



0000020269

EXHIBIT
A-1

RECEIVED

BEFORE THE ARIZONA CORPORATION COMMISSION

31EX

2004 OCT 25 A 10: 16

COMMISSIONERS

Marc Spitzer, Chairman

William A. Mundell

Jeff Hatch-Miller

Mike Gleason

Kristin K. Mayes

AZ CORP COMMISSION
DOCUMENT CONTROL

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2005 APR 14 2 28

RECEIVED

IN THE MATTER OF THE APPLICATION OF
PALO VERDE UTILITIES COMPANY FOR AN
EXTENSION OF ITS EXISTING CERTIFICATE
OF CONVENIENCE AND NECESSITY.

Docket No. SW-03575A-04-0767

IN THE MATTER OF THE APPLICATION OF
SANTA CRUZ WATER COMPANY FOR AN
EXTENSION OF ITS EXISTING CERTIFICATE
OF CONVENIENCE AND NECESSITY.

Docket No. W-03576A-04-0767

**APPLICATION FOR EXTENSIONS
OF CERTIFICATES OF
CONVENIENCE AND NECESSITY**

Santa Cruz Water Company, L.L.C. ("Santa Cruz") and Palo Verde Utilities Company, L.L.C. ("Palo Verde") (hereinafter sometimes collectively referred to as the "Applicants"), through undersigned counsel, hereby apply to the Arizona Corporation Commission ("Commission") for approval of an extension of their respective Certificates of Convenience and Necessity ("CC&Ns"), as detailed more fully herein.

The CC&N extensions are necessary at this time to assure that adequate water and wastewater facilities are in place and that service is available for the residents and businesses that will soon be located within the extension area. The Applicants are qualified and prepared to provide the necessary facilities and service to the extension area. In support of this Application, Santa Cruz and Palo Verde state as follows:

1. Santa Cruz is an Arizona public service corporation authorized to provide water service within portions of Pinal County, Arizona. Santa Cruz received CC&Ns from the Commission in Decision No. 61943 (September 17, 1999), Decision No. 66394 (October 6, 2003) and Decision No. 67240 (September 15, 2004). Santa Cruz currently serves approximately 3,367 water customers.

DOCKETED

APR 14 2005

DOCKETED BY

ROSHKA HEYMAN & DEWULF, PLC
ONE ARIZONA CENTER
400 EAST VAN BUREN STREET - SUITE 800
PHOENIX, ARIZONA 85004
TELEPHONE NO 602-256-6100
FACSIMILE 602-256-6800

1 2. Palo Verde is an Arizona public service corporation authorized to provide
2 wastewater service within portions of Pinal County, Arizona. Palo Verde received CC&Ns from
3 the Commission in Decision No. 61943 (September 17, 1999), Decision No. 66394 (October 6,
4 2003) and Decision No. 67240 (September 15, 2004). Palo Verde currently serves approximately
5 3,296 wastewater customers.

6 3. The additional area is comprised of approximately 4,900 acres, including several
7 projected master planned communities (the "CC&N extension area"). The identity of the master
8 planned communities and their approximate number of lots are set forth in Exhibit 1, attached
9 hereto and by this reference incorporated herein.

10 4. All of the developers with projects located in the CC&N extension area have
11 requested that the Applicants provide water and wastewater service to their projects. The
12 Applicants will provide the Commission with copies of executed extension agreements as they
13 become available.

14 5. The legal description for the CC&N extension area is set forth in Exhibit 2,
15 attached hereto and by this reference incorporated herein.

16 6. The management contact for each Santa Cruz and Palo Verde is:

17 Ms. Cindy Liles
18 Vice President and Chief Financial Officer
19 Global Water Management
20 22601 North 19th Avenue, Suite 210
 Phoenix, Arizona 85027
 (623) 580-9600

21 7. The operators of record for Santa Cruz and Palo Verde are as follows:

<u>Name of Utility</u>	<u>Certification</u>	<u>Name</u>	<u>Operator ID</u>	<u>Phone Number</u>
Santa Cruz	Treatment	Jeff Lemley	20649	(520) 510-9240
Santa Cruz	Distribution	Jeff Lemley	20649	(520) 510-9240
Palo Verde	Wastewater	Jose Millanes	11728	(602) 620-0457
Palo Verde	Collection	Jeff Lemley	20649	(520) 510-9240

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1 The Applicants' field operations and management personnel are located at:

2 Palo Verde Utilities Company Water Reclamation Campus
3 41265 West Hiller Road,
4 Maricopa, Arizona 85239
5 (520) 568-1593

6 8. The Applicants' attorneys are:

7 Roshka Heyman & DeWulf, PLC
8 One Arizona Center
9 400 East Van Buren Street, Suite 800
10 Phoenix, Arizona 85004
11 (602) 256-6100

12 All data requests or other requests for information should be directed to:

13 Raymond S. Heyman
14 Michael W. Patten
15 Roshka Heyman & DeWulf, PLC
16 One Arizona Center
17 400 East Van Buren Street, Suite 800
18 Phoenix, Arizona 85004

19 With a copy to:

20 Ms. Cindy Liles
21 Vice President and Chief Financial Officer
22 Global Water Management
23 22601 North 19th Avenue, Suite 210
24 Phoenix, Arizona 85027

25 9. Certificates of Good Standing for Santa Cruz Water Company and Palo Verde
26 Utilities Company are attached hereto as Exhibit 3, and by this reference incorporated herein.

27 10. The customers located in the CC&N extension area will receive water, wastewater
and reclaimed water service subject to Applicants' current rates and charges for utility service,
which were approved by the Commission in Decision No. 61943 (September 17, 1999).

11. Maps indicating the Applicants' (i) present CC&Ns and the CC&N extension area;
and (ii) current and preliminary master plans for water, wastewater and reclaimed water, are
attached hereto as Exhibit 4 and by these references incorporated herein.

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FACSIMILE 602-256-6800

1 12. The Applicants' balance sheet and profit and loss information for the 12-month
2 period ending December 31, 2003, is attached hereto as Exhibit 5, and by this reference
3 incorporated herein.

4 13. The estimated number of customers to be served by Santa Cruz and Palo Verde in
5 each of the first five years of water and wastewater utility service is depicted in Exhibit 6, attached
6 hereto and by this reference incorporated herein.

7 14. Applicants' estimated annual operating revenue and operating expenses for each of
8 the first five (5) years of operation in the CC&N extension area are set forth in Exhibit 7, attached
9 hereto and by this reference incorporated herein

10 15. The Applicants' total estimated costs to construct utility facilities to serve
11 customers in the CC&N extension area are approximately \$1,520 per service connection for Santa
12 Cruz and \$3,170 per service connection for Palo Verde.

13 16. The facilities needed to serve the CC&N extension area will be constructed as
14 needed to provide service to customers. The estimated starting and completion dates for the
15 construction of facilities are not known at this time, although construction for the majority of these
16 projects will commence within the next nine (9) months. Applicants' existing facilities presently
17 have some additional available capacity to serve initial hookups in the extension area.

18 17. The cost of the construction of facilities needed to serve the CC&N extension area
19 will be paid for primarily by shareholder equity and advances in aid of construction.

20 18. The Applicants are in the process of amending their Franchise with the City of
21 Maricopa to include the CC&N extension area.

22 19. Copies of the approvals to construct facilities in the CC&N extension area that are
23 issued by the Arizona Department of Environmental Quality ("ADEQ") will be provided to the
24 Commission when they are obtained by the Applicants.

25 20. All necessary and required notice provisions will be provided by the Applicants.
26 Proof of publication of any such notice will be filed with the Commission.

27

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1 21. This Application is in the public interest and should be granted because, among
2 other things, there is a pressing need for water and wastewater service in western Pinal County.
3 Because of the proximity of their existing facilities, expertise of the personnel and financial
4 stability, Santa Cruz and Palo Verde are in the best position to extend and provide service to the
5 CC&N extension area. Existing Santa Cruz and Palo Verde customers will benefit because the
6 cost of providing water and wastewater service will be spread over a larger customer base and
7 economies of scale will provide additional efficiencies in Applicants' operations.

8 22. The CC&N extensions also provide public benefit because Santa Cruz and Palo
9 Verde advocate and employ the use of reclaimed water. Palo Verde has instituted a policy
10 requiring developers to provide reclaimed water retention structures and reclaimed water
11 distribution systems, and use of reclaimed water for all community open spaces, schoolyards,
12 homeowner association irrigation and lakes within the CC&N extension area.

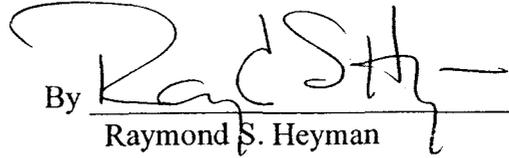
13 23. Applicants, to the best of their knowledge and belief, are currently in compliance
14 with all regulatory requirements applicable to their provision of water and wastewater service.

15 WHEREFORE, Santa Cruz and Palo Verde respectfully request that the Commission:

- 16 A. Schedule a hearing on this Application as soon as possible;
- 17 B. Issue an Order:
- 18 (i) finding that it is in the public interest to include the CC&N extension area in
19 the CC&Ns of Santa Cruz and Palo Verde; and
- 20 (ii) ordering that the CC&Ns of Santa Cruz and Palo Verde be extended to
21 include the CC&N extension area; and
- 22 C. Grant any such other and further relief as may be appropriate under the
23 circumstances herein.
- 24
- 25
- 26
- 27

1 RESPECTFULLY submitted this 25th day of October 2004.

2
3 ROSHKA HEYMAN & DEWULF, PLC

4
5
6 By 

7 Raymond S. Heyman
8 Michael W. Patten
9 One Arizona Center
400 East Van Buren Street, Suite 800
Phoenix, Arizona 85004

10
11 Original + 15 copies of the foregoing
filed this 25th day of October 2004, with:

12 Docket Control
13 ARIZONA CORPORATION COMMISSION
14 1200 West Washington
Phoenix, Arizona 85007

15 Copies of the foregoing hand-delivered/mailed
this 25th day of October 2004, to:

16 Chairman Marc Spitzer
17 Arizona Corporation Commission
18 1200 West Washington
Phoenix, Arizona 85007

19 Commissioner William A. Mundell
20 Arizona Corporation Commission
21 1200 West Washington
Phoenix, Arizona 85007

22 Commissioner Jeff Hatch-Miller
23 Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

24 Commissioner Mike Gleason
25 Arizona Corporation Commission
26 1200 West Washington
Phoenix, Arizona 85007

27

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1 Commissioner Kristin K. Mayes
2 Arizona Corporation Commission
3 1200 West Washington
4 Phoenix, Arizona 85007

5 Lyn Farmer, Esq.
6 Chief Administrative Law Judge
7 Hearing Division
8 Arizona Corporation Commission
9 1200 West Washington
10 Phoenix, Arizona 85007

11 Christopher C. Kempley
12 Chief Counsel, Legal Division
13 Arizona Corporation Commission
14 1200 West Washington
15 Phoenix, Arizona 85007

16 Ernest G. Johnson, Esq.
17 Director, Utilities Division
18 Arizona Corporation Commission
19 1200 West Washington
20 Phoenix, Arizona 85007

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25
26
27


1

ROSHKA HEYMAN & DEWULF, PLC
ONE ARIZONA CENTER
400 EAST VAN BUREN STREET - SUITE 800
PHOENIX, ARIZONA 85004
TELEPHONE NO 602-256-6100
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EXHIBIT 1

<u>Developer/Development</u>	<u>Number of Lots</u>
L&R Contracting, Inc., Trap King, LLP, Sue Flores, Pro Active Remarketing LLC, Sean Aldrous and Guy Gedeon	322
Cook/El Dorado, L.L.C., Little/El Dorado, L.L.C., and William P. Gore and Margie L. Gore	2,205
Maricopa – Casa Grande Highway 813, L.C. and Western Pinal Industrial Park, L.C.	4,322
JNAN, LLC	2,240
Pitaco Farms Limited Partnership	2,240
Desert Sunrise, L.L.C. and Maricopa 240, L.L.C.	1,680
Mace Holdings, L.L.C., Maricopa 32, L.L.C., and Maricopa 400, L.L.C.	2,240
Kruse Farms	1,680

2

STATE OF ARIZONA



Office of the
CORPORATION COMMISSION

CERTIFICATE OF GOOD STANDING

To all to whom these presents shall come, greeting:

I, Brian C. McNeil, Executive Secretary of the Arizona Corporation Commission, do hereby certify that

*****SANTA CRUZ WATER COMPANY, LLC*****

a domestic limited liability company organized under the laws of the State of Arizona, did organize on the 15th day of June 2001.

I further certify that according to the records of the Arizona Corporation Commission, as of the date set forth hereunder, the said limited liability company is not administratively dissolved for failure to comply with the provisions of A.R.S. section 29-601 et seq., the Arizona Limited Liability Company Act; and that the said limited liability company has not filed Articles of Termination as of the date of this certificate.

This certificate relates only to the legal existence of the above named entity as of the date issued. This certificate is not to be construed as an endorsement, recommendation, or notice of approval of the entity's condition or business activities and practices.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Arizona Corporation Commission. Done at Phoenix, the Capital, this 3rd Day of August, 2004, A. D.



Brian C. McNeil
Executive Secretary

By *Cathleen Buidget*

STATE OF ARIZONA



Office of the
CORPORATION COMMISSION

CERTIFICATE OF GOOD STANDING

To all to whom these presents shall come, greeting:

I, Brian C. McNeil, Executive Secretary of the Arizona Corporation Commission, do hereby certify that

*****PALO VERDE UTILITIES COMPANY, LLC*****

a domestic limited liability company organized under the laws of the State of Arizona, did organize on the 15th day of June 2001.

I further certify that according to the records of the Arizona Corporation Commission, as of the date set forth hereunder, the said limited liability company is not administratively dissolved for failure to comply with the provisions of A.R.S. section 29-601 et seq., the Arizona Limited Liability Company Act; and that the said limited liability company has not filed Articles of Termination as of the date of this certificate.

This certificate relates only to the legal existence of the above named entity as of the date issued. This certificate is not to be construed as an endorsement, recommendation, or notice of approval of the entity's condition or business activities and practices.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Arizona Corporation Commission. Done at Phoenix, the Capital, this 3rd Day of August, 2004, A. D.



Brian C. McNeil
Executive Secretary

By *Catherine Budge*

3

EXHIBIT "3"
LEGAL DESCRIPTION

COMMENCING AT THE NORTHWEST CORNER OF SECTION 30, TOWNSHIP 4 SOUTH, RANGE 4 EAST, GILA & SALT RIVER BASE & MERIDIAN, PINAL COUNTY, ARIZONA, SAID NORTHWEST CORNER OF SAID SECTION 30 BEING THE TRUE POINT OF BEGINNING;

THENCE EASTERLY ALONG THE NORTH LINE OF SAID SECTION 30 AND CONTINUING EASTERLY ALONG THE NORTH LINE OF SECTION 29, TOWNSHIP 4 SOUTH, RANGE 4 EAST, TO THE NORTHEAST CORNER OF SAID SECTION 29;

THENCE SOUTHERLY ALONG THE EASTERLY LINES OF SAID SECTION 29 AND SECTION 32, TOWNSHIP 4 SOUTH, RANGE 4 EAST, TO THE SOUTHEASTERLY CORNER OF SAID SECTION 32;

THENCE EASTERLY ALONG THE NORTH LINE OF SECTION 4, TOWNSHIP 5 SOUTH, RANGE 4 EAST, TO THE NORTHEAST CORNER OF SAID SECTION 4;

THENCE SOUTHERLY ALONG THE EASTERLY LINE OF SAID SECTION 4 TO THE EAST QUARTER CORNER THEREOF;

THENCE WESTERLY ALONG THE EAST-WEST MIDSECTION LINE OF SAID SECTION 4 TO THE CENTER OF SAID SECTION 4;

THENCE SOUTHERLY ALONG THE NORTH-SOUTH MIDSECTION LINE OF SAID SECTION 4 TO THE SOUTH QUARTER CORNER THEREOF;

THENCE EASTERLY ALONG THE COMMON EAST-WEST SECTION LINE BETWEEN SAID SECTION 4 AND SECTION 9, TOWNSHIP 5 SOUTH, RANGE 4 EAST TO THE SOUTHEASTERLY CORNER OF SAID SECTION 4;

THENCE CONTINUING EASTERLY ALONG THE NORTH LINE OF SECTION 10, TOWNSHIP 5 SOUTH, RANGE 4 EAST TO THE NORTH QUARTER CORNER OF SAID SECTION 10;

THENCE SOUTHERLY ALONG THE NORTH-SOUTH MIDSECTION LINE OF SAID SECTION 10 TO THE SOUTH QUARTER CORNER OF SAID SECTION 10;

THENCE WESTERLY ALONG THE SOUTH LINE OF SAID SECTION 10 TO THE SOUTHWEST CORNER OF SAID SECTION 10;

THENCE NORTHWESTERLY ALONG A LINE DESCRIBED AS FOLLOWS:
BEGINNING AT THE COMMON SOUTHERLY SECTION CORNER BETWEEN
THE AFOREMENTIONED SECTIONS 9 AND 10, THENCE NORTHWESTERLY
ON A LINE TOWARDS THE NORTH QUARTER CORNER OF SAID SECTION 9
TO A POINT, SAID POINT BEING DESCRIBED AS THE INTERSECTION OF SAID
NORTHWESTERLY LINE AND AN EAST-WEST LINE LYING 1397.53 FEET
SOUTH, AND PARALLEL TO THE NORTH LINE OF SAID SECTION 9;

THENCE WESTERLY ALONG THE LINE WHICH LIES 1397.53 FEET
SOUTHERLY OF THE NORTH LINE OF SECTION 9 TO THE WEST LINE OF
SAID SECTION 9;

THENCE SOUTHERLY ALONG THE WEST LINE OF SAID SECTION 9 TO THE
INTERSECTION OF THE WEST LINE OF SAID SECTION 9 AND THE
NORTHERLY RIGHT-OF-WAY LINE OF THE UNION PACIFIC RAILROAD;

THENCE NORTHWESTERLY ALONG THE UNION PACIFIC RAILROAD RIGHT-
OF-WAY TO THE INTERSECTION OF SAID RAILROAD RIGHT-OF-WAY AND
THE WEST LINE OF SECTION 6, TOWNSHIP 5 SOUTH, RANGE 4 EAST;

THENCE NORTHERLY ALONG THE WEST LINE OF SAID SECTION 6 TO THE
NORTHWEST CORNER THEREOF;

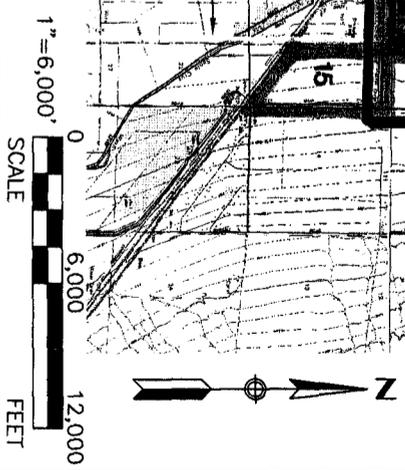
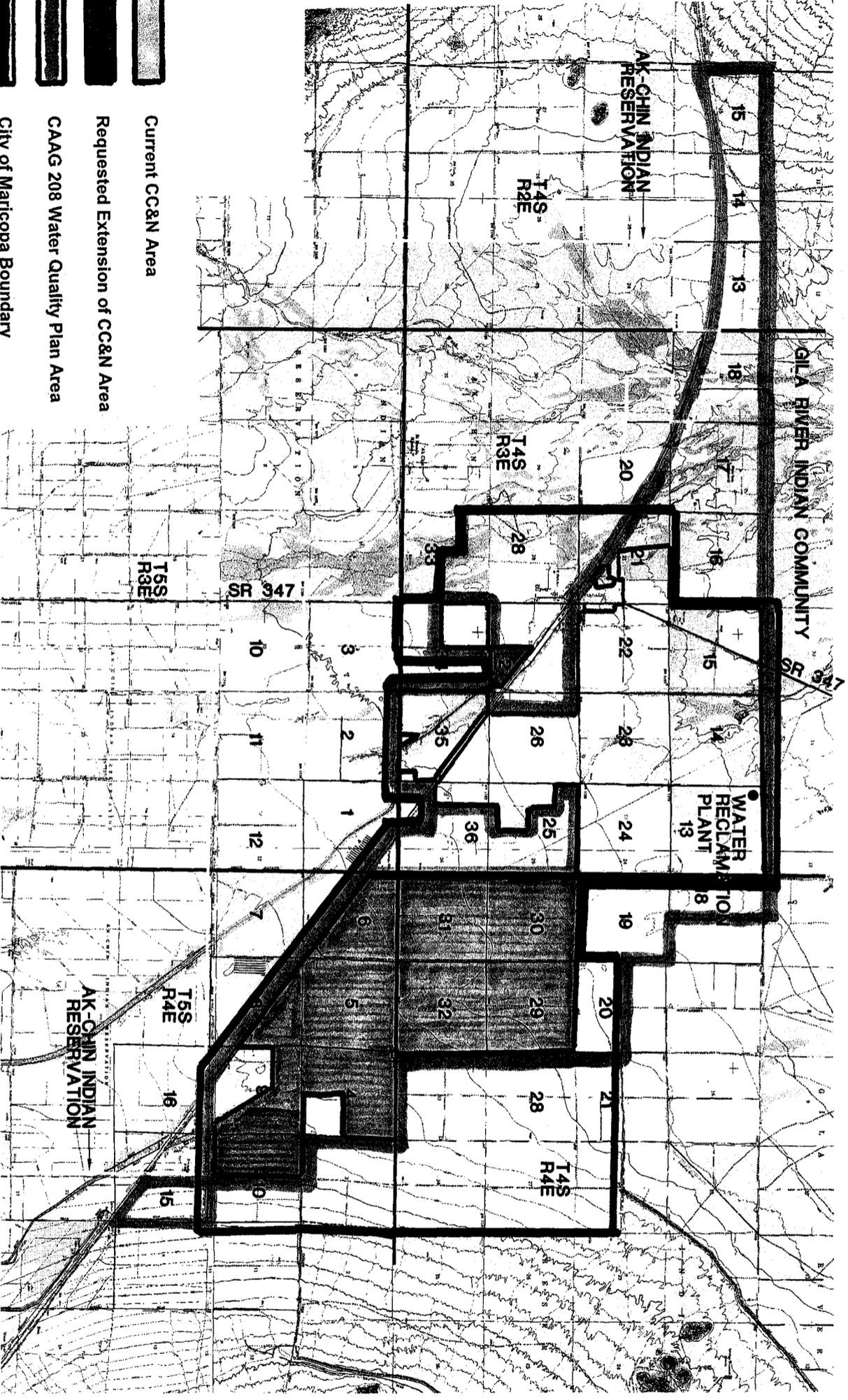
THENCE CONTINUING NORTHERLY ALONG THE WEST LINES OF SECTIONS
31 AND 30, TOWNSHIP 4 SOUTH, RANGE 4 EAST, TO THE NORTHWEST
CORNER OF SAID SECTION 30 AND THE TRUE POINT OF BEGINNING.

