of Engines at Wells	Significant	<p><b>4.10-3:</b> If wells are to be located within the distance and noise thresholds cited above for residences, the owner/operator will employ noise reducing practices so that noise from well operations does not exceed Kern County noise-level standards at adjacent residences. Measures to be implemented may include:</p> <ul style="list-style-type: none"> <li>• restricting well installations to beyond 1,600 feet from residences, where feasible;</li> <li>• using electric pumps when feasible where well installations are within 1,600 feet of residences; and</li> <li>• using sound attenuation enclosures designed to</li> </ul>	Less than significant

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		achieve noise reductions sufficient to comply with Kern County standards for noise-generating elements of the well operation when no other feasible control method is available.	
<b>4.10-4:</b> Exposure of Residences to Noise from Operation of Engines at Lift Stations	Significant	<p><b>4.10-4:</b> If the noise and distance thresholds cited above are to be exceeded, the owner/operator will employ noise-reducing practices so that noise from lift station operations does not exceed Kern County noise-level standards at adjacent residences. Measures to be implemented may include:</p> <ul style="list-style-type: none"> <li>• restricting lift station installations to beyond 2,800 feet from residences, where feasible;</li> <li>• using electric pumps where lift station installations are within 2,800 feet of residences; and</li> <li>• using sound attenuation enclosures designed to achieve noise reductions sufficient to comply with Kern County standards for noise-generating elements of the lift station operation when no other feasible control method is available.</li> </ul>	Less than significant
<b>4.11 POPULATION AND HOUSING</b>			
<b>4.11-1:</b> Potential Growth-Inducing Impacts Related to Construction	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.12 TRANSPORTATION AND TRAFFIC</b>			
<b>4.12-1:</b> Cause an Increase in Traffic That is Substantial in Relation to the Existing Traffic Load and Street System Capacity	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.12-2:</b> Exceed a Level of Service Standard Established by the County	Less than significant	No additional mitigation is proposed	Less than significant
<b>4.12-3:</b> Result in a Change in Air Traffic Patterns, Including an Increase in Traffic Volume or Change in Location that Results in Substantial Safety Risks	No impact	No additional mitigation is proposed	NA



Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.12-4:</b> Substantially Increase Hazards Due to a Design Feature or Incompatible Use	Significant	<p><b>4.12-1:</b> The owner/operator will require the construction contractor to prepare and implement a traffic safety plan before the onset of the construction phase of the Project. The traffic safety plan shall be reviewed and approved by the Kern County Roads Department for affected roads in Kern County and the Los Angeles County Public Works Department for affected roads in Los Angeles County. The plan shall address:</p> <ul style="list-style-type: none"> <li>• appropriate vehicle size and speed,</li> <li>• travel routes,</li> <li>• detour or lane-closure plans,</li> <li>• flagperson requirements,</li> <li>• locations of turnouts to be constructed,</li> <li>• coordination with law enforcement and fire control agencies,</li> <li>• coordination with California Department of Transportation personnel (for work affecting state road rights-of-way),</li> <li>• emergency access to ensure public safety, and</li> <li>• traffic and speed limit signs.</li> </ul>	Less than significant
<b>4.12-5:</b> Result in Inadequate Emergency Access	Significant	<p><b>4.12-2:</b> Before beginning construction activities, the applicant or the construction contractor shall contact local emergency-response agencies (Kern County and Los Angeles County Sheriff and Fire Departments) to provide information on the timing and location of any traffic control measures required to complete the Project. Emergency-response agencies would be notified of any change to traffic control measures as the construction phases proceed, so that emergency-response providers can modify their response routes to ensure that response time would not be affected.</p>	Less than significant
<b>4.12-6:</b> Result in Inadequate Parking Capacity	No impact	<p><b>4.12-3:</b> Prior to issuance of a grading permit, the applicant shall submit a plot plan detailing the location of</p>	NA

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.12-7:</b> Conflict with Adopted Policies, Plans, or Programs Supporting Alternative Transportation (e.g., bus turnouts, bicycle racks)	No impact	buildings to be used for operational staff. The plan shall have a minimum of 10 parking spaces and shall comply with Chapter 19.82 (Off-Street Parking) of the Kern County Zoning Ordinance.	NA
<b>4.13 PUBLIC SERVICES AND UTILITIES</b>			
<b>4.13-1:</b> Temporary Disruption of AVEK West Feeder as a Result of Construction or Operation	Less than significant	No additional mitigation is proposed	Less than significant

## **2.1 Purpose of California Environment Quality Act**

CEQA of 1970, as amended, requires that an EIR be prepared, considered, and certified by decision makers before action is taken on a project. Section 15161 of CEQA requires an EIR to examine the expected individual and cumulative impacts of all phases of a proposed project, including planning, construction, and operation. An EIR also identifies means (mitigation measures) to minimize potential adverse impacts and evaluates reasonable alternatives to the proposed project, including the required No-Project Alternative.

The Kern County Planning Department is the lead agency for this EIR, which is a proposal by Western Development and Storage, LLC (WDS), to develop a facility to store imported surface water beneath properties in eastern Kern County at the west end of the Antelope Valley, California (Figure 2-1). (Specific Plan Amendment No. 13, Map 232, Specific Plan Amendment No. 2 Map 233, Agricultural Preserve No. 24-Inclusion.)

The entire area proposed for recharge facilities is zoned as A (Exclusive Agriculture) and FPS (Flood Plain Secondary) Districts, but also includes approximately 640 acres of residential and industrial designations under the Willow Springs Specific Plan (WSSP). Implementation of the Project will require:

- amendment of the Willow Springs Specific Plan to change various map code designations;
- inclusion of approximately 640 acres into Agricultural Preserve No. 24;
- construction of recharge basins, recovery wells and accessory structures needed for ongoing operation and maintenance; and
- authorization and permits from various affected agencies.

CEQA (Public Resources Code Sections 21000–21178.1) and the State CEQA Guidelines provide the statutory requirements for evaluating environmental impacts of the Project. CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority. Public agencies are required to avoid or mitigate

impacts, when feasible. Public agencies also are required to balance a variety of public objectives, including economic, environmental, and social aims.

The following table shows characteristics of the operation of the Project.

**Table 2-1.** Characteristics of the Project

Item	Project
Objectives	Enhance water supply reliability and flexibility through a facility that is of sufficient size and scope to be both cost effective and environmentally sound; reduce the rate of aquifer overdraft; and encourage conjunctive use, where appropriate
Source of recharge water	State Water Project
Recharge basin area	Approximately 1,500 acres
Total capacity	500,000 af
Annual capacity	100,000 af
Instantaneous recharge capacity	Approximately 350 cfs
Instantaneous recovery capacity	Approximately 250 cfs
Wells for recovery of stored surface water	Approximately 30 to 40 new wells Use of existing wells as appropriate
Project participants	Municipal water agencies, such as those in Kern, Los Angeles, Orange, and San Diego Counties
Overdraft recovery	10% of recharged water left behind for overdraft recovery
Monitoring committee	Impacts on groundwater levels and water quality would be monitored by a committee, which may include, among others, representatives from the owner/operator, neighboring landowners, Rosamond Community Service District, Antelope Valley State Water Project Contractors Association, and Kern County and Los Angeles County representatives.

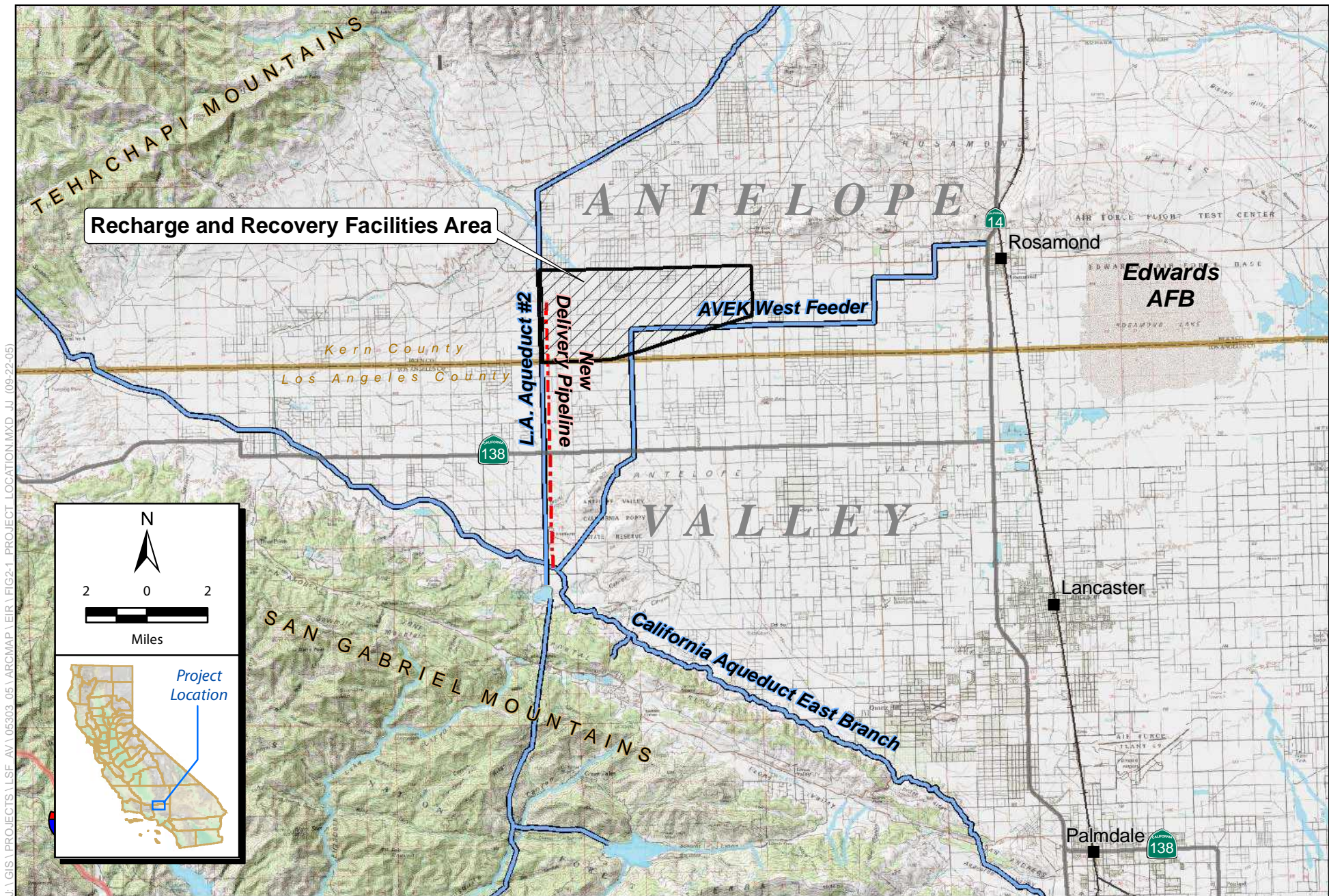
af = acre-feet  
cfs = cubic feet per second

## 2.2 Purpose of This Environmental Impact Report

An EIR is a public informational document used in the planning and decision-making process. The Kern County Planning Commission and Board of Supervisors will consider the information in the EIR, including the public comments and staff response to those comments, during the public hearing process. As a legislative action, the final decision is made at the Board of Supervisors where the Project may be approved, conditionally approved, or denied. The purpose of an EIR is to identify:

- the significant potential impacts of the proposed project on the environment and indicate the manner in which those significant impacts can be avoided or mitigated,
- any unavoidable adverse impacts that cannot be mitigated, and





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**Figure 2-1  
Project Location**



- reasonable and feasible alternatives to the project that would eliminate any significant adverse environmental impacts or reduce the impacts to a less-than-significant level.

