

ARIZONA WATER BANKING AUTHORITY

WEDNESDAY, SEPTEMBER 17, 1997
ORO VALLEY TOWN COUNCIL CHAMBERS

PLEASE PRINT

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8	NAME: BOB McCAIN REPRESENTING: AMWUA	BUSINESS ADDRESS:	TEL: FAX: E-MAIL:
9	NAME: MICHAEL BLOCK REPRESENTING: METRO WATER DISTRICT	BUSINESS ADDRESS::	TEL: FAX: E-MAIL:
10	NAME: JEFF JOHNSON REPRESENTING: SO. NEVADA WATER ASSOC.	BUSINESS ADDRESS:	TEL: FAX: E-MAIL:
11	NAME: G.L. EDWARDS REPRESENTING: CRC - NEVADA	BUSINESS ADDRESS:	TEL: FAX: E-MAIL:
12	NAME: HARRRY RUZGARIAN REPRESENTING: MWDSC - SO. CALIF	BUSINESS ADDRESS:	TEL: 213-217-6082 FAX: E-MAIL:
13	NAME: MARK MYERS REPRESENTING: METRO WATER - TUCSON	BUSINESS ADDRESS: 5800 N. CAMINO ARTURO TUCSON 85718	TEL: 520-742-0416 FAX: E-MAIL:
14	NAME: RON WONG REPRESENTING: BKW FARMS	BUSINESS ADDRESS: PO BOX 186 MARANA 85653	TEL: 520-682-2516 FAX: 520-682-2517 E-MAIL: BKWFARMS@JUNO.COM
15	NAME: JIM PETERSEN REPRESENTING: ORO VALLEY	BUSINESS ADDRESS 11000 N. LA CAÑADA DR ORO VALLEY 85737	TEL: 520-297-2591 FAX: 520-297-0428 E-MAIL:

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ORO VALLEY TOWN COUNCIL CHAMBERS

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16	NAME: LOIS KULAKOWSKI REPRESENTING: TUCSON REGIONAL WATER COUNCIL	BUSINESS ADDRESS 48 N. TUCSON BL., #106 TUCSON 85716	TEL: 520-881-3939 FAX: 520-881-1165 E-MAIL:
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18	NAME: ERIC HOLLER REPRESENTING: BUREAU OF RECLAMATION	BUSINESS ADDRESS 4257 W. INA RD., #101 TUCSON 85742	TEL: 520-744-5182 FAX: 520-744-0192 E-MAIL:
19	NAME: FRANK BUTRICO REPRESENTING: ORO VALLEY TOWN COUNCIL	BUSINESS ADDRESS 11000 N. LA CAÑADA DR. ORO VALLEY 85737	TEL: FAX: E-MAIL:
20	NAME: KATHY JACOBS REPRESENTING: ADWR, TUCSON AMA	BUSINESS ADDRESS	TEL: FAX: E-MAIL:
21	NAME: REPRESENTING:	BUSINESS ADDRESS	TEL: FAX: E-MAIL:
22	NAME: REPRESENTING:	BUSINESS ADDRESS	TEL: FAX: E-MAIL:
23	NAME: REPRESENTING:	BUSINESS ADDRESS	TEL: FAX: E-MAIL:

Arizona Water Banking Authority
500 North Third Street, Phoenix, Arizona 85004
Telephone 602-417-2418
Fax 602-417-2401

FINAL AGENDA

Wednesday, September 17, 1997
10:00 a.m.

Oro Valley Town Council Chambers
11000 North La Cañada Drive
Oro Valley, Arizona 85737

- I. Welcome / Opening Remarks
- II. Adoption of Minutes of August 20th Meeting
- III. Update of 1997 Plan of Operation
- IV. Tucson Regional Recharge Plan/Status of Tucson Recharge Sites
- V. Tucson Water Recharge Activity
- VI. Update on Mohave County Discussions
- VII. Update on the AWBA Study Commission
- VIII. Update on Interstate Discussions
- IX. Call to the Public
- X. Adjournment

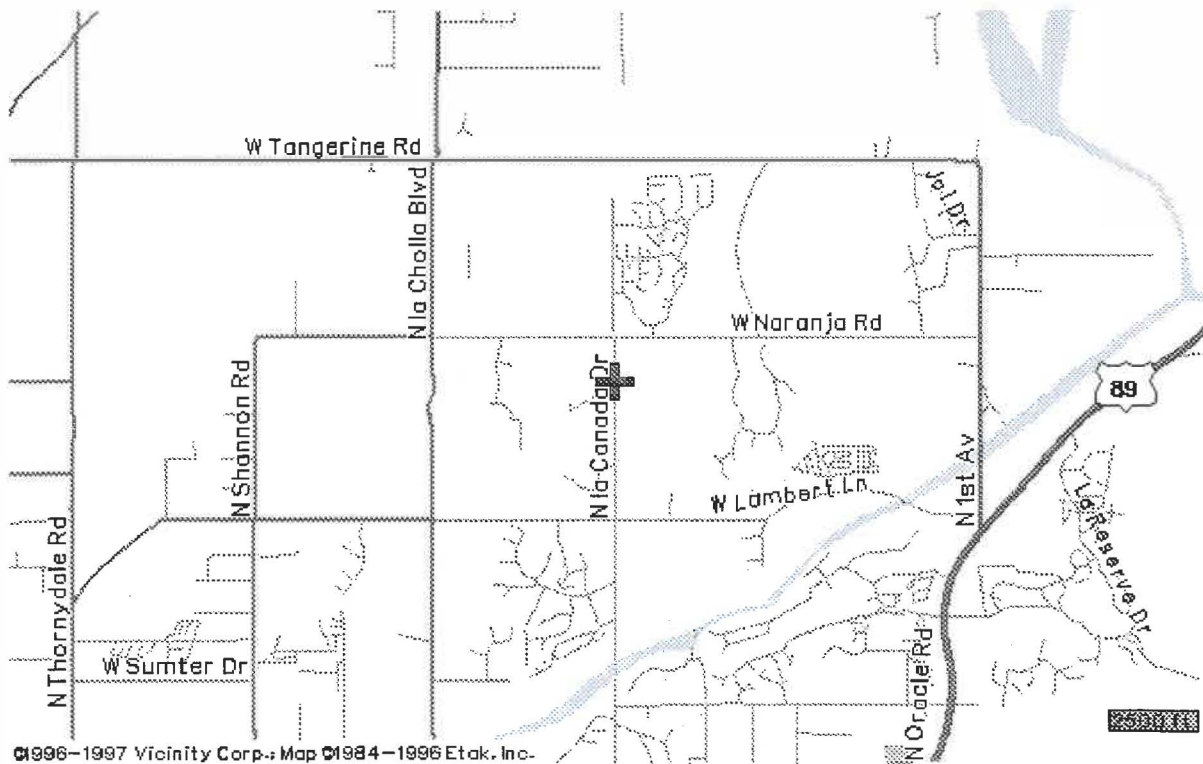
Future Meeting Dates:

Wednesday, October 15, 1997

Wednesday, November 19, 1997

Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting the Arizona Water Banking Authority at (602) 417-2418 or (602) 417-2455 (T.D.). Requests should be made as early as possible to allow time to arrange the accommodation.

****PLEASE NOTE MAP ON BACK PAGE**



ARIZONA WATER BANKING AUTHORITY
Draft Minutes

August 20, 1997
Arizona Department of Water Resources



AUTHORITY MEMBERS
Rita P. Pearson, *Chairman*
Tom Griffin, *Vice-Chairman*
Bill Chase, *Secretary*
Grady Gammage
Richard S. Walden

EX OFFICIO MEMBERS
Senator Pat Coomer
Rep. Bill McGibbon

Welcome / Opening Remarks

Chairman Pearson opened the Arizona Water Banking Authority (AWBA) meeting with roll call of the Authority members in attendance. All members of the Authority were present.

Adoption of Minutes of June 30th Meeting

The June 30th minutes were adopted as submitted.

Update of 1997 Plan of Operation

Tim Henley gave an overview stating that, according to the current Plan of Operation, the scheduled water deliveries have fallen behind due to inability to deliver to GRUSP. It is estimated that GRUSP will be operable starting in September. In the Tucson AMA, the deliveries are ahead of schedule due to the implementation of Avra Valley. The Authority staff is still waiting for the other facilities to become available. The Authority staff will begin working with Central Avra Valley Salt River Project (CAVSRP), recharging water in September. Pima Mine Road activity has been moved to 1998. Lower Santa Cruz is still in the defining phase, looking at developing an Inter Governmental Agreement (IGA) with the CAP, which has delayed the process. Deliveries in Pinal are above their schedule mainly because the districts have had a significant amount of water use this year for agriculture. Hohokam is delivering more water. The Water Bank is currently at about 250,000 af of water through July and should be close to its projected 360,000 af by the end of the year.

Dennis Rule, Administrator for Tucson Water, gave an update on the CAVSRP, which is a 60-acre pilot. He anticipated that it would come into operation the first or second week of September. There should be approximately 4,000 to 10,000 af for the remainder of 1997 in the facility. Mr. Rule and Chuck Cahoy, Legal Counsel for the Arizona Water Banking Authority, will work on the agreements between CAVSRP and WBA and the storage permits. He stated that he is hopeful that the WBA will be able to put a bigger volume of water in the facility for the remainder of 1997 and 1998 and be able to get storage in the Tucson area.

Larry Dozier from the CAWCD stated that CAWCD is going to try to get some water in GRUSP starting in September. CAWCD is looking at having water siphoned from the Colorado River by September 15. The most optimistic date is set at August 22.

Discussion of WEB Page

Kim Klaiber, Technical Administrator, informed those present that the Arizona Department of Water Resources (ADWR) is officially on the Internet. The WEB page contains information about ADWR, recent announcements, Arizona water information reference materials and other items.

The AWBA plans to have a WEB page available in mid September. The cost to have the Internet for AWBA up and running is approximately \$3,500.00. The information contained on the AWBA WEB page are: future Annual Reports, Executive Summary, various forms will be available and instructions necessary for Water Banking customers, information on Authority members, biographical sketches, searchable text of House Bill 2494, water pricing availability information staff contact information and electronic forms so that people using the site can interact.

The Arizona Water Banking Authority has already begun a mailing list through electronic e-mail and encourages interested parties to submit their e-mail addresses.

Richard Siegel, from SRP, asked if the Plan of Operation will be available on the WEB page and Kim Klaiber affirmed.

Don Pope, Yuma County Water Users Association, asked if there will be information available on the irrigation districts. Ms. Klaiber stated that she will work with the appropriate people from ADWR to determine the 'link' capabilities to other sites.

Initial Discussions of Pricing for 1998

Larry Dozier stated that the committee is set up to formalize a rate setting procedure, but at this time they are working on the actions to be taken and the steps to go through and will not be setting up rates at this time. There are some issues that cannot be resolved at this time. The committee will work on formalizing the procedure for rate setting.

The second committee that was formed will be establishing a pricing philosophy. They will address the subsidy issues, source of funds, the \$.04 property tax, general fund appropriation and the groundwater pump tax, the benefits from those dollars, and what kind of subsidies are associated with prices.

The first meeting will be September 4. The first meeting of the committees will be posted and announced by CAWCD.

Ms. Pearson had some concerns whether the Arizona Water Banking Authority should have any kind of flexibility in the pricing structure and whether the Authority should take into consideration different pumping rates in the Tucson area versus the Phoenix area.