CC&N EXPANSION CONTAINS 4900 ACRES, MORE OR LESS.

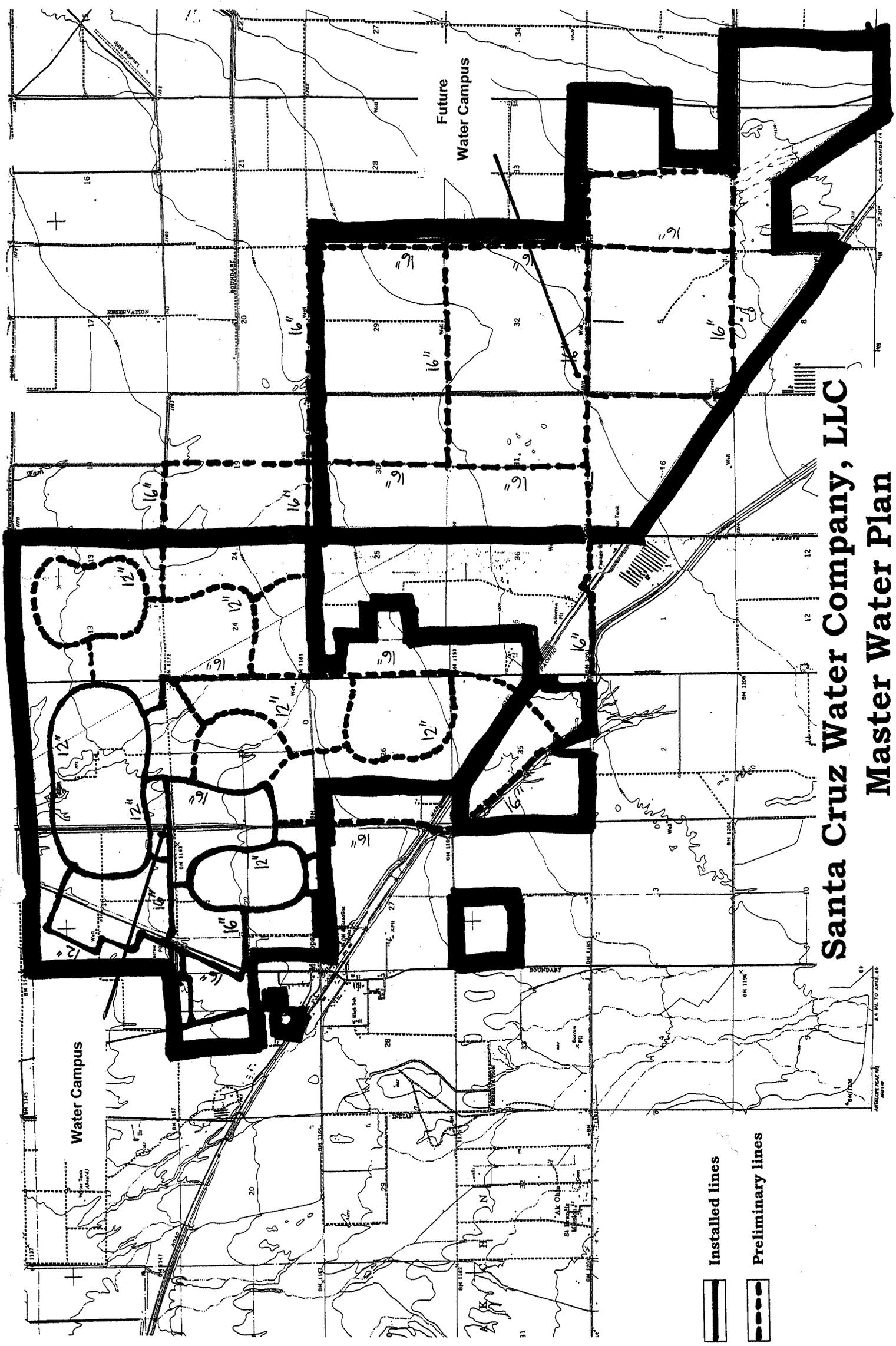
A handwritten signature in black ink is written over a circular notary seal. The seal contains the following text: "REGISTRAR OF DEEDS" at the top, "17119" in the center, "LAWRENCE S. BRAUND" below that, "Date Signed" followed by "4 AUG 04" in the bottom left, and "ARIZONA, U.S.A." at the bottom. The signature is a cursive scribble that partially obscures the seal's text.

4

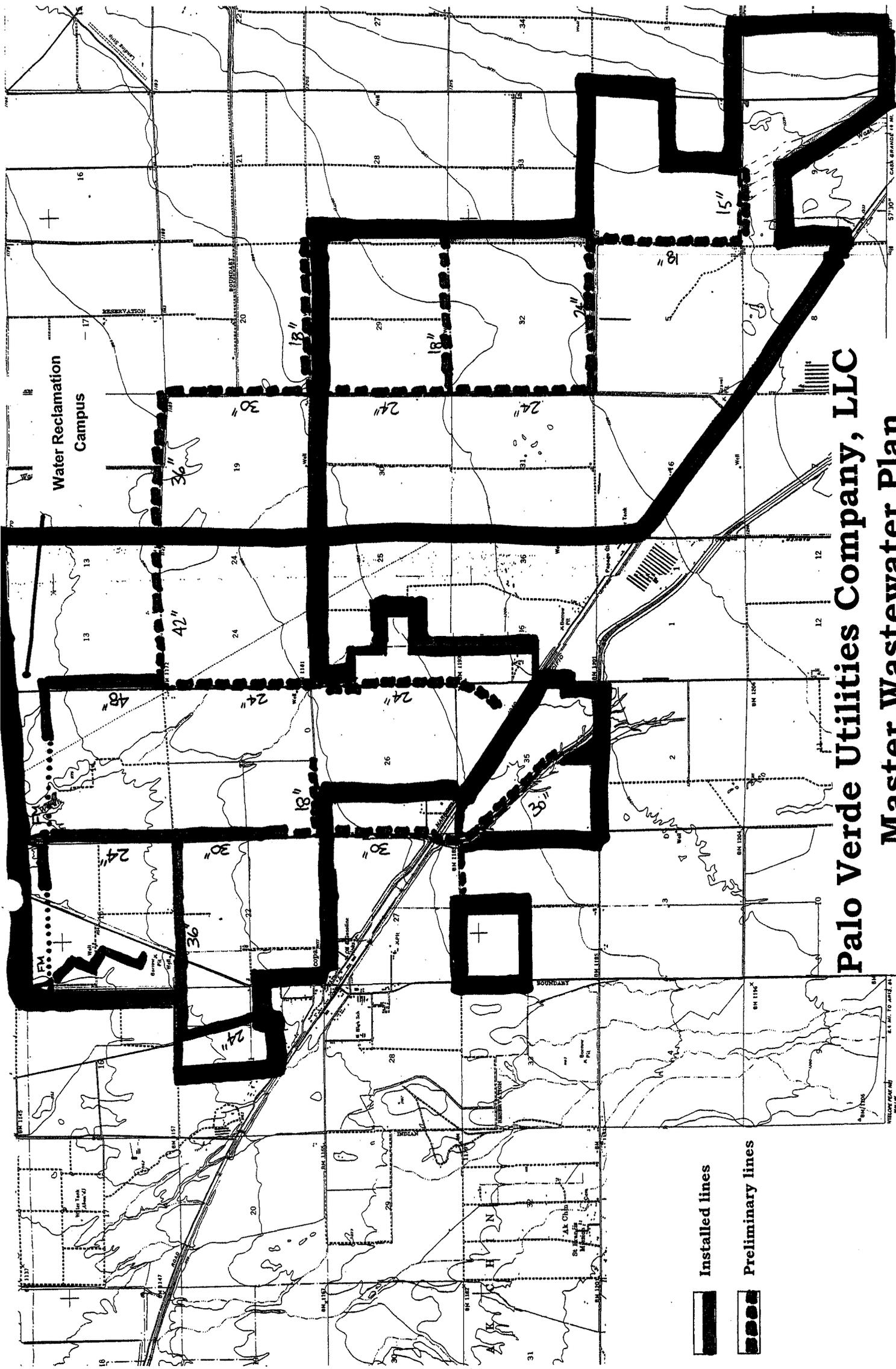
-  Current CC&N Area
-  Requested Extension of CC&N Area
-  CAAG 208 Water Quality Plan Area
-  City of Maricopa Boundary



Santa Cruz Water Company
Palo Verde Utilities Company



Santa Cruz Water Company, LLC
Master Water Plan



Water Reclamation
Campus

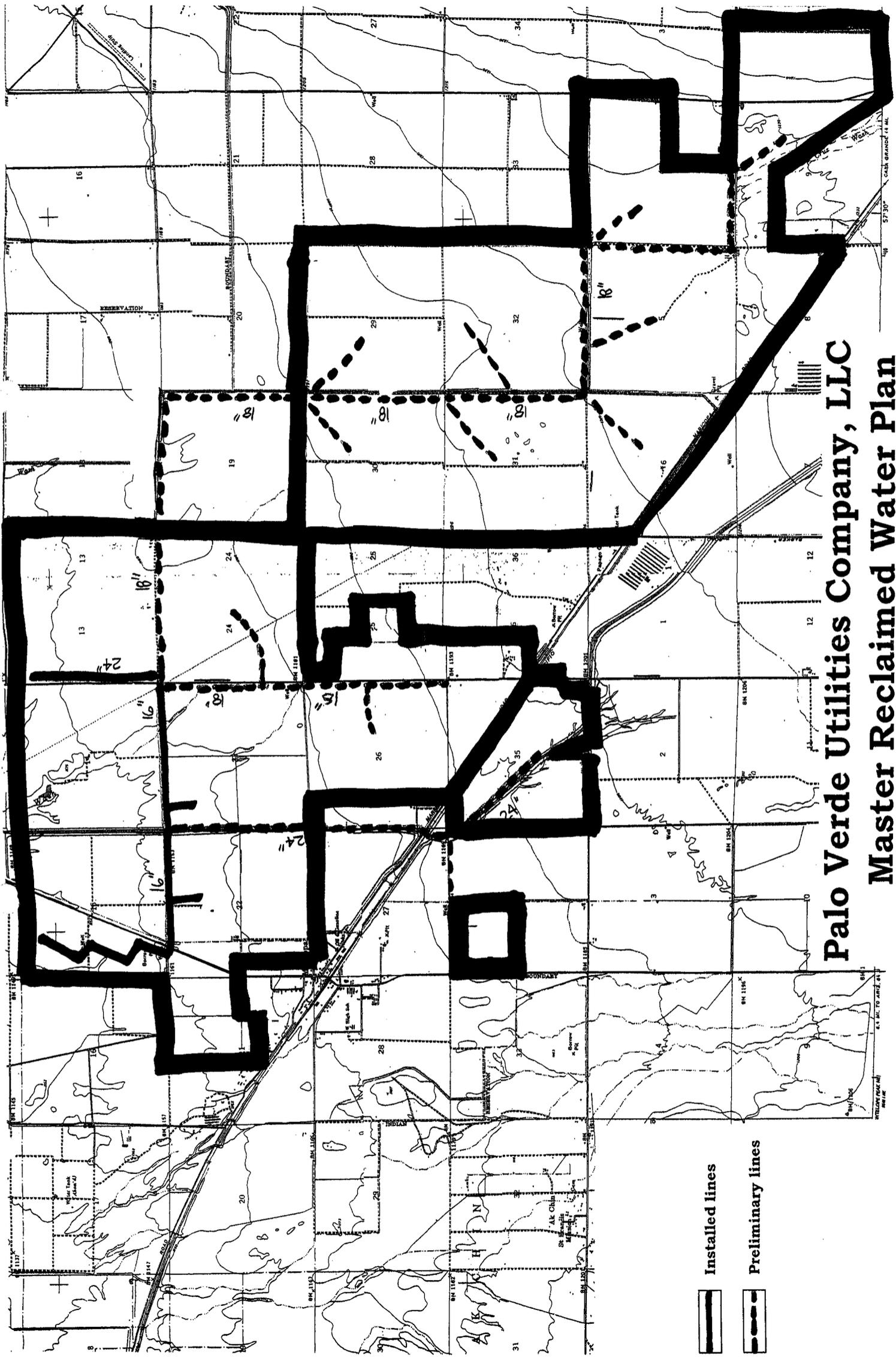
Palo Verde Utilities Company, LLC

Master Wastewater Plan

Installed lines

Preliminary lines





-  Installed lines
-  Preliminary lines

Palo Verde Utilities Company, LLC

Master Reclaimed Water Plan

57° 30' 00" W
 1/4" = 100' (VERTICAL SCALE)
 1" = 100' (HORIZONTAL SCALE)

5

EXHIBIT "5"

Santa Cruz Water Company, LLC
Balance Sheet at December 31, 2003

Acct. No.	ASSETS		
	CURRENT AND ACCRUED ASSETS		
131	Cash & Working Funds	\$ 473,683	
124	Utility Investments		
141	Customer Accounts Receivable	119,714	
146	Notes/Receivables from Associated Companies	8,351	
151	Materials & Supply Inventory		
174	Other Current & Accrued Assets	<u>101,210</u>	
	TOTAL CURRENT AND ACCRUED ASSETS		\$ 702,958
	FIXED ASSETS		
101	Utility Plant in Service	\$ 5,953,702	
103	Property Held for Future Use		
105	Construction Work in Progress	1,445,427	
108	Accumulated Depreciation	196,233	
121	Non-Utility Property		
122	Accumulated Depreciation-NonUtility		
	TOTAL FIXED ASSETS		<u>\$ 7,202,896</u>
	TOTAL ASSETS		<u><u>\$ 7,905,854</u></u>
	LIABILITIES AND EQUITY		
	CURRENT LIABILITIES		
231	Accounts Payable	\$ 291,483	
232	Notes Payable		
235	Meter Deposits	159,807	
236	Accrued Taxes	6,245	
237	Accrued Interest	358	
241	Other Current & Accrued Liabilities	<u>805,386</u>	
	TOTAL CURRENT LIABILITIES		\$ 1,263,279
224	LONG-TERM DEBT(Over 12 months)		
	DEFERRED CREDITS		
252	Advances in Aid of Construction	\$ 2,121,895	
255	Accumulated Deferred Investment Tax Credits		
271	Contributions in Aid of Construction	-	
272	Less: Amortization of Contributions	-	
281	Accumulated Deferred Income Taxes	<u>-</u>	
	TOTAL DEFERRED CREDITS		<u>\$ 2,121,895</u>
	TOTAL LIABILITIES		<u>\$ 3,385,174</u>
	EQUITY		
201	Common Stock Issues (Shareholders Equity)	\$ 3,939,476	
204	Preferred Stock Issues		
211	Other Paid in Capital		
215	Retained Earnings	581,204	
218	Proprietary Capital (for sole props, and partnerships)		
	TOTAL EQUITY		<u>\$ 4,520,680</u>
	TOTAL LIABILITIES AND EQUITY		<u><u>\$ 7,905,854</u></u>

Unaudited Financial Statements

SANTA CRUZ WATER COMPANY, LLC
STATEMENT OF INCOME AND EXPENSE
For the Year Ended December 31, 2003

Acct. No.		
	OPERATING REVENUE	
461	Res. & Comm. Revenue	\$ 972,971
460	Unmetered Revenue	
474	Other Operating Revenue	106,395
	TOTAL OPERATING REVENUE	<u>\$ 1,079,366</u>
	OPERATING EXPENSES	
601-603	Salaries & Wages	\$ 181,213
610	Purchased Water	
615	Purchased Pumping Power	86,111
618	Chemicals	2,320
620	Materials & Supplies:repairs and maintenance	59,990
621	Office Supplies and Expense	26,600
630-636	Outside Services	108,297
635	Water Testing	
640	Rents	25,136
650	Transportation Expense	1,268
657	Insurance Expense-General Liability	22,432
659	Insurance Expense-Health and Life	11,332
665	Regulatory Commission Expense - per last rate case	
675	Misc. Operating Expenses	31,584
403	Depreciation Expense	157,658
408	Taxes other Than income; property tax	
408.11	Property Taxes	26,011
409	Income Tax	
	TOTAL OPERATING EXPENSE	<u>\$ 739,952</u>
	OPERATING INCOME / (LOSS)	<u>\$ 339,414</u>
	OTHER INCOME/EXPENSE	
419	Interest Income	\$ 63
421	Other Income	2,306
426	Other Expense	
427	Interest Expense	
	TOTAL OTHER INCOME (EXPENSE)	<u>\$ 2,369</u>
	NET INCOME / (LOSS)	<u><u>\$ 341,783</u></u>

Palo Verde Utilities Company, LLC
Balance Sheet at December 31, 2003

Acct.
No.

ASSETS

CURRENT AND ACCRUED ASSETS

131	Cash & Working Funds	\$	237,917	
141	Customer Accounts Receivable		25,707	
151	Materials & Supply Inventory			
174	Miscellaneous Current & Accrued Assets		80,385	
	TOTAL CURRENT AND ACCRUED ASSETS	\$		344,009

FIXED ASSETS

101	Utility Plant in Service	\$	11,179,548	
103	Property Held for Future Use			
105	Construction Work in Progress		2,418,002	
108	Accumulated Depreciation		346,433	
121	Non-Utility Property			
122	Accumulated Depreciation-NonUtility			
	TOTAL FIXED ASSETS			13,251,117
	TOTAL ASSETS	\$		13,595,126

LIABILITIES AND EQUITY

CURRENT LIABILITIES

231	Accounts Payable	\$	137,257	
234	Notes / Accounts Payable to Associated Companies		938,052	
235	Customer Deposits			
236	Accrued Taxes			
237	Accrued Interest			
241	Miscellaneous Current & Accrued Liabilities			
	TOTAL CURRENT LIABILITIES	\$		1,075,309

224 Long - Term Debt (Over 12 months)

DEFERRED CREDITS

252	Advances in Aid of Construction	\$	1,295,032	
255	Accumulated Deferred Investment Tax Credits			
271	Contributions in Aid of Construction			
272	Less: Amortization of Contributions			
281	Accumulated Deferred Income Taxes			
	TOTAL DEFERRED CREDITS			1,295,032

TOTAL LIABILITIES

EQUITY

201	Common Stock Issues (Shareholder Equity)	\$	11,336,555	
211	Other Paid in Capital			
215	Retained Earnings		(111,770)	
218	Proprietary Capital (for sole props, and partnerships)			
	TOTAL EQUITY			11,224,785
	TOTAL LIABILITIES AND EQUITY	\$		13,595,126

Unaudited Financial Statements

Palo Verde Utilities Company, LLC
Statement of Income and Expense
For the Year Ended December 31, 2003

Acct.
No.

OPERATING REVENUE		
521	Flat Rate Revenues	\$ 494,967
522	Measured Revenues	
536	Other Wastewater Revenues	93,515
	TOTAL OPERATING REVENUE	<u>\$ 588,482</u>
Operating Expenses		
701	Salaries and Wages	221,357
710	Purchased Wasterwater Treatment	
711	Sludge Removal Expense	
715	Purchased Power	10,099
716	Fuel for Power Production	
718	Chemicals	6,788
720	Materials and Supplies	33,165
731	Contractual Services - Professional	77,860
735	Contractual Services - Testing	
736	Contractual Services - Other	
740	Rents	25,236
750	Transportation Expenses	806
755	Insurance Expense	18,957
765	Regulatory Commission Expense	
775	Miscellaneous Expense	6,103
403	Depreciation Expense	278,514
408	Taxes Other Than Income	
408.1	Property Taxes	32,374
409	Income Tax	
	Total Operating Expenses	<u>\$ 711,259</u>
	OPERATING INCOME / (LOSS)	<u>\$ (122,777)</u>
Other Income (Expense)		
419	Interest Income	719
421	Non-Utility income	3
426	Miscellaneous Non-Utility Expense	
427	Interest Expense	
	Total Other Income (Expense)	<u>\$ 722</u>
	NET INCOME / (LOSS)	<u><u>\$ (122,055)</u></u>

Unaudited Financial Statements

6

ROSHKA HEYMAN & DEWULF, PLC
ONE ARIZONA CENTER
400 EAST VAN BUREN STREET - SUITE 800
PHOENIX, ARIZONA 85004
TELEPHONE NO 602-256-6100
FACSIMILE 602-256-6800

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EXHIBIT 6

	<u>Water¹</u>	<u>Wastewater²</u>
1 st year:	75	75
2 nd Year:	305	305
3 rd Year:	625	625
4 th Year:	920	920
5 th Year:	1,220	1,220

¹ Served by Santa Cruz Water Company
² Served by Palo Verde Utilities Company

7

ROSHKA HEYMAN & DeWULF, PLC
ONE ARIZONA CENTER
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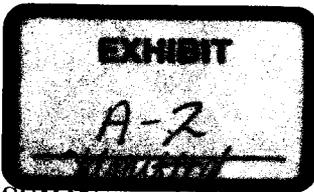
EXHIBIT 7

Santa Cruz Water Company

	<u>Operating Revenue</u>	<u>Operating Expenses</u>
1 st Year:	\$ 21,273	\$ 9,733
2 nd Year:	\$125,305	\$ 60,410
3 rd Year:	\$373,838	\$187,760
4 th Year:	\$780,807	\$404,171
5 th Year:	\$1,341,791	\$707,939

Palo Verde Utilities Company

	<u>Operating Revenue</u>	<u>Operating Expenses</u>
1 st Year:	\$ 27,875	\$ 17,731
2 nd Year:	\$126,435	\$ 86,183
3 rd Year:	\$347,795	\$244,266
4 th Year:	\$722,980	\$520,140
5 th Year:	\$1,233,400	\$904,442



BEFORE THE ARIZONA **RECEIVED** COMMISSION

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COMMISSIONERS

- Marc Spitzer, Chairman**
- William A. Mundell**
- Jeff Hatch-Miller**
- Mike Gleason**
- Kristin K. Mayes**

2004 NOV 12 P 4:44

AZ CORP COMMISSION
DOCUMENT CONTROL

IN THE MATTER OF THE APPLICATION OF
PALO VERDE UTILITIES COMPANY FOR AN
EXTENSION OF ITS EXISTING CERTIFICATE
OF CONVENIENCE AND NECESSITY.