An EIR also discloses growth-inducing impacts; impacts found not to be significant; and significant cumulative impacts of past, present, and reasonably anticipated future projects.

CEQA requires an EIR that reflects the independent judgment of the lead agency regarding the impacts, the level of significance of the impacts both before and after mitigation, and mitigation measures proposed to reduce the impacts. A draft EIR is circulated to responsible agencies, trustee agencies with resources affected by the project, and interested agencies and individuals. The purposes of public and agency review of a draft EIR include sharing expertise, disclosing agency analyses, checking for accuracy, detecting omissions, discovering public concerns, and soliciting counterproposals.

Reviewers of a draft EIR should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate significant environmental effects.

## 2.3 Terminology

To assist readers in understanding this EIR, terms used are defined in the following manner.

- *Project* means the whole of an action that has the potential for resulting in a physical change in the environment, directly or ultimately.
- *Environment* means the physical conditions that exist in the area and that would be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved is the area in which significant direct or indirect impacts would occur as a result of the project. The environment includes both natural and artificial conditions.
- *Impacts* analyzed under CEQA must be related to a physical change. Impacts are:
  - direct or primary impacts that are caused by the proposed project and occur at the same time and place, or
  - indirect or secondary impacts that are caused by the proposed project and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect or secondary impacts may include growth-inducing impacts and other effects related to induced changes in the pattern of

land use; population density or growth rate; and related effects on air and water and other natural systems, including ecosystems.

- *Significant impact on the environment* means a substantial, or potentially substantial, adverse change in any of the physical conditions in the area affected by the proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. An economic or social change by itself is not considered a significant impact on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.
- *Mitigation* consists of measures to avoid or substantially reduce the proposed project's significant environmental impacts by:
  - avoiding the impact altogether by not taking a certain action or parts of an action;
  - minimizing impacts by limiting the degree or magnitude of the action and its implementation;
  - rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
  - reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or
  - compensating for the impact by replacing or providing substitute resources or environments.
- *Cumulative impacts* are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. The following statements also apply when considering cumulative impacts:
  - The individual impacts may be changes resulting from a single project or separate projects.
  - The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

This EIR uses a variety of terms to describe the level of significance of adverse impacts. These terms are defined as follows.

- **Less than significant:** An impact that is adverse but that does not exceed the defined thresholds of significance. Less-than-significant impacts do not require mitigation.
- **Significant:** An impact that exceeds the defined thresholds of significance and would or could cause a substantial adverse change in the environment. Mitigation measures are recommended to eliminate the impact or reduce it to a less-than-significant level.

- **Significant and unavoidable:** An impact that exceeds the defined thresholds of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of mitigation measures.

## 2.4 Organization of This Environmental Impact Report

The EIR is organized into the following chapters:

- Chapter 1, “Executive Summary.”
- Chapter 2, “Introduction,” explains the purpose of this EIR, defines terms used in the analysis, and discusses the environmental review process and public involvement.
- Chapter 3, “Project Description,” describes the Project as proposed by the applicant.
- Chapters 4, “Resources,” is devoted to resource topics. Impacts on a resource are evaluated for the Project site in each section of this chapter. For each resource, data relevant to the environmental setting are presented. The impacts of the Project on the resource are evaluated in terms of significance, and mitigation measures are identified. As Lead Agency, the Planning Department is responsible for determining what mitigation measures are appropriate. Resource sections include:
  - Section 4.1, “Agricultural Resources;”
  - Section 4.2, “Air Quality;”
  - Section 4.3, “Biological Resources;”
  - Section 4.4, “Cultural Resources;”
  - Section 4.5, “Geology and Soils;”
  - Section 4.6, “Hazards and Hazardous Materials;”
  - Section 4.7, “Hydrology and Water Quality;”
  - Section 4.8, “Land Use and Planning;”
  - Section 4.9, “Mineral Resources;”
  - Section 4.10, “Noise;”
  - Section 4.11, “Population and Housing;”
  - Section 4.12, “Transportation and Traffic;” and
  - Section 4.13, “Utilities and Services.”
- Chapter 5, “Mandatory CEQA Sections,” presents an analysis of the Project’s cumulative and growth-inducing impacts and other CEQA



requirements, including significant and unavoidable impacts, irreversible commitment of resources, and areas of potential controversy.

- Chapter 6, “Alternatives,” identifies the alternatives that are being considered to eliminate or reduce significant impacts and compares the differences between all the alternatives.
- Chapter 7, “Response to Comments,” is a future chapter that will provide responses to comments on the Draft EIR.
- Chapter 8, “Organizations and Persons Consulted,” lists persons consulted in preparation of this EIR.
- Chapter 9, “Preparers,” lists the EIR authors, the technical specialists, members of the production team, and other key individuals who assisted in the preparation and review of this EIR.
- Chapter 10, “Bibliography,” lists documents cited in this EIR.
- Appendix A includes the Notice of Preparation (NOP) that Kern County published for this EIR and comments received in response to the NOP.
- Appendix B is the applicant’s Feasibility Evaluation for the Project.
- Appendix C contains data relating to air quality.
- Appendix D contains California Natural Diversity Database (CNDDDB) records and lists special-status wildlife and plant species with potential to occur in the Project area and vicinity according to U.S. Fish and Wildlife Service (USFWS) offices in Sacramento and Ventura.
- Appendix E is the Cultural Resources Report for the Project area.
- Appendix F contains noise tables.
- Appendix G is the Environmental Data Report.

## 2.5 Decision-Making Process

The State CEQA Guidelines require that the Draft EIR be made available for a 45-day public review period. During this review period, written comments concerning the adequacy of the document may be submitted by interested public agencies and private parties to:

County of Kern  
Planning Department  
2700 “M” Street, Suite 100  
Bakersfield, California 93301  
Attention: Mr. Don Kohler

At the end of the public review period, written responses to all comments will be compiled into a Final EIR, and a Mitigation Monitoring Program will be prepared along with Findings of Fact. As required by County policy, responses to comments submitted by public agencies and interested parties will be

distributed to those agencies for review at least 21 days before the Planning Commission considers the Final EIR. A public hearing(s) will be held before the Kern County Planning Commission regarding the proposed Project and the adequacy of the Draft EIR, at which time public comments also will be heard and the Planning Commission will vote on whether to recommend certification of the EIR and approval of the Project to the Kern County Board of Supervisors. If a recommendation for certification is made by the Planning Commission, the Board of Supervisors will be asked to certify the EIR and then will adopt findings relative to the proposed Project's environmental effects after implementation of mitigation measures and the consideration of alternatives, and will take action to provide its outright approval, conditional approval, or denial of the proposed Project, and other related entitlement requests.

# Chapter 3

## Project Description

### 3.1 Project Overview

The applicant, Western Development and Storage, LLC (WDS), is proposing to develop a facility to store imported surface water underground beneath properties in eastern Kern County, at the west end of the Antelope Valley, California, for recovery when needed (Figure 3-1).

The Project would entail importing water from the State Water Project (SWP) via the East Branch of the California Aqueduct (Figure 3-1) to the Project site for recharge and storage underground. When needed, stored water would be recovered for delivery to various water agencies, such as those in Kern, Los Angeles, and Orange Counties.

Characteristics of the Project are summarized in Table 3-1.

**Table 3-1.** Characteristics of the Project

Item	Project
Objectives	Enhance water supply reliability and flexibility through a facility that is of sufficient size and scope to be both cost effective and environmentally sound; reduce the rate of aquifer overdraft; and encourage conjunctive use, where appropriate
Source of recharge water	State Water Project
Recharge basin area	Approximately 1,500 acres
Total capacity	500,000 af of total storage capacity
Annual capacity	100,000 af
Instantaneous recharge capacity	Approximately 350 cfs
Instantaneous recovery capacity	Approximately 250 cfs
Wells for recovery of stored surface water	Approximately 30 to 40 new wells Use of existing wells as appropriate
Project participants	Municipal water agencies, such as those in Kern, Los Angeles, and Orange Counties

Item	Project
Overdraft recovery	10% of recharged water left behind for overdraft recovery
Monitoring committee	Impacts on groundwater levels and water quality would be monitored by a committee, which may include, among others, representatives from the owner/operator, neighboring land owners, Rosamond Community Service District, Antelope Valley State Water Project Contractors Association, and Kern County and Los Angeles County representatives.

af = acre-feet  
cfs = cubic feet per second

## Lead Agency

The public agency that has the principal responsibility for carrying out or approving this Project is termed the *Lead Agency*. Kern County is the Lead Agency for this EIR, which will be utilized by the Kern County Board of Supervisors to consider amendments to the Willow Springs Specific Plan (WSSP) land use designations to allow the Project to proceed (Specific Plan Amendment No. 13, Map 232, Specific Plan Amendment No. 2 Map 233, Agricultural Preserve No. 24—Inclusion).