Tim Henley stated that the Authority staff will do some research on the pricing and report the findings to the members of the Authority. He also stated that a report could be prepared and ready for review by the members by the October 15 meeting.

Larry Dozier stated that 97-98 prices are set, and that the committee is looking at 1999 prices.

Tim Henley commented that the Authority staff will begin discussions with the irrigation partners over the next month as they start to think about what their operations for the next year will be. Mr. Henley proposed at this time that the Authority continue with its philosophy of \$21.00 for the partners, depending on what actually happens with CAP water, and continue to talk to the partners to see the interest that's generated. With direct recharge, it is maintained as 'sites specific' which is what the Bank's philosophy has been in the past, pending the outcome of the proposed report and any additional direction the Authority would give the Authority staff in the future.

Ms. Pearson stated that, with respect to the direct recharge, she would like to see what the different charges are on a site-by-site basis, and what the components of those charges are so that the Authority members understand what they are paying for.

Discussion of Innovations in American Government

Kim Klaiber described the Ford Foundation as a grant program which recognizes innovated government programs that show promise in certain areas: community development, education, media, arts and culture, and peace and social justice. The program is administered by the Kennedy School of Government at Harvard University.

The Arizona Water Banking Authority meets the eligibility requirements which are set forth in the application for the program. It has to be administered by a government or special authority, takes a new approach to a special pressing need, be in existence for 12 months, and must have a proven record of effectiveness that the program has met its goals.

There are 25 winners total, 10 of them will receive \$100,000.00 and the 15 receive \$20,000.00. Some past winners have been the ADWR Groundwater Management Code, in 1986 and BOR won an award previously.

Representative McGibbon inquired as to what the Bank would do with the funds if they are received and asked whether the Arizona Water Banking Authority has spending discretion.

Tim Henley stated that the funds could be used for more public involvement. Chuck Cahoy, Legal Advisor to the Arizona Water Banking Authority, stated that under ARS 45-2425(B), the Authority is entitled to receive grant monies and use it for the purpose of general aid.

Mr. Henley also stated that they could use the funds to purchase more water or use the funds for more public involvement, and there is a great need for public involvement and activities.

Ms. Pearson felt that Arizona Water Banking Authority, as a program, would qualify for consideration by the Ford Foundation for an award.

Update on Mohave County Discussions

Tim Henley stated that not too much has taken place on the Mohave County discussions. Although some things have happened, one of the issues with Mohave County is how much water should be recharged to provide the firming of the supply.

One of the activities of the subcommittees will be to look and run some models to help define some of their activities, and it appears that there is a range on what direction the Bank will want to go in firming the supplies. Mr. Henley stated that it appears that the range is about 500,000 to 1,000,000 af, with a realistic number being in the area of 750,000 af. It would be appropriate at the next meeting to have an agenda item to discuss and bring forward the model runs made available to the subcommittee of the Study Commission. There are some variations in the model runs that create the range, and Mr. Henley felt that it would be appropriate to have the discussion on what direction to go in firming the supplies.

Mr. Henley expressed that they have met with Mohave County to talk about a general outline, which was presented in July.

With the approval of the budget for the Water Banking Authority, the process of looking into the potential hiring of a consultant is underway. The proposals of the eight consultants that were selected through the State procurement process are available for the Authority staff's review. Mr. Henley will be meeting with representatives from ADWR who through the screening process will determine the most qualified consultant. This person will assist the Authority in developing data pertaining to recovery.

Update on the AWBA Study Commission

Tim Henley gave an outline of the activities of the study commission subcommittees. The subcommittees did not meet in the month of July, but Herb Dishlip has been working on various reports that are in draft form. As reported in the last Water Banking meeting, the schedule is to have the reports drafted, reviewed in the month of August and develop recommendations. The recommendations are then presented to the full Study Commission, expected to meet on Thursday, September 25. At that time the Study Commission will look at the various reports and develop their recommendations, which will then be drafted and reviewed and be available to meet the November time frame of the interim report (pursuant to the legislation).

Update on Interstate Discussions

Ms. Pearson stated that the seven basin states met in San Diego to hear a presentation by California. This plan intends to show how they will reduce their current demand of 5.3 million af a year off the Colorado River, reducing it down to 4.4 million af, their annual entitlement. The meeting was a culmination of a very extensive process that has been ongoing in California. This would be both an intrastate plan and an interstate plan. The six states were more interested in what the long term plan was for taking additional water off the Colorado River. The news articles stated that the six states were generally disappointed with the plan due to the lack of information contained therein.

The six states uniformly agreed that the plan was short on specifics. About a year ago the six states wrote a letter to the California Water Board and said they could not support ongoing surplus declarations on the Colorado River to meet the demands in excess of 4.4 million af until California could come up with a plan that would show that they can in fact reduce their demand. This is what initially initiated the discussions

among the California agencies to come up with the plan. The plan actually is proposed for California to continue to take 5.2 million af. The plan was very short on commitments to reduce the demand and is still a way for California to get additional surpluses out of Lake Mead. The six states reacted that this plan does not work, they cannot support ongoing surplus declarations when California does not have a tangible program in place to show how they can reduce the demand.

There have been subsequent discussions with the various California agencies, preparing to redo the plan and Ms. Pearson is optimistic that they will in fact find a way to reduce their demand. They have some internal quantification issues with the agricultural agencies for understanding what the baseline use of the ag communities are and what water can move to the municipal side of the ledger. There are still problems with Metropolitan Water District (MWD) being reluctant to reel San Diego's potential water supply from IID. There are still unresolved issues in Coachella with respect the 3.85 million af of ag water which is allocated among the ag users in California.

The California plan did not contain any time lines and no specific quantities. The six basin states want to see 'concrete' dates and amounts so that the states can get some comfort that California has found a way to reduce its demand.

During their meeting in San Diego, Bob Johnson from the U.S. Bureau of Reclamation provided an update on the federal banking regulations. He indicated that they will probably release the regulations in late September or early October for public comment in the Federal Register. ADWR should expect to see a draft federal banking regulations within the next couple of months.

Ms. Pearson introduced Mike Pearce, Chief Counsel for the ADWR, to summarize the status of the litigation regarding the Colorado River Water Supplies under the Endangered Species Act. The original complaint was dismissed on legal grounds of not having filed proper notice to the Bureau of Reclamation (BOR) upon filing the suit. The plaintiff amended the complaint, alleging that the Secretary violated the ESA in preparing the biological opinion Lake Mead. Plaintiff and Defendant Babbitt both moved to intervene. While the seven states renewed their motion to dismiss on jurisdictional grounds. Overall, there is a good likelihood that the Secretary will prevail based on his cross-motion for summary judgment. Later, the Court issued its order on the cross motions for summary judgment. The Plaintiff's motion for summary judgment was denied, and the Defendant's cross-motion for summary judgment was granted. (Copy of judge's order attached. The order was not available for public handout the day of the meeting).

Ms. Pearson stated one important point is there are probably subsequent cases in the 'pipeline' now, so even though the judge ruled in a way that is satisfactory to ADWR, there are other lawsuits that are likely to be filed.

Call to Public

Chairman Pearson adjourned the meeting at 10:30 a.m.

1 Mead under the Law of the River. (Final BO at 8-10). The Final
2 BO reflects that the change from the RPA in the Draft BO to that
3 in the Final BO was the result of a clarification of
4 Reclamation's discretion to decrease the level of Lake Mead.
5 Although Plaintiff argues that the Service failed to
6 independently determine the extent of Reclamation's discretion,
7 even if Reclamation has complete discretion in the management of
8 Lake Mead, the relevant inquiry is whether the RPA in the Final
9 BO alleviates jeopardy. Although the RPA in the Final BO does
10 not require the preservation of the Delta habitat, that does not
11 per se render it arbitrary or capricious and this Court has
12 concluded that the RPA is not otherwise arbitrary and capricious.

13 Accordingly,

14 Plaintiff's motion for summary judgment will be denied.
15 Defendant's cross-motion for summary judgment will be granted.

16 The Court being fully advised,

17 **IT IS ORDERED** granting Plaintiff's motion for leave to file
18 overlength brief. (Dkt. 84).

19 **IT IS FURTHER ORDERED** granting Plaintiff's motion for
20 expedited consideration of its motion for summary judgment.
21 (Dkt. 85).

22 **IT IS FURTHER ORDERED** granting Plaintiff's motion to file
23 overlength response and reply. (Dkt. 119).

24 **IT IS FURTHER ORDERED** granting Defendant's motion for leave
25 to file overlength brief. (Dkt. 97).

26 **IT IS FURTHER ORDERED** granting the Regional Entities' motion

1 to exceed the page limit. (Dkt. 102).

2 **IT IS FURTHER ORDERED** granting the States leave to appear at
3 oral argument on the motions for summary judgment. (Dkt. 114).

4 **IT IS FURTHER ORDERED** denying Plaintiff's motion to strike
5 declarations of Laura Herbranson and Nancy Kaufman. (Dkt. 132).

6 **IT IS FURTHER ORDERED** denying Plaintiff's motion for summary
7 judgment. (Dkt. 81).

8 **IT IS FURTHER ORDERED** granting Defendant's cross-motion for
9 summary judgment. (Dkt. 95).

10 **IT IS FURTHER ORDERED** denying the renewed motions to dismiss
11 as moot. (Dkt. 115).