Docket No. SW-03575A-04-0767

IN THE MATTER OF THE APPLICATION OF
SANTA CRUZ WATER COMPANY FOR AN
EXTENSION OF ITS EXISTING CERTIFICATE
OF CONVENIENCE AND NECESSITY.

Docket No. W-03576A-04-0767

AMENDMENT TO APPLICATION

Palo Verde Utilities Company, L.L.C. ("Palo Verde") and Santa Cruz Water Company, L.L.C. ("Santa Cruz") hereby amend the application in this docket to include one additional parcel of approximately 100 acres in the requested CC&N extension area. This parcel was included in the map identifying the requested CC&N extension area (Exhibit 4 to the Application), but was inadvertently left out of Exhibit 1 (property owners) and Exhibit 3 (legal description).

Attached to this Amendment are amended Exhibits 1 and 3 that include the additional property owners for the parcel (Amended Exhibit 1) and the additional legal description for the parcel (Amended Exhibit 3).

RESPECTFULLY submitted this 12th day of November 2004.

ROSHKA HEYMAN & DEWULF, PLC

By

Raymond S. Heyman
Michael W. Patten
One Arizona Center
400 East Van Buren Street, Suite 800
Phoenix, Arizona 85004

ROSHKA HEYMAN & DEWULF, PLC
ONE ARIZONA CENTER
400 EAST VAN BUREN STREET - SUITE 800
PHOENIX, ARIZONA 85004
TELEPHONE NO 602-256-6100
FACSIMILE 602-256-6800

1 Original + 15 copies of the foregoing
2 filed this 12th day of November 2004, with:

3 Docket Control
4 ARIZONA CORPORATION COMMISSION
5 1200 West Washington
6 Phoenix, Arizona 85007

7 Copies of the foregoing hand-delivered/mailed
8 this 12th day of November 2004, to:

9 Lyn Farmer, Esq.
10 Chief Administrative Law Judge
11 Hearing Division
12 Arizona Corporation Commission
13 1200 West Washington
14 Phoenix, Arizona 85007

15 Christopher C. Kempley
16 Chief Counsel, Legal Division
17 Arizona Corporation Commission
18 1200 West Washington
19 Phoenix, Arizona 85007

20 Ernest G. Johnson, Esq.
21 Director, Utilities Division
22 Arizona Corporation Commission
23 1200 West Washington
24 Phoenix, Arizona 85007

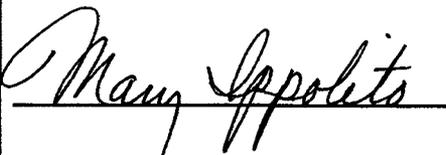
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EXHIBIT 1

AMENDED

**EXHIBIT 1
(Amended)**

<u>Developer/Development</u>	<u>Number of Lots</u>
L&R Contracting, Inc., Trap King, LLP, Sue Flores, Pro Active Remarketing LLC, Sean Aldrous and Guy Gedeon	322
Cook/El Dorado, L.L.C., Little/El Dorado, L.L.C., and William P. Gore and Margie L. Gore	2,205
Maricopa – Casa Grande Highway 813, L.C. and Western Pinal Industrial Park, L.C.	4,322
JNAN, LLC	2,240
Pitaco Farms Limited Partnership	2,240
Desert Sunrise, L.L.C. and Maricopa 240, L.L.C.	1,680
Mace Holdings, L.L.C., Maricopa 32, L.L.C., and Maricopa 400, L.L.C.	2,240
Kruse Farms	1,680
Bera Ventures, L.L.C., DAC Maricopa Investment, L.L.C., JJD Development L.L.C., Maricopa Investment Group, L.L.C., JACOB/McCASLIN/EDEN, LLC and Mesquite Groves L.L.C.	350

EXHIBIT 3

AMENDED

EXHIBIT "3"
(AMENDED)
LEGAL DESCRIPTION

LEGAL DESCRIPTION FOR PORTION OF EXPANSION EAST OF CURRENT SERVICE AREA:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 30, TOWNSHIP 4 SOUTH, RANGE 4 EAST, GILA & SALT RIVER BASE & MERIDIAN, PINAL COUNTY, ARIZONA, SAID NORTHWEST CORNER OF SAID SECTION 30 BEING THE TRUE POINT OF BEGINNING;

THENCE EASTERLY ALONG THE NORTH LINE OF SAID SECTION 30 AND CONTINUING EASTERLY ALONG THE NORTH LINE OF SECTION 29, TOWNSHIP 4 SOUTH, RANGE 4 EAST, TO THE NORTHEAST CORNER OF SAID SECTION 29;

THENCE SOUTHERLY ALONG THE EASTERLY LINES OF SAID SECTION 29 AND SECTION 32, TOWNSHIP 4 SOUTH, RANGE 4 EAST, TO THE SOUTHEASTERLY CORNER OF SAID SECTION 32;

THENCE EASTERLY ALONG THE NORTH LINE OF SECTION 4, TOWNSHIP 5 SOUTH, RANGE 4 EAST, TO THE NORTHEAST CORNER OF SAID SECTION 4;

THENCE SOUTHERLY ALONG THE EASTERLY LINE OF SAID SECTION 4 TO THE EAST QUARTER CORNER THEREOF;

THENCE WESTERLY ALONG THE EAST-WEST MIDSECTION LINE OF SAID SECTION 4 TO THE CENTER OF SAID SECTION 4;

THENCE SOUTHERLY ALONG THE NORTH-SOUTH MIDSECTION LINE OF SAID SECTION 4 TO THE SOUTH QUARTER CORNER THEREOF;

THENCE EASTERLY ALONG THE COMMON EAST-WEST SECTION LINE BETWEEN SAID SECTION 4 AND SECTION 9, TOWNSHIP 5 SOUTH, RANGE 4 EAST TO THE SOUTHEASTERLY CORNER OF SAID SECTION 4;

THENCE CONTINUING EASTERLY ALONG THE NORTH LINE OF SECTION 10, TOWNSHIP 5 SOUTH, RANGE 4 EAST TO THE NORTH QUARTER CORNER OF SAID SECTION 10;

THENCE SOUTHERLY ALONG THE NORTH-SOUTH MIDSECTION LINE OF SAID SECTION 10 TO THE SOUTH QUARTER CORNER OF SAID SECTION 10;

THENCE WESTERLY ALONG THE SOUTH LINE OF SAID SECTION 10 TO THE SOUTHWEST CORNER OF SAID SECTION 10;

THENCE NORTHWESTERLY ALONG A LINE DESCRIBED AS FOLLOWS:
BEGINNING AT THE COMMON SOUTHERLY SECTION CORNER BETWEEN
THE AFOREMENTIONED SECTIONS 9 AND 10, THENCE NORTHWESTERLY
ON A LINE TOWARDS THE NORTH QUARTER CORNER OF SAID SECTION 9
TO A POINT, SAID POINT BEING DESCRIBED AS THE INTERSECTION OF SAID
NORTHWESTERLY LINE AND AN EAST-WEST LINE LYING 1397.53 FEET
SOUTH, AND PARALLEL TO THE NORTH LINE OF SAID SECTION 9;

THENCE WESTERLY ALONG THE LINE WHICH LIES 1397.53 FEET
SOUTHERLY OF THE NORTH LINE OF SECTION 9 TO THE WEST LINE OF
SAID SECTION 9;

THENCE SOUTHERLY ALONG THE WEST LINE OF SAID SECTION 9 TO THE
INTERSECTION OF THE WEST LINE OF SAID SECTION 9 AND THE
NORTHERLY RIGHT-OF-WAY LINE OF THE UNION PACIFIC RAILROAD;

THENCE NORTHWESTERLY ALONG THE UNION PACIFIC RAILROAD RIGHT-
OF-WAY TO THE INTERSECTION OF SAID RAILROAD RIGHT-OF-WAY AND
THE WEST LINE OF SECTION 6, TOWNSHIP 5 SOUTH, RANGE 4 EAST;

THENCE NORTHERLY ALONG THE WEST LINE OF SAID SECTION 6 TO THE
NORTHWEST CORNER THEREOF;

THENCE CONTINUING NORTHERLY ALONG THE WEST LINES OF SECTIONS
31 AND 30, TOWNSHIP 4 SOUTH, RANGE 4 EAST, TO THE NORTHWEST
CORNER OF SAID SECTION 30 AND THE TRUE POINT OF BEGINNING.

**LEGAL DESCRIPTION FOR PORTION OF EXPANSION SOUTH OF THE
UNION PACIFIC RAILROAD:**

**Lots 1 through 3, inclusive, Block 43, and Lots 1 through 8, inclusive, Block 45,
MARICOPA TOWNSITE, according to the plat of record in the office of the
County Recorder of Pinal County, Arizona, recorded in Book 3 of Maps, Page 6;**

**EXCEPT all of Lot 2, and a portion of Lots 1 and 3, Block 45, MARICOPA
TOWNSITE, according to the plat of record in the office of the County Recorder of
Pinal County, Arizona, recorded in Book 3 of Maps, Page 6, a subdivision located in
Section 26 and 27, Township 4 South, Range 3 East, of the Gila and Salt River Base
and Meridian, Pinal County, Arizona, more particularly described as follows;**

**Commencing at the South quarter corner of said Section 26, from which the
Southwest corner of Section 26 bears South 89 degrees 05 minutes 38 seconds West,
a distance of 2635.13 feet;**

**thence South 89 degrees 05 minutes 38 seconds West along the South line of the
Southwest quarter of said section 26, to the intersection of the South line of the**

Southwest quarter of said Section 26 with the Southerly right-of-way line of the Southern Pacific Railroad, a distance of 1811.49 feet;

thence North 53 degrees 52 minutes 12 seconds West along said Southerly right-of-way line to a point 30 feet North of the South line of the Southwest quarter of Section 26, a distance of 49.81 feet and the POINT OF BEGINNING;

thence South 89 degrees 05 minutes 38 seconds West and parallel with the South line of the Southwest quarter of Section 26 to a point on the East line of the Southeast quarter of said Section 27 that bears North 00 degrees 03 minutes 29 seconds East a distance of 30.00 feet from the Southeast corner of said Section 27, a distance of 783.38 feet;

thence South 89 degrees 05 minutes 38 seconds West and parallel with the South line of the Southwest quarter of Section 26, a distance of 0.23 feet;

thence North 89 degrees 51 minutes 46 seconds West and parallel with the South line of the Southeast quarter of Section 27, a distance of 569.55 feet;

thence North 24 degrees 43 minutes 54 seconds West along the West line of the Santa Rosa Wash Easement recorded in Fee number 2003-008603, a distance of 121.99 feet;

thence North 00 degrees 47 minutes 54 seconds West along the West line of said easement, a distance of 428.42 feet;

thence North 20 degrees 03 minutes 27 seconds East along the West line of said easement, to the intersection of the West line of said easement with the Southerly right-of-way line of the Southern Pacific Railroad, a distance of 421.29 feet;

thence South 53 degrees 52 minutes 12 seconds East along the Southerly right-of-way line of the Southern Pacific Railroad to the intersection of said Southerly right-of-way line with the East line of the Southeast quarter of said Section 27, a distance of 597.88 feet;

thence South 53 degrees 52 minutes 12 seconds East along said Southerly right-of-way line, a distance of 969.05 feet to the POINT OF BEGINNING; and

EXCEPT all oil, gas and other mineral rights as reserved in instrument recorded in Docket 15, Page 66, records of Pinal County, Arizona.

CC&N EXPANSION CONTAINS 5,000 ACRES, MORE OR LESS.

HAWKINS & CAMPBELL INCORPORATED

800 N. 4th STREET, P.O. BOX 13627
 PHOENIX, ARIZONA 85002
 PHONE (602) 254-6147
 FAX (602) 271-4517

Please--

1. Do Not Type In Shaded Areas
2. Fill Out Completely
3. Print Three Copies
4. Retain One Copy

ATTORNEY SERVICE

DATE	November 11 ¹² , 2004	Sk. Tr.			ZONE
PHONE #	256-6100	Loc.			
FIRM	Roshka Heyman and DeWulf	Svs			
ATTY	Heyman	Mil			ZONE
ADDRESS	400 E. VAN BUREN STREET #800	Mil			
CITY/ZIP	PHOENIX AZ 85004	Mil			
SECRETARY	Mary	Adv			
CASE #		SC			OTHER CHARGES
COURT					
COUNTY					
PLTF.					TOTAL CHARGES
DEFT.		Noty			
ATTY FILE #	globalresources	Total			

DOCUMENTS: (Please list exactly as they should appear on affidavit)

FILING FEE CHECK ATTACHED	WITNESS FEE: CHECK ATTACHED-AMOUNT \$	H & C CHECK
\$	H & C ADVANCE WITNESS FEE <input type="checkbox"/> YES <input type="checkbox"/> NO	\$
	H & C ADVANCE MILEAGE FEE <input type="checkbox"/> YES <input type="checkbox"/> NO	#

COURIER INSTRUCTIONS

File original and 15 with Docket Control of the Arizona Corporation Commission
 Deliver envelope to appropriate parties at the ACC
 Return conformed copy to RHD on next regular run

MUST BE FILED TODAY **PTQ**

SPECIAL SERVICE INSTRUCTIONS:

HELP

NOV 21 2004

LAST DAY TO SERVE:

DATE OF HEARING:

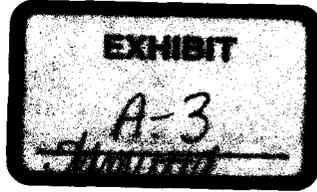
RUN 7

SERVE: (Please list name exactly as it should appear on affidavit)

RESIDENCE ADDRESS:	BUSINESS ADDRESS:
Phone:	Phone:

DESCRIPTION
 age/dob: ht: wt hr: eyes: race: other:

SERVED:	ADDRESS:	DATE
Title		TIME
SERVER/COURIER		Received by: (a person authorized to accept)



BEFORE THE ARIZONA CORPORATION COMMISSION

2005 FEB 14 P 4:35

AZ CORP COMMISSION
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COMMISSIONERS

- Jeff Hatch-Miller, Chairman**
- William A. Mundell**
- Marc Spitzer**
- Mike Gleason**
- Kristin K. Mayes**

IN THE MATTER OF THE APPLICATION OF
PALO VERDE UTILITIES COMPANY FOR AN
EXTENSION OF ITS EXISTING CERTIFICATE
OF CONVENIENCE AND NECESSITY.

Docket No. SW-03575A-04-0767

IN THE MATTER OF THE APPLICATION OF
SANTA CRUZ WATER COMPANY FOR AN
EXTENSION OF ITS EXISTING CERTIFICATE
OF CONVENIENCE AND NECESSITY.

Docket No. W-03576A-04-0767

SUPPLEMENT TO APPLICATION

As a supplement to the application in these dockets, Santa Cruz Water Company, L.L.C. and Palo Verde Utilities Company, L.L.C. submit the attached letter from the City of Maricopa supporting the applications of Santa Cruz Water Company and Palo Verde Utilities Company.

RESPECTFULLY submitted this 14th day of February 2005.

ROSHKA HEYMAN & DEWULF, PLC

By

Raymond S. Heyman
Michael W. Patten
One Arizona Center
400 East Van Buren Street, Suite 800
Phoenix, Arizona 85004

1 Original + 15 copies of the foregoing
2 filed this 14th day of February 2005, with:

3 Docket Control
4 ARIZONA CORPORATION COMMISSION
5 1200 West Washington
6 Phoenix, Arizona 85007

7 Copies of the foregoing hand-delivered/mailed
8 this 14th day of February 2005, to:

9 Chairman Jeff Hatch-Miller
10 Arizona Corporation Commission
11 1200 West Washington
12 Phoenix, Arizona 85007

13 Commissioner William A. Mundell
14 Arizona Corporation Commission
15 1200 West Washington
16 Phoenix, Arizona 85007

17 Commissioner Marc Spitzer
18 Arizona Corporation Commission
19 1200 West Washington
20 Phoenix, Arizona 85007

21 Commissioner Mike Gleason
22 Arizona Corporation Commission
23 1200 West Washington
24 Phoenix, Arizona 85007

25 Commissioner Kristin K. Mayes
26 Arizona Corporation Commission
27 1200 West Washington
Phoenix, Arizona 85007

Lyn Farmer, Esq.
Chief Administrative Law Judge
Hearing Division
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

David Ronald
Legal Division
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

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- 1 Steven Olea
Utilities Division
- 2 Arizona Corporation Commission
1200 West Washington
- 3 Phoenix, Arizona 85007

- 4 Blessing Chukwu
Utilities Division
- 5 Arizona Corporation Commission
1200 West Washington
- 6 Phoenix, Arizona 85007

- 7 Dorothy Hains
Utilities Division
- 8 Arizona Corporation Commission
1200 West Washington
- 9 Phoenix, Arizona 85007

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Mary Appolito

ROSHKA HEYMAN & DEWULF, PLC
ONE ARIZONA CENTER
400 EAST VAN BUREN STREET - SUITE 800
PHOENIX, ARIZONA 85004
TELEPHONE NO 602-256-6100
FACSIMILE 602-256-6800



February 2, 2005

Mr. Trevor Hill
Global Water Management, LLC
Dear Valley Financial Centre
22601 North 19th Avenue
Suite 210
Phoenix, AZ 85027

Re: Docket Numbers SW-03575A-04-0767 and W-03576A-04-0767

Mr. Hill:

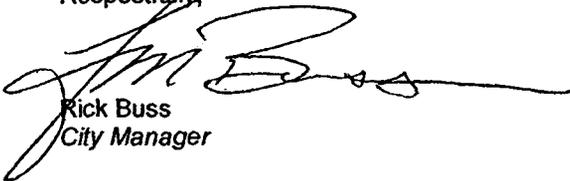
Pursuant to a unanimous vote of the City Council of the City of Maricopa on February 1, 2005, I have been directed to issue you this letter of support relative to docket numbers SW-03575A-04-0767 and W-03576A-04-0767.

The City of Maricopa supports the applications of Palo Verde Utilities Company and the Santa Cruz Water Company for extensions of their Certificates of Convenience and Necessity ("CC&Ns") as described in these dockets. Global Water and its utility subsidiaries have forged a strong relationship with the City of Maricopa and are seen as reliable partners in the development of this community.

Reliable, quality infrastructure built to meet or exceed demands of the hypergrowth the City of Maricopa is experiencing is of critical importance.

If further documentation is required, please notify me accordingly.

Respectfully,



Rick Buss
City Manager

ROSHKA HEYMAN & DEWULF

ROSHKA HEYMAN & DEWULF, PLC
ATTORNEYS AT LAW
ONE ARIZONA CENTER
400 EAST VAN BUREN STREET
SUITE 800
PHOENIX, ARIZONA 85004
TELEPHONE NO 602-256-6100
FACSIMILE 602-256-6800

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2004 DEC 14 P 4: 24

AZ CORP COMMISSION
DOCUMENT CONTROL



December 14, 2004

Hand-Delivered

Mr. James Fisher
Utilities Division
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

RE: Palo Verde Utilities' Company, L.L.C./Santa Cruz Water Company, L.L.C.
Docket Nos. SW-03575A-04-0767/Docket No. W-03576A-04-0767

Dear Mr. Fisher:

Enclosed is the information that you requested in your November 12, 2004 letter to Palo Verde Utilities Company, L.L.C. and Santa Cruz Water Company, L.L.C. in the above-captioned dockets. We are providing specific responses to the individual requests, a more detailed report on the PVUC and SCWC infrastructure and operations, and the §208 plan amendment that covers all but one of the developments in the extension area. We are preparing the proposed §208 plan amendment for the remaining development and will submit it when completed. The documents enclosed in connection with the specific responses are:

- Exhibit A Infrastructure Report;
- Exhibit B A map of the requested service territory with an identification of the respective property owners requesting service;
- Exhibit C Requests for service from each of the affected property owners;
- Exhibit D Unit phasing - the schedule of development (absorption schedule);
- Exhibit E Arizona Department of Environmental Quality's "Aquifer Protection Permit" for the wastewater treatment plant;
- Exhibit F A summary of current permits;
- Exhibit G Report identifying the location of future and existing transmission mains and include the timing or construction phasing of facilities;

ROSHKA HEYMAN & DEWULF

Mr. James Fisher
December 14, 2004
Page 2

- Exhibit H A set of design plans for the proposed water facilities;
- Exhibit I A development plan for 9.0 MGD of treatment;
- Exhibit J Design plans for the proposed wastewater facilities;
- Exhibit K A determination of per unit flow rates;
- Exhibit L A master wastewater design report which clarifies how wastewater service will be provided to the proposed CC&N area; and
- Exhibit M Reclaimed water master plan.

We believe that we have provided all the information required under Commission rules for our application to be deemed sufficient for purposes of a CC&N extension. The submitted information -- in both the application and these responses -- covers the information set forth by A.A.C. R14-2-402.C, the Commission's standard form CC&N extension application and substantially more.