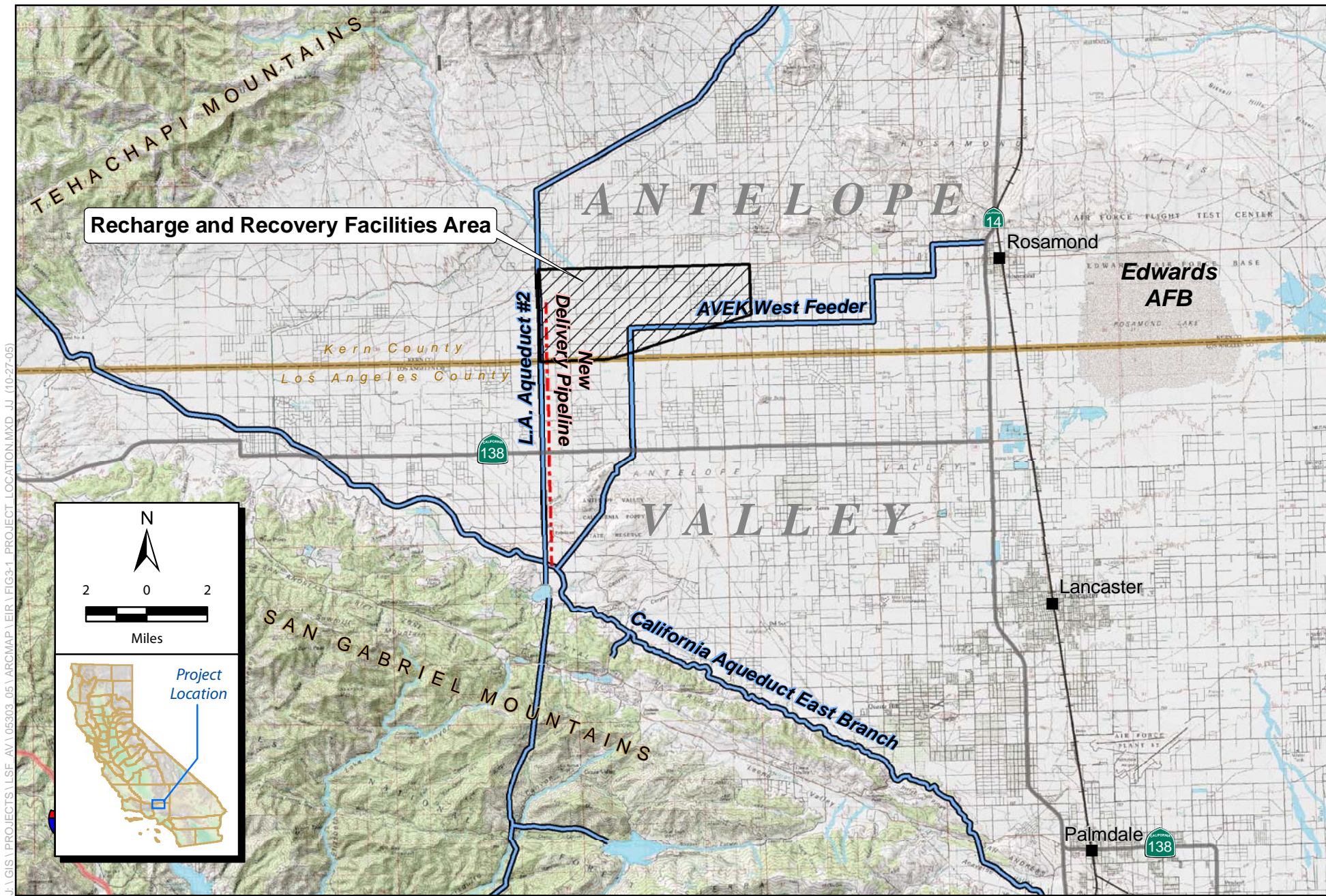
The entire area proposed for recharge facilities is zoned as A (Exclusive Agriculture) and FPS (Flood Plain Secondary) Districts (Figure 3-2). Water banking and recharge is an allowed land use in the A FPS zone district. While the WSSP designates approximately 640 acres as 8.1 (Intensive Agriculture), the site also includes approximately 320 acres designated as 5.3 (Residential), approximately 320 acres designated as 7.1 (Light Industrial), and approximately 350 acres designated as 8.5 (Resource Management). See Figure 3-3. As part of the proposed Project, the applicant is requesting approval of an amendment to the WSSP and inclusion of Project lands into an agricultural preserve (Figure 3-4). Each of these requests is described below.

## Specific Plan Amendment

Land uses allowed in the Project area are established and guided by the Land Use Element of the WSSP. The specific plan controls the type, intensity, and distribution of land uses in a 79-square-mile area in the eastern area of the Kern County General Plan. The WSSP was adopted in 1992 and identified a mix of residential, industrial, and resource management uses for the area combined with designations identifying constraints due to military flight corridors as well as flood and comprehensive planning requirements. This Project would amend the WSSP as follows (Figures 3-3 and 3-4):

- Map Codes 5.3/2.85/4.4 (Residential—maximum 10 units per net acre; Military Flight Operations (60 decibels [dB]); Comprehensive Plan Area) to

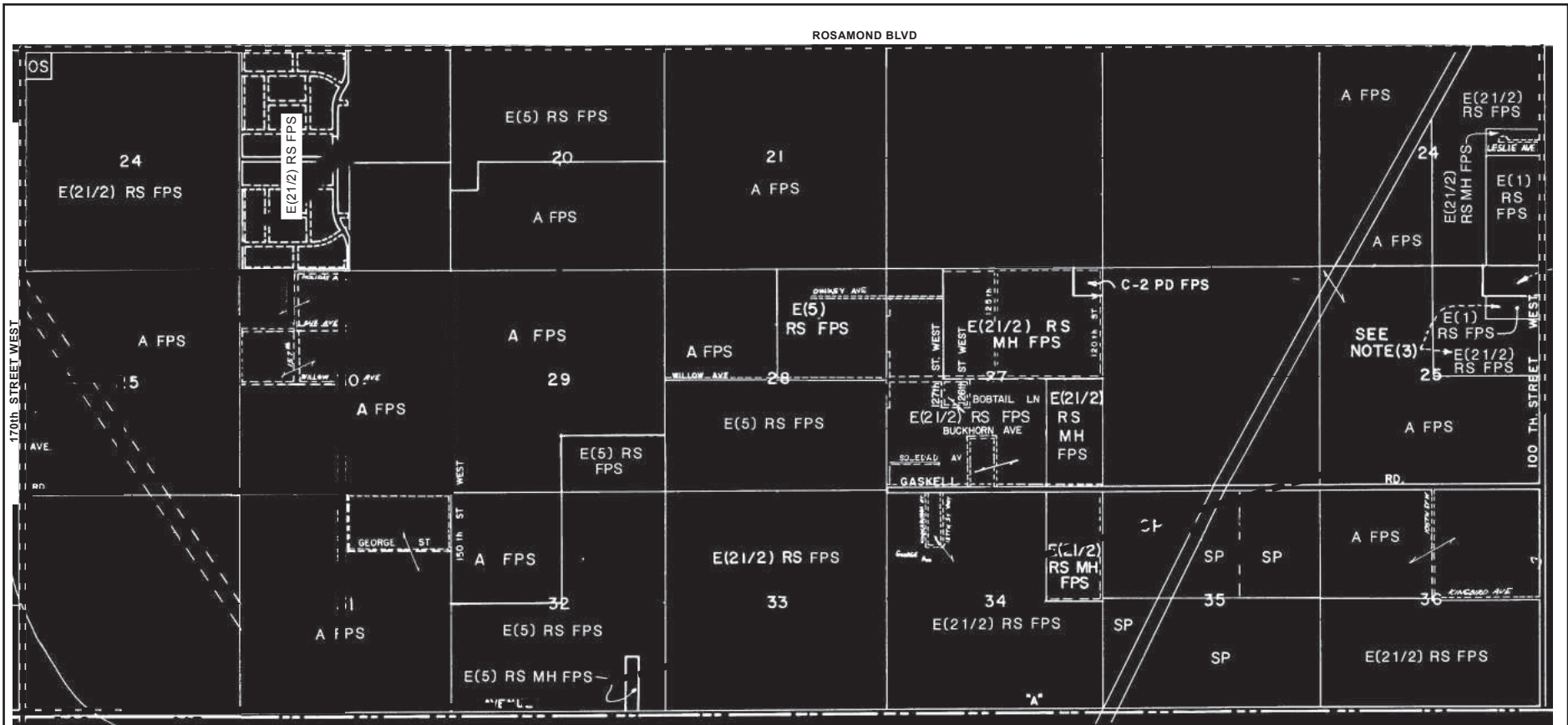




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**Figure 3-1**  
**Project Location**





**LEGEND**

A - Exclusive Agriculture	Area Proposed for Recharge Basins
C - Commercial	Recharge and Recovery Facilities Area
E - Estate (1/4 to 20 acre areas)	
FPS - Floodplain (Secondary Combining)	
MH - Mobilehome Combining	
O - Open Space	
PD - Precise Development Combining	
RS - Residential Suburban Combining	
SP - Special Planning	