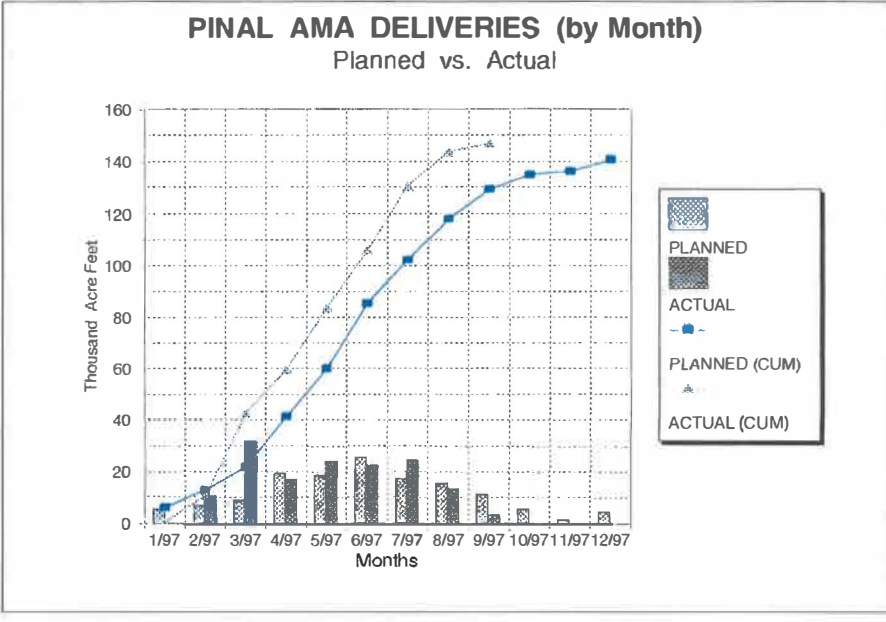
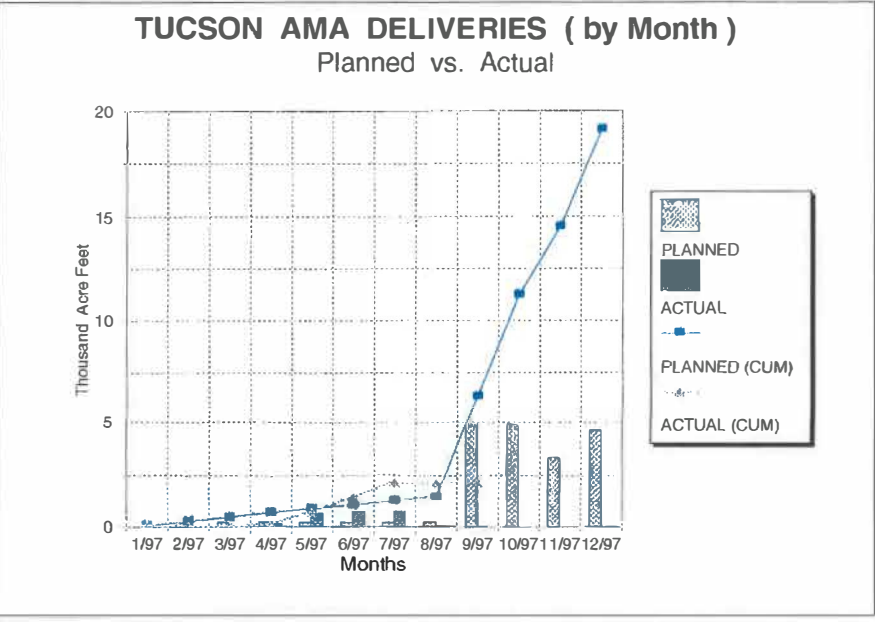
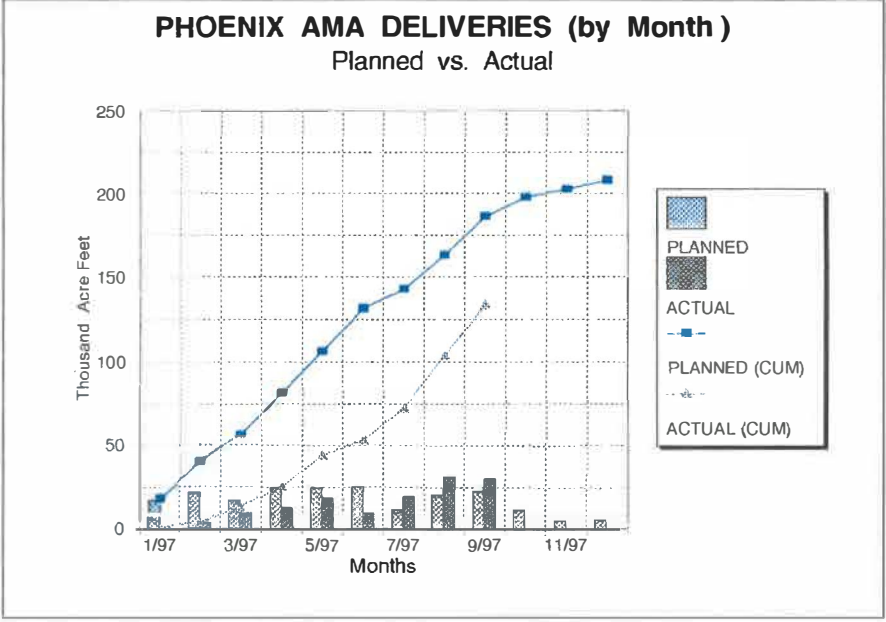
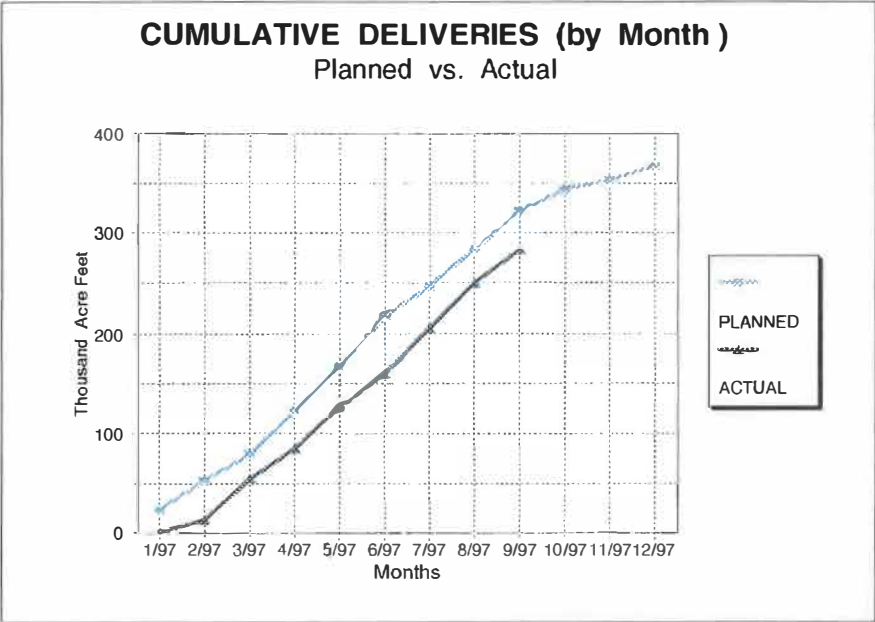
12 **IT IS FURTHER ORDERED** denying as moot the Central Arizona
13 Conservation District's motion to intervene. (Dkt. 117).

14 **IT IS FURTHER ORDERED** denying as moot Imperial Irrigation's
15 motion to intervene. (Dkt. 128).

16 DATED this 22 of August, 1997.

17
18 
19 Earl H. Carroll
United States District Judge

1997 PLAN OF OPERATION



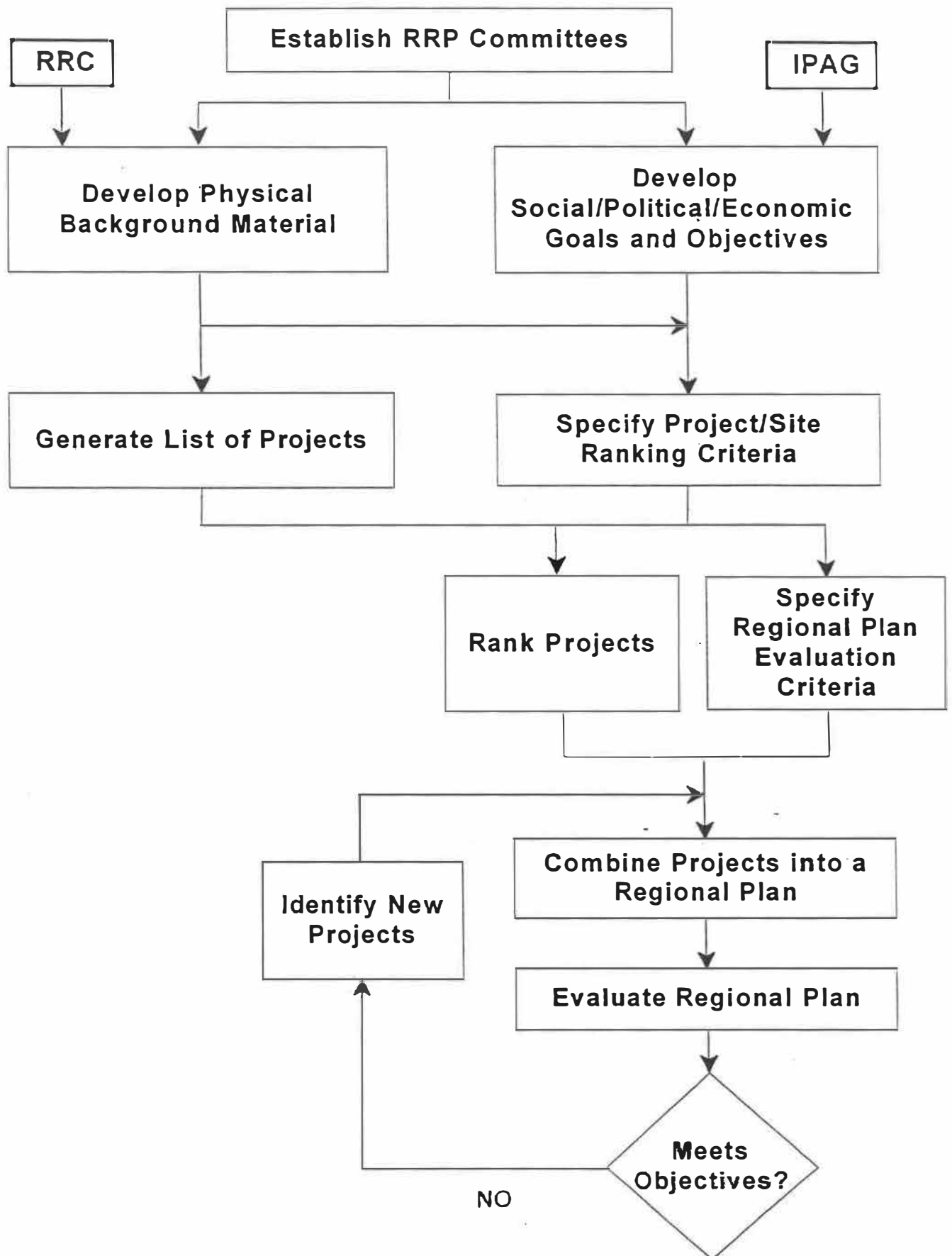
Actual deliveries updated 15-Sep-97

	jan	feb	mar	apr	may	jun	jul	aug	sep	total	
Phoenix AMA											
GRUSP	0	0	1,961	0	8,302	727	0	0	10,000	20,990	GRUSP
RWCD	0	0	3,689	8,121	8,326	4,676	8,267	6,164	4,000	43,243	RWCD
NMIDD	0	3,310	3,490	4,400	2,100	3,700	6,992	15,590	12,000	51,582	NMIDD
QCID	0	0	0	0	0	0	3,566	7,263	1,000	11,829	QCID
MWD	0	0	0	0	0	0	578	2,171	2,878	5,627	MWD
CHCID	<u>0</u>	<u>100</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>0</u>	<u>0</u>	<u>350</u>	CHCID
Subtotal	0	3,410	9,190	12,571	18,778	9,153	19,453	31,188	29,878	133,621	
Pinal AMA											
CAIDD	0	6,825	19,967	8,208	10,000	0	0	0	0	45,000	CAIDD
MSIDD	0	2,446	8,422	5,402	8,923	12,780	10,940	3,838	1,270	54,021	MSIDD
HIDD	<u>0</u>	<u>1,400</u>	<u>3,300</u>	<u>3,300</u>	<u>5,015</u>	<u>9,575</u>	<u>13,485</u>	<u>9,423</u>	<u>2,000</u>	<u>47,498</u>	HIDD
Subtotal	0	10,671	31,689	16,910	23,938	22,355	24,425	13,261	3,270	146,519	
Tucson AMA											
Avra Vally	0	0	0	55	644	743	695	20	0	2,157	Avra Vally
CAVSRP	0	0	0	0	0	0	0	0	0	0	CAVSRP
Pima Mine	0	0	0	0	0	0	0	0	0	0	Pima Min
Lower Santa Cru	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	L. Santa
Subtotal	0	0	0	55	644	743	695	20	0	2,157	
TOTAL	0	14,081	40,879	29,536	43,360	32,251	44,573	44,469	33,148	282,297	