We trust that the Utilities Division will process our application expeditiously, particularly in light of the rapid progress of the developments in the extension area.

Please contact me if you have any questions.

Sincerely,

Michael W. Patten

MWP:mi

Enclosures

cc: Blessing Chukwu, Utilities Division (with all enclosures)

Original and 15 copies
(without voluminous/oversized
enclosures) filed this 14th day
of December, 2004 with Docket Control



Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.adeq.state.az.us



Stephen A. Owens
Director

January 20, 2004

Ms. Alexis Strauss, Director
EPA Region IX, Water Division
75 Hawthorne Street (WTR-1)
San Francisco, CA 94105

Dear Ms. Strauss:

Pursuant to Section 208 of the Clean Water Act and 40 CFR 130.6(e), I certify that the 208 Plan Amendment for the Palo Verde Utilities Company, L.L.C. is consistent with both the State of Arizona's and the Central Arizona Association of Governments' Water Quality Management Plans.

As the Governor's designee for the State's Water Quality Management Program, I hereby transmit this amendment to EPA for review.

Sincerely,

Stephen A. Owens
Director

Enclosure

cc: Cheryl McGovern, Water Division, EPA Region IX, (WTR-4)
Edwina Vogan, Watershed Management Unit, ADEQ

Northern Regional Office
1515 East Cedar Avenue • Suite F • Flagstaff, AZ 86004
(928) 779-0313

Southern Regional Office
400 West Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

**PINAL COUNTY
BOARD OF SUPERVISORS**

LIONEL D. RUIZ, District 1
Mammoth

SANDIE SMITH, District 2
Apache Junction

JIMMIE B. KERR, District 3
Casa Grande



STANLEY D. GRIFFIS, Ph.D.
County Manager

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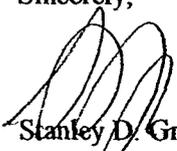
November 4, 2003

Ms. Maxine Leather
Executive Director
Central Arizona Association of Governments
271 Main Street
Superior, Arizona 85273

Dear Ms. Leather,

Pinal County has reviewed the plans for the Palo Verde Utilities Company. We concur with their efforts and recommend CAAG proceed with the public 208 Amendment process.

Sincerely,


Stanley D. Griffis, Ph.D.
Pinal County Manager

SDG/rp

CAAG 208 WATER QUALITY PLAN AMENDMENT

FOR

PALO VERDE UTILITIES COMPANY, L.L.C.

PINAL COUNTY, ARIZONA



Prepared by:

GTA ENGINEERING, INC.

Consulting Engineers

1990 W. Camelback Rd., Suite 401

Phoenix, Arizona 85015

TEL (602) 246-7759 FAX (602) 246-7645

e-mail: gta@GTAengineering.com

September 12, 2003

GTA No. 00260

**CAAG 208 WATER QUALITY PLAN AMENDMENT
FOR
PALO VERDE UTILITIES COMPANY, L.L.C.**

TABLE OF CONTENTS

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3	Service Area	3
4	Project Population and Wastewater Flows	3
5	Proposed Wastewater Treatment Plant	6
6	Effluent Management	7
7	Required Permits	7
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9	Environmental Impacts/Benefits	11
10	Financial Information	11

List of Tables

- I Population and Wastewater Flow Projections
- II Construction Phases

List of Exhibits

- 1 Project Location Map
- 2 Service Area Map
- 3 Wastewater Treatment Plant Site Plan
- 4 Existing and Proposed CC&N Boundaries
- 5 Effluent Management Plan
- 6 Trunk Sewer Exhibit
- 7 Process Flow Diagram

List of Attachments

- A Basis of Design
- B Letter to ADEQ Notifying of 208 Amendment
- C CAAG Checklist



1.0 OVERVIEW

The report is an amendment to the CAAG 208 Area Wide Quality Management Plan and will provide planning information on the expansion of the existing Water Reclamation Plant (WRP) and service area for Palo Verde Utilities Company. The proposed plant is located one and a half miles east of Arizona Highway 347 (Maricopa Highway), and is one quarter of a mile south of the Gila River Indian Community. The 25 square mile service area is in the Maricopa area. Most of the service area is north of the Union Pacific Railroad, south of the Gila River Indian Community, and extends about six miles west and seven miles east of Arizona Highway 347 (Maricopa Highway). See Exhibit 1.

A CAAG 208 Plan Amendment for Palo Verde Utility Company was approved in September 1997. That plan included a 300,000 GPD aerated lagoon followed by mechanical plants up to a capacity of 2.25 MGD. The service area included the Rancho El Dorado Project and an additional 3750 dwelling units within 3 miles.

The proposed service area in general encompasses approximately 25 square miles with an estimated 71,600 home sites, golf courses, open space and parks, schools, and some commercial areas. Maximum flow for the WRP at build out is 13.0 MGD. The WRP will utilize a sequencing batch reactor process that will be built in phases to accommodate development. The plant effluent will be reclaimed for irrigation of golf courses, parks, lakes or discharged into the Santa Cruz Wash about one mile south of the Gila River Indian Community.

The boundaries of the planning area are shown in Exhibit 2. Following is a list of the Sections in the 25 square mile sewage management service area:

<i>Full Sections</i>	<i>Partial Sections</i>	<i>Township</i>	<i>Range</i>
	13, 14, 15	4 South	2 East
13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 26, 35	18, 19, 25, 27, 29, 34, 36	4 South	3 East
19, 29, 30, 31, 32	18, 20	4 South	4 East
	1	5 South	3 East
4, 5,	6, 8, 9, 10, 15	5 South	4 East

2.0 BACKGROUND AND SUMMARY

Currently Palo Verde Utilities Company, L.L.C. (the Company) has a 300,000 gpd aerated lagoon plant servicing the Rancho El Dorado project. The lagoons are currently treating flows of approximately 200,000 gallon per day. The lagoons will be converted to emergency effluent storage. The Company has obtained an Aquifer Protection Permit (APP# 105228) for a new 2.25 MGD facility of which the first 1 MGD plant is under construction and is expected to be operational in October, 2003. This is the first phase of the proposed 13.0 MGD facility described in this 208 Amendment. The WRP site is laid out to accommodate the existing and all future WRP expansions in the northwest quarter of Section 13, T4S, R3E.(See Exhibit 3)

The original 208 Amendment anticipated growth west and south of the Rancho El Dorado. The Plan states, "additional residential development will occur within a 3 mile radius to the west and south of the Rancho El Dorado development. To serve this future area development, the water utility may increase its delivery and storage capacity and the sewage utility may increase the size of the central treatment facilities to a total treatment capacity of 2.25MGD. This is based on 1.5 MGD for the Rancho El Dorado project and an allowance of .75 MGD for the additional expansion of the existing plant during Stage IV, making a total plant capacity of 2.25 MGD." See Exhibit 2.

The original 208 Amendment was needed to provide service for Sections 13,14 and the eastern portion of Section 15 up to John Wayne Highway in T4S, R3E. This area was included in the current Certificate of Convenience and Necessity(CC&N) for service to the Rancho El Dorado subdivisions. The Company has applied for an expansion of the CC&N from the Arizona Corporation Commission (ACC) for adjacent properties within the proposed 25 mile service area. See Exhibit 4.

Effluent is currently used to irrigate farm land in Section 13, T.4S., R3E. The new 1 MGD plant and future expansions will be producing A+ effluent which will be used to irrigate The Duke Golf Course and other developments nearby. (See Exhibit 5) The Company has applied for a AZPDES Permit which will be used when flows exceed reuse requirements.

3.0 SERVICE AREA

Currently, the 25 square mile planning area is mostly agricultural in nature with multiple ownerships. The Company wastewater management facility serves the Rancho El Dorado development and will be serving several proposed developments in Sections 15, 21, 22, and 23 of T4S, R3E. Please see Exhibit 4 extension of CC&N currently being considered by the Arizona Corporation Commission.

The 387 Improvement District wastewater treatment plant is located in the northwest quarter of Section 28, Township 4 South, Range 3 East, about 5 miles from the Palo Verde facilities. The planing area for 387 Improvement District is located in Sections 25, 27, 28, 33, 34, and 36 of Township 4 South, Range 3 East; Sections 21, 28, and 34 of Township 4 South, Range 4 East; and Sections 2, 3, 11 and 12 of Township 5 South, Range 3 East of the Gila and Salt River Base and Meridian, Pinal County, Arizona. The plant is expected to begin operations in 2004. See Exhibit 2.

The water company serving Rancho El Dorado is the Santa Cruz Water Company, L.L.C. (SCWC). SCWC also has a request before the ACC to increase its CC&N to conform to the Company's CC&N area. See Exhibit 3. There are no other ACC certificated areas in the proposed planning area.

4.0 PROJECT POPULATION AND WASTEWATER FLOWS

The Company began sewer service to the Rancho El Dorado development in 1999 with a 0.3 MGD aerated lagoon wastewater treatment plant. The aerated lagoons plant is soon to be replaced by a new 1 MGD wastewater treatment plant expected to be in operation October 2003. New plant expansions will be added as the planning area develops and flows increase. Provisions have been made to expand to a 13.0 MGD if necessary. Current wastewater flows have averaged 160 GPD per dwelling unit.

Table I shows the project service area flows and population for each Section of the planned area based on 210 GPD per dwelling unit which is based on 160 GPD from each home and 50 GPD from commercial and school flows.

Table 1
Palo Verde Utilities Company Service Area
Population and Wastewater Flow Projections - Per Section

Section	Dwelling Units	Population	Projected Average Daily Flow (GPD)
Township 4 South, Range 2 East			
15	1,400	3,500	294,000
14	1,120	2,800	235,200
13	1,400	3,500	294,000
Township 4 South, Range 3 East			
13	2,240	5,600	470,400
14	2,240	5,600	470,400
15	2,240	5,600	470,400
16	2,240	5,600	470,400
17	2,236	5,590	469,560
18	1,360	3,400	285,600
19	840	2,100	176,400
20	2,240	5,600	470,400
21	2,240	5,600	470,400
22	2,240	5,600	470,400
23	2,240	5,600	470,400
24	2,240	5,600	470,400
25	840	2,100	176,400
26	2,236	5,590	469,560
27	560	1,400	117,600
29	840	2,100	176,400
34	1,680	4,200	352,800

Table 1 - Continued Palo Verde Utilities Company Service Area Population and Wastewater Flow Projections - Per Section			
Section	Dwelling Units	Population	Projected Average Daily Flow (GPD)
35	2,240	5,600	470,400
36	860	2,150	180,600
Township 4 South, Range 4 East			
18	1,120	2,800	235,200
19	2,240	5,600	470,400
20	1,120	2,800	235,200
30	2,240	5,600	470,400
29	2,240	5,600	470,400
31	2,240	5,600	470,400
32	2,240	5,600	470,400
Township 5 South, Range 3 East			
1	280	700	58,800
Township 5 South, Range 4 East			
6	1,400	3,500	294,000
5	2,230	5,575	468,300
4	2,240	5,600	470,400
8	840	2,100	176,400
9	1,960	4,900	411,600
10	1,120	2,800	235,200
15	800	2,000	168,000
TOTAL	62,082	155,205	13,037,220

The wastewater flow projection for the service area is approximately 13.0 MGD.

5.0 PROPOSED WASTEWATER TREATMENT PLANT

The existing lagoon wastewater treatment plant site is located in the Northwest quarter of Section 13, T4S, R3E in the Rancho El Dorado development 1,000 feet south of the Gila River Indian Community, Arizona, and about 1 ½ miles east of SR-347, Pinal County. The existing aerated lagoons will be closed when the new 1 MGD plant becomes operational and will be utilized for effluent storage. Current sewage flows are approximately 200,000 GPD and the new plant will have a design capacity of 1 MGD, for the first phase with an ultimate facility capacity of 13.0 MGD. The location of the plant is shown in Exhibit 3.

Construction impacts for each new addition to the WWTP will be minimal. The site has been laid out to accommodate the expansions by use of common walls when possible. Yard piping and pump stations are sized to accommodate full build-out and to maintain all construction activities within the WWTP site. The site is master-planned to allow the construction of new phases with minimal interference with operations.

Operational impacts will be minimal. Chlorine usage will be eliminated with the activation of the UV disinfection system. Spent ultraviolet (UV) lamps will be disposed by returning to the manufacturer for proper disposal. Oils and grease collected from equipment maintenance will be stored in secure containers until they are picked up by an approved grease and oil recycler. The diesel fuel tank has a retention wall around the slab to prevent any spills flowing to the ground and contaminating the groundwater. Spent charcoal used for odor control will be collected by the supplier and re-generated.

The new plant will be enclosed and include odor control. The plant will have full noise, odor and aesthetic control. The ADEQ setbacks for the facility will be 350 feet (AAC R18-9-B201-I)

Influent sewage will be pumped into the headworks where screening, grit removal, and flow measurement will occur. Screenings and grit will be removed, dewatered, and disposed of at a landfill. Secondary treatment will include BOD₅ and TSS removal and nitrification/denitrification for nitrogen removal. The treatment plant is a sequencing batch reactor that provides biological treatment with nitrification, denitrification and clarification in one tank. The effluent will be decanted into a surge tank and then pumped to a tertiary filter (automatic backwash sand filter) followed by disinfection using UV lamps. Excess sludge will be wasted to an aerobic digester where it will be stabilized to a Class B sludge and de-watered using a belt press. Ultimate

sludge disposal will be to a landfill or permitted land application. See Exhibit 7 for a process flow diagram.

6.0 EFFLUENT MANAGEMENT

The treatment plant facilities will treat the sewage to a "Class A+" effluent quality for irrigation of golf courses, recreational lakes, parks and landscaping. An effluent distribution system is planned so projects can utilize effluent for recreational lakes and landscape irrigation. A water balance shows that the available agricultural land can handle flows to 1 MGD. Irrigation will be shifted from the agricultural land to landscaping, lake use, and golf course irrigation as these facilities develop. When the Section 24 (T4S, R3E) land is retired from agriculture, the excess flows, which will occur during portions of the winter months, will be discharged to the Santa Rosa Wash, see Exhibits 5, which runs north through the Rancho El Dorado Project. The Company has applied for an AZPDES Permit. The permit application is for 2.25 MGD, the flow rate of the existing 208 plan and will be increased when this plan is approved. Discharge will occur one mile south of the Gila River Indian Community boundary. The wash discharges into the Santa Cruz Wash which then meets with the Gila River, about 17 miles north of the discharge point. The effluent will be denitrified, tertiary treated and disinfected prior to release into the receiving wash and will exceed the water quality requirements for the Santa Cruz River.

7.0 REQUIRED PERMITS

ADEQ has been advised of this 208 Amendment Application by letter dated May 7, 2003. (See Attachment B)

Following is a summary of the permit requirements that are required for the wastewater management facility.

7.1 Aquifer Protection Permit (APP)

The State Aquifer Protection Permit (APP) Program was established by the Environmental Quality Act (EQA) and is primarily designed to regulate facilities that may discharge to an aquifer. An individual APP permit is required for all new wastewater treatment plant facilities and all such facilities must be constructed and operated to meet the greatest degree of discharge reduction achievable. The company has an Aquifer Protection Permit (APP# 105228)

which allows for the facility to expand and operate up to 2.25MGD. When the WWTP is expanded, the APP will be modified to correspond with other permits.

7.2 Effluent Reuse Permit

Type 2 Reclaimed Water General Permits are required for direct use of reclaimed water which includes irrigation of The Duke Golf Course, use in the community lakes, and irrigation of landscaping. Permit applications are in process for the proposed reuse areas.

7.3 Section 208 Plan Amendment

In accordance with Section 208 of the Clean Water Act, an Areawide Water Quality Management Plan was prepared for the Central Arizona Association of Governments (CAAG). The Water Quality Management Plan has continually been updated through several Plan Amendments and updates. This document will serve as the 208 Water Quality Plan Amendment for the Company. The Central Arizona Association of Government (CAAG) is a designated Areawide Water Quality Management Planning Agency for Pinal and Gila Counties.

7.4 AZPDES Permit

An AZPDES permit for discharge into the Santa Rosa Wash has been prepared and submitted to ADEQ for review and approval on May 5, 2003.

7.5 Sludge Management

Part 503 of the Clean Water Act and Chapter 9, Title 18, of the Arizona Administrative Code specifies the quality of sewage sludge that may be applied to land, distributed and marketed, placed in a sludge disposal facility, or incinerated in a sewage sludge incinerator. The sludge generated at the proposed wastewater treatment plant will be stabilized and dewatered and then disposed of at an operating sanitary landfill certified by the ADEQ to handle and dispose of sludge from wastewater treatment plants. Protection of the groundwater at the landfill location will be provided by the landfill facility.

The closest landfill accepting sludge for disposal is:

Butterfield Station Municipal Solid Waste Landfill
99th Avenue, one mile north of Highway 238
Mobile, Arizona

Operated by: Waste Management, Inc.
2425 South 40th Street
Phoenix, Arizona 85034 Phone: (602) 256-0630

Waste Management, Inc. has agreed to accept sludge from the Company's wastewater treatment plant at Butterfield Station Municipal Solid Waste Landfill. The life expectancy of the landfill is forty (40) to fifty (50) years.

An AZPDES Storm Water Pollution Prevention Permit will be required for the entire project including the treatment plant site work. The contractor for the facilities is responsible to obey all AZPDES Permit regulations relevant to construction sites to prevent surface water and groundwater contamination. All hazardous materials and potential pollutants shall be stored onsite in appropriate storage areas which are constructed to contain any spills or runoff of hazardous materials. Retention basins, silt traps, and other sediment barriers are to be provided at the site to filter sediment from storm water runoff leaving the site. The contractor shall keep the site clean and have covered dumpsters on site which are emptied regularly.

7.6 Local Floodplain and Drainage Regulations

The Santa Rosa Wash bisects the Rancho El Dorado project. The wastewater treatment plant is located approximately one mile east of the Santa Rosa Wash and is out of the 100-year floodplain.

7.7 Construction Permits (404/401 permits)

There are no non-point issues related to the wastewater treatment plant. If an issue does occur, the contractor will be required to obtain the necessary permits.

7.8 Air Quality Permit

An Air Quality Permit will be obtained from Pinal County.

8.0 CONSTRUCTION

The ultimate plant wastewater flow is approximately 13.0 MGD. All flows are from existing and new residential developments within the service area. Construction of the 1 MGD plant began in January 2003. Additional phases will be added to accommodate the future growth. Build out is expected to take 20 years, with completion projected for 2023. The contractor for the construction of the new 1 MGD wastewater treatment plant is Aquatec, Inc. Severn-Trent Services is under contract to operate and maintain the WWTP.

The new treatment units will be built in increments of 1, or 2 MGD units. As the flows increase, it may be cost effective to increase the unit capacity constructed. All infrastructure and discharge lines will be sized for ultimate flows. Some process units like odor control, solids de-watering, and generators will be sized to multiple phases. Construction will follow non-point source requirements to control stormwater runoff. Below is a table which shows a preliminary schedule of treatment plant expansions.

Table 2 Palo Verde Utility Company Construction Phases					
Phase	Year Completed	No. of Residential Units	Estimated Population per Dwelling	Treatment Capacity (MGD)	Capital Cost
I	2003	4,750	11,875	1.0	\$5Million
II	2005	14,500	36,250	3.0	\$10Million
III	2008	21,500	53,750	4.5	\$7.5Million
IV	2010	28,500	71,250	6.0	\$7.5Million
V	2013	35,500	88,750	7.5	\$7.5Million
VI	2015	42,500	106,250	9.0	\$7.5Million
VII	2018	49,500	123,750	10.5	\$7.5Million
VIII	2020	56,500	141,250	12.0	\$7.5Million
X	2023	62,082	155,205	13.0	\$5Million

Total: \$65Million

9.0 ENVIRONMENTAL IMPACTS/BENEFITS

The wastewater treatment plant for the developments will provide benefits to the area:

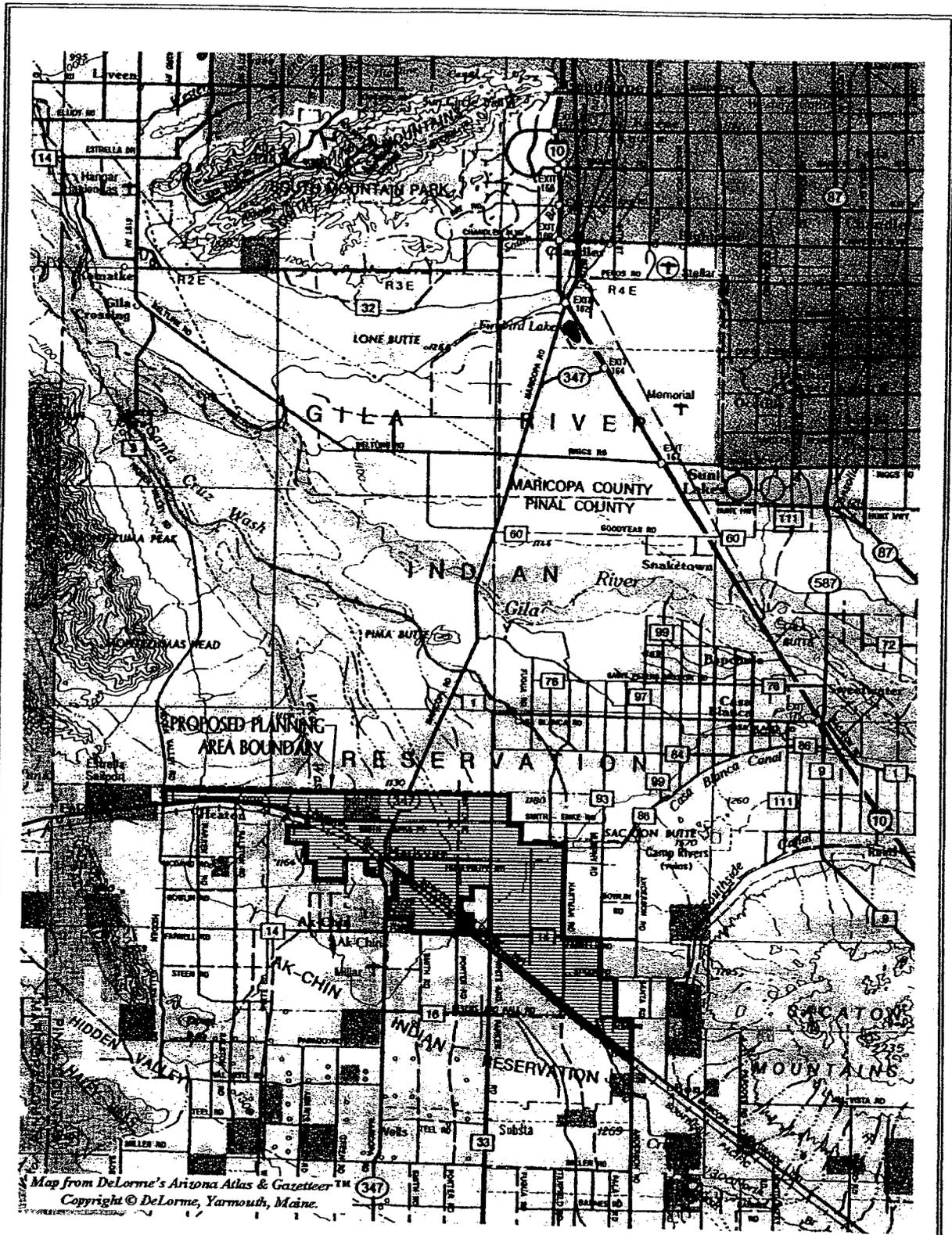
- Centralized wastewater treatment will be provided, reducing the potential for groundwater contamination from overuse of septic tanks with leach fields in the area.
- The treated effluent from the wastewater treatment plant will be used to irrigate the golf courses and other open area facilities.
- The expansion of the wastewater treatment plant will allow the area to accommodate growth in an environmentally safe manner.
- The development of new communities will fulfill a growing demand for affordable homes in high quality master planned communities, while retail uses within the community will provide an increased tax and employment base for Pinal County.
- The mechanical plants will meet aquifer water quality standards. Plant will be enclosed and have odor control.
- The golf course and landscaped areas will use best management practices to prevent pollution of the groundwater.