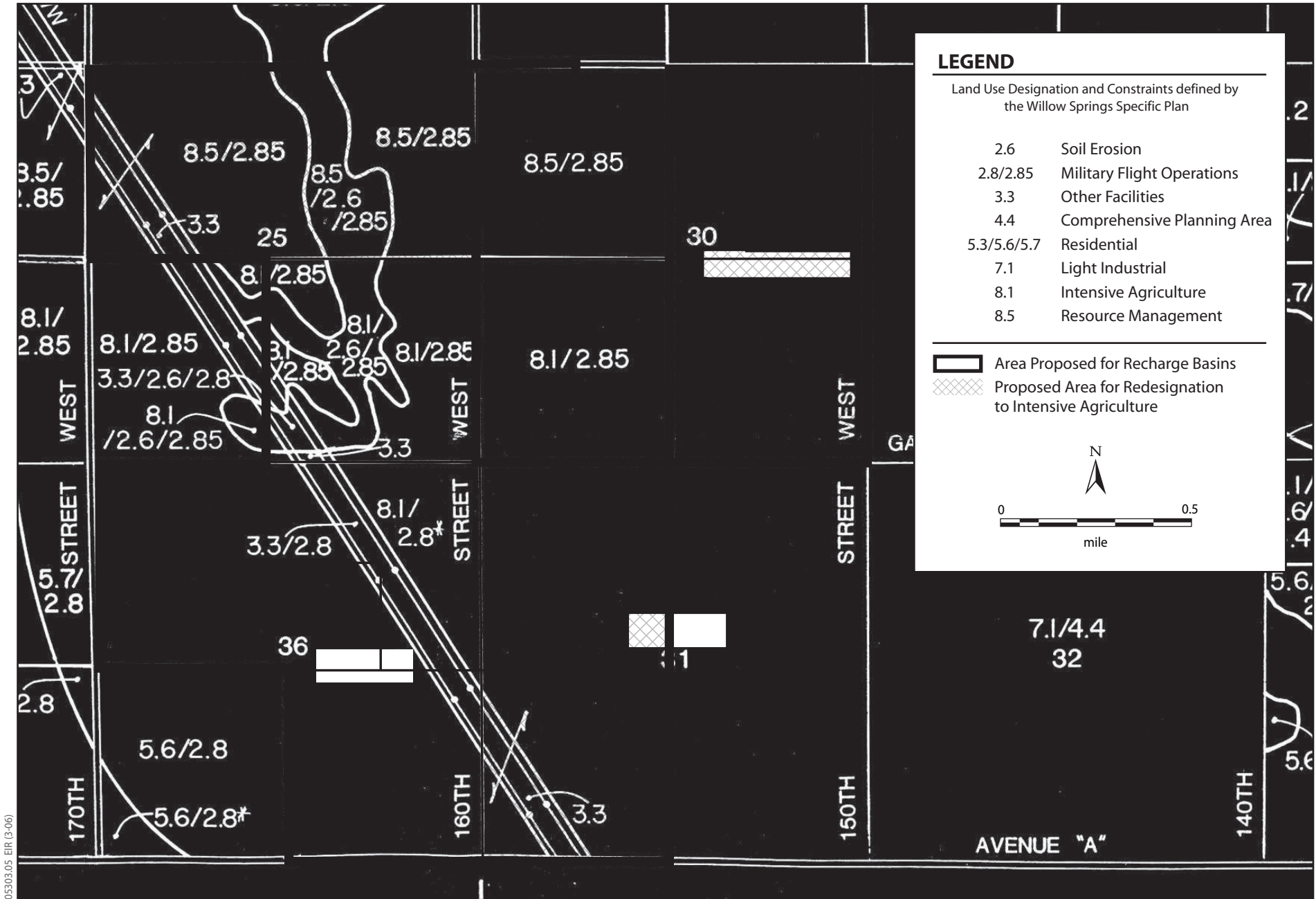
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Feet

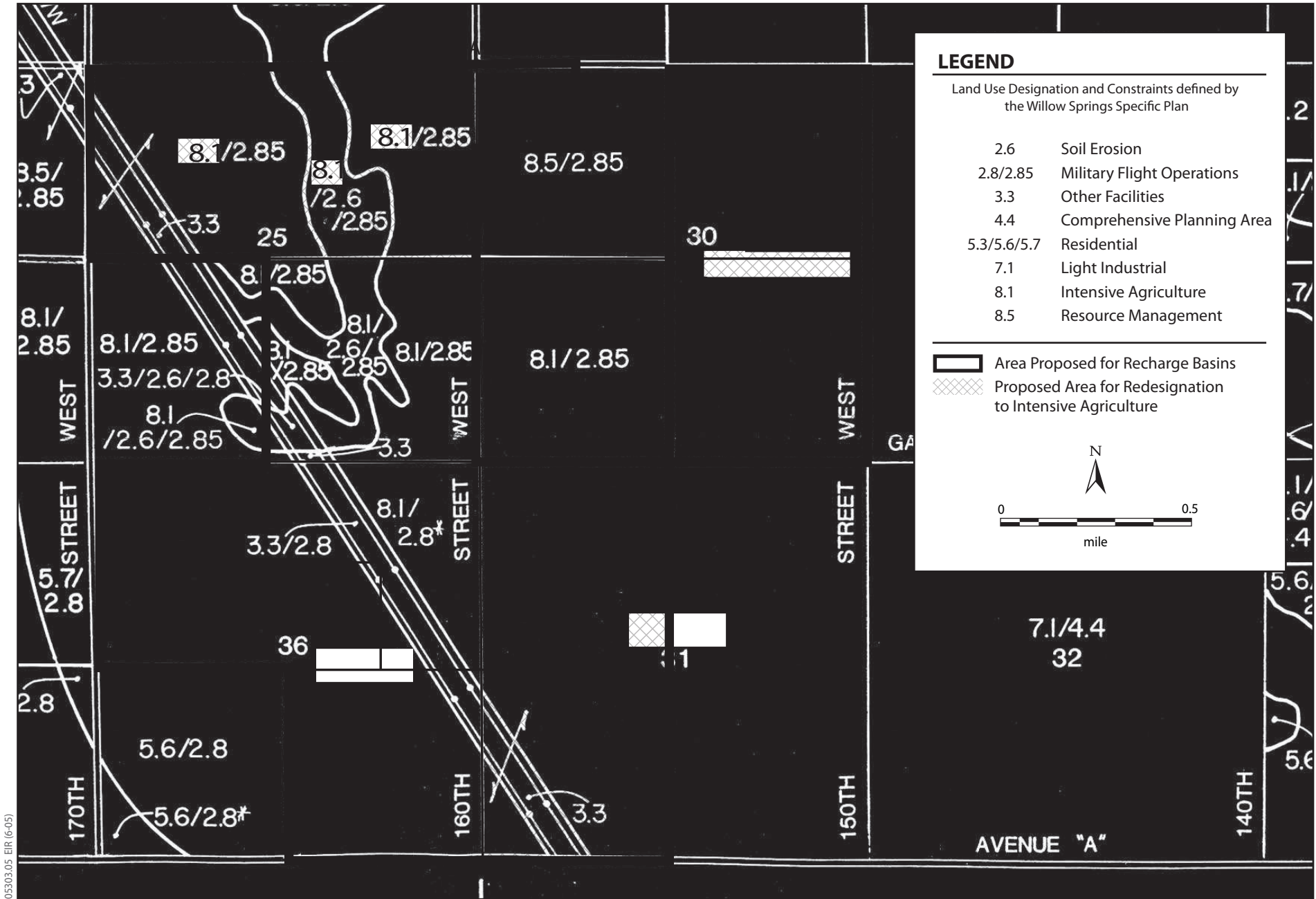
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**Figure 3-2**  
**Kern County Zoning Designations**



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**Figure 3-3**  
**Willow Springs Specific Plan**  
**Current Land Use Designation Map**



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**Figure 3-4**  
**Willow Springs Specific Plan**  
**Project-Proposed Land Use Designation Map**



8.1/2.85 (Intensive Agriculture—minimum 20-acre parcel size; Military Flight Operations (60 dB)) on approximately 320 acres.

- Map Codes 7.1/4.4 (Light Industrial; Comprehensive Plan Area) to 8.1 (Intensive Agriculture—minimum 20-acre parcel size) on approximately 320 acres.
- Map Codes 8.5/2.85 (Resource Management—minimum 20-acre parcel size; Military Flight Operations (60 dB)) to 8.1/2.85 (Intensive Agriculture—minimum 20-acre parcel size; Military Flight Operations (60 dB)) on approximately 300 acres.
- Map Codes 8.5/2.6/2.85 (Resource Management—minimum 20-acre parcel size; Flood Hazard; Military Flight Operations (60 dB)) to 8.1/2.6/2.85 (Intensive Agriculture—minimum 20-acre parcel size; Flood Hazard; Military Flight Operations (60 dB)) on approximately 50 acres.

## Agricultural Preserve Inclusion

The proposed land use designation change from residential and industrial to intensive agriculture within the existing A (Exclusive Agriculture) zoning requires an alteration of the boundaries of Agricultural Preserve No. 24 to include approximately 640 acres. Agricultural preserves have been established for the purpose of implementing the local Williamson Act Land Use Contract program and only property designated for conforming agricultural uses may qualify.

## 3.2 Project Objectives

The applicant states that the primary purpose of the Project is to provide additional water storage to supply the needs of Antelope Valley and, potentially, other regions of southern California, through facilities that are of sufficient size and scope to be both cost effective and environmentally sound. WDS conducted an assessment of water storage needs and constraints and identified the western Antelope Valley as having suitable geographic and geologic features for such a project (Appendix B).

The applicant intends either to transfer the Antelope Valley Water Bank to a public agency or agencies or to partner with such agencies and potentially other water suppliers, wholesalers, and retailers to develop and/or operate the Antelope Valley Water Bank.

To accomplish this purpose, the applicant has the following objectives for the Project:

1. To import SWP water when it is available (typically wet years) for recharge and storage underground, and then recover it when needed.

2. To leave some of the recharged water in the aquifer to aid in recovery or to slow the decline of the water table.
3. To continue farming Project lands using organic farming practices when the land is not being used for recharge purposes.
4. To construct a project that is designed to enhance water supply reliability and flexibility in a cost-effective and environmentally sound manner, help reduce the rate of aquifer overdraft, allow continuation of agricultural uses on Project lands, and encourage conjunctive use, where appropriate.

### 3.3 Project Location

The Project is located in an unincorporated area of eastern Kern County with conveyance facilities in northern Los Angeles County, California, about 10 miles west of the unincorporated community of Rosamond. Agriculture is the dominant land use in the Project vicinity, and the area is sparsely populated. Nearby residences and other buildings are noted on Figure 3-5. The county line between Kern County and Los Angeles County lies immediately south of the area proposed for the recharge and recovery facilities (Figure 3-1).