Regional Recharge Planning Objectives

- **Provide a forum for regional cooperation regarding recharge activities**
- **Maximize the use of renewable water supplies in the Tucson AMA**
- **Optimize the sharing of recharge, pumping and transmission facilities**
- **Expedite selection, testing and construction of groundwater recharge facilities**
- **Facilitate equitable access to recharge capacity**
- **Provide a background document for the facilities plan that will be required by the Arizona Water Banking Authority**

REGIONAL RECHARGE PLANNING PROCESS



SOURCES OF WATER FOR RECHARGE IN THE TUCSON AMA
(Total amounts in year 2000 not reduced by projected amounts for direct use)

Entity	CAP (acre-feet)	Effluent (acre- feet)	Other (acre- feet)	Comments
Bureau of Reclamation		28,200		Secretary of Interior's SAWRSA exchange
CAWCD/CAGR	1,500 Excess CAP			projected minimum replenishment obligation
State Land Department	14,000			for TAMA
AWBA	42,000 Excess CAP			purchased by estimated \$2.1M revenue from Pima Co. at \$50/AF
San Xavier District of TON	27,000		23,000	allocation and SAWRSA exchange from Secretary's effluent
Schuk Toak District of TON	10,800		5,200	allocation and SAWRSA exchange from Secretary's effluent
Pasqua Yaqui Tribe	500			allocation
Pima County		4,680		1979 IGA
City of Tucson	148,420	42,120		allocation and 1979 IGA
Town of Oro Valley	1,652			allocation
Del Lago WC	786			allocation
Spanish Trail WC	3,037			allocation
Commun WC - Green Valley/New Pueblo WC	1,337			allocation
Green Valley WC	1,900			allocation and
Cortaro WUA	47			allocation
Flowing Wells ID	4,354			allocation expected to be exchanged
Midvale Farms	1,500			allocation expected to be available to City of Tucson
TOTAL	258,830	75,000	28,200	

Needs Assessment Survey

28 Interviews:

Government agencies

Local jurisdictions

Municipal water providers

Agricultural users

Mining users

Indian representatives

Subjects/Issues:

Goals and risks associated with recharge

Constraints and opportunities

Potential to participate

Results:

Criteria for evaluating projects for inclusion in the Regional Plan; also, criteria for evaluating the Plan itself to ensure objectives are met

Development of short and long-term objectives.

Focus of Plan

Short-term objectives:

- **Maximize use of Colorado River water, ASAP**
- **Minimize costs**

Long-term objectives:

- **Groundwater level stabilization**
- **Subsidence prevention**
- **Protection of water quality**
- **Environmental considerations (riparian protection, etc.)**

Categorization of Projects

Initial project evaluations based on RRC Report

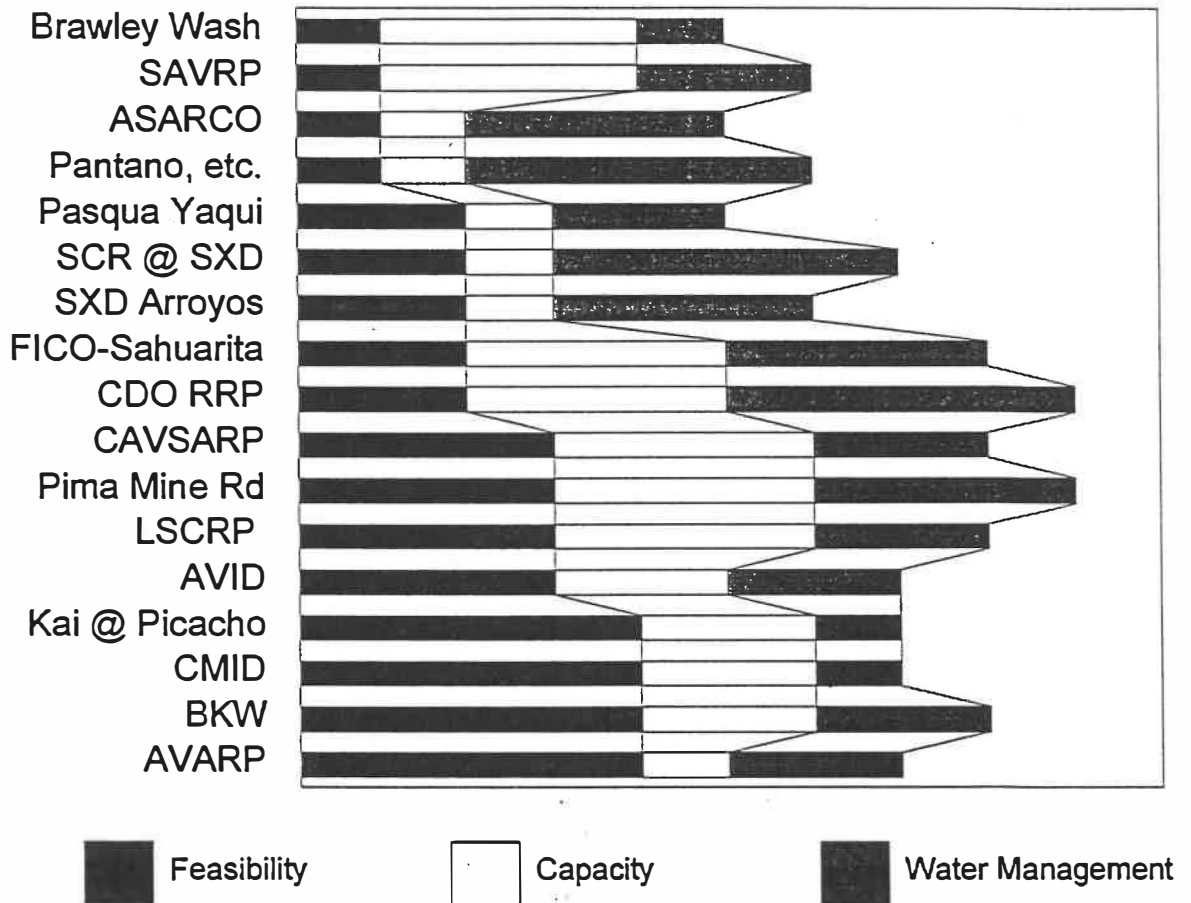
(Deleted Tangerine/I-10 site, added Kai at Picacho (indirect) and Pascua Yaqui (basins))

• Categorization of projects based on 3 groups of criteria:

- Feasibility, including cost, operational and regulatory risk (4 categories)**
- Facility capacity (4 categories)**
- Water management and related benefits (4 categories)**

Figure 10

Recharge Project Categorization



**Arizona Water Banking Authority
Potential Recharge Capacity Needs in Pima County**

Revenue for 1998

4 cent tax	\$1.4 M
Withdrawal fee	\$0.7 M
<hr/>	
Total	\$2.1 M

Capacity needed to expend funds for recharge

@ \$49.00/AF:	43,000 AF
@ \$25.00/AF:	84,000 AF

AWBA storage scheduled at TAMA recharge facilities in 1997: 19,100 AF

AWBA storage in 1997 to date: 2,100 AF

Additional capacity needed in 1998: up to 17,000 AF

RECHARGE DEMAND

Scenario 1: Low Recharge Demand 64,000 AF in 2000
71,423 AF in 2007

- **Tucson uses CAP by direct delivery**
- **CAGR D meets minimum obligation**
- **AWBA use based on \$49/AF-43,000**
- **Few long-term credits generated**

Scenario 2: Medium Recharge Demand 110,308 AF in 2000
135,895 AF in 2007

- **Tucson uses a 50/50 blend of CAP and groundwater**
- **Phase in of recharge by CAGR D**
- **AWBA use based on \$49/AF**
- **Long-term credits accrue @ 20% of potable demand**

Scenario 3: High Recharge Demand 232,770 AF in 2000
253,964 AF in 2007

- **Tucson recharges all of its CAP**
- **All providers recharge to offset their total use (through CAGR D or otherwise)**
- **AWBA recharge cost is \$25/AF-84,000 AF**

**Tucson AMA
Recharge Capacity vs Demand**

Recharge Capacity			Recharge Demand		
	2000	2007		2000	2007
Low	110,800	144,300	Low	64,776	71,423
Med	173,000	216,500	Med	110,308	135,895
High	230,500	286,000	High	232,770	253,964

Existing Annual Recharge Capacity

Indirect (GSF) 30,031

Direct*

Avra Valley Airport 11,000

PMR 10,000

CAVSARP 10,000

Total 31,000

Total Existing 61,031

***Only projects existing or under construction are listed.**

Implementation Issues/Opportunities

- **Incorporation of water management objectives in site selection for storage and recovery**
- **Tucson Water CAP Utilization - Proposition 200 or 201?**
- **Need Projects to address Tucson's Central Wellfield; in the absence of Proposition 200, direct use would offset well pumpage. In addition, injection recharge would be an excellent way to address subsidence potential and to recharge the wellfield.**
- **Tucson's "At the Tap" study outcome (summer, 1998)**
- **ADWR Green Valley - Sahuarita study outcome**
This is an optimization study of CAP use by FICO, the mines, golf courses and area water companies, as well as recharge opportunities. Final report due summer, 1998.
- **ADWR technical services contract available to respond quickly to technical issues. Current proposals include THM precursor evaluations and a proposed pilot study on the Canada del Oro.**

PROVISIONS OF THE WATER CONSUMER PROTECTION ACT WITH IMPLICATIONS FOR RECHARGE

- ▶ For 5 years from the effective date of the act, CAP water delivered to the City of Tucson

Shall **not** be used for direct delivery as a **potable water supply**

Unless it is treated to the quality of water delivered from Tucson's Avra Valley well field in **salinity, hardness** and **dissolved organic material**

Shall **not** be directly recharged by **well injection**

Unless treated to the potable standards listed above and is free from **disinfection by-products**

- ▶ The City of Tucson shall **not recharge** water in any area that contains or is adversely affected by **toxic landfills**.
- ▶ The City of Tucson shall use recharge to **completely replenish** all groundwater withdrawn from its **central well field**, as measured over a 5-year period.