10.0 FINANCIAL INFORMATION

Palo Verde Utilities Company, L.L.C. is owned 1% by Phoenix Utility Management, L.L.C. and 99% by Phoenix Capital Partners, L.L.C. The Company currently has a Certificate of Convenience and Necessity for wastewater service for Section 13, 14, and 15, Township 4 South, Range 3 East, as shown in Exhibit 4. The Company is in the application process with the Arizona Corporation Commission to expand the Certificated Area.

The Company is responsible for the operation and maintenance of the sewage management system in their service area. The Company's customers will be paying user fees based upon fair value as determined by the Corporation Commission.

Capacity charges are assessed to the developers to fund the capital investments when expanding the WWTP. Effluent re-users will compensate the Company for treatment and delivery costs. The Company will fund the plant construction. Any portion of pipelines and interceptors constructed within a development by a developer will be conveyed to the Company under a main extension agreement.



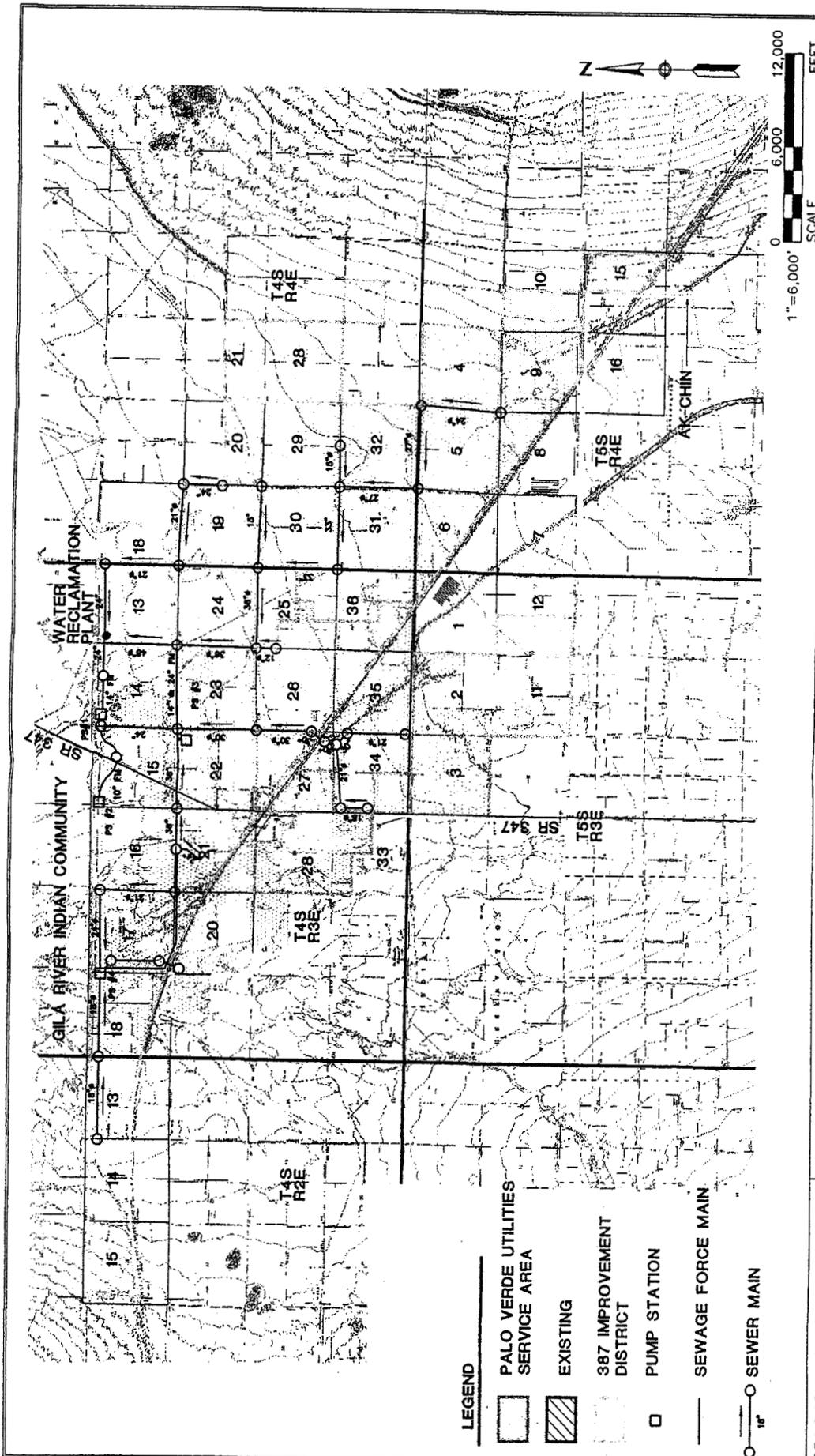
GTA ENGINEERING, INC.
 CONSULTING ENGINEERS
 1990 W CAMELBACK RD. STE. 401
 PHOENIX, AZ (602)246-7759

**PALO VERDE UTILITIES
 LOCATION MAP**

EXHIBIT

1

MAY 2003



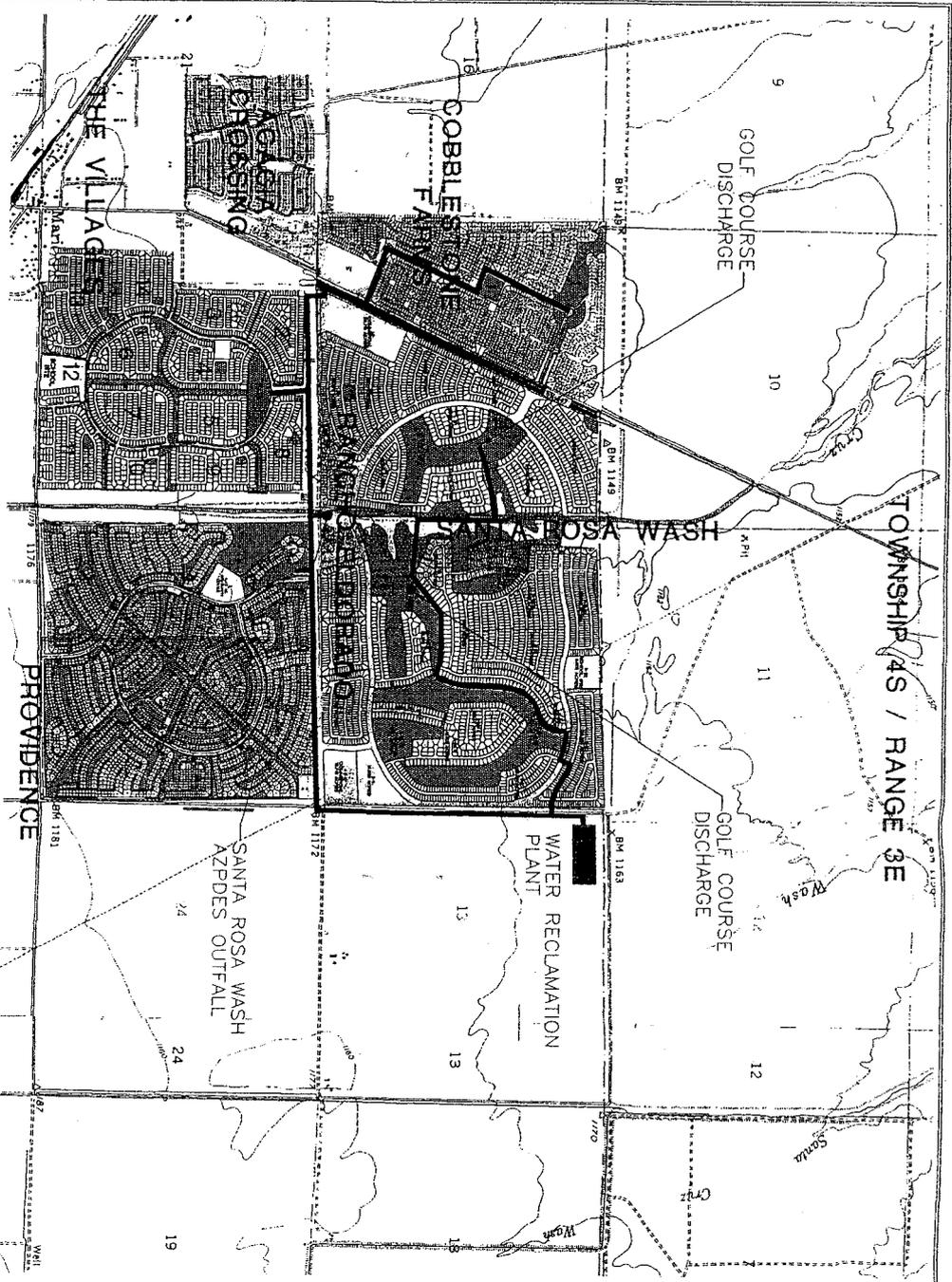
GILA RIVER INDIAN COMMUNITY
 WATER RECLAMATION PLANT
 T4S R4E
 T4S R3E
 T5S R4E
 T5S R3E
 SR 347
 AK-CHIN

LEGEND
 PALO VERDE UTILITIES SERVICE AREA
 EXISTING
 387 IMPROVEMENT DISTRICT
 PUMP STATION
 SEWAGE FORCE MAIN
 SEWER MAIN

1" = 6,000' SCALE
 0 6,000 12,000 FEET

PALO VERDE UTILITIES
 TRUNK SEWER MAP
 JULY 2003
 EXHIBIT 6

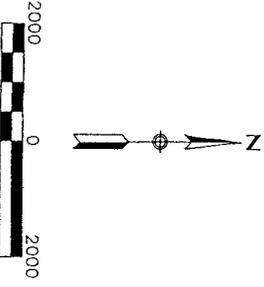
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 CONSULTING ENGINEERS
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 PHOENIX, AZ (602)246-7759



LEGEND

— PROPOSED EFFLUENT PIPELINES

■ EFFLUENT REUSE AREAS

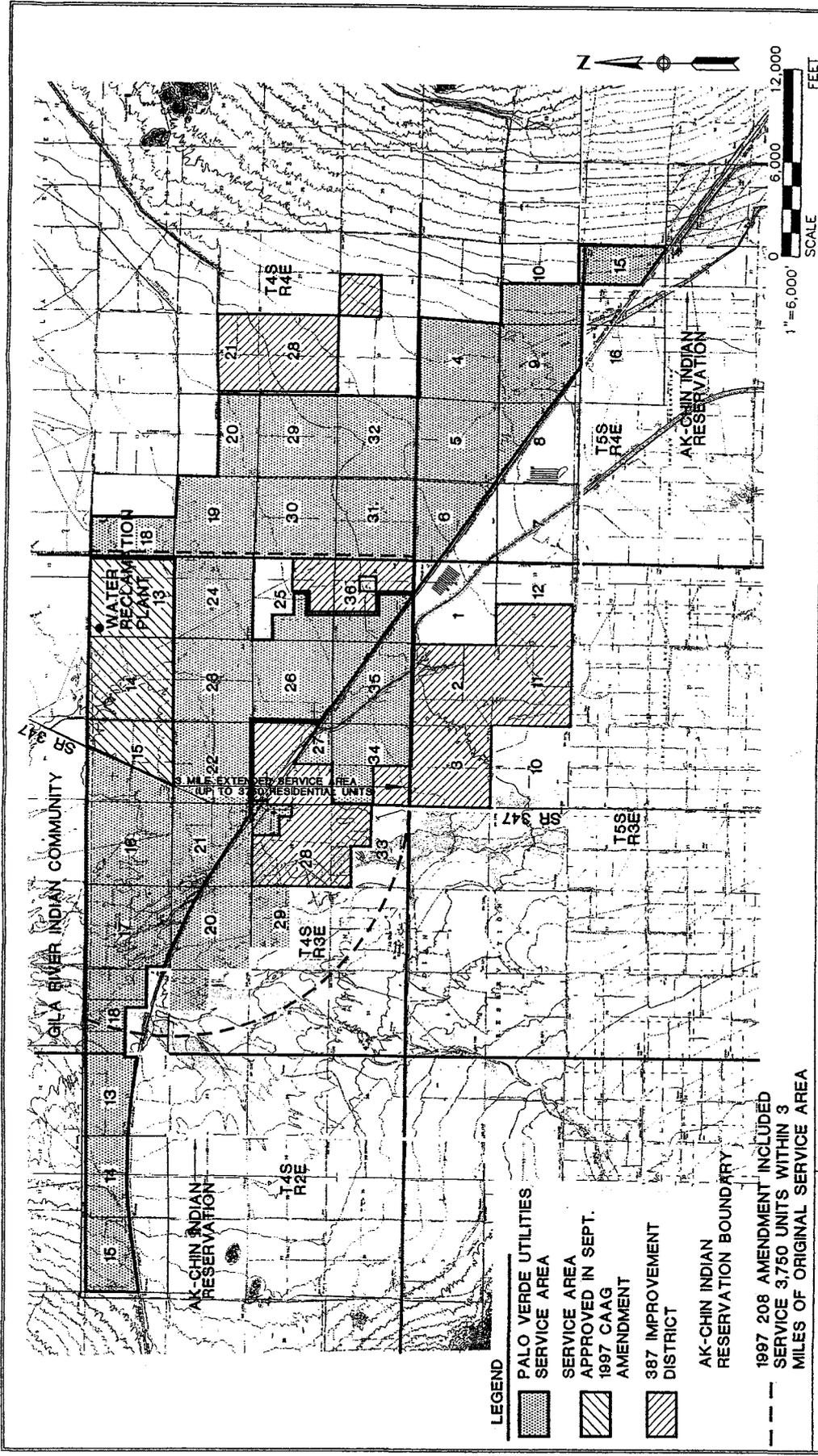


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 CONSULTING ENGINEERS
 1990 W CAMELBACK RD. STE. 401
 PHOENIX, AZ (602)246-7759

PALO VERDE UTILITIES COMPANY
 EFFLUENT MANAGEMENT PLAN

JULY 2003

EXHIBIT
5



LEGEND

-  PALO VERDE UTILITIES SERVICE AREA
-  SERVICE AREA APPROVED IN SEPT. 1997 CAAG AMENDMENT
-  387 IMPROVEMENT DISTRICT
-  AK-CHIN INDIAN RESERVATION BOUNDARY

1997 208 AMENDMENT INCLUDED
 SERVICE 3,750 UNITS WITHIN 3
 MILES OF ORIGINAL SERVICE AREA

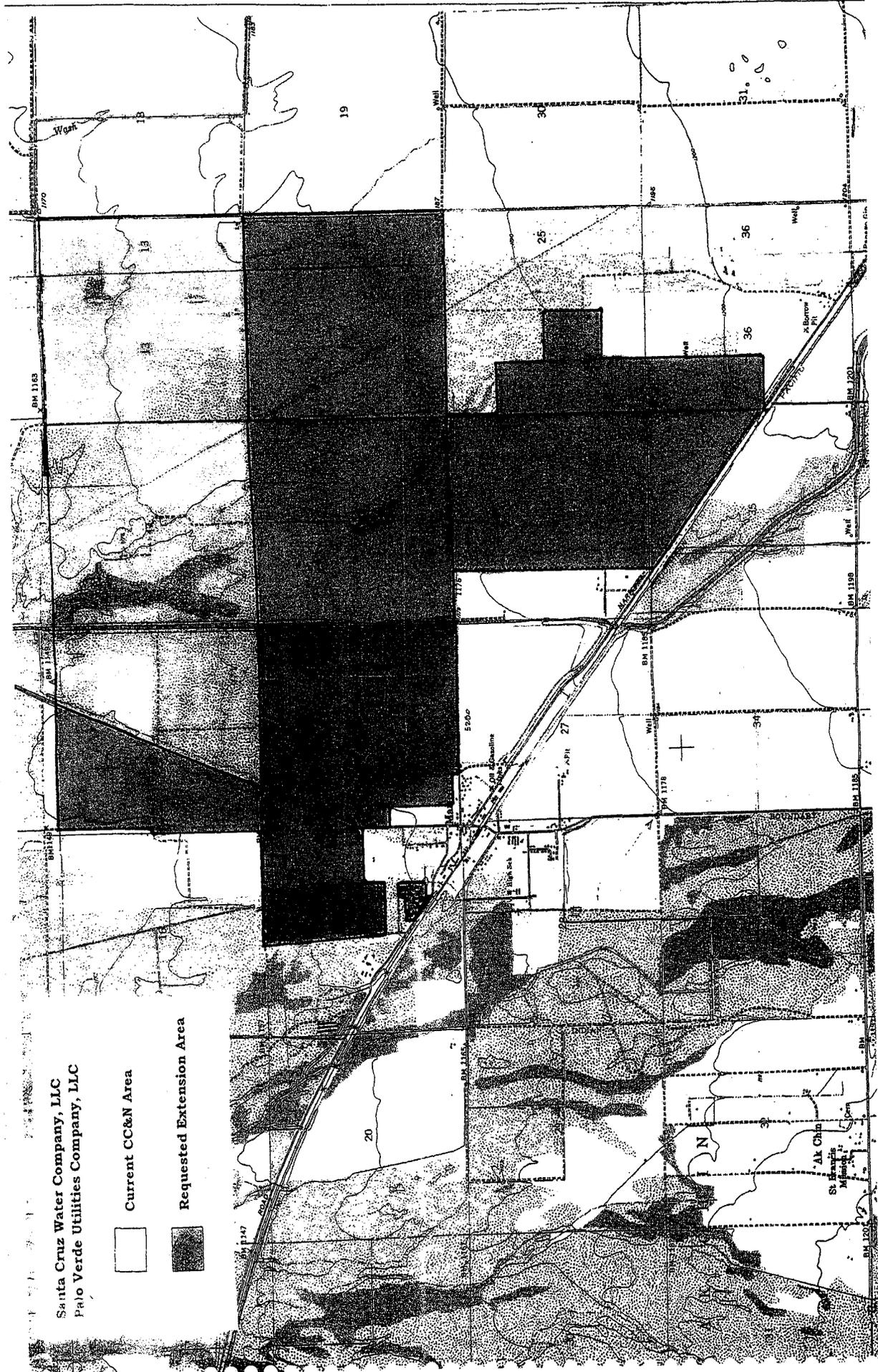
GTA ENGINEERING, INC.
 CONSULTING ENGINEERS
 1990 W CAMELBACK RD. STE. 401
 PHOENIX, AZ (602)246-7759

**PALO VERDE UTILITIES
 SERVICE AREA MAP**

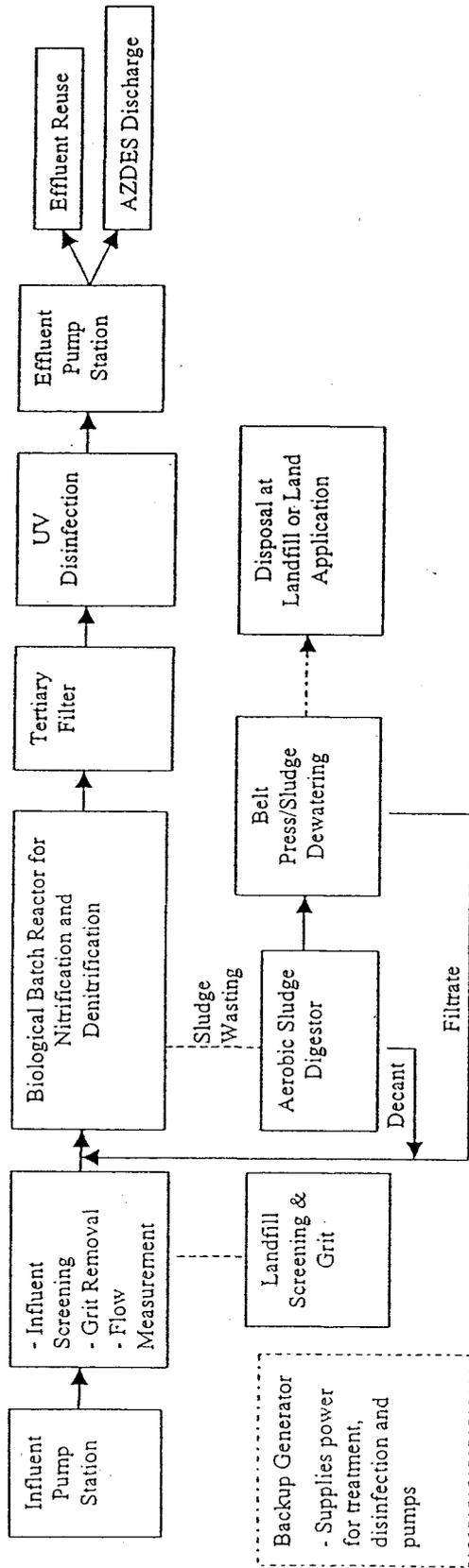
JULY 2003

Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC

- Current CC&N Area
- Requested Extension Area



**PALO VERDE UTILITIES COMPANY, L.L.C.
PROCESS FLOW DIAGRAM**



Narrative Description: The plant will be enclosed and include odor control. Influent sewage will be pumped into the headworks where screening, grit removal, and flow measurement will occur. Screening and grit will be dewatered and disposed of at a landfill. Secondary treatment will include BOD₅ and TSS removal and nitrification/denitrification for nitrogen removal. The process is a sequencing batch reactor that provides aerated biological treatment with nitrification anoxic denitrification and clarification in one tank. Sludge will be wasted to an aerobic digester. Effluent will be decanted into a surge tank and then pumped to a tertiary filter (automatic backwash sand filter) followed by UV disinfection. Waste sludge will be stabilized to a Class B sludge in an aerobic digester and dewatered using mechanical dewatering (belt press). Ultimate sludge disposal will be to a landfill or permitted land application.