The 21-square-mile area (13,440 acres) proposed for recharge and recovery facilities is bounded by:

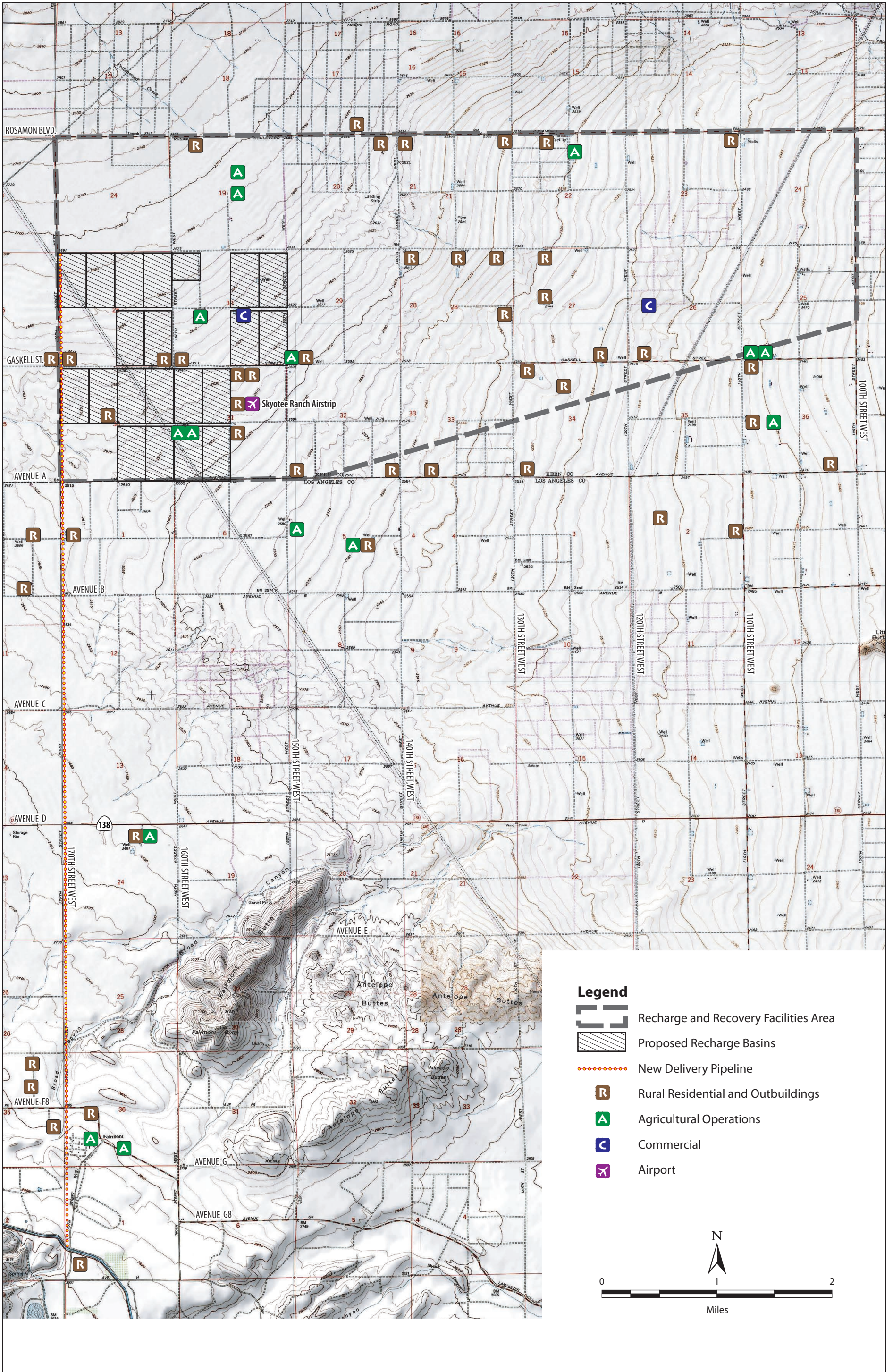
- Rosamond Boulevard to the north,
- Avenue A to the south (Kern County/Los Angeles County line),
- 170th Street West to the west, and
- 100th Street West to the east (Figure 3-6).

As shown on Figure 3-5, the area is sparsely populated. Agriculture is the dominant land use, with scattered rural residences. There are approximately 10 rural residences in the area proposed for the recharge basins. Other buildings in the immediate vicinity are for agriculture. Skyotee Ranch Airstrip lies immediately east of the area proposed for the recharge basins.

Rosamond Boulevard, Avenue A, 170<sup>th</sup> Street, and 100<sup>th</sup> Street are paved, 2-lane roads owned and maintained by Kern County. Locally, the Project would be accessed via Avenue A and 170<sup>th</sup> Street. Gaskell Road is County-owned and paved between 100<sup>th</sup> Street and 130<sup>th</sup> Street. Other roads within the area proposed for the recharge and recovery facilities are privately owned and unpaved. The new delivery pipeline is aligned parallel to 170<sup>th</sup> Street, which is paved in both Kern County and Los Angeles County.

The area proposed for recharge and recovery facilities is located within the service area of the Antelope Valley East Kern Water Agency (AVEK), which supplies imported SWP water to customers via the AVEK West Feeder. The Project area also is crossed by Los Angeles Aqueduct (LAA) #2, owned by the Los Angeles Department of Water and Power, which passes just west of the area





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**Figure 3-5**  
**Types of Structures in the Project Area**



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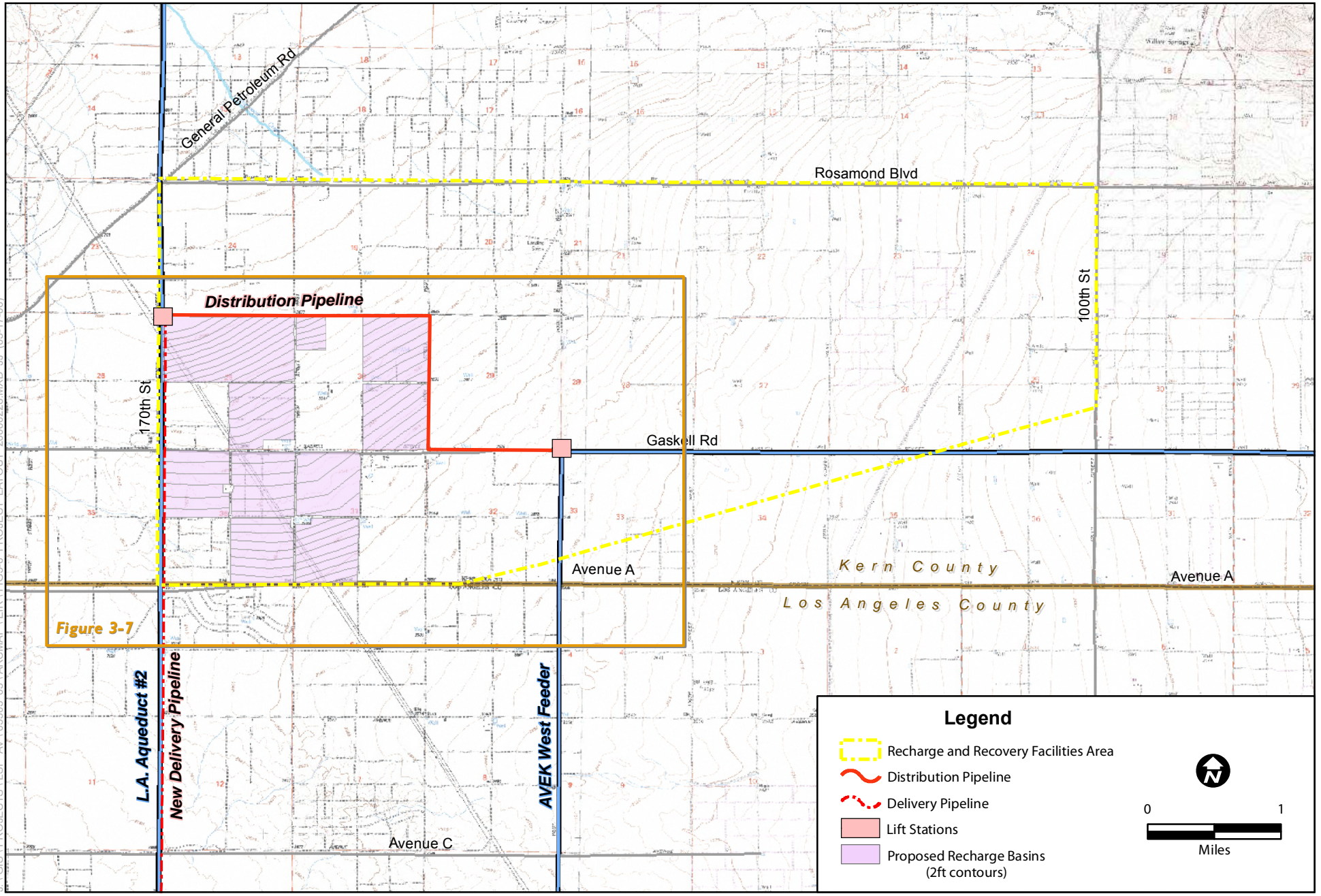


Figure 3-7

Figure 3-6 Project Layout

proposed for recharge basins and runs through Los Angeles County (Figures 3-1 and 3-6). LAA #2 conveys water from the Owens Valley to the City of Los Angeles.

## 3.4 Project Characteristics

### Project Operation

As proposed, the Project would receive imported SWP water via the East Branch of the California Aqueduct (Figure 3-1). Project participants who have existing entitlements to available SWP water would provide the water in accordance with authorized SWP operations. The Project would be designed to receive water at a rate of up to 350 cfs and to recharge up to 100,000 af per year.

Surface water recharged in the basins would percolate through the subsurface for storage in dewatered portions of the underlying aquifer. The total storage capacity of the Project would be 500,000 af. Recharge activities would occur primarily during the winter and early spring. The recharge basins would be used for organic farming for a minimum of 8 months of the year, when not required for recharge activities. Additionally, sustainable farming practices and farm economics dictate that land may need to be idled at times; however, Project lands would not be converted to nonagricultural uses.

When needed, the stored water would be recovered using groundwater wells. The recovered water would be delivered to water users. The recovery of stored water would be limited to 90% of the amount recharged, thereby assisting the underlying aquifer to recover from past overdraft and reduce the rate of current overdraft.

During recharge operations, Project facilities would be inspected on a daily basis. These inspections would ensure that trespass was discouraged, that project facilities including basin berms were in good repair, and that remote monitoring stations (flow, water elevation, etc.) were functioning properly.

## Project Construction

### Project Phasing

The Project is proposed to be constructed in two phases. Phase 1 would involve construction of only the recharge and recovery facilities connecting to the AVEK West Feeder. This would allow the recharge and recovery facilities to be operated within the current capacity of the AVEK West Feeder. Construction of Phase 1 facilities is anticipated to begin in 2006.

Phase 2 would involve connecting the recharge and recovery facilities to the California Aqueduct by means other than the AVEK West Feeder, to increase the

total capacity of the Project. This would be accomplished by constructing a new pipeline, approximately 8.75 miles long, parallel to the existing LAA #2 alignment. Phase 2 construction would commence after at least one year of Phase 1 operation and would require approximately 12 months to complete.

Figures 3-1 and 3-6 show both Phase 1 and Phase 2 components.