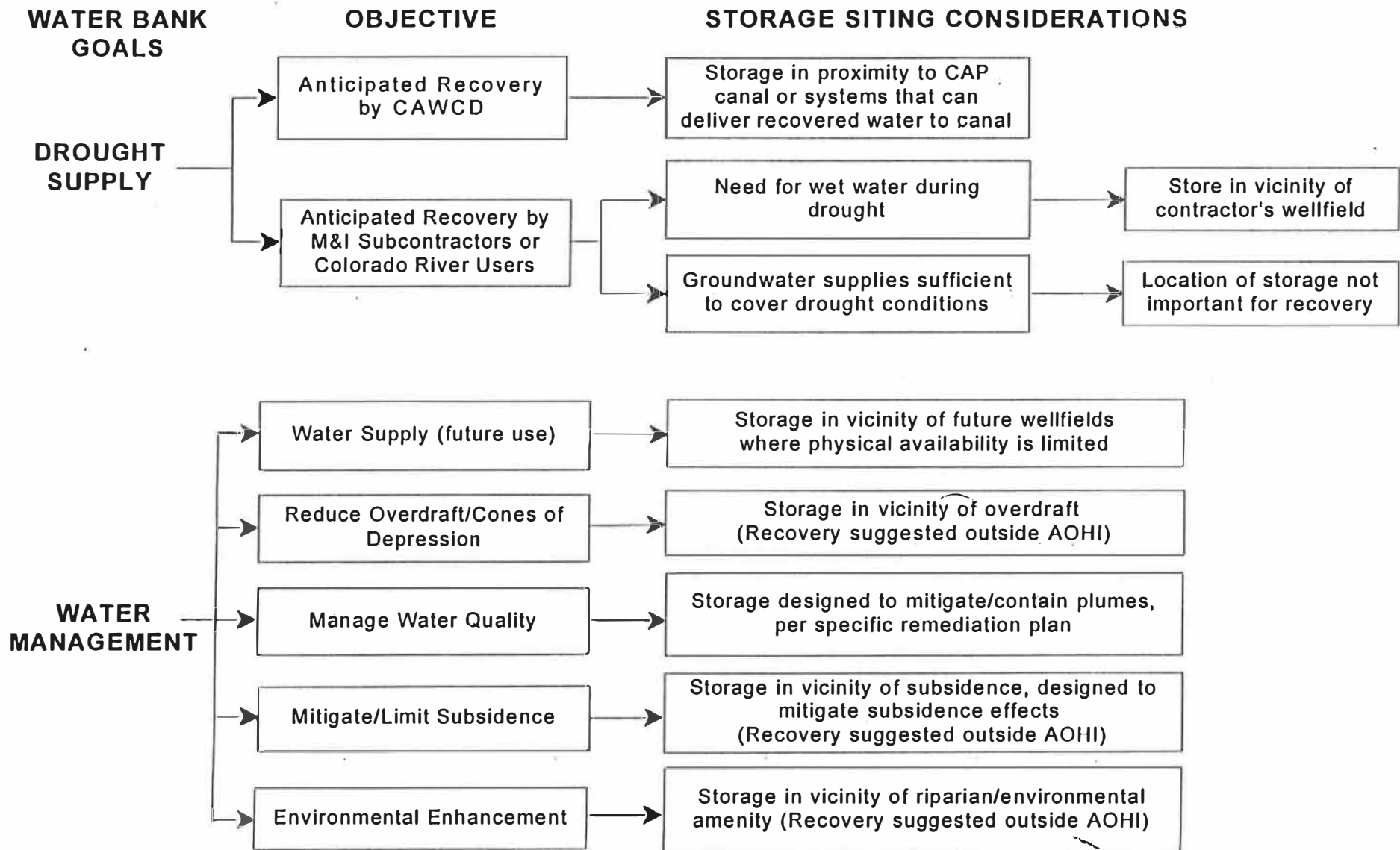


Figure 22

Land Subsidence Potential
(by the year 2025)

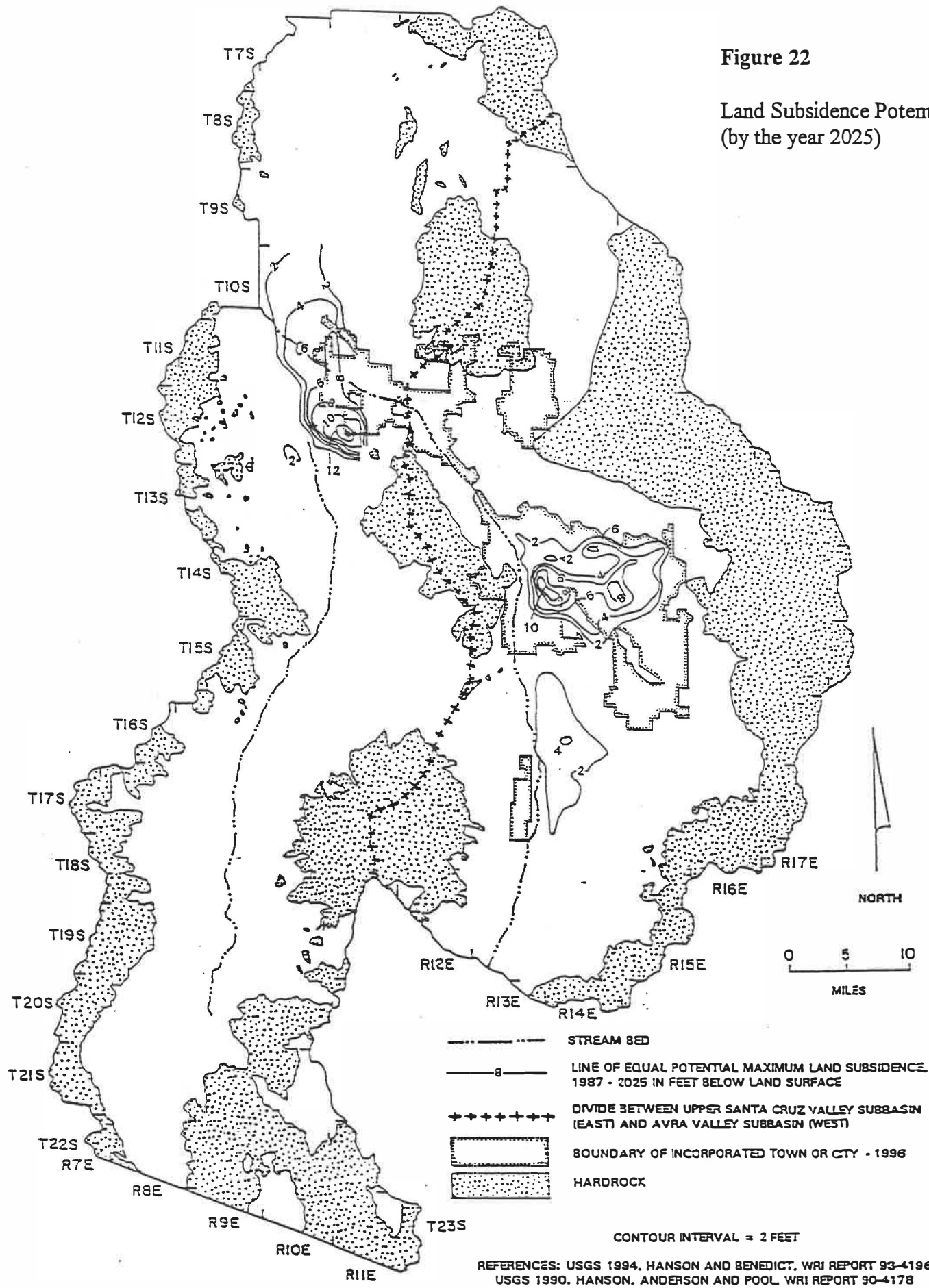


Figure 23

Change in Groundwater Level
(1940 to 1982)

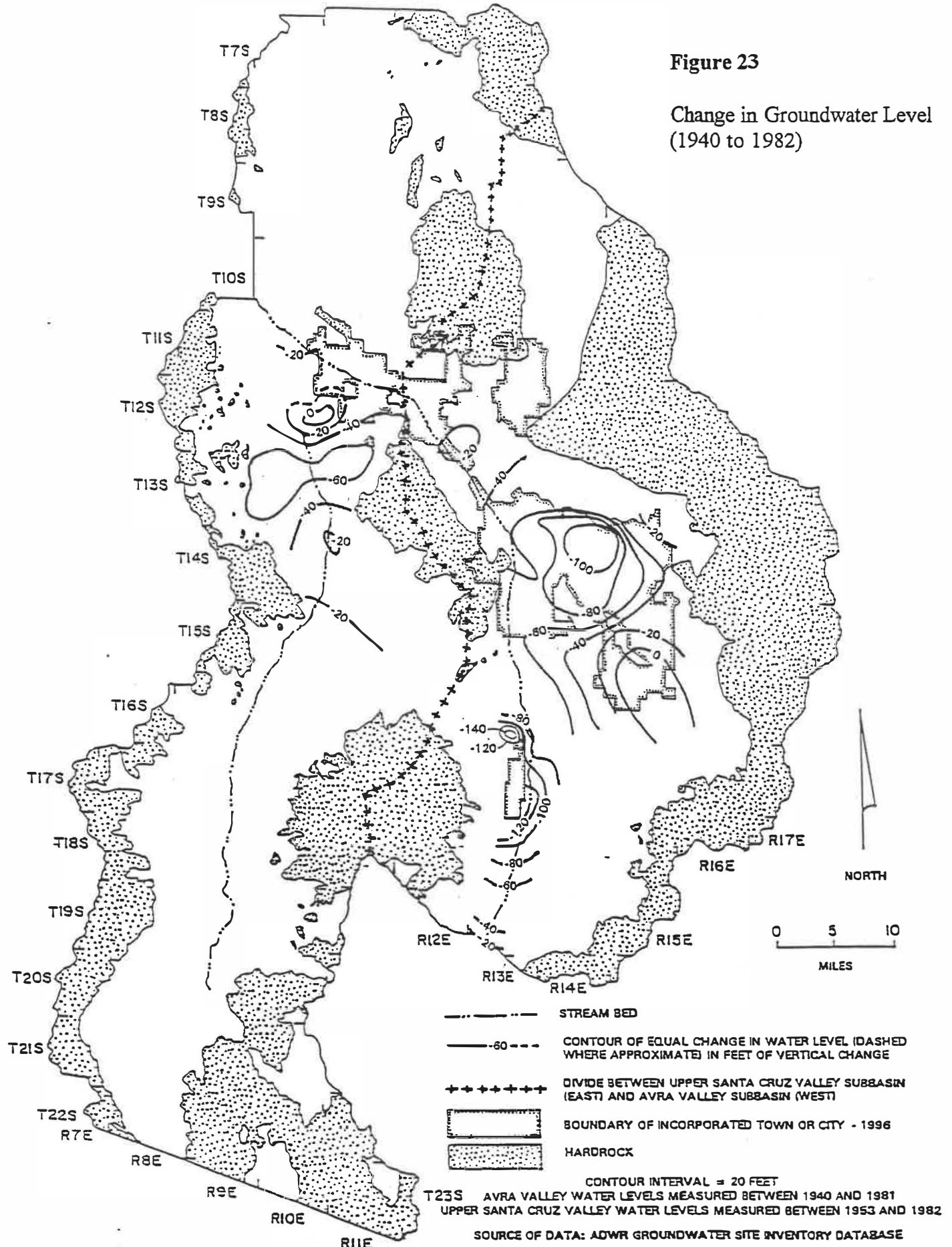
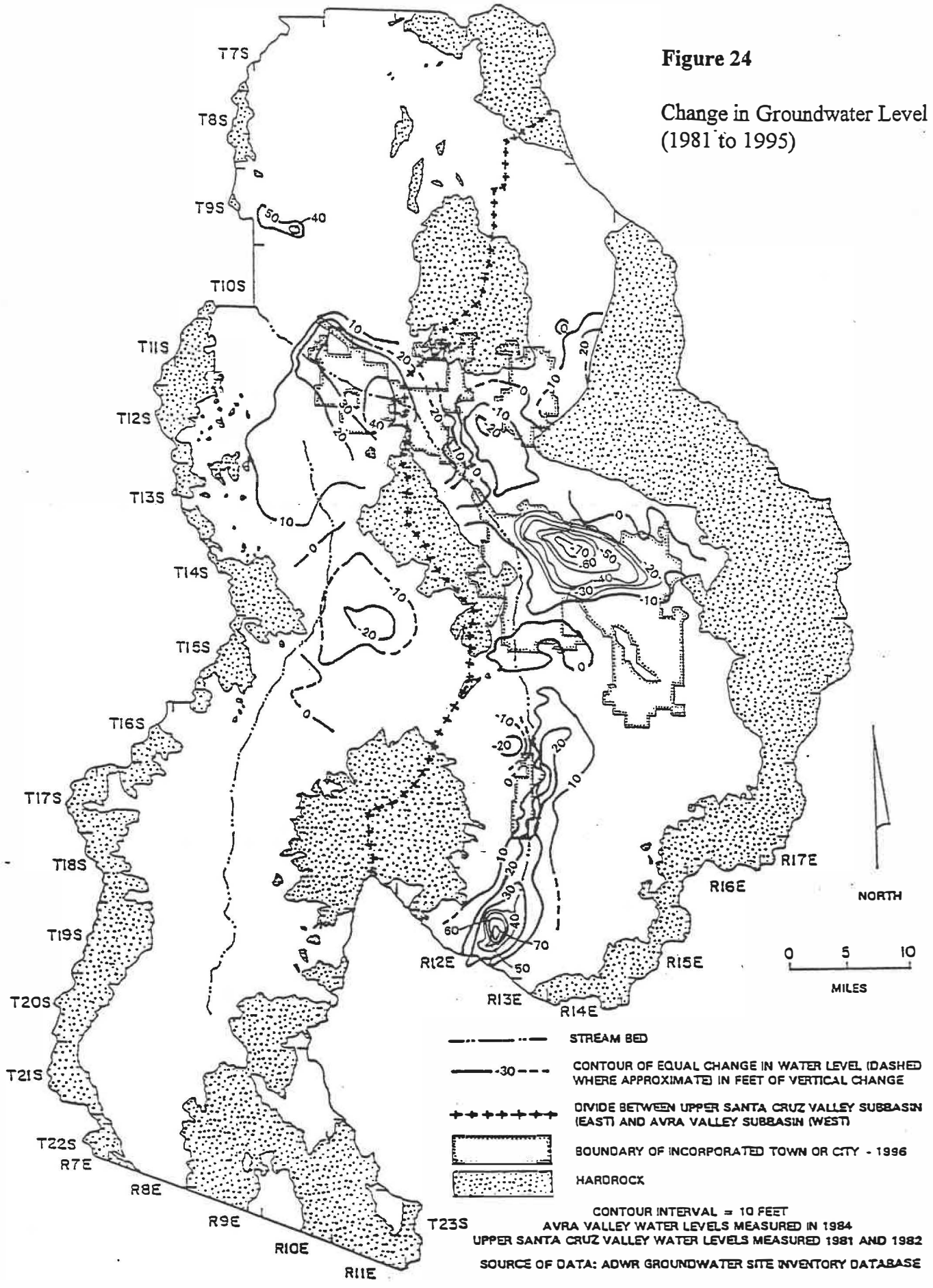