Exhibit 7

JULY 2003

GTA ENGINEERING, INC.
ALLI0BS0Z:PALOVERDENPDES/FLOWDIAGRAM

208 AMENDMENT CHECKLIST
Section 208 Clean Water Act
40 CFR Part 130.6

REQUIREMENT	PROVIDE BRIEF SUMMARY ON HOW REQUIREMENTS ARE ADDRESSED	ADDRESSED ON PAGE:
<p><u>AUTHORITY</u></p> <p>Proposed Designated Management Agency (DMA) shall self-certify that it has the authorities required by Section 208(c)(2) of the Clean Water Act to implement the plan for its proposed planning and service areas. Self-certification shall be in the form of a legal opinion by the DMA or entity attorney.</p>	<p>N/A</p>	
<p><u>20-YEAR NEEDS</u></p> <p>Clearly describe the existing wastewater (WWT) treatment facilities: Describe existing WWT facilities.</p>	<p>Currently Palo Verde Utilities Company, L.L.C. (the Company) has a 300,000 gpd aerated lagoon plant servicing the Rancho El Dorado project. The lagoons are currently treating flows of approximately 200,000 gallon per day. The lagoons will be converted to emergency effluent storage.</p>	<p>Page 2, 3, 6</p>
<p>Show WWT certified and service areas for private utilities and sanitary district boundaries if appropriate.</p>		<p>Exhibit 2 & 4</p>
<p>Clearly describe alternatives and the recommended WWT plan:</p> <ul style="list-style-type: none"> - Provide POPTAC population estimates (or COG-approved estimates only where POPTAC not available) over 20-year period. 	<p>Population growth will be determined as developments are built and homes are bought. POPTAC figures are unavailable for undeveloped areas.</p>	<p>Page 3 Table 1 & 2</p>
<ul style="list-style-type: none"> - Provide wastewater flow estimates over the 20-year planning period. 	<p>The wastewater flow projection for the entire service area is 13 mgd.</p>	<p>Page 1, 2, 3, 10, 11 Table 1 & 2</p>
<ul style="list-style-type: none"> - Illustrate the WWT planning and service areas. 		<p>Exhibit 4 and 6</p>

Sequencing Batch Reactor
(Using SAM Aeration - Mixing Equipment)
Process Design Report



AquaTec, Inc.

1235 Shappert Drive, Rockford, IL 61115

This AquaTec, Inc. Engineered System Report has been exclusively prepared for:

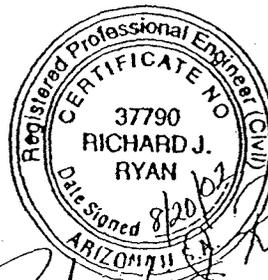
Project: Palo Verde Utilities Company Phase 1 1.0 MGD Treatment Plant

Date: 07/25/02

Report prepared by: Richard (Dick) Ryan, P.E., D.E.E.

Note: This report is submitted subject to the following conditions:

AquaTec, Inc. (AquaTec) provides the enclosed information and accompanying data and illustrations based upon our understanding of information conveyed to us by your verbal and/or written transmission of information. This data is relative to the general application of certain processes and equipment and controls. Variables can change, and their associated details may require the need to adjust process functions or require changes in the size and type of equipment used; and therefore, some design assumptions and mathematics used in models may need to be adjusted for final approval. It is our intent to present this data to be as accurate as possible for estimating purposes. However, unless an approved purchase order to AquaTec is overlaying such information as this, and unless such information is included as a condition to a specific purchase order, with all details of design confirmed and approved by AquaTec, then all information contained herein must be considered preliminary. Otherwise, AquaTec assumes no responsibility for the validity of neither this data nor its application. AquaTec assumes no responsibility for any liability resulting from any party using this data. This information, since it is the product of AquaTec's confidential and proprietary business resources is to be considered property of AquaTec and exclusive for use or distribution only as approved by written approval of AquaTec. It is not to be released for review by or to any third parties without AquaTec's written approval.



Richard J. Ryan

General Design Notes:

Pre-SBR treatment system

Mechanically cleaned bar screen with 1/4" opening will be provided.

Flow equalization

No Pre-SBR flow equalization basin(s) used in this design.

Post-SBR Flow equalization basin(s) used in this design.

A post flow equalization basin is used prior to UV disinfection.

Neutralization

Neutralization is recommended ahead of the SBR reactor if the pH can fall outside 6.5 - 8.5 for duration that can adversely effect the treatment process.

Raw wastewater inlet screening and grit removal

A minimum of coarse bar screening (maximum 1-inch openings) is recommended ahead of the SBR reactor. And, grit removal ahead of the SBR reactor, while not mandatory, is recommended. Equipment damage from these issues are not covered under AquaTec, Inc. warranty.

Daily flow parameters for SBR basin sizing

Unless otherwise included in the calculations shown in this report, the entire days flow is assumed to be generated over a 24-hour period.

A peak flow of 2.5 MGD has been included in this design.

Oxygen supply provided by Aeration

1.25 lbs./O₂/lb of BOD₅ applied is provided in the aeration system design for this SBR System.

Nitrogen utilization

Nitrogen utilization will be based up a uptake rate of 1:20 (N:BOD₅), unless otherwise noted. If credit for using applied TKN for nutrient source is used in the calculations for oxygen requirements it will be noted. Where nitrification is required, it will be assumed that sufficient alkalinity exists or will be provided as needed.

The SBR has been sized with sufficient MCRT to allow denitrification.

Phosphorus

Some phosphorous may be removed in the SBR system by luxury uptake.

Control panel and process design logic

This SBR system is an "Engineered Process Design" and must incorporate the use of specific logic controls, some of which may require use of computers and/or PLC units. AquaTec, Inc. has used state of the art design logic and components for the controls used and they require specific signal and I/O compatibility. Chemical feed units, flow meters, level and sequencing dynamics are all unitized together to assure a high level of control and effluent quality. This control system is an integral part of the SBR system and must be furnished by AquaTec, Inc. for system integrity.

Equipment

Equipment chosen is based upon process requirements, including basin geometry wastewater type, depth, aeration and mixing requirements, flows, temperature considerations and a host of other parameters that each individual unit expresses as a need to fit or interact with the whole system. Any substitutions made that changes the proposed equipment can have considerable effect other equipment items or the engineered process itself. No substitutions should be considered without AquaTec, Inc. giving written approval after carefully evaluating the overall effect and its result.

Continued....

Basic SBR System Design Influent Parameters

Total design flow	1.00 mgd	3,785 m ³ /day
BOD ₅ applied	300 mg/l	
	2,502 lbs BOD ₅ /day	1,137 Kg BOD ₅ /day
Suspended solids	300 mg/l	
	2,502 lbs SS/day	1,137 Kg SS/day
Ammonia nitrogen (influent)	45 mg/l	
Nitrogen credit applied (to O ₂)	5 mg/l	
Temp of SBR basin (deg C):		
Winter liquid Temp	15 °C	9.80 mg/l, O ₂ saturation in clean water
Summer liquid Temp	27 °C	7.70 mg/l, O ₂ saturation in clean water
SBR System jobsite elevation	1200 ft amsl	365.8 m amsl
Barometric Pressure @ Elevation	14.07 psia	727.6 mm Hg
Alpha value for aeration	0.85	
Beta value for wastewater	0.95	
Residual D.O. to maintain in SBR	2.00 mg/l	
SBR jobsite correction factor	0.582 (adjusts aerator clean water O ₂ transfer rate to field conditions)	

Design effluent characteristics:	BOD ₅	S.S.	NH ₃
	10 mg/l	10 mg/l	<8.0 mg/l

This SBR design is capable of meeting these results when operated at above influent parameters with inclusion of the considerations in the General Design Notes on page 2 of this report, and with the exclusion of any undisclosed conditions that could adversely effect the process design. Tertiary sand filtration is recommended to meet these low limits after post equalization and before disinfection.

SBR Reactor Details (with process control sequences)

Number of SBR reactors used	2 basin(s) in SBR System	
Hydraulic retention time	29.07 hours (all SBR aeration basins)	
Number of cycles/day/basin	5 at Initial Program Selection	
Aeration hours per cycle	2.0	10.0 hours total aeration time/basin/day
Maximum liquid depth in SBR	22.00 ft	6.71 m
Decant liquid level drop	3.63 ft at Ave. Design Flow	1.11 m
Decant flow rate	2,941 gpm at Initial Program Flow	11.13 m ³ /m
Number of decanters per basin	1 (gravity, with automatic control valve, unless otherwise noted)	

Field programmable SBR process control sequencing parameters furnished with proposed system.
(Minutes)

Static Fill	per PRGM	Typically introduction of raw influent without mixing or aeration
Mixed Fill	per PRGM	Typically mixing only with introduction of raw influent
React Fill	per PRGM	Typically introduction of raw influent with aeration and mixing
React	per PRGM	Typically aeration and mixing without introduction of raw influent
Settle	per PRGM	Typically settling does not exceed 60-minutes
Decant	per PRGM	Typically decanting does not exceed 120-minutes
Sludge Draw	per PRGM	Typically waste sludge draw off does not exceed 30-minutes
Idle	per PRGM	Normal to multiple basin SBR's (time option varies, can be used elsewhere)

The minimum operating depth for each SBR at average flow conditions will be 12.9' liquid depth
The maximum operating depth for each SBR at average flow conditions will be 16.6' liquid depth
The maximum operating depth for each SBR at peak flow conditions will be 22'0" liquid depth.

Continued....

SBR Reactor Aeration Basin Size and Type Details

2 SBR Reactor basin(s), sized as follows, used in this system design.

The SBR reactor basin(s) for this design will be square.

SBR reactor basin width is:	40.00 ft	12.19 m	
SBR reactor basin length is:	92.00 ft	28.04 m	
Liquid depth in SBR is:	22.00 ft	6.71 m	
Freeboard above liquid is:	2.00 ft	0.61 m	
The volume of each basin is:	605,550 gal	2292 m ³	
Decant (design level drop) is:	3.63 ft	1.11 m	
Peak Flow Decant Level Drop is:	9.08 ft	2.77 m	
Design MLSS concentration is:	4000 mg/l @	0.80 VSS =	3200 mg/l mlvss
Design mean cell residence time:	26.91 days, MCRT		
Design Food/Microorganism ratio:	0.077 F/M		
Organic loading in aeration basin:	15.45 lb/BOD ₅ /mft	0.25 Kg/BOD ₅ /m ³	
Sludge yield (waste) per day/basin:	12,000 gal/day	45.4 m ³ /day @	1.0% solids

The above values are at average flow conditions of 1.0 MGD. The MLSS will decrease along with the F/M ratio at peak flow conditions. The organic loading will decrease at peak flow conditions as well. A minimum of 20 days MCRT (sludge age) is required to achieve good nitrification and denitrification.

Aeration Supply Information & Details for Each SBR Basin

Clean water aerator O ₂ transfer	25% (at STD Temp. & Alt. for SBR design)	
Oxygen supplied per SBR reactor	2,331 lbs O ₂ /day	1,060 Kg O ₂ /day
	97.1 lbs O ₂ /hr	44.1 Kg O ₂ /hr
ACFM air supplied per SBR reactor	1,739 cfm	49.2 m ³ /m
Maximum SBR blower pressure	10.20 psig	0.703 Bar
SBR blower efficiency	80.00 percent	
Highest blower inlet Temp	115 °F	46 °C
Estimated blower discharge Temp	235 °F	113 °C
Blower BHP required per SBR reactor	95.6 Hp	71.3 KW
SAM Aerator - Mixer BHP required/SBR	49.7 Hp	37.1 KW
The SBR basin aeration - mixing power level is:		
SAM aerator - mixer equipment	82.6 Hp/ml/gals	16.3 Wm ³
SAM + blower (air) equipment	240.5 Hp/ml/gals	47.4 Wm ³
The air flow, cfm/1000 cu. ft. vol	21.5 cfm/mft ³	21.6 Ln/m ³
Total "cycle time" power (Hp/day)/SBR/day	71.6 Hp	53.4 KW

Note: Blower & SAM BHP values above are "on-line" power levels required during SBR react operation. Actual blower and SAM equipment sizes will be chosen by conventional sizes available that are closest to the size shown. Equipment power loading is set very close to required power values shown above by drive designs.

The total "cycle time" power (Hp/day)/SBR/day is the equivalent steady state power on line that each SBR basin's aeration and mixing equipment demands. It is the power consumed per day for aeration and mixing which is determined by the SBR process control program set by the PLC. This calculates to a power consumption of 1282.1 kW-Hours/Day for each SBR basin.

Two (2) 25 Hp SAM units will be installed in each SBR basin and can be operated at 10 to 25 Hp by VFD. At the average liquid depth of 14.7' at average flow conditions the blowers will draw only 7.0 psig and approximately 67.0 BHP. At peak flow conditions at 22' liquid depth, 10.2 psig the blowers draw 95.6 BHP. At average flow conditions the total SBR energy used is (67+49.7) X 2 X 0.416 = 97.1 BHP continuous.

Continued....

SBR - Aerobic Digester - Process Design Parameters

For Aerobic Digester jobsite conditions, the same conditions used for the SBR are applied.

The number of Aerobic Digester basins used is	1		
The sludge flow to each digester	24,000 gal/day	90.9 m ³ /day	
Each digester basin volume is	240,000 gal	908.5 m ³	= 10.0 days retention
The influent sludge concentration	1.00% W.A.S. @	80% volatile SS	
The lbs O ₂ applied per lb VSS	1.30 lb/lb	2.86 Kg/Kg	
The VSS applied per basin/day	1,201 lbs/day	545.9 Kg/day	
The percent VSS reduction est	20% VSS @	240.2 lbs/day	= 109.2 Kg/day
The gal digester solids wasted	10,560 gal/day @	2% solids	= 40.0 m ³ /day
The gal supernatant discharged	13,440 gal/day	50.9 m ³ /day	

Aerobic Digester Aeration Basin Size and Type Details

The number of Aerobic Digester basins used is	1	
The digester basin(s) for this design will be rectangular.		
The digester basin width is:	18.00 ft	5.49 m
The digester basin length is:	82.00 ft	24.99 m
Liquid depth in the digester is:	22.00 ft	6.71 m
Freeboard above liquid is:	2.00 ft	0.61 m
The volume of each basin is:	240,000 gal	909 m ³

Aeration Supply Information & Details for Each Digester Basin

Clean water aerator O ₂ transfer	26% (at STD Temp. & Alt. Digester design)	
The lbs O ₂ applied/Digester/day	1,561 lbs/O ₂ /day	710 Kg/O ₂ /day
The ACFM applied/Digester/day	442 cfm	12.5 m ³ /m
Maximum Digester blower pressure	10.16 psig	0.701 Bar
Digester blower efficiency	80%	
Highest blower inlet Temp	115 °F	46 °C
Estimated blower discharge Temp	235 °F	113 °C
Blower BHP required per Digester basin	24.2 Hp	18.08 kW
SAM Aerator - Mixer BHP required/Digester	17.7 Hp	13.19 kW
The digester aeration - mixing power level is:		
SAM aerator - mixer equipment	93.8 Hp/mil/gals	18.5 Wm ³
SAM + blower (air) equipment	194.7 Hp/mil/gals	38.4 Wm ³
The air flow, cfm/1000 cu. ft. vol	13.8 cfm/mft ³	13.78 Lm/m ³
Total Digester Hp power (Hp/day)/Digester	41.9 Hp	31.27 kW
Total calculated power consumption for each Digester / Day is	750.5	KW-Hours day.

Note: Blower & SAM BHP values above are "on-line" power levels required during Digester operation. Actual blower and SAM equipment sizes will be chosen by conventional sizes available that are closest to the size shown. Equipment power loading is set very close to required power values shown above by drive designs.

Three (3) 7.5 Hp SAM units will be installed in the aerobic sludge digester with one (1) 25 Hp blower delivering oxygen to the SAM units. Note that this design is better because the air input to the digester can be throttled and even turned off to denitrify and control filamentous microorganism and conserve energy requirements.

Continued....

Post-SBR Flow Equalization Basin Design Parameters

The Post-EQ basin minimum storage volume provided will be	2.92	SBR decant cycles @ ave design flow
	1.17	SBR decant cycles @ peak flow
For average design flow:		
Each SBR reactor decant flow is:	2,941 gpm	11.13 m ³ /m
Each SBR decant time cycle is:	34.00 minutes	
For peak flow:		
Each SBR reactor decant flow is:	3,906 gpm	14.79 m ³ /m
Each SBR decant time cycle is:	64.00 minutes	
The equalization basin(s) for this design will be rectangular.		
The equalization basin width is:	45.00 ft	13.72 m
The equalization basin length is:	74.00 ft	22.56 m
Max liquid depth in the EQ basin is:	11.92 ft	3.63 m
Freeboard above liquid is:	12.08 ft	3.68 m
The EQ basin working volume is:	291,765 gal	1,104 m ³

This basin is sized larger and in common-wall with the SBR basins.

Note that the decanter is sized for the peak flow conditions at 3910 gpm each. For peak flow condition

SBR System waste sludge pumps, digester waste sludge pumps and supernatant transfer pumps:

Note: Unless otherwise stated, it is assumed the digester supernatant will be pumped to the SBR influent.

SBR waste sludge pumps:

The volume of waste sludge/SBR/day is-----	12,000 gal	45.4 m ³
The "cycle time" pump GPM flow rate is-----	240 gpm	0.91 m ³ /m
The total dynamic head for this flow rate is-----	30.0 ft	9.1 m
The BHP required for the flow and head is-----	3.64 Hp	2.71 kW
The size pump selected for this application is-----	5 Hp	3.73 kW
The number of pumps per SBR basin is-----	2	
The "cycle time" power used for sludge waste is-----	54.25 kW-Hours/day/SBR basin	

Aerobic Digester waste sludge pumps:

The volume of waste sludge/digester/day is-----	10,560 gal	40.0 m ³
The "cycle time" pump GPM flow rate is-----	1,056 gpm	4.00 m ³ /m
The total dynamic head for this flow rate is-----	30.0 ft	9.1 m
The BHP required for the flow and head is-----	11.76 Hp	8.78 kW
The size pump selected for this application is-----	15 Hp	11.19 kW
The number of pumps per digester basin is-----	2	
The "cycle time" power used for sludge waste is-----	35.11 kW-Hours/day/digester	

Aerobic Digester supernatant transfer pumps:

The volume of supernatant/digester/day is-----	13,440 gal	50.9 m ³
The "cycle time" pump GPM flow rate is-----	448 gpm	1.70 m ³ /m
The total dynamic head for this flow rate is-----	30.0 ft	9.1 m
The BHP required for the flow and head is-----	4.85 Hp	3.62 kW
The size pump selected for this application is-----	7.5 Hp	5.60 kW
The number of pumps per digester basin is-----	2	
The "cycle time" power used for supernatant is-----	43.40 kW-Hours/day/digester	

Continued....

Date: 6/27/2002 Prepared By: Richard (Dick) Ryan, P.E., D.E.E.
 Project: Palo Verde Utilities Company Phase 1 1.0 MGD Treatment Facility

Comments:

This design assumes that during average daily flow conditions the SBR tanks will run with a minimum liquid depth of 12.9' and a maximum liquid depth of 16.55' at average flow conditions of 1.0 MGD. When the flow exceeds the average by a peak factor of 2.5 times average then the liquid depth for each SBR will rise to the 22' liquid depth and the decant time will be automatically shifted to 64 minutes in lieu of 34 minutes and there will be no idle time in the cycle.