## Phase 1 Facilities

The facilities that would be constructed and operated during Phase 1 of the Project are described below and include:

- a two-way, 4-mile-long distribution/recovery pipeline to distribute water from and recover water to the AVEK West Feeder;
- distribution canals and recharge basins (with peripheral berms and internal water checks) on approximately 1,612 acres;
- approximately 17 new recovery wells and pumps, with use of existing wells as appropriate; and
- approximately 7 miles of recovery pipelines to convey water from the recovery wells back to the AVEK West Feeder via the distribution/recovery pipeline.

Table 3-2 provides information about the acreages involved in constructing and operating these Project components and construction earthwork volumes.

**Table 3-2.** Estimated Ground Disturbance for Phase 1 Project Construction

Project Component	Temporary Disturbance Acreage	Permanent Disturbance Acreage
Distribution/Recovery pipeline	78	<1
Distribution canals	95	31
Peripheral berms	219	42
Water checks (internal recharge basin levees)	57	57
Basin floors (farmland)	1,482	0
Recovery wellheads	<17	<2
Recovery pipelines	97	0

### Distribution/Recovery Pipeline

During Phase 1, SWP water would be delivered to the recharge basins via the AVEK West Feeder. This pipeline currently connects to the California Aqueduct south of the Project area (Figure 3-1). The AVEK West Feeder pipeline is a 33-

to 66-inch-diameter, underground steel pipeline with a capacity of 225 cfs. There is an existing diversion valve (the Van Dam Turnout) near the intersection of Gaskell Road and 140th Street West, approximately 1 mile east of the proposed location of the recharge basins (Figure 3-6).

To connect the recharge basins to the AVEK West Feeder (and thus the California Aqueduct), a new pipeline having up to 84 inches in diameter (sized to accommodate Phase 2) approximately 4 miles long would be installed from the Van Dam Turnout to the northwest corner of the recharge basin area, just east of LAA #2 (Figure 3-6). This distribution/recovery pipeline would be aligned along existing roadways. It would be installed in trenches wide enough to lay the pipe (up to approximately 36 feet wide). Trenching would be performed by backhoe, trackhoe, or trenching machine. Soil would be temporarily sidecast within the construction corridor and backfilled into the trench once the pipe is in place. Backfill would be compacted using a vibrating sheepsfoot roller. Although the distribution/recovery pipeline would be buried, minor aboveground features, such as air vents, would be present.

The connection between the AVEK West Feeder and the distribution/recovery pipeline would be buried and constructed of reinforced concrete pipe. The Van Dam Turnout may be upgraded with a pump (a *lift station*) to allow delivery of water to the westernmost recharge basins if the AVEK West Feeder has insufficient pressure. The upgraded turnout also would allow recovered water to be delivered back into the AVEK West Feeder.

The lift station, if required, would involve construction of a concrete pad and installation of a lift pump driven by a propane engine or an electric motor. Construction would involve disturbance of approximately 0.25 acre, and the final installation would occupy about 2,500 square feet.

## Recharge Basins

The applicant estimates that 11 basins would be constructed—most being 160 acres in size, with one 40-acre basin—totaling approximately 1,482 acres. These basins would be used to percolate delivered SWP water into currently dewatered portions of the underlying aquifer. This system would require construction of three earthen distribution canals connected to the distribution/recovery pipeline, peripheral berms surrounding the recharge basins, and numerous internal water checks (similar to water checks on rice fields), which are described below. Graders, excavators, and tractor-drawn ridgers would be used to construct these elements. The “basins” themselves would comprise existing farmlands at existing grades and would not be graded (except as required to obtain berm materials); they would continue to be used for farming during non-recharge periods of the growing season.

## Water Checks

Within the basins, after crop removal, water checks would be constructed prior to each recharge episode to accommodate the gently sloping basin floors. As shown in Figure 3-7, check alignment and the area between checks would vary

with slope from about 1 to 50 acres, averaging about 20 acres. Checks would be constructed to allow water depths ranging from 0.5 foot along the uphill check to 2.5 feet along the downslope check. Checks would be constructed by a tractor-pulled ridger device to typically be up to 3 feet high (with crest width of 1 foot and base width of about 13 feet), allowing for 0.5 foot of freeboard above the initial water surface.

### **Distribution Canals**

Three earthen canals having trapezoidal cross-sections would extend southward from the distribution/recovery pipeline (and one would extend westward) to deliver water to the recharge basins, totaling approximately 5.25 miles of earthen canals (Figure 3-7). Canal berms would vary in height from 1 to 6 feet above existing grade, so that 2 feet of freeboard would be provided. Weirs would be installed at approximately every 5-foot drop in existing grade, to stairstep the water down the southward-sloping site. Typical irrigation turnouts would be installed to feed water into the recharge basins. Construction would include compaction of moisture-adjusted native material in successive lifts to ensure long-term stability. Embankment material would be obtained from near-surface soils adjacent the canals. Topsoil would be segregated during excavation and respread over the canal berms to promote vegetation reestablishment.

### **Peripheral Berms**

On basin peripheries where distribution canals are present, the canal berms would also serve as peripheral basin berms. On other peripheries, additional berms would be constructed with an average height of 4 feet, a crest width of 8 feet and a base width of 24 feet. The applicant estimates that approximately 14.6 miles of berms will be required. As with canal berms, construction would include compaction of moisture-adjusted native material in successive lifts to ensure long-term stability. Embankment material would be obtained from near-surface soils adjacent to the berms. Topsoil would be segregated during excavation and respread over the peripheral berms to promote vegetation reestablishment.

### **Recovery Wells**

When needed, the stored water would be recovered using groundwater wells similar to those already in use in the area for agriculture. Both existing and new wells would be used to recover stored water. The applicant estimates that approximately 10 existing wells would be used and that 30 to 40 new wells would ultimately need to be constructed. During Phase 1, approximately 10 to 17 new wells would be installed in and adjacent to the recharge basins, with additional wells added in later years as needed. This phased approach would enable collection of data from the initial well field so as to optimize the designs, numbers, and locations of additional wells.

Phase 2 wells would be located to the east and northeast of the recharge basins (i.e., downgradient relative to the direction of groundwater flow) within the area defined for recharge and recovery facilities (Figure 3-6). The configuration of the wells and pipelines is in the preliminary design stage and contingent on final design and securing of required access agreements. The construction of wells



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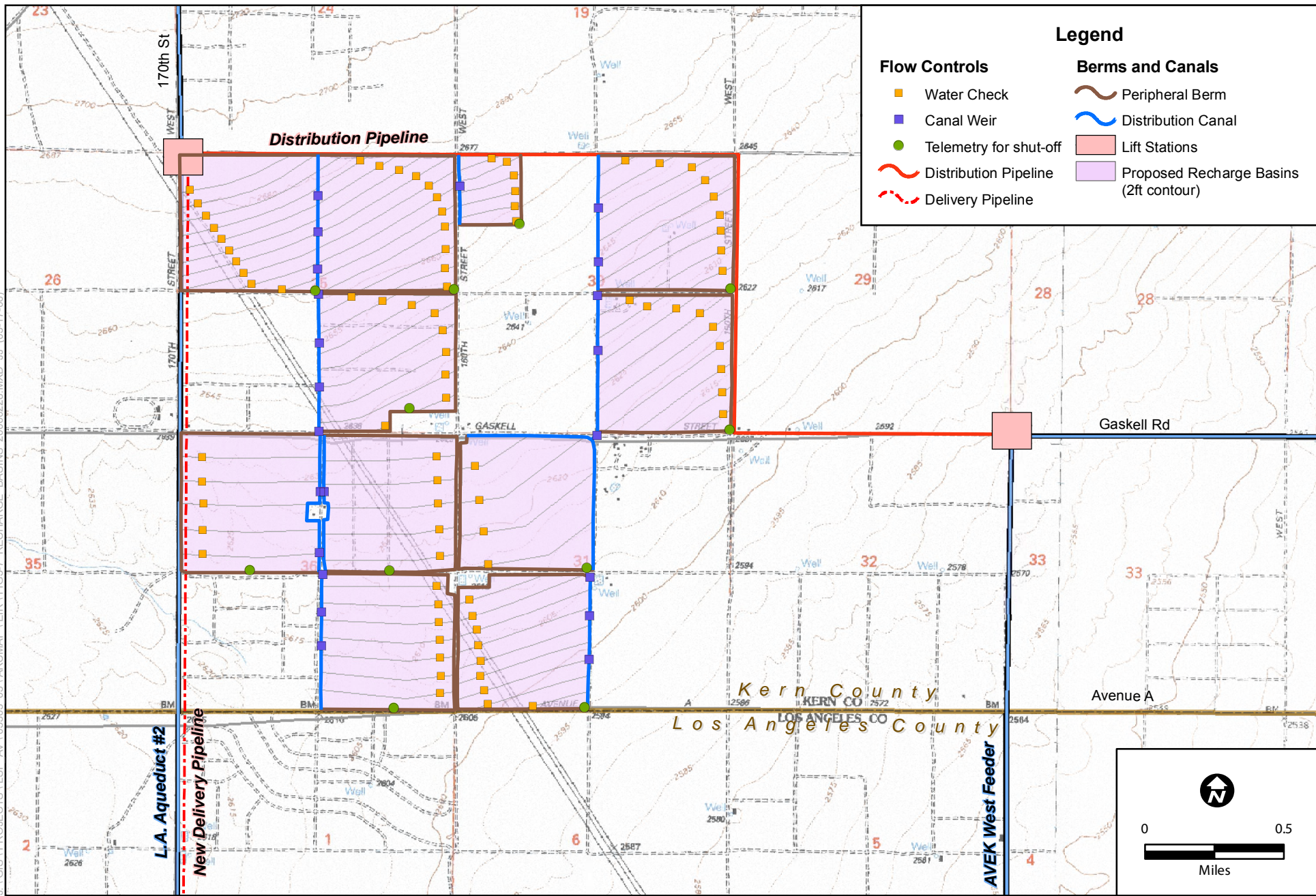


Figure 3-7  
Recharge Basins

would be restricted to areas zoned for agriculture. Most new wells would be located on land owned by third parties, and easements or access agreements would be required for their construction.

The recovery wells would be constructed by drilling to a depth approximately 700 feet below ground surface. The design and construction of recovery wells would comply with the Kern County standards. Construction would include drilling, flushing, development, and testing to maximize well efficiency and longevity. Drill rigs would discharge cuttings to transportable steel tanks. Drilling water would be trucked into most drill sites and stored in portable tanks. Two small berms would be used to control accidental spills during drilling operations, as required by the Occupational Safety and Health Administration (OSHA). A small berm would be constructed with a front loader around the perimeter of each 100-foot by 100-foot temporary construction area. Another berm would be constructed around all drilling equipment, and the area inside the berms would be lined with tarps to contain accidental spills of fuels, lubricants, and drilling effluent. After drilling is completed, all equipment and fluids would be disposed in a lawful manner; the berms would be leveled; and the sites would be restored to near preconstruction condition.