Figure 24

**Change in Groundwater Level
(1981 to 1995)**



VII. RECHARGE PROJECT SITE ASSESSMENT FOR PROJECTS USING CAP

As stated above (Section I.B), this phase of the regional recharge planning process focused primarily on CAP recharge. When the Regional Recharge Committee (RRC) evaluated projects in detail, it selected primarily CAP recharge projects for further evaluation. The RRC's 16 detailed project evaluations were published in their report. Evaluations were based on technical and economic criteria, and the projects' regional benefits were described. These 16 projects were used as a preliminary list of potential project sites to be assessed to determine the extent to which they met Regional Recharge Plan objectives. It was determined by IPAG that the Tangerine Road at I-10 (basins) site would be eliminated from consideration and that the Kai at Picacho (indirect) and Pascua Yaqui (basins) sites would be included.

A. Review Criteria

Assessment criteria were developed based on objectives. They reflect the objectives of potential recharge participants, including the AWBA, as identified through the interview process. They also incorporate the discussions of the IPAG on distinguishing short-term from long-term objectives. Each of the 16 projects was described in terms of the assessment criteria using information provided in the RRC Report and supplemental information provided by the projects' sponsors, when needed. The criteria used in these project descriptions are listed below.

Hydrologic Feasibility. The project site and design meet the technical criteria as described in the RRC Report. (All projects)

Regulatory Compliance. The project has obtained or is likely to qualify for all applicable permits and can comply with all applicable laws and regulations including the Endangered Species Act. (All projects)

Contaminant Isolation. The project will not mobilize contaminants or exacerbate groundwater contamination. (All projects)

Acceptability. The project has been approved or is likely to be approved by the governing bodies with jurisdiction over land in the project's area of impact. Local organizations and enterprises are unlikely to object to the project or the project is likely to mitigate local objections. (All projects)

Speed. The project can be brought into operation within the next three years. (Short-term)

Water Storage Capacity. The project stores a large quantity of water relative to the short-term storage goal; the storage capacity exceeds the minimum, short-term requirements of its sponsors. (Short-term)

Low Cost. The project provides the most economical means to meet its sponsor(s)'s objectives. (Short-term)

Water Supply. The project stores water in the vicinity of future wellfields; the project stores a large quantity of water relative to the long-term storage goal; the project storage capacity exceeds the minimum, long-term requirements of its sponsors. (Long-term)

Storage Credits. The project generates storage credits that can be transferred, recovered or extinguished by the credit owner. Water stored at the project has a high probability of generating credits. (Long-term)

Environmental Enhancement. The project stores water in the vicinity of a riparian/environmental amenity so as to enhance the amenity; the project is designed for riparian/environmental enhancement; the project is accessible to the general public for recreation. (Long-term)

Water Quality Management. The project design provides mitigation/containment of plumes, per a specific remediation plan. The project minimizes any long-term negative water quality impacts of recharge on the aquifer and water customers. (Long-term)

Reduced Overdraft/Cones of Depression and Subsidence Prevention/Mitigation. The project stores water in the vicinity of overdraft and subsidence; the project is designed to mitigate subsidence effects. (Long-term)

Multiple Parties/Multiple Benefits. The project has the support of multiple cooperating sponsors; the project provides multiple benefits to identifiable beneficiaries. (Long-term)

Benefit/Cost. The project costs are appropriate relative to the benefits it provides, including intangible benefits. (Long-term)

B. Project Evaluations

Project assessment sheets display the information relating to recharge project criteria that was used to develop the Regional Recharge Plan. An assessment sheet was prepared for each of the 16 projects originally described in the RRC Report. The assessment sheets were reviewed by the IPAG, and entries were corrected and up-dated on the basis of comments from IPAG members who represent the sponsors of individual projects. The assessment sheets are subject to change as additional information on these projects becomes available.

Complete project assessment sheets are included as Appendix B.

C. Categorization of Projects

Rather than rank projects numerically on the basis of the assessments, the IPAG elected to categorize projects qualitatively. In order to develop categories of projects, the IPAG needed to be able to prioritize the criteria and condense the information in the assessments. These tasks were accomplished by combining individual criteria into three groups: feasibility, capacity, and water management and related benefits. The components of these three groups are displayed below.

FEASIBILITY

Operational and regulatory risk

- Status of project

- Conditions imposed by applicable regulations and policies

Acceptability

- Equal access

- Sponsorship potential

- Community support

Contaminant isolation

Hydrologic feasibility

- Storage potential (Depth to water & groundwater flow)

- Soil, subsoil, & aquifer characteristics

Cost

- Dollars per acre-foot of water recharged (\$/AF)

CAPACITY

Total planned capacity

Phase-in of capacity

Capacity in excess of amount likely to be committed to identified sponsors

WATER MANAGEMENT AND RELATED BENEFITS

Groundwater level (GWL) change & cone of depression

- Historical GWL decline

- Recent GWL change

- Potential future GWL declines

Subsidence

- Calculated subsidence potential

- Potential impact on infrastructure

Recreational Access

Special needs of location (e.g., trees on Tanque Verde)

Riparian habitat

Multiple purposes/multiple beneficiaries

Shared facilities

Water quality benefits
Long-term water balance

The group of “feasibility” criteria was intended to allow the relative ordering of projects based on how certain the IPAG could be that they would be built. “Capacity” criteria included total planned capacity and capacity in excess of the projected short-term and long-term needs of the sponsors. “Water management and related benefits” comprised the long-term, location-specific objectives and additional benefits of multiple-use projects. “Cost” was considered as a possible criteria category but was omitted as a separate category since economic factors influence feasibility and were included in the feasibility criteria category.

The resulting categorization of projects follows.

Feasibility Criterion

Category I - Projects that have demonstrated their feasibility and are operating.

Avra Valley Airport Recharge Project
BKW Farms Groundwater Savings Project
CMID Groundwater Savings Project
Kai Farms Groundwater Savings Projects at Picacho*

Category II - Projects with good evidence of feasibility that are permitted (at least for large pilot operation) or are expected to be permitted in the near future.

AVID Groundwater Savings Project
Lower Santa Cruz Replenishment Project
Pima Mine Road Recharge Project
Central Avra Valley Storage and Recovery Project

Category III - Projects with sponsorship and substantial momentum but also substantial uncertainties regarding their operation as regional recharge facilities.

CDO Recharge and Recovery Project
San Xavier District Arroyos In-channel Recharge Project
Santa Cruz River In-channel Recharge Project at San Xavier District
FICO Groundwater Savings Project
Pascua Yaqui Recharge Project*

Category IV - Projects that lack sponsors or have been assigned lower priority than other projects by potential sponsors.

Pantano, Rillito and Tanque Verde In-channel Recharge Project
ASARCO Groundwater Savings Project
South Avra Valley Recharge Project
Brawley Wash Recharge Project
Recharge Project West of the CAP at Tangerine Road**

Capacity Criterion

Category I - Projects with the potential to recharge 10,000 to 20,000 AF of water annually within ten years.

CDO Recharge and Recovery Project
Lower Santa Cruz Replenishment Project
Pima Mine Road Recharge Project
Central Avra Valley Storage and Recovery Project
South Avra Valley Recharge Project
Brawley Wash Recharge Project
FICO Groundwater Savings Project

Category II - Projects with the potential to recharge more than 10,000 AF of water annually within ten years.

BKW Farms Groundwater Savings Project
CMID Groundwater Savings Project
AVID Groundwater Savings Project
Kai Farms Groundwater Savings Projects at Picacho*

Category III - Projects with the potential to recharge up to 10,000 AF of water annually within the next 10 year.

Avra Valley Airport Recharge Project
San Xavier District Arroyos In-channel Recharge Project
Santa Cruz River In-channel Recharge Project at San Xavier District
Pantano, Rillito and Tanque Verde Recharge Project
ASARCO Groundwater Savings Project
Pascua Yaqui Recharge Project*

Water Management and Related Benefits Criterion

Category I - Projects contributing substantially to a majority of the listed water management and related benefits.

CDO Recharge and Recovery Project
Pantano, Rillito and Tanque Verde Recharge Project
Santa Cruz River In-channel Recharge Project at San Xavier District

Category II - Projects contributing to several listed water management and related benefits.

Pima Mine Road Recharge Project
San Xavier District Arroyos In-channel Recharge Project
FICO Groundwater Savings Project
ASARCO Groundwater Savings Project

Category III - Projects contributing to one or more listed water management and related benefits.

- Avra Valley Airport Recharge Project
- Lower Santa Cruz Replenishment Project
- Central Avra Valley Storage and Recovery Project
- BKW Farms Groundwater Savings Project
- AVID Groundwater Savings Project
- South Avra Valley Recharge Project
- Pascua Yaqui Recharge Project*

Category IV - Projects with limited regional benefits beyond accrual of storage credits.