Design Parameters:

Flow, M³/day 3786 1,000,156 gal/day
 BOD₅, Mg/L 300
 N_O, TKN, Mg/L 45
 X_i, inert solids, Mg/L 60 (non-biodegradable inert influent solids)
 Min. Temp, °C 15
 MLSS Mg/L 4000 X_T, when MLSS is represented at full tank volume
 K_d, d⁻¹ 0.06
 Y_{NH4}, gr/gr 0.15
 K_O, Mg/L 0.5 DO inhibition coefficient, Mg/L
 Nitrification SF 2
 SRT, d 30
 S, Eff BOD, Mg/L 10
 N_E, Eff NH₄, Mg/L 1
 Y, gTSS/gBOD₅ used 0.5
 F_N 0.1

Select n, the number of Tanks = 2
 Select N_C, number of Cycles/day = 5 (must be a whole number)
 Select design tank depth, ft = 16.55

	Hours	Minutes	Calc pad	Data
T _S (Settling time, hours) =	0.73333	44.00	Enter minutes	57.60 0.96000 hrs.
T _W (Withdrawal time, hours) =	0.56666	34.00	Enter hours	0.27 16.0020 min.
T _I (Idle time, hours)* =	0.10000	6.00	Enter value to adjust	2.6667
T _{SF} (Static fill time, hours) =	0.00000	0.00	Enter adjustment	2.4
T _{MF} (Mix fill time, hours) =	1.40000	84.00	Add = 1; Subtract = 2	2 0.2667 value
T _{RF} (React fill time, hours) =	1.00000	60.00		
T _R (React time, hours) =	1.00000	60.00		
T _A (Aeration time/cycle, hours) =	2.0000	120.00		10.00 hours/day total aeration time
T _F (Fill time, hours) =	2.4000	144.00		12.00 hours/day total fill time
* Sludge wasted during idle time	288.00	288.00		-0.0006 variance (minutes)
T _C (Total Cycle Time, hours) =	4.8000		box values must be equal	
SVI (Mg/L) =	4.8		hrs max @	5 cycles/day
f (Decant safety factor)	1.2			
T _{DN} , (Anoxic reaction time, hours) =	1.40000			includes only static fill & mix fill time cycles

1) Select SRT for design = 30 days

2) Determine net heterotrophic yield

$$Y_{NH} = Y / [1 + K_d (SRT)] = 0.5 / [1 + (0.06) \times (30)] = 0.18 \text{ g/g}$$

3) Determine amount of nitrogen oxidized based upon influent flow (ignoring the small amount used for growth of nitrifiers)

$$N_{ox} = TKN - (Eff. NH_4 - N) - \{F_N(Y_{NH})\}(S_0 - S)$$

$$= (45 - 1.0) - 0.10 (0.18) (300 - 10) = 38.82 \text{ Mg/L}$$

$$= 38.82 \times 3786 \text{ m}^3/\text{d} \times 0.001 = 146.98 \text{ kg/d}$$

4) Determine the volume of the aeration basin as follows

$$V = \frac{[Y_{NH}(S_0 - S) + X_1 + Y_{NH}(N_{ox})]Q(SRT)}{X}$$

Where

X = Aeration tank mixed liquor concentration, Mg/L

S₀ = Influent BOD₅, Mg/L

S = Effluent BOD₅, Mg/L

N_{ox} = Ammonia in influent flow oxidized, Mg/L

Y_{NH} = Net yield of heterotropic organisms at design SRT including endogenous decay, gTSS/gBOD₅ removed

Y_{NH} = Net yield of nitrifying bacteria, gTSS/gN oxidized

X₁ = Influent non-biodegradable inert solids, Mg/L

$$V = \{[(0.18)(300.00 - 10.00) + 60.00 + (0.15)(38.82)](3786)(30)\} / 4000$$

$$V = 3340 \text{ m}^3 = 882,204 \text{ gallons total (all tanks)}$$

$$= 441,102 \text{ gal/reactor}$$

$$= 58,971 \text{ cu ft/reactor}$$

Calculate the Tank Sizes (each tank) 2 reactors chosen for this design

Square Tanks	59.69 ft square, each
Round Tanks	67.36 ft dia, each

$$\text{Detention Time} = (3340 \text{ m}^3 / 3786 \text{ m}^3) \times 24 \text{ hrs/day} = 21.17 \text{ hours}$$

Select Tank Size (feet)	60.5 Square =	453,117 gal. each	3660 sq ft/ea =	60,577 cu ft/tank
	0 Round =	gal. each		453,117 gal./tank
Enter L/W ratio, ie 2=2:1	2.3 Rectangular =	39.89 ft wide x	91.75 ft long =	

5) Calculate the fill volume

$$V_F = Q(N_c)_{N} = 3786 / (5) (2) = 378.60 \text{ m}^3$$

$$= 100,016 \text{ gal/tank}$$

$$= 13,371 \text{ cu ft/tank}$$

Δ H for Selected Tank Size = 3.65 ft level drop at "Q" design

Low water level after decant = 16.55 - 3.65 = 12.90 ft SWD

$$V_D/V_T = 0.779$$

$$V_F/V_T = 0.221$$

6) Calculate the SBR minimum fill volume fraction

$$[Y\{1 + K_d(T_{n}/T_c)SRT\} + (X_1/S_0)]SRT = X_T / \{(V_F/V_T)(S_0 - S)(N_c)\}$$

$$= [0.5\{1 + 0.06(2.00/4.8)\} + (60/300)](30) = 4000 / \{(V_F/V_T)(300 - 10)(5)\}$$

$$32.25 = 4000 / (V_F/V_T)(1450)$$

$$V_F/V_T = 4000 / \{(V_F/V_T)(1450)(32.25)\}$$

$$V_F/V_T = 0.086 \text{ minimum fill volume fraction}$$

7) Check the maximum V_F/V_T allowed

$$\begin{aligned} (V_F/V_{TMAX}) &= [1 - f(X_i)(SVI/10^6)] \\ &= [1 - 1.2 (4000) (120 / 10^6)] \\ &= 0.424 \text{ maximum } V_F/V_T \text{ allowed} \end{aligned}$$

8) Calculate the effective, SRT_E

$$\begin{aligned} SRT_E &= SRT (T_A/T_D) \\ &= 30 (2.00 / 4.80) \\ &= 12.50 \text{ days} \end{aligned}$$

9) Calculate the heterotrophic yield based on effective, SRT_E

$$\begin{aligned} Y_{NT} &= Y / (1 + K_d SRT_E) + (X_v/S_0) \\ &= [0.5 / (1 + (0.06)(12.50))] + (60 / 300) \\ &= (0.286 + 0.200) \\ Y_{NT} &= 0.486 \end{aligned}$$

10) Determine the Nitrogen oxidized

$$NO = N_0 - Y_{NH} (S_0 - S) (F_N) - N_e$$

Where

N_0 = Influent TKN, Mg/L

F_N = Nitrogen content of biomass, g/g

N_e = Effluent ammonia concentration, Mg/L

$$\begin{aligned} NO &= [45 - (0.18) (300 - 10) (0.1)] - 1 \\ NO &= 38.82 \text{ Mg/L} \end{aligned}$$

11) Calculate the nitrifying bacteria mass

$$X_N = Y_{NH} (NO) (V_F/V_T) (N_e) SRT$$

Where X_N = Nitrifier biomass concentration, Mg/L

$$\begin{aligned} X_N &= (0.15) (38.82) (0.221) (5) (30) \\ X_N &= 192.80 \text{ Mg/L} \\ \% \text{ MLSS} &= 4.82\% \end{aligned}$$

12) Calculate the available nitrogen for nitrification during the aeration period

$$\begin{aligned} NO_0 &= (NO + N_e) (V_F/V_T) \\ NO_0 &= (38.82 + 1.0) (0.221) \\ NO_0 &= 8.79 \text{ Mg/L} \end{aligned}$$

13) Calculate the required time for nitrification

$$T_N = \frac{[(K_N) L_N (NO_0/N_E) + (NO_0 - N_E)] Y_{NH} SF (24 \text{ hr/d})}{(U_{N, \text{MAX, DO}}) X_N}$$

Where

$U_{N, \text{MAX, DO}}$ = Maximum Specific growth rate corrected for DO, d^{-1} (@ $10^\circ\text{C} = 0.23$)

$$U_{N, \text{MAX, DO}} \text{ for design temp} = (0.50) 10^{0.033(15-20)}$$

$$= 0.342$$

N_E = Required effluent ammonia concentration, Mg/L

SF = Nitrification Safety Factor, 2.0

$$K_N = 10^{0.05(15-14.8)} = 0.41 \text{ @ } 15 \text{ deg C}$$

$$T_N = \frac{[(0.41) L_N (8.79 / 1.0) + (8.79 - 1)] (0.15) (2.0) (24)}{(0.342) (192.80)}$$

$$T_N = 62.56 / (0.342) (192.80)$$

$$T_N = 0.95 \text{ hours}$$

ok

14) Calculate the pre-Anoxic Nitrogen removal

A) Determine SDNR and DNO possible during the Anoxic fill period of 1.40 hours

$$F/M_A = (V_F/V_T)(S_0/X_T)(1/T_F)(24 \text{ hrs/d})$$

$$= (0.221) (0.075) (0.4) (24)$$

$$F/M_A = 0.166$$

B) $SDNR_{20} = 0.03 (F/M_A) + 0.029$

$$= 0.03 (0.17) + 0.029$$

$$SDNR_{20} = 0.034 \text{ g/g-d}$$

C) Correct for temperature, the SDNR @ 15 deg C = $(SDNR_{20}) (\theta^{T-20}) = 0.025$
Where, for this equation, $\theta = 1.06$

D) Calculate nitrate nitrogen reduced during anoxic period

$$DNO_3 = (SDNR) (X_T)(T_{DN})(1/24)$$

$$= (0.025) (4000) (1.40) (0.042)$$

$$DNO_3 = 5.92 \text{ Mg/L}$$

15) Check for denitrification

$$(V_F/V_T) NO_1 = (1 - V_F/V_T) (NO_0 - N_E) - DNO_3$$

Note: if the right side of the equation is negative, excess denitrification capacity is available and NO_1 is equal to zero. NO_1 = nitrate nitrogen concentration remaining after pre-anoxic period in Mg/L

$$(V_F/V_T) NO_1 = (1 - 0.221) (8.79 - 1.0) - 5.92$$

$$= 0.15$$

Therefore $NO_1 = 0.67 \text{ Mg/L}$

16) Determine the effluent nitrate nitrogen concentration

$$\begin{aligned} \text{NO}_E &= \text{NO}_0 + \text{NO}_1 - N_E \\ &= (8.79 + 0.67 - 1.0) \\ \text{NO}_E &= 8.46 \text{ Mg/L} \end{aligned}$$

17) Determine nitrogen removal percent

$$\begin{aligned} \% \text{ Removal} &= [N_0 - N_E - \text{NO}_E] 100 / N_0 \\ &= [(45) - (1.0) - (8.46)] (100 / 45) \\ &= 78.98 \% \text{ Removal} \end{aligned}$$

18) Calculate the denitrification rate for a post-anoxic period of 10 minutes after aeration

$$\text{DNR} = F(K_d)(Y_{NH}/Y_{NT})(X_T)(1/24)$$

Where

DNR = denitrification rate, Mg/L-hr

F = fraction of biological respiration rate using nitrate instead of oxygen g/g, 0.5

$$\begin{aligned} \text{DNR} &= (0.5) (0.06) (0.18 / 0.49) (4000) (0.042) \\ &= 1.84 \text{ Mg/L} \end{aligned}$$

Therefore, the additional nitrate removed is then

$$\begin{aligned} \text{DNR} (T_{DN}) &= (1.84) (1.40) \\ &= 2.57 \text{ Mg/L} \end{aligned}$$

19) Determine effluent nitrate nitrogen concentration including denitrification

$$\begin{aligned} \text{NO}_{DE} &= \text{NO}_E - [(\text{DNR})(T_{DN})] \\ &= (8.46) - (2.57) \\ &= 5.89 \text{ Mg/L} \end{aligned}$$

% Removal = 84.70 %, including denitrification

20) Determine the total nitrogen concentration in the effluent

$$\begin{aligned} \text{TN} &= N_E + \text{NO}_{DE} \\ \text{TN} &= (1.0) + (5.89) \\ &= 6.89 \text{ Mg/L} \end{aligned}$$

E.O.F.

Existing Influent Lift Station

Diameter (feet)	8
Area (ft. ²)	6.3
Maximum Liquid Depth (feet)	14.1
Minimum Liquid Depth (feet)	1.58
Working Volume (gallons)	588.1
Pump No. 1 Capacity (Flygt 3201 – 35 Hp)*	2,100 gpm @ 50 ft.
Pump No. 2 Capacity (Flygt 3201 – 35 Hp)*	2,100 gpm @ 50 ft.

* Existing pumps will be modified to meet the Peak Hour Demands of 2.5 MGD

Headworks¹

Screen Capacity (GPM/MGD)	4,200/6.0
---------------------------	-----------

Effluent Filtration System

Filter Type	Gravity Traveling Carriage – 2
Filter Media Type	1 mm sand – 12 in.
Number of Units	2
Number of Cells/Unit	40
Filtration Area per filter (SF)	360
Filtration Flow Rate @ Average Flow (gpm/ft. ²)	2.0
Filtration Flow Rate @ Peak Flow (gpm/ft. ²)	4.0
Backwash Flow Rate (gpm)	180
Backwash as % Throughput (%)	0.75%
Total Backwash Volume/Day (gallons)	7,500

UV Disinfection System

UV Type	Low Pressure – High Intensity
Number of Banks	3
Capacity/unit @ 100 mj/cm ² (65%)	555
Number of Lamps/bank	40
Rating of Lamp (watts/lamp)	165
Total Kw installed	20
Average Kw During Operation	13.2
% of Total Capacity @ Maximum Monthly Day Flow	66.7

¹This process unit is sized to handle the future average daily flow of 3.0 MGD and peak flow of 6.0 MGD

Effluent Clear Well

Length (ft.)	51 ft. 6 in.
Width (ft.)	11 ft. 0 in.
Maximum Liquid Depth (ft.)	22 ft.
Minimum Liquid Depth (ft.)	7 ft.
Total Volume ¹ (gallons)	93,223

Sludge Production¹

Design Sludge Yield Factor	0.80
Pounds Dry Solids/Day from Secondary Treatment @ SYF = 0.80	6,004
Volume of WAS/day @ 10,000 MLSS (gallons)	72,000
Pounds of Dry Solids/Day After Digestion	4,803

Sludge Dewatering System¹

Type	Belt Filter Press
Number of Units	1
Size of Unit	1.5m
Average loading Capacity (gpm)	90
Pounds of Dry Solids to press per day	4,803
Gallons of Sludge to press per day	28,797
Design % Solids in Feed	2.0
Design % Solids in Cake	20
Total Hours of Operation/Day	5.3
Total Volume of Sludge to Disposal (cy/day)	11.4

Polymer Requirements¹

Design Polymer Requirements (lbs. Polymer/Ton Dry Solids)	15
Estimated Polymer Usage/Day	36
Gallons of Emulsion Polymer Required/Day @ 25% Active	16.4
Gallon of Dilution Water/Day	3,290
Polymer Injection Requirement (gallons/hour)	3.1
Dilution Water Requirements (gallons/hour)	602

¹This process unit is sized to handle the future average daily flow of 3.0 MGD and peak flow of 6.0 MGD

GTA ENGINEERING, INC.
Consulting Engineers
1990 W. Camelback Rd., Suite 401
Phoenix, Arizona 85015
TEL (602) 246-7759 FAX (602) 246-7645
e-mail: gta@gtaengineering.com

May 7, 2003

Asif Majeed
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, AZ 85007

Re: Palo Verde Utilities Company WWTP
APP No. P-103558

Dear Mr. Majeed:

Palo Verde Utilities Company is submitting a 208 Amendment to CAAG that includes an expansion to its current service area to include the area as shown on Figure 1, located in Township 4 South, Range 2, 3, and 4 East and Township 5 South, Range 4 East of the Gila and Salt River Base and Meridian, Pinal County.

The wastewater treatment plant will be expanded in phases to accommodate development in the service area. The existing APP (not yet signed) is for a flow rate of 3.0 MGD.

Palo Verde Utilities understands that expansion to their system will require the following permits:

1. Individual APP Modification
2. Reuse Permits for each effluent customer
3. AZPDES for any surface discharge

The 208 Amendment will be submitted to CAAG and ADEQ in June, 2003 for review. Design of the management system will be based upon sound engineering principles. The entire project is expected to be completed in the year of 2011 with a wastewater treatment capacity of 9.0 mgd.

208 AMENDMENT CHECKLIST
Section 208 Clean Water Act
40 CFR Part 130.6

REQUIREMENT	PROVIDE BRIEF SUMMARY ON HOW REQUIREMENTS ARE ADDRESSED	ADDRESSED ON PAGE:
- Describe the type and capacity of the recommended WWT Plant.	Sequencing Batch Reactor WWTP with a 13 mgd capacity	Page 1, 2, 3, 6, 7 10 Exhibit 3, 7
- Identify water quality problems, consider alternative control measures, and recommend solution for implementation.	Type 2 Reclaimed Water General Permits are required and will be adhered to, for direct use to golf courses, community lakes, parks and landscape irrigation. The treatment plant will treat the sewage to a Class A+ effluent quality.	Page 7, 8
- If private WWT utilities with certificated areas are within the proposed regional service area; define who (municipal or private utility) serves what area and when. Identify whose sewer lines can be approved in what areas and when?	N/A	-
- Describe method of effluent disposal and reuse sites (if appropriate).	"Class A+" effluent quality for reuse for irrigation of golf courses, recreational lakes, parks and landscaping.	Page 7, 8, 9, 11
- If Sanitary Districts are within a proposed planning or service area, describe who serves the Sanitary Districts and when.	Located approximately three (3) miles from the existing WWTP will be the treatment plant of the 387 Improvement District. The planing area boundary for 387 Improvement District is located in Sections 25, 27, 28, 33, 34, and 36 of Township 4 South, Range 3 East; Sections 21, 28, and 34 of Township 4 South, Rang 5 East; and Sections 2, 3, 11 and 12 of Township 5 South, Range 3 East of Pinal County, Arizona. Operation expected to begin 2004.	Page 3 Exhibit 2

208 AMENDMENT CHECKLIST
Section 208 Clean Water Act
40 CFR Part 130.6

REQUIREMENT	PROVIDE BRIEF SUMMARY ON HOW REQUIREMENTS ARE ADDRESSED	ADDRESSED ON PAGE:
- Describe ownership of land proposed for plant sites and reuse areas.	The undeveloped land is owned by numerous individuals. Once the land is bought and developed, Home Owner Associations will be established and will be responsible for following regulations of reclaimed water usage.	Page 11, 12
- Address time frames in the development of the treatment works.	The wastewater flow projection when all phases are built out is 13 mgd in approximately 20 years, in the year 2023.	Page 1, 6, 10 Table 2
- Address financial constraints in the development of the treatment works.	None	Page 12
- Describe how discharges will comply with EPA municipal and industrial stormwater discharge regulations (Section 405, CWA).	A AZPDES permit for discharge into the Santa Rosa Wash has been submitted to ADEQ. The sludge generated at the proposed wastewater treatment plant will be stabilized and dewatered and then disposed of at an operating sanitary landfill certified by the ADEQ to handle and dispose of sludge from wastewater treatment plants. Protection of the groundwater at the landfill location will be provided by the landfill facility.	Page 8, 9, 10
- Describe how open areas & recreational opportunities will result from improved water quality and how those will be used.	The treated effluent from the wastewater treatment plant will be used to irrigate the golf courses, lakes and other open area facilities and to recharge the aquifer using rapid infiltration basins. Operation of the golf courses using best management practices to prevent pollution of the groundwater.	Page 7, 11

208 AMENDMENT CHECKLIST
Section 208 Clean Water Act
40 CFR Part 130.6

REQUIREMENT	PROVIDE BRIEF SUMMARY ON HOW REQUIREMENTS ARE ADDRESSED	ADDRESSED ON PAGE:
<ul style="list-style-type: none"> Describe potential use of lands associated with treatment works and increased access to water-based recreation, if applicable. 	N/A	
REGULATIONS		
<ul style="list-style-type: none"> Describe types of permits needed, including NPDES, APP and reuse. 	<p>Needed are AZPDES (NPDES), APP, Reuse, Air Quality, Construction Permits</p>	Page 7, 8, 9, 10
<ul style="list-style-type: none"> Describe restrictions on NPDES permits, if needed, for discharge and sludge disposal. 	<p>The AZPDES (NPDES) program also regulates sewage sludge under Section 405 of the Clean Water Act (CWA). Part 503 of the Clean Water Act controls the quality of sewage sludge that may be applied to land, distributed and marketed, placed in a sludge disposal facility, or incinerated in a sewage sludge incinerator. Sludge will be hauled to: Butterfield Station Municipal Solid Waste Landfill, 99th Avenue, one mile north of Highway 238, Mobile, Arizona. Waste management verbally agreed to accept the sludge.</p>	Page 8, 9
<ul style="list-style-type: none"> Provide documentation of communication with ADEQ Permitting Section 30 to 60 days prior to public hearing regarding the need for specific permits. 	See Attachment B	Page 7 Attachment B
<ul style="list-style-type: none"> Describe pretreatment requirements and method of adherence to requirements (Section 208 (b)(2)(D), CWA). 	Accomplished by Best Available Demonstration Control Technology (BADCT). Modifications to existing APP will be submitted.	Page 7, 8

208 AMENDMENT CHECKLIST
Section 208 Clean Water Act
40 CFR Part 130.6

REQUIREMENT	PROVIDE BRIEF SUMMARY ON HOW REQUIREMENTS ARE ADDRESSED	ADDRESSED ON PAGE:
<ul style="list-style-type: none"> Identify, if appropriate, specific pollutants that will be produced from excavations and procedures that will protect ground and surface water quality (Section 208(b)(2)(K) and Section 304, CWA). 	<p>The contractor for the facilities is responsible to obey all AZPDES Permit regulations relevant to construction sites to prevent surface water and groundwater contamination. All hazardous materials and potential pollutants shall be stored onsite in appropriate storage areas. Retention basins, silt traps, and other sediment barriers are to be provided at the site to filter sediment from storm water runoff leaving the site. The Contractor shall keep the site clean and have covered dumpsters on site which are emptied regularly.</p>	<p>Page 6, 7, 8, 9, 11</p>
<ul style="list-style-type: none"> Describe alternatives and recommendation in the disposition of sludge generated. (Section 405 CWA). 	<p>Sludge will be stabilized and dewatered and then disposed of to a landfill certified by ADEQ. The landfill: Butterfield Station Municipal Solid Waste Landfill, 99th Avenue, one mile north of Highway 238, Mobile, Arizona has been notified and verbally agreed to accept the sludge.</p>	<p>Page 8, 9</p>
<ul style="list-style-type: none"> Define any nonpoint issues related to the proposed facility and outline procedures to control them. 	<p>No nonpoint issues. If an issue does occur, it will be required that the contractor obtain the necessary permits.</p>	<p>Page 10</p>
<ul style="list-style-type: none"> Describe process to handle all mining runoff, orphan sites and underground pollutants, if applicable. 	<p>N/A</p>	<p>-</p>
<ul style="list-style-type: none"> If mining related, define where collection of pollutants has occurred, and what procedures are going to be initiated to contain contaminated areas. 	<p>N/A</p>	<p>-</p>