Each new well would be equipped with a typical agricultural pump. The new pumps would be driven by propane-fueled engines or electrical motors. After well completion, the wellheads would be placed on 5-foot square concrete pads with adjacent 6-foot by 14-foot concrete pads for pump-related engine and control equipment. During construction, pumps and motors would be set with conventional two-axle pump maintenance rigs.

Installation of each well would temporarily impact an area of approximately 1 acre, and each finished facility (i.e., wellhead, pump, etc.) would permanently impact about 0.1 acre.

## Recovery Pipelines

The recovered water would be collected via a system of buried pipelines, comprising up to 18 miles (7 miles during Phase 1) of 10- to 42-inch-diameter pipe, for delivery of recovery water to the AVEK West Feeder. The applicant intends to align most recovery pipelines beneath existing road shoulders. As noted above for new recovery wells, most recovery pipelines would be located on land owned by third parties, and easements or access agreements would be required for their construction.

The recovery pipelines would be installed in trenches wide enough to lay the pipe (approximately 2 to 7 feet wide). Trenching would be performed by backhoes, trackhoes, or trenching machines. Where pipelines are not located along roads, soil would be temporarily sidecast within the construction corridor and backfilled into the trench once the pipeline is in place. Backfill would be compacted using a vibrating sheepsfoot roller. Piping would be made of polyvinyl chloride (PVC), polyethylene, or concrete for the larger diameters.

## **Project Service Buildings and Roads**

The existing shops, storage buildings, and houses located within the area proposed for recharge facilities are adequate for Project needs. There are several fenced, gravel, and dirt parking areas around each of the buildings. No improvements are required because the Project needs are identical to those of a farm operation. Detailed equipment and pump work would be outsourced to contractors.

One of the on-site houses would serve as an office, as it does for the current farm foreman. As with current farm operations, the Project foreman would live in this house.

Similarly, existing dirt roads within the area proposed for recharge facilities are adequate for Project needs. No new roads are proposed.

## **Phase 2 Facilities**

Phase 2 of the Project would entail the development of additional recharge and recovery capacity beyond that provided by the AVEK West Feeder.

Up to 30 new recovery wells and pumps would be installed as needed to increase the recovery capacity of the Project. Approximately 11 miles of new recovery pipelines would be installed to deliver recovered water from the new recovery wells back to the AVEK West Feeder or to a delivery pipeline to and from the California Aqueduct. The recovery wells and recovery pipelines required for Phase 2 of the Project would be similar to those required for Phase 1 described above.

## **Construction of a New Delivery Pipeline**

The applicant proposes to construct a new 8.75-mile-long pipeline parallel to LAA #2 to allow delivery of SWP water from the California Aqueduct to recharge facilities for storage and delivery of recovered water back to the California Aqueduct. (Figure 3-2). This work would involve connecting the south end of the new delivery pipeline to the California Aqueduct and the north end to the distribution/recovery pipeline installed during Phase 1. The connections to the new delivery pipeline would be constructed of reinforced concrete pipe. The new delivery pipeline would be buried; however, minor aboveground features, such as air vents, would appear at the surface. Lift stations (pumps) would be installed at one or potentially both each ends of the new delivery pipeline.

When the Notice of Preparation for this environmental impact report (EIR) was published, a second option was under consideration to allow delivery of SWP water from the California Aqueduct to recharge facilities for storage and delivery of recovered water back to the California Aqueduct. This second option would

have involved use of LAA #2, which runs adjacent to the western border of the recharge and recovery area, to convey water between the Project and the California Aqueduct. After additional consultation with the LADWP, however, WDS determined that use of the LAA #2 would not be feasible. Therefore, this option is not considered further in this EIR.

## Construction Schedule

Phase 1 of the Project would begin within 6 months of EIR certification (to allow for finalization of permitting and Phase 1 design). It is estimated that construction could commence by the end of 2006. Construction of the distribution/recovery pipeline, distribution canals and recharge basins is anticipated to require about 6 months, depending on availability of materials. Following construction of those facilities, recharge of imported water could begin.

Following the recharge season of 2006–2007, the first group of approximately 10 to 17 recovery wells and recovery pipelines would be installed between and adjacent to the recharge basins. In later years, as needed, depending on the availability of stored water for recovery and the performance of existing wells, additional wells and recovery pipelines would be installed.

Phase 2 of the Project would not begin until after at least 1 full year of Phase 1 operations. Phase 2 construction would require approximately 12 months to complete.

## 3.5 Monitoring

Recharge operations would cause the water table to rise above baseline conditions and recovery operations would cause water levels to decline back to near baseline conditions. Over the long run, water levels are expected to rise above baseline conditions because 10 percent of all recharged water would be left behind to aid in overdraft recovery. Monitoring of water levels would be required to track water storage and recovery and to protect adjacent agricultural operations.

As part of the Project, the applicant has proposed that a *monitoring committee* be formed to monitor the impact of operations on groundwater levels and quality and to ensure that adjacent landowners are protected. Composition of the monitoring committee would include the following representatives:

- the owner/operator,
- the Rosamond Community Service District,
- the Antelope Valley State Water Project Contractors Association (a joint powers authority including the Antelope Valley East Kern Water Agency, Palmdale Water District, and Littlerock Creek Irrigation District),

- neighboring landowners and/or other selected representatives, and
- Kern and Los Angeles County representatives.

## Monitoring and Operational Constraints Plan

The monitoring committee would develop and implement a Monitoring and Operational Constraints Plan (MOCP) for the Project to ensure there are no unacceptable impacts to groundwater levels or quality. While the details of that plan have not been developed, it is anticipated that it would include the following components.

### Water Level Monitoring

The owner/operator would monitor water levels in onsite and offsite wells and adjust recharge operations to prevent offsite water levels from rising to within 20 feet of the ground surface. In the event that offsite water levels rise to within 20 feet of the ground surface, recharge operations would be halted and not be restarted until approved by the monitoring committee. During recovery operations, the owner/operator would monitor water levels with operational adjustment, compensation, or provision of alternate sources of water in the event that water levels drop to unacceptable levels in offsite wells as a consequence of operations.

Water levels would be monitored in a network of wells that would include:

- recovery wells,
- wells near the Project boundary, and
- select irrigation wells located at varying distances from Project facilities.

The monitoring committee would determine the numbers and locations of wells to be monitored. All wells installed for monitoring purposes only would be constructed within existing roads or lands already disturbed by other Project components (e.g., recharge basins).

The monitoring committee would establish protocols to adjust operations and to avoid, minimize, or recommend compensation for adverse effects. Monitoring data collected during recharge and recovery would be interpreted using methods preapproved by the monitoring committee to provide two levels of protection. First, data would be used in real time to adjust operations. Second, if, after adjusting operations, data indicate that offsite water levels would decline or rise (or have declined or risen) an unacceptable amount as a consequence of operations, the monitoring committee would be immediately notified.

## Water Quality Monitoring

The Project would convey and recharge imported surface water from the SWP. SWP water has been applied to the Project area since 1974. However, because the volume of water being recharged would exceed historic water application rates, unexpected impacts could result. Therefore, the quality of groundwater and recovered water would be monitored. A component of the MOCP would include sampling and analysis of recovered water leaving the Project and groundwater flowing away from Project for total dissolved solids (TDS) to ensure that levels remain appropriate for designated beneficial uses.

## Water Accounting

Recharge flows would be monitored where water enters and leaves the Project (e.g., the Van Dam turnout). In addition, the owner/operator would monitor flows to specific recharge areas and from individual recovery wells for operational purposes. Precipitation, wind, pan evaporation, and temperature would be monitored to calculate net precipitation and evaporation effects. Taken together, the data and estimates from all of these systems would be used for estimating losses, recharge into the Project, and recovery.

### Recoverable Recharge

Flow into recharge areas would be monitored. Flow into recharge areas, minus estimated evaporation and evapotranspiration, would be considered stored. However, only 90 percent of the stored water would be considered recoverable.

### Recovery

Flow from recovery wells, minus recharge during conveyance, if any, would be considered recovered water. Almost all aquifer storage projects experience migration of recharged water away from recovery systems over time. In addition, a portion of early-season recharge water typically becomes inaccessible to recovery systems either through perching above silts/clays or through storage in sediments that drain too slowly to be of practical use to recovery systems. The applicant has concluded that actual aquifer losses cannot be reasonably predicted in a way that would adequately protect surrounding landowners from “overextraction.” Therefore, the applicant has committed to operational constraints (to be specified in the MOCP) and to leave 10 percent of the recharged water behind to ensure that the Project results in a net reduction in the rate of overdraft and to prevent “overrecovery.”

The monitoring committee would meet monthly during recharge/recovery periods and semi-annually during other periods when the Project is not in operation.

## 3.6 Alternatives to the Proposed Project

Five alternatives to the proposed Project have been considered:

- Alternative A—no project,
- Alternative B—other locations in or near Antelope Valley Basin,
- Alternative C—use of injection wells to place imported surface water into the aquifer,
- Alternative D—traditional (surface) reservoirs to store imported surface water, and
- Alternative E—in-lieu recharge.

### Alternative A—No Project

No project would mean that a project to store available SWP water under ground in eastern Kern County would not be developed, and Project objectives described above would not be met. The WSSP would not be amended, and 640 acres would not be included in Agricultural Preserve No. 24.

### Alternative B—Proposed Project Constructed at Another Location

This alternative would entail construction of a similar project at some other location in the Antelope Valley basin that can feasibly receive up to 100,000 af per year of SWP water, store it without significant evaporation losses, and have it be recoverable and feasibly returnable to water users.

### Alternative C—Use of Injection Wells

This alternative would entail the installation of injection wells for recharge, rather than infiltration basins. The applicant estimates that 189 injection wells would be needed to provide the same recharge capacity as the proposed Project.

### Alternative D—Aboveground Storage

This alternative would entail construction of a reservoir at a location with suitable characteristics. The topography and soil permeability of the Project site do not lend themselves to a reservoir.