- CMID Groundwater Savings Project
- Kai Farms Groundwater Savings Projects at Picacho*
- Brawley Wash Recharge Project

* Project added based on information available after publication of the RRC Report

** Project dropped based on information available after publication of the RRC Report

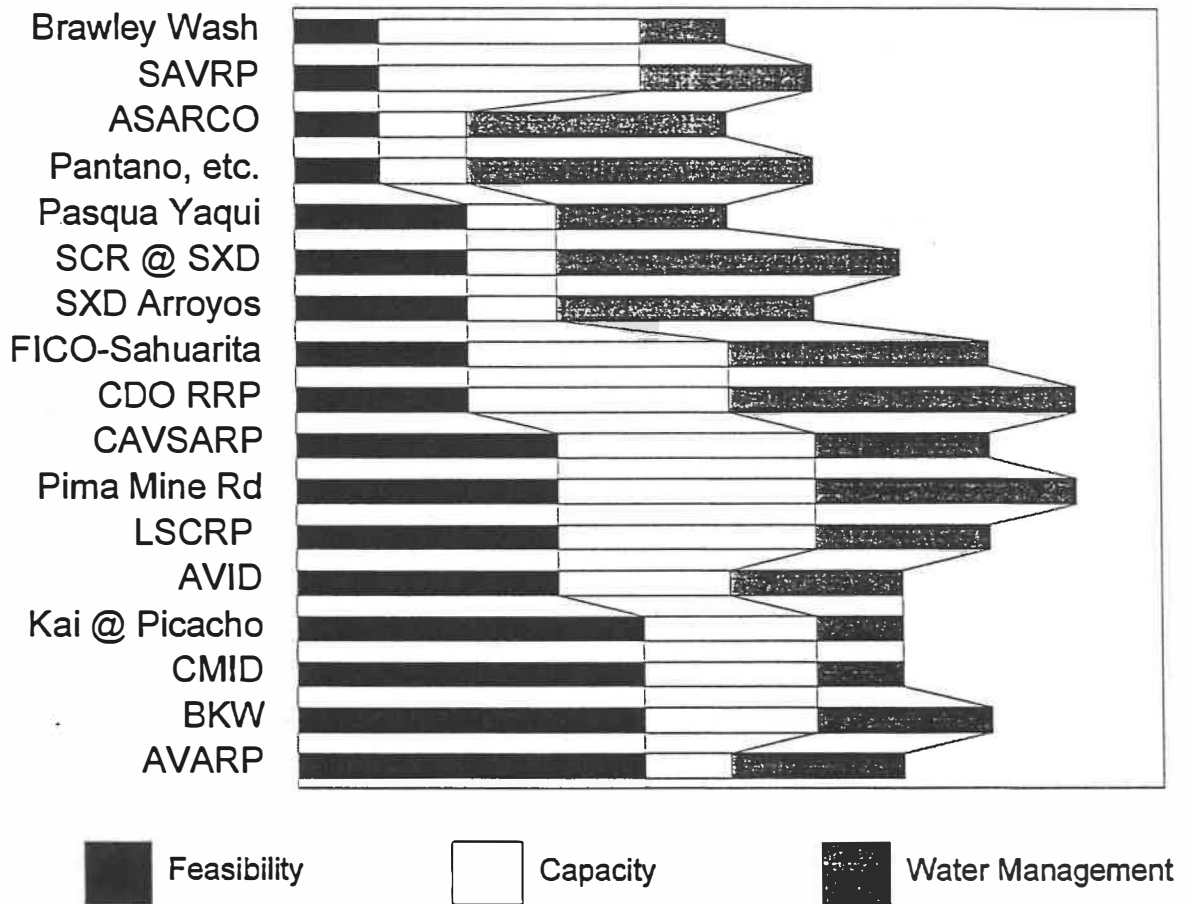
Each facility in a given category was given the same score. The scoring process and outcome is illustrated in the following charts. (The highest ranking is "I").

Figure 9

SITE ASSESSMENT CATEGORIZATION			
	Feasibility	Capacity	Water Mngmt
PROJECTS			
Avra Valley Airport	I	III	III
BKW	I	II	III
CMID	I	II	IV
Kai @ Picacho	I	II	IV
AVID	II	II	III
CDO - Big Wash	III	I	I
Lower Santa Cruz	II	I	III
Pima Mine Road	II	I	II

SITE ASSESSMENT CATEGORIZATION			
CAVSARP	II	I	III
FICO-Sahuarita	III	I	II
SXD Arroyos	III	III	II
Santa Cruz @ SXD	III	III	I
Pascua Yaqui	III	III	III
Pantano, etc.	IV	III	I
ASARCO	IV	III	II
SAVRP	IV	I	III
Brawley Wash	IV	I	IV

Recharge Project Categorization



VIII. REGIONAL RECHARGE PLAN

A. Rationale for Plan Configuration

This phase of the Regional Recharge Plan includes all projects listed in feasibility categories I, II and III. All of these projects have sponsorship commitment and were not disqualified on the basis of the IPAG’s selection criteria. All have the potential to contribute needed recharge capacity to the AMA, as well as to provide other recharge-related benefits. While the future demand for recharge capacity is uncertain, more CAP water is currently available for recharge than will be available in the future. This Plan is intended to support the on-going efforts of sponsoring entities to build sufficient recharge projects to take advantage of currently available water supply.

In the table below, projects in Feasibility Category I are assumed to be recharging by the year 2000 at their full projected capacity. Recharge in projects in feasibility categories II and III is estimated for the years 2000 and 2007 based on what is known about the projects’ phase-in time lines. Projects located on Indian reservations are summed separately because, in the absence of an IGA governing storage credits, recharge in these projects can not be used to meet the demand of municipal water providers.

The table below shows the amount of CAP water projected by IPAG to be recharged in the years 2000 and 2007 by planned projects. These projections were used as the basis of the “Recharge Capacity” analysis that follows. A map showing the location of the planned recharge projects is shown in Figure 12.

Figure 11

IPAG PROJECTIONS OF DEVELOPABLE RECHARGE CAPACITY BASED ON CURRENT ASSUMPTIONS/INFORMATION			
GSF	2000	2007	Comments
BKW Farms	15,000	15,000	Facility permit application to expand project to 16,614.6 acre feet per year (AFA) has been declared incomplete and incorrect by ADWR staff. Current permit volume is 8,800 AF per year.
CMID	16,000	16,000	Current facility permit volume is 10,000 AFA.
Kai @ Picacho	11,000	11,000	Current facility permit volume is 11,231 AFA.
BKW @ Mile Wide Road	750	750	Facility permit application for 627 AFA has been declared incomplete and incorrect by ADWR staff. This project is not currently permitted.

IPAG PROJECTIONS OF DEVELOPABLE RECHARGE CAPACITY BASED ON CURRENT ASSUMPTIONS/INFORMATION			
AVID	10,000	10,000	ADWR staff are currently reviewing a facility permit application for 10,642 AFA. This project is not currently permitted.
FICO	20,000	20,000	This facility is not currently permitted. Comments received have indicated that it is unlikely that FICO will achieve 20,000 AF of storage by the year 2000. Feasibility of this project is being evaluated through an ADWR contract.
ASARCO	0	10,000	This facility is not currently permitted. Feasibility of this project is being evaluated through an ADWR contract.
TOTAL GSF	72,750	82,750	

IPAG PROJECTIONS OF DEVELOPABLE RECHARGE CAPACITY BASED ON CURRENT ASSUMPTIONS/INFORMATION			
Direct	2000	2007	
Avra Valley Airport (basins)	7,000	7,000	The pilot phase of this facility is permitted at 8,300 AFA. A full scale application is anticipated during the fall of 1997. It will request a permit volume of 11,000 AFA. CAWCD believes that this facility is likely to store 10,000 AF in both 2000 and 2007.
Lower Santa Cruz (basins) **	15,000	30,000	The application for this facility permit has been approved by ADWR staff and has entered the public notice phase of the Department's review.
Pima Mine Road (basins)	10,000	30,000	The pilot phase of this facility is permitted for 10,000 AF over two years. Construction is nearing completion and recharge is expected to begin in early 1998. CAWCD believes that this facility will store 13,000 AF in the year 2000.
CAVSARP (basins)	30,000	30,000	The expanded pilot phase of this project is nearing the end of the permitting process. The permit volume will be 10,000 AF over two years. Construction is nearing completion on the basins. Recharge is expected to begin by the end of 1997.
CDO - Big Wash (in-channel) ***	0	25,000	This facility is not currently permitted.
Pantano, Rillito and Tanque Verde (in-channel) ****	0	10,000	This facility is not currently permitted.
TOTAL DIRECT	62,000	132,000	
TOTAL NON-INDIAN	134,750	214,750	
Indian Water Recharge*			These projects are not required to obtain ADWR permits in order to operate the facilities (if located on Indian lands).
SXD (basins)	0	15,000	
SXD Arroyos (in-channel)	9,000	9,000	This project is currently operating. Annual volume is not known.
SXD Santa Cruz (in-channel)	7,000	7,000	Comments received have indicated that it is unlikely that this project will achieve 7,000 AF of storage by the year 2000.
Pascua Yaqui (basins)	10,000	10,000	
TOTAL INDIAN	26,000	41,000	
TOTAL RECHARGE	160,750	255,750	

*An IGA will be needed to allow storage credit recovery by non-Indian entities.

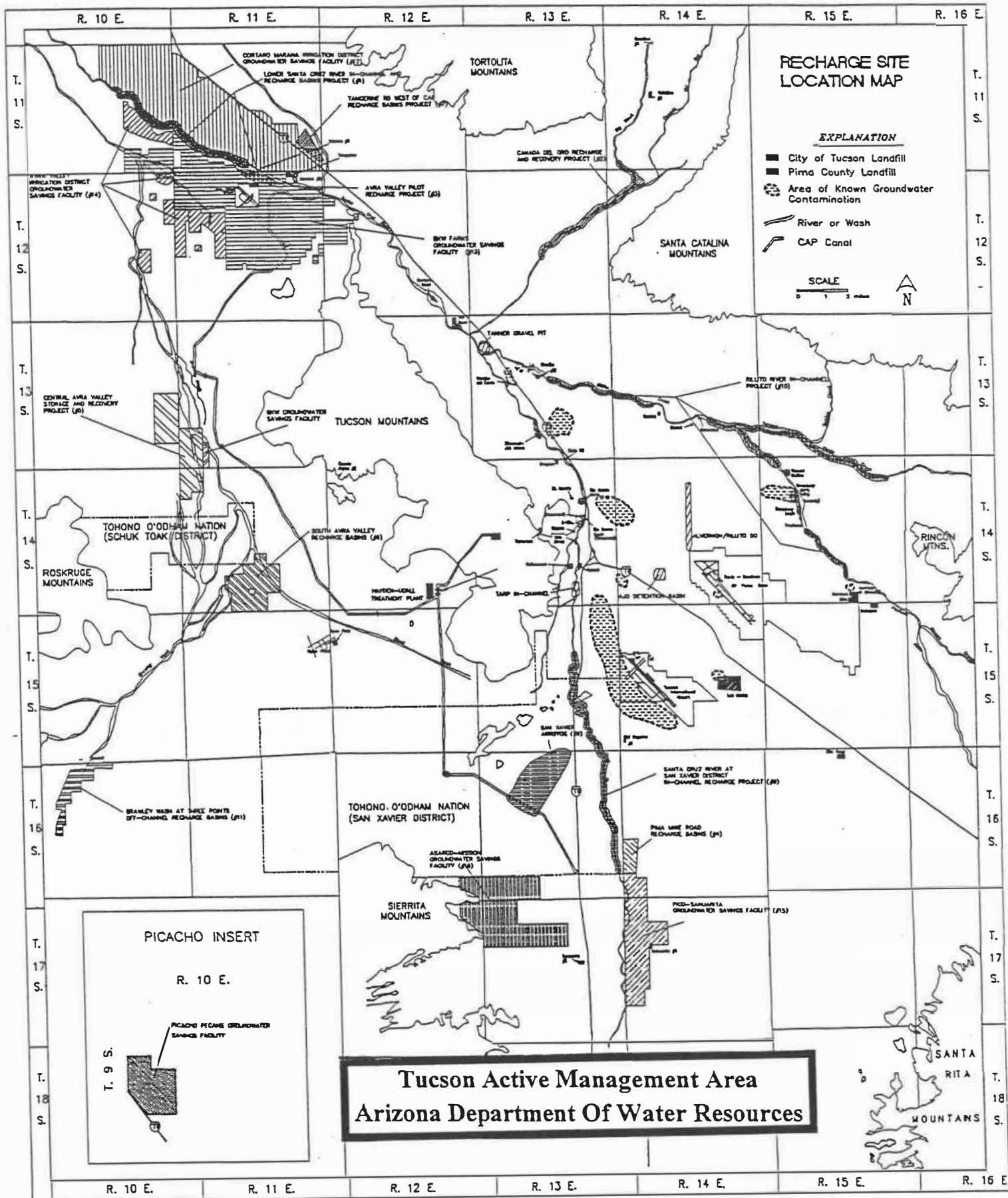
** May be expanded to include managed in-channel component