208 AMENDMENT CHECKLIST
Section 208 Clean Water Act
40 CFR Part 130.6

REQUIREMENT	PROVIDE BRIEF SUMMARY ON HOW REQUIREMENTS ARE ADDRESSED	ADDRESSED ON PAGE:
<p>If mining related, define what specialized procedures will be initiated for orphan sites, if applicable.</p>	<p>N/A</p>	
<p>CONSTRUCTION</p> <p>Define construction priorities and time schedules for initiation and completion.</p>	<p>Construction of 1 MGD plant began 2/2003 and is expected to be in operations in October 2003. As land develops, flows will increase. See Table 2 for phases of construction to Build-out in 2023</p>	<p>Page 2, 3, 6, 10 Table 2</p>
<p>Identify agencies who will construct, operate and maintain the facilities and otherwise carry out the plan.</p>	<p>The current facility is under contract with Severn-Trent Services to operate and maintain WWTP. Westcon is the Contractor and the Supplier is AquaTec.</p>	<p>Page 10</p>
<p>Identify construction activity-related sources of pollution and set forth procedures and methods to control, to the extent feasible, such sources.</p>	<p>Construction will follow non-pont source requirements to control erosion. There are no non-point issues related to this project that are expected. Construction impacts for each new addition to the WWTP will be minimal. The site has been laid out to accommodate the expansions by use of common walls when possible. Yard piping and pump stations are sized to accommodate full build-out and to maintain all construction activities within the WWTP site. The site is master-planned to allow the construction of new phases with minimal interference with operations.</p>	<p>Page 6,10</p>

208 AMENDMENT CHECKLIST
Section 208 Clean Water Act
40 CFR Part 130.6

REQUIREMENT	FINANCING AND OTHER MEASURES NECESSARY TO CARRY OUT THE PLAN	PROVIDE BRIEF SUMMARY ON HOW REQUIREMENTS ARE ADDRESSED	ADDRESSED ON PAGE:
<ul style="list-style-type: none"> - If plan proposes to take over certificated private utility, describe how, when and financing will be managed. 	N/A		
<ul style="list-style-type: none"> - Describe any significant measure necessary to carry out the plan, e.g., institutional, financial, economic, etc. 	Palo Verde will have a CC&N for Wastewater. Palo Verde will be financially responsible for the construction of the plant.	Page 11, 12	
<ul style="list-style-type: none"> - Describe proposed method(s) of community financing. 	The developers will be responsible for pipelines and interceptors. Palo Verde will have a CC&N. User fees will be paid by customers as regulated by the CC&N.	Page 11, 12	
<ul style="list-style-type: none"> - Provide financial information to assure DMA has financial capability to operate and maintain wastewater system over its useful life. 	N/A		
<ul style="list-style-type: none"> - Provide a time line outlining period of time necessary for carrying out plan implementation. 	Construction will be scheduled as properties are bought and developed. The wastewater treatment plant will be built in accordance with land development. Construction of new 1.0 mgd plant began 2/03 and is expected to be completed 10/03. Built out is expected in approximately 20 years, 2023.	Page 10 Table 2	
<ul style="list-style-type: none"> - Provide financial information indicating the method and measures necessary to achieve project financing. (Section 201 CWA or Section 604 may apply.) 	Palo Verde Utilities is requiring connection fees from the developer and home owners will be paying the user fee based upon fair value as determined by the Corporation Commission.	Page 11, 12	

208 AMENDMENT CHECKLIST
Section 208 Clean Water Act
40 CFR Part 130.6

REQUIREMENT	PROVIDE BRIEF SUMMARY ON HOW REQUIREMENTS ARE ADDRESSED	ADDRESSED ON PAGE:
<p><u>IMPLEMENTABILITY</u></p> <p>Describe impacts and implementability of Plan:</p> <ul style="list-style-type: none"> - Describe impacts on existing wastewater (WW) facilities, e.g., Sanitary district, infrastructure/facilities and certificated areas. 	<p>The Palo Verde Utilities Company existing wastewater treatment facility serves the Rancho El Dorado development. 387 Improvement District WWTP is located 3 miles from Rancho El Dorado. There will be no impact to the 387 Improvement District WWTP. There are no other Arizona Corporation Commission certificated areas in the area.</p>	<p>Page 2, 3</p>
<ul style="list-style-type: none"> - Describe how and when existing package plants will be connected to a regional system. 	<p>N/A</p>	<p>-</p>
<ul style="list-style-type: none"> - Describe the impact on communities and businesses affected by the plan. 	<p>It will allow the area to accommodate more growth in an environmentally safe manner and the development of new communities will fulfill a growing demand for affordably priced homes, while retail uses within the community will provide an increased tax and employment base for Pinal County.</p>	<p>Page 11</p>
<ul style="list-style-type: none"> - If a municipal wastewater (WWT) system is proposed, describe how WWT service will be provided until the municipal system is completed: i.e., will package plants and septic systems be allowed and under what circumstances. (Interim services). 	<p>N/A</p>	<p>-</p>
<p><u>PUBLIC PARTICIPATION</u></p>	<p>CAAG</p>	<p>-</p>
<ul style="list-style-type: none"> - Submit copy of mailing list used to notify the public of the public hearing on the 208 amendment. (40 CFR, Chapter 1, Part 25.5) 	<p>CAAG</p>	<p>-</p>
<ul style="list-style-type: none"> - List location where documents are available for review at least 30 days before public hearing. 	<p>CAAG</p>	<p>-</p>

208 AMENDMENT CHECKLIST
Section 208 Clean Water Act
40 CFR Part 130.6

REQUIREMENT	PROVIDE BRIEF SUMMARY ON HOW REQUIREMENTS ARE ADDRESSED	ADDRESSED ON PAGE:
- Submit copy of the public notice of the public hearing as well as an official affidavit of publication from the area newspaper. Clearly show the announcement appeared in the newspaper at least 45 days before the hearing.	CAAG	-
- Submit affidavit of publication for official newspaper publication.	CAAG	-
- Submit responsiveness summary for public hearing.	CAAG	-

MAR-24-2004 16:34

ADEQ WATER QUALITY DIV

602 771 4528 P.02



Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.adeq.state.az.us



Stephen A. Owens
Director

January 20, 2004

Ms. Alexis Strauss, Director
EPA Region IX, Water Division
75 Hawthorne Street (WTR-1)
San Francisco, CA 94105

Dear Ms. Strauss:

Pursuant to Section 208 of the Clean Water Act and 40 CFR 130.6(e), I certify that the 208 Plan Amendment for the Palo Verde Utilities Company, L.L.C. is consistent with both the State of Arizona's and the Central Arizona Association of Governments' Water Quality Management Plans.

As the Governor's designee for the State's Water Quality Management Program, I hereby transmit this amendment to EPA for review.

Sincerely,


Stephen A. Owens
Director

Enclosure

cc: Cheryl McGovern, Water Division, EPA Region IX, (WTR-4)
Edwina Vogan, Watershed Management Unit, ADEQ

Northern Regional Office
1515 East Cedar Avenue • Suite F • Flagstaff, AZ 86004
(928) 779-0313

Southern Regional Office
400 West Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

**PINAL COUNTY
BOARD OF SUPERVISORS**

LIONEL D. RUIZ, District 1
Mammoth

SANDIE SMITH, District 2
Apache Junction

JIMMIE B. KERR, District 3
Casa Grande



STANLEY D. GRIFFIS, Ph.D.
County Manager

RECEIVED

NOV 21 2003

November 4, 2003

Ms. Maxine Leather
Executive Director
Central Arizona Association of Governments
271 Main Street
Superior, Arizona 85273

Dear Ms. Leather,

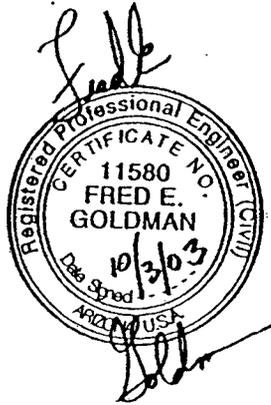
Pinal County has reviewed the plans for the Palo Verde Utilities Company. We concur with their efforts and recommend CAAG proceed with the public 208 Amendment process.

Sincerely,

Stanley D. Griffis, Ph.D.
Pinal County Manager

SDG/rp

Palo Verde Utilities Company, L.L.C.
CAAG 208 Amendment
Service Area Legal Description



October 3, 2003

KENNEDY/JENKS CONSULTANTS
3101 N. Central Ave., Suite 1470
Phoenix, AZ 85012
Tel. 602-274-0886
Fax. 602-274-0764

formerly

GTA ENGINEERING, INC.

LEGAL DESCRIPTION OF SERVICE AREA FOR PALO VERDE UTILITIES COMPANY, L.L.C.
APPROVED IN 1997 CAAG 208 AMENDMENT

All of Section 13 and 14 Township 4 South, Range 3 East, SRB&M and that portion of Section 15, Township 4 South, Range 3 East, SRB&M lying East of the West right-of-way line of Maricopa Road (Arizona State Route 347) in Pinal County, Arizona.

In addition to the above: LEGAL DESCRIPTION OF SERVICE AREA FOR PALO VERDE UTILITIES COMPANY, L.L.C. IN THE 2003 CAAG 208 AMENDMENT:

That portion of Sections 13, 14, and 15, Township 4 South, Range 2 East, SRB&M lying North of the South Right-of-Way line of the Mobile Road (Arizona State Route 238) in Pinal County, Arizona.

That portion of Section 15, Township 4 South, Range 3 East, SRB&M lying West of the West Right-of-Way line of Maricopa Road (Arizona State Route 347) in Pinal County, Arizona.

All of Sections 16, 22, 23, and 24 of Township 4 South, Range 3 East, SRB&M in Pinal County, Arizona.

All of Section 17, Township 4 South, Range 3 East, SRB&M except for that portion lying South of the South Right-of-Way line of the Mobile Road (Arizona State Route 238) in Pinal County, Arizona.

All of that portion of Section 18, Township 4 South, Range 3 East, SRB&M lying North of the Ak-Chin Indian Reservation in Pinal County, Arizona.

That portion of Section 20, Township 4 South, Range 3 East, SRB&M lying North of the South Right-of-Way line of the Mobile Road (Arizona State Route 238) in Pinal County, Arizona.

That portion of Section 21, Township 4 South, Range 3 East, SRB&M lying North of the South Right-of-Way line of the Mobile Road (Arizona State Route 238) in Pinal County, Arizona.

That portion of Section 25, Township 4 South, Range 3 East, SRB&M in Pinal County, Arizona, described as follows:

The Southwest Quarter of the Northwest Quarter of said Section 25, and together with the North One-Half of the Southwest Quarter, and together with the Southwest Quarter of the Southwest Quarter of said Section 25.

All of Section 26, Township 4 South, Range 3 East, SRB&M, in Pinal County, Arizona, EXCEPT for the West Half of the West Half of said Section 26.

October 3, 2003

That Portion of the Northwest Quarter of Section 34 in Township 4 South, Range 3 East, SRB&M, in Pinal County, Arizona, being more particularly described as follows:

BEGINNING AT THE NORTHWEST CORNER OF SAID SECTION 34; THENCE NORTH 89° 24' 54" EAST, ALONG THE NORTH LINE OF SAID SECTION 34 A DISTANCE OF 2,751.05 FEET, MORE OR LESS, TO THE NORTH QUARTER CORNER OF SAID SECTION 34; THENCE SOUTH 00° 12' 02" WEST, ALONG THE NORTH SOUTH MID-SECTION LINE OF SAID SECTION 34 A DISTANCE OF 2,664.95 FEET TO THE CENTER OF SAID SECTION 34; THENCE NORTH 89° 51' 49" WEST, ALONG THE EAST WEST MID-SECTION LINE OF SAID SECTION 34 A DISTANCE OF 2,591.70 FEET, MORE OR LESS, TO THE WEST LINE OF SAID SECTION 34; THENCE NORTH 00° 40' 29" WEST ALONG THE WEST LINE OF SAID NORTHWEST QUARTER 2,663.95 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

THE BASIS OF BEARING IS THE MONUMENT LINE OF MARICOPA ROAD (ARIZONA STATE ROUTE 347), ALSO BEING THE WEST LINE OF THE NORTHWEST CORNER OF SECTION 34, TOWNSHIP 4 SOUTH, RANGE 3 EAST, USING A BEARING OF NORTH 00° 06' 23" WEST.

CONTAINS 159.00 ACRES MORE OR LESS.

All of that portion of Section 35, Township 4 South, Range 3 East, SRB&M in Pinal County, Arizona, lying Southerly of the South Right-of-Way line of the Union Pacific Railroad in Pinal County, Arizona, EXCEPT any portion lying within the following described property:

COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 35;

THENCE NORTH 89 DEGREES 19 MINUTES 10 SECONDS WEST, A DISTANCE OF 1971.27 FEET TO THE TRUE POINT OF BEGINNING;

THENCE CONTINUING NORTH 89 DEGREES 19 MINUTES 10 SECONDS WEST, A DISTANCE OF 765.30 FEET;

THENCE NORTH 01 DEGREE 19 MINUTES 10 SECONDS EAST, A DISTANCE OF 1377.37 FEET;

THENCE SOUTH 27 DEGREES 53 MINUTES 16 SECONDS EAST, A DISTANCE OF 1568.23 FEET TO THE TRUE POINT OF BEGINNING; AND

EXCEPT ALL OIL, GAS AND MINERAL RIGHTS AS RESERVED IN INSTRUMENT RECORDED IN DOCKET 15, PAGE 70;

AND EXCEPT ANY PORTION LYING WITHIN THE FOLLOWING DESCRIBED PROPERTY:

COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 35;

THENCE NORTH 01 DEGREE 12 MINUTES 36 SECONDS EAST, A DISTANCE OF 77.50 FEET TO THE TRUE POINT OF BEGINNING;

THENCE SOUTH 89 DEGREES 44 MINUTES 11 SECONDS WEST, A DISTANCE OF 660.00 FEET;

THENCE NORTH 01 DEGREE 12 MINUTES 38 SECONDS EAST, A DISTANCE OF 1320 FEET;

THENCE NORTH 89 DEGREES 44 MINUTES 11 SECONDS EAST, A DISTANCE OF 660.00 FEET;

THENCE SOUTH 01 DEGREE 12 MINUTES 36 SECONDS WEST, A DISTANCE OF 1320 FEET TO THE TRUE POINT OF BEGINNING; AND

EXCEPT ONE-HALF OF ALL OIL, GAS AND OTHER MINERALS AS RESERVED IN INSTRUMENT RECORDED IN BOOK 85 OF DEEDS, PAGE 228.

That portion of Section 35, Township 4 South, Range 3 East, SRB&M lying North of the South Right-of-Way line of the Maricopa-Casa Grande Highway in Pinal County, Arizona.

That portion of Section 36, Township 4 South, Range 3 East, SRB&M, in Pinal County, Arizona described as follows:

The West half of the Northwest Quarter of said Section 36, and
That portion of the Southwest Quarter of said Section 36 lying North of the South Right-of-Way line of the Maricopa-Casa Grande Highway EXCEPT any portion thereof lying within the Ak-Chin Indian Reservation.

All of Sections 19, 29, 30, 31, and 32 of Township 4 South, Range 4 East, SRB&M in Pinal County, Arizona.

The West One-Half of Section 18, Township 4 South, Range 4 East, SRB&M in Pinal County, Arizona.

Palo Verde Utilities Company, L.L.C.
Service Area Legal Description

October 3, 2003

The South One-Half of Section 20 of Township 4 South, Range 4 East, SRB&M in Pinal County, Arizona.

All of Section 4 of Township 5 South, Range 4 East, SRB&M in Pinal County, Arizona.

That portion of Section 6, Township 5 South, Range 4 East, SRB&M lying North of the South Right of Way Line of the Maricopa-Casa Grande Highway in Pinal County, Arizona.

That portion of Section 8, Township 5 South, Range 4 East, SRB&M lying North of the South Right of Way Line of the Maricopa-Casa Grande Highway in Pinal County, Arizona.

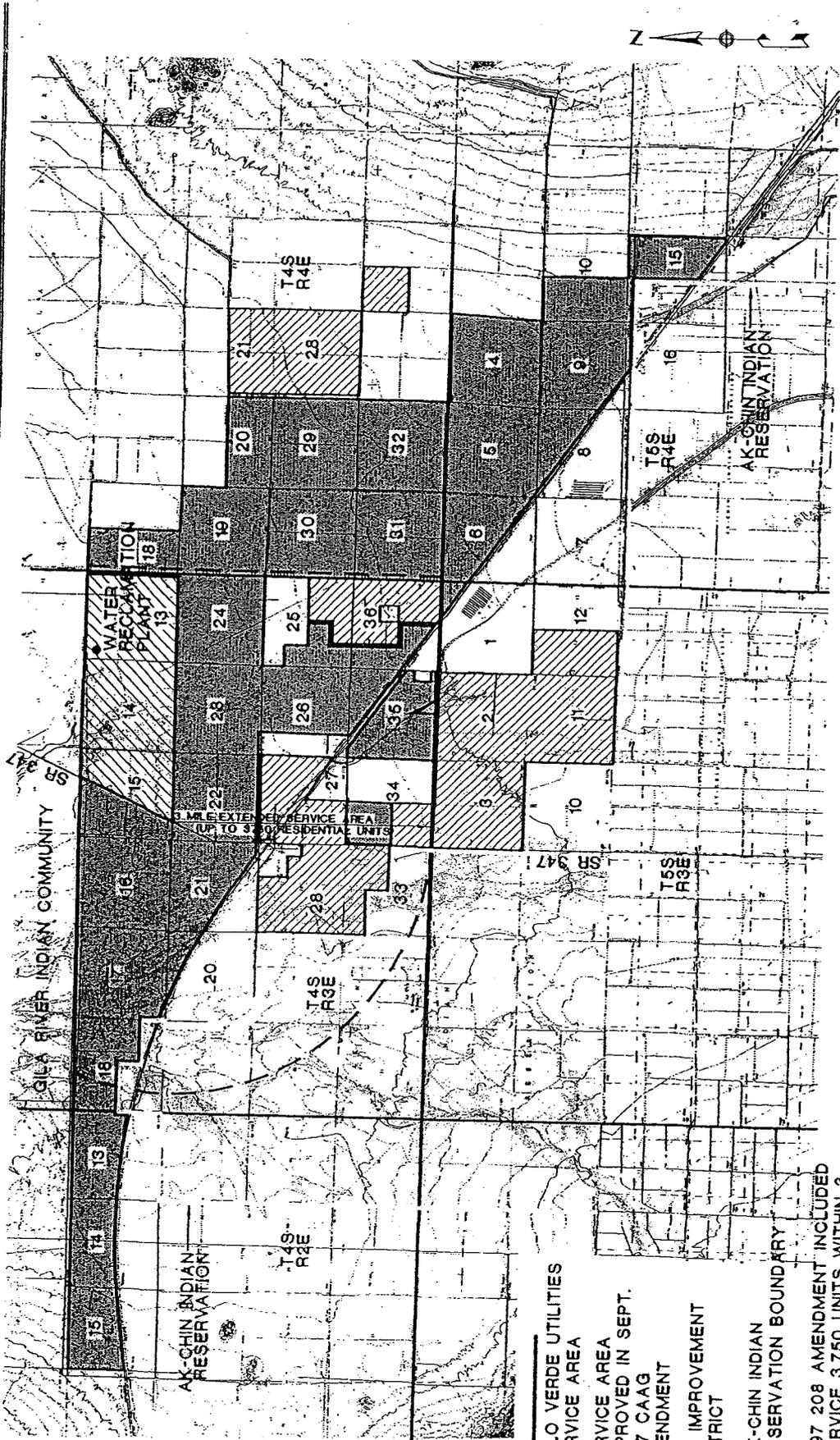
That portion of Section 9, Township 5 South, Range 4 East, SRB&M lying North of the South Right of Way Line of the Maricopa-Casa Grande Highway in Pinal County, Arizona.

The West One-Half of Section 10 together with the South 33 feet of the East One-Half of said Section 10, Township 5 South, Range 4 East, SRB&M in Pinal County, Arizona.

The East One-Half Section 15, Township 5 South, Range 4 East, SRB&M in Pinal County, Arizona lying North of the South Right of Way Line of the Maricopa-Casa Grande Highway in Pinal County, Arizona.

All of Section 5, Township 5 South, Range 4 East, SRB&M except for that portion lying South of the South Right of Way Line of the Maricopa-Casa Grande Highway in Pinal County, Arizona.

That portion of the Northeast Quarter of Section 1, Township 5 South, Range 3 East, SRB&M lying North of the South Right of Way Line of the Maricopa-Casa Grande Highway in Pinal County, Arizona.



LEGEND

-  PALO VERDE UTILITIES SERVICE AREA
-  SERVICE AREA APPROVED IN SEPT. 1997 CAAG AMENDMENT
-  387 IMPROVEMENT DISTRICT

AK-CHIN INDIAN RESERVATION BOUNDARY

1997 208 AMENDMENT INCLUDED SERVICE 3,750 UNITS WITHIN 3 MILES OF ORIGINAL SERVICE AREA

GTA ENGINEERING, INC.
 CONSULTING ENGINEERS
 1990 W CAMELBACK RD. STE. 401
 PHOENIX, AZ (602)246-7759

**PALO VERDE UTILITIES COMPANY, L.L.C.
 CAAG SERVICE AREA MAP**

OCTOBER 2003

Specific Responses to ACC Letter Dated 12 November 2004.

1. Please provide a request for service from each of the affected property owners.

Please see Exhibit C.

2. Please