A specific location for an off-stream reservoir has not been proposed in Antelope Valley; however, the U.S. Bureau of Reclamation and the California Department of Water Resources (DWR) have considered facilities of similar capacity for the southern San Joaquin Valley. With a capacity of 450,000 af, the Yokohl Valley Reservoir is an example of such a project. (Montgomery Watson Harza 2003.)

Lake Isabella, constructed by the U.S. Army Corps of Engineers in 1953, is another example of a Kern County reservoir. Its capacity of 568,000 af is comparable to that of the Project (U.S. Department of Interior, Bureau of Reclamation 2005).

## **Alternative E—In-Lieu Recharge**

In-lieu recharge refers to the practice whereby overlying pumpers, most often farmers, substitute imported surface water supplies for those supplies that would have otherwise been pumped from the underlying aquifer. Water supplies banked by in-lieu means are not physically introduced into the aquifer (except for a small quantity), but instead a like amount of water is not pumped from the groundwater basin.

### **3.7 Intended Uses of the EIR**

This EIR is an informational document for decision makers. CEQA requires that decision makers review and consider the EIR in their consideration of this Project. Kern County is the Lead Agency responsible for certifying the EIR. Table 3-3 identifies the responsible agencies that would use this EIR as the environmental basis for decisions necessary for implementation of the project. The owner/operator of the project or users of the project could include water agencies in various counties, including Kern, Los Angeles, Orange, and San Diego. Use of this document by these agencies to comply with CEQA is governed by state CEQA statutes and the State CEQA Guidelines Section 15096.00. These agencies would need to make appropriate findings of fact to support their decision to use this document as compliance with CEQA for their actions.



**Table 3-3.** List of Responsible Agencies with Subsequent Permit Review or Approval Authority over the Project

Agency	Permit/Authorization Description
<b>Regional</b>	
AVEK	Approval for turnouts and connections to the Western Feeder.
Kern County Air Pollution Control District	Permits for propane-powered water pumps
<b>State</b>	
Department of Water Resources	Approval of conveyance to and from California Aqueduct
California Department of Health Services	Public Water System permit
Lahontan Regional Water Quality Control Board	Authorization under <i>General Permit for Storm Water Discharge Associated with Construction Activity</i>
<b>Federal</b>	
None identified to date	

## 3.8 Cumulative Projects

State CEQA Guidelines Section 15130 requires a discussion of the cumulative impacts of a project when the project's incremental effect is "cumulatively considerable," meaning that the project's incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects.

As set forth in the State CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. As stated in CEQA, Title 14, Section 21083(b), "a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable."

According to the State CEQA Guidelines:

"Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable and which compound or increase other environmental impacts.

- (a) The individual effects may be changes resulting from a single project or a number of separate projects.
- (b) The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects. Cumulative impacts can result from individually

minor but collectively significant projects taking place over a period of time.” (California Code of Regulations (CCR), Title 14, Division 6, Chapter 3, §15355)

In addition, as stated in State CEQA Guidelines, it should be noted that:

The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable. (CCR, Title 14, Division 6, Chapter 3, Section 15064[I][5]).

Cumulative impact discussions for each issue area are provided in the technical analyses contained in Chapter 4, “Environmental Setting, Impacts, and Mitigation Measures.”

## List of Relevant Projects

As previously stated, and as set forth in the State CEQA Guidelines, related projects consist of, “closely related past, present, and reasonable foreseeable probable future projects that would likely result in similar impacts and are located in the same geographic area.” (CCR, Title 14, Division 6, Chapter 3, Section 15355).

Several projects proposed or currently under development were identified by the Kern County and Los Angeles County Planning Departments. These related projects are listed and described in Table 3-4, and a brief discussion of each project is provided below.

Although most of the cited projects are located in Kern County, two projects in Los Angeles County also are included. All listed projects were selected either (1) because of their geographic proximity to the proposed Project site<sup>1</sup> in combination with a potential contribution to a “significant effect” as defined by CEQA<sup>2</sup>, or (2) for a development outside the proximity of the project, because it is large enough in scale to warrant consideration.

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<sup>1</sup> For this EIR, “Proximate” is defined as within 6 miles of the proposed Project site.

<sup>2</sup> *Ibid* at CEQA, Title 14, Section 21083(b).

**Table 3-4.** Relevant Cumulative Projects

Case Number (if applicable)	Project Name	Project Location	Approximate Distance to Project Site	Project Type	Project Description
<b>Kern County</b>					
GPA 1, Map 218	Tejon Mountain Village Specific Plan	East of I-5 in the hills north and east of Castaic Lake	14 miles northwest of project site	Major Residential/commercial/recreational development	3,450 single family units (s.f.u.) homes on 23,000-acre planning area,
GPA, Map 255	Lebec Canyon Estates	East of Frazier Mountain Park Road/I-5 interchange	22 miles west of project site	Residential development	32 s.f.u on 1,000 acres
SPA 8, Map 254, Amend. Zone Map 254, Zone Change 6, SP 1, Map 254, Vesting Tent. Tract 6436	Frazier Park Estates	Southern boundary of Kern Co. and portion of LA County, west of I-5 south of Frazier Mountain Park Road	24 miles west of project site	Residential / Commercial development	705 s.f.u. and 135 thousand sq. ft of commercial on 847 acres in Kern County and 323 in LA County
GPA to 5.7, Map 215	Christine Bower	One quarter mile west of 105 <sup>th</sup> Street and McConnell Road near Rosamond	3 miles north of project site	General Plan Amendment and Zone	4 s.f.u on 20-acre site
ZC to A-1, Map 231	Julien and Assoc.	8684 Sweetser Road, Rosamond (APN 315-081-09)	3-1/2 miles northeast of project site	Commercial greenhouses	60-acre site
<b>Los Angeles County</b>					
N/A	Centennial Specific Plan	1 mile east of I-5, adjacent to SR-138	12 miles southwest of project site	Large-scale new community; including residential/commercial development	23,000 dwelling units and 14 million sq. ft. commercial on 11,700 acres
N/A	Gorman Ranch	Gorman Post Road, north of SR-138, east of I-5	17 miles southeast of project site	Residential	227 s.f.u. on 2,500 acres

## **Tejon Mountain Village Specific Plan (GPA 1, Map 218)**

The Tejon Ranch Company proposes to construct Tejon Mountain Village, a 28,253-acre project site; 23,000 acres of the site would remain as a nature reserve, and 5,000 acres would be developed with a mix of residential, commercial, and recreational uses. The proposed uses include up to 3,450 residences (both single-family and multi-family units) and up to 160,000 square feet of commercial development. This resort development would include various hotel, spa, and resort facilities, with up to 750 lodging units at up to seven locations. There would be a number of recreational and educational facilities, including a nature center, farmers' market, day camps, equestrian facilities, sporting clays course, parks, play lawns, trails, swimming, boating, docks on the lake, up to four 18-hole golf courses, and riding and hiking trails.

## **Lebec Canyon Estates (GPA, Map 255)**

The proposed Lebec Canyon Estates development would consist of 32 single-family residences located in the foothills just east of the interchange of Frazier Mountain Park Road and I-5. The residences would be located on multi-acre rural residential sites mostly in steep topography.

## **Frazier Park Estates (SPA 8, Map 254)**

The Frazier Park Estates project involves the entitlements for an 847-acre property in Kern County as well as infrastructure development on three adjacent parcels in Los Angeles County. The project includes a Tentative Final Map to develop the 847-acre site with a mixture of 705 single-family residential units, 41 multi-family residential units, commercial, recreational, community service facilities, and infrastructure.

## **Christine Bower (GPA to 5.7, Map 215)**

The applicant is requesting is to amend the Kern County General Plan for 20 acres located ¼-mile west of 105<sup>th</sup> Street and McConnell Road, north of the Willow Springs Specific Plan (WSSP). The parcel is currently designated Map Code 8.5 (Resource Management—20 acre min.) and zoned A FPS (Exclusive Agriculture/Floodplain Secondary).

The applicant is requesting a GPA from Map Code 8.5 to Map Code 5.7 (5 gross acres/dwelling unit) to facilitate four single-family dwelling units. A Zone Change would be processed concurrently with the General Plan Amendment.

## **Julien and Associates (ZC to A-1, Map 231)**

The applicant is proposing to construct greenhouses to cultivate hydroponically grown organic tomatoes on a 60-acre site. In addition, the applicant proposes to establish a wholesale business on the property.

## **Centennial Specific Plan**

The proposed Centennial project site consists of 12,000 acres located 1 mile east of I-5 and adjacent to State Route 138 in Los Angeles County.

The project includes a specific plan and subdivision entitlements (tract maps and conditional use permits) for a master planned community. The specific plan proposes a maximum of 23,000 dwelling units and 14 million total square feet of non-residential development of employment areas (12,233,390 square feet) and retail serving centers (1,986,336 square feet) is anticipated to be built over a period of approximately 20 years. It is estimated that the non-residential development may generate approximately 31,000 jobs.

## **Gorman Ranch Residential Project**

This project consists of an application to develop 191 single-family residences on 1,340 acres; 19 open space lots on 1,277 acres; 17 street lots on 57 acres; and one water tank site. Conditional use and an oak tree removal permit are required for hillside management and development within a Los Angeles County–designated sensitive environmental area. This project would encroach upon 2,404 oak trees in the development area, of which 35 are heritage oak trees. The proposed development would incorporate private septic systems. Domestic water service would be provided by the Gorman Ranch Mutual Water Company, which would be formed to serve the project. Approximately 2,119,598 cubic yards of cut is proposed and would be balanced on site, with an expected shrinkage of fill to 1,926,907 cubic yards. The proposed site for the project is located in Gorman on 2,674.7 acres at the end of Gorman Post Road, north of State Route 138, east of I-5, and within the Tehachapi Foothills Significant Ecological Area (SEA No. 59).

## **Kern County General Plan**

The draft Program EIR for the Kern County General Plan Update (July 2003) (GP PEIR) was also used as a source to determine cumulative impacts. The draft PEIR identifies potential cumulative impacts, based on buildout of the General Plan, in the following resource areas: air quality, land use, biology, noise, and public services. These potential impacts, with implementation of the General Plan Update, include increased air emissions exacerbating existing nonattainment status, conversion of prime and important farmland to urban uses, take of

individual plant and animal species, noise attributable to increased traffic and from existing rail corridors, and potential adverse effects to schools and sewer systems.

The potential cumulative impacts associated with implementation of the General Plan, along with the projects listed below, make up the cumulative impact scenario (cumulative scenario) to be considered in conjunction with the AVWBP.