*** Design includes spreading basins as well as managed in-channel

**** Utilizing reclaimed water

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Figure 12



B. Development Of Alternative Demand Plans -- Scenario Analysis

Implications For Recharge Needs And Site Selection

Three scenarios were developed using the target years 2000 and 2007: 1) low demand, 2) medium demand, and 3) high demand for recharge capacity. Calendar year 2007 represents the last year of the AWBA's planning period for its Storage Facilities Inventory. Projections of recharge demand were based on information, including population projections, used to monitor the ADWR Assured Water Supply program. The following components of recharge demand were used to develop the scenarios.

1. City of Tucson: Options were selected to represent the range of alternative ways to meet water supply needs and compliance with Assured Water Supply requirements: a) deliver CAP water directly without recharge; b) blend CAP water with groundwater; and c) recharge CAP water to offset groundwater pumping.
2. Other Municipal Providers: Selected options for recharge demand include: a) CAGR minimum replenishment; b) phased in use of annual storage and recovery; and c) 100% annual storage and recovery.
3. Long-Term Storage Credits: Options were selected for each eligible party regarding whether to accrue long-term storage credits during this time period: a) low; b) medium; and c) high.
4. Arizona Water Banking Authority: use consistent GSF storage price policy among AMAs for low and medium recharge demand scenarios; modify GSF storage price policy for Tucson AMA for high demand scenario.

It was assumed that some recharge facilities would be expanded relative to the level of demand. For example, in the low demand scenario, the City of Tucson would deliver treated CAP water directly to customers and would not use a strategy of annual storage and recovery. In the high demand scenario, the City of Tucson recharges the majority of its CAP, and would have to expand the volume of its facilities. Developed recharge capacity for each of the three scenarios was adjusted to demonstrate how projects in the plan could respond flexibly to different demand conditions.

The demand scenarios are listed below. See Figures 11 through 18 for estimated demand and supply volumes and sources for each of the following scenarios.

A. Scenario 1- Low Recharge Demand Scenario

Assumptions:

City of Tucson CAP Utilization:

Tucson Water delivers treated CAP water directly to all customers for whom such delivery is

possible using the existing distribution system. This excludes approximately 10,000 to 15,000 AF. Tucson Water chooses not to debit its groundwater accounts, and stores enough water to replace all groundwater pumped in excess of allowances (e.g., allowance of 4% for incidental recharge).

Other Municipal CAP Utilization:

The CAGR D stores the minimum required by contract for all its members; and all municipal providers subject to AWS rules rely exclusively on the CAGR D. (Excludes City of Tucson.)

Long-term Storage Credits:

The City of Tucson accrues long-term storage credits at the rate of 10% of total potable water demand; other designated providers choose to save their groundwater accounts rather than accrue long-term storage credits.

AWBA:

The AWBA purchases CAP water and storage capacity in the AMA with \$2.1 M, according to current pricing policies. Average price for recharge is \$49.00/AF.

B. Scenario 2 - Medium Recharge Demand Scenario

Assumptions:

City of Tucson CAP Utilization:

Tucson Water employs a strategy of advanced treatment and blending that delivers a blend containing 50% CAP water to its potable water customers and recharges as annual storage and recovery the remaining 50% of its CAP allocation. It chooses to debit its groundwater account for additional groundwater pumped in excess of allowances.

Other Municipal CAP Utilization:

Municipal providers phase in recharge as Annual Storage and Recovery (ASR) beginning in 1998 with 10% of groundwater pumped in excess of allowances and increasing by 10% each year thereafter. They choose to debit groundwater accounts for the remainder of groundwater pumped in excess of allowances (e.g., designated providers are allowed a 4% factor for incidental recharge). (Excludes City of Tucson.)

Long-term Storage Credits:

Designated providers accrue additional long-term storage credits at the rate of 15% of total potable water demand.

AWBA:

The AWBA purchases CAP water and storage capacity in the AMA with \$2.1 M according to current pricing policies. Average price for recharge is \$49.00/AF.

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C. Scenario 3 - High Recharge Demand Scenario

Assumptions:

City of Tucson CAP Utilization:

Tucson Water delivers no CAP water directly to customers, chooses not to debit its groundwater account, and stores as ASR enough water to replace all groundwater pumped in excess of allowances.

Other Municipal CAP Utilization:

Municipal providers store as ASR enough water to replace all the groundwater they pumped in excess of their allowances. (Excludes City of Tucson)

Long-term Storage Credits:

Municipal providers accrue additional long-term storage credits at the rate of 20% of total potable water demand.

AWBA:

The AWBA purchases CAP water and storage capacity in the AMA with \$2.1 M in accordance with revised pricing policies; agrees to store water at Tucson AMA GSFs at prevailing prices. For this scenario, the average cost for storage used in the AWBA's Storage Facilities Inventory (\$20 to \$30 per AF) was assumed.

Figure 18

Scenario Analysis Results: Demand and Capacity in Calendar Years 2000 and 2007

	Demand 2000	Demand 2007
Scenario 1		
Tucson Water AWS	10,000	10,000
Other Municipal AWS	1,007	6,571
Municipal Long-term	10,912	11,995
AWBA	42,857	42,857
<i>Totals</i>	<i>64,776</i>	<i>71,423</i>
Scenario 2		
Tucson Water AWS	42,018	39,225
Other Municipal AWS	4,759	23,120
Municipal Long-term	20,674	30,693
AWBA	42,857	42,857
<i>Totals</i>	<i>110,308</i>	<i>135,895</i>
Scenario 3		
Tucson Water AWS	104,343	114,634
Other Municipal AWS	15,862	23,120
Municipal Long-term	27,565	31,210
AWBA	85,000	85,000
<i>Totals</i>	<i>232,770</i>	<i>253,964</i>

Capacity 2000	Capacity 2007	
		Scenario 1
59,800	59,800	GSFs
42,000	42,000	Non-Ind Constructed
0	25,000	Non-Ind In-channel
0	0	Indian Constructed
9,000	17,500	Indian In-channel
<i>110,800</i>	<i>144,300</i>	<i>Totals</i>
		Scenario 2
77,000	77,000	GSFs
77,000	77,000	Non-Ind Constructed
0	35,000	Non-Ind In-channel
10,000	10,000	Indian Constructed
9,000	17,500	Indian In-channel
<i>173,000</i>	<i>216,500</i>	<i>Totals</i>
		Scenario 3
84,500	84,500	GSFs
127,000	127,000	Non-Ind Constructed
0	47,000	Non-Ind In-channel
10,000	10,000	Indian Constructed
9,000	17,500	Indian In-channel
<i>230,500</i>	<i>286,000</i>	<i>Totals</i>

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Scenario Analysis Results: Projected Recharge Capacities at Specific Facilities

	Developed Capacity in 2000			Developed Capacity in 2007		
	Low	Medium	High	Low	Medium	High
Avra Valley Airport	7000	7000	7000	7000	7000	7000
BKW GSF	8800	12000	15000	8800	12000	15000
CMID GSF	10000	13000	16000	10000	13000	16000
Kai @ Picacho GSF	11000	11000	11000	11000	11000	11000
AVID GSF	10000	11000	12500	10000	11000	12500
CDO - Big Wash	0	0	0	20000	25000	30000
Lower Santa Cruz	15000	20000	30000	15000	20000	30000
Pima Mine Rd	10000	20000	30000	10000	20000	30000
CAVSARP	10000	30000	60000	10000	30000	60000
FICO GSF	20000	20000	20000	20000	20000	20000
SXD Arroyos	9000	9000	9000	9000	9000	9000
Santa Cruz @ SXD	0	0	0	8500	8500	8500
Pasqua Yaqui	0	10000	10000	0	10000	10000
Pantano, etc	0	0	0	5000	10000	17000
ASARCO GSF	0	10000	10000	0	10000	10000
SAVRP	0	0	0	0	0	0
Brawley Wash	0	0	0	0	0	0
TOTAL	110800	173000	230500	144300	216500	286000

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Arizona Water Banking Study Commission

500 North Third Street, Phoenix, Arizona 85004

*TENTATIVE AGENDA

Thursday, September 25, 1997

9:30 a.m. - 2:00 p.m.

Arizona Department of Water Resources
3rd floor Conference Room

- | | | |
|------|--|--------------------------------|
| I. | Introduction | Rita Pearson |
| II. | Planning and Modeling Issues
Subcommittee Report | Larry Dozier |
| III. | Interstate and Intrastate
Banking and Marketing Issues
Subcommittee Report | Mark Meyers |
| IV. | Water Banking Benefits Outside CAP
Service Areas Issues
Subcommittee | Tom Griffin
Herb Dishlip |
| V. | Indian Issues Subcommittee Report | Gary Hansen
Mary Ann Antone |
| VI. | Contents for Interim Report | Herb Dishlip |

*This is a tentative agenda that is subject to change prior to the scheduled meeting date. Please contact the AWBA at (602) 417-2440 24 hours in advance of meeting for final agenda.

Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting the Arizona Water Banking Authority Study Commission at (602) 417-2440 or (602) 417-2455 (TDD). Requests should be made as early as possible to allow time to arrange the accommodation.

WATER DELIVERED TO RECHARGE PROJECTS IN THE TAMA

Recharge Facility	1995	1996	1997 Estimate
Avra Valley Pilot (CAP)	0 AF	2,794.1 AF	5,506 AF
CAVSARP Pilot (CAP)	0 AF	153.6 AF	3,000 AF
CMID Groundwater Storage (CAP)	5,902.0 AF	9,581.0 AF	10,000 AF
BKW Farms Groundwater Storage (CAP)	4,235.0 AF	7,080.0 AF	8,800 AF
Kai - Picacho Groundwater Storage (CAP)	0 AF	0 AF	6,000 AF
Sweetwater Annual Storage and Recovery (Effluent)	2,654.1 AF	2,572.0 AF	4,000 AF
TOTAL	12,791.1 AF	22,180.7 AF	37,800 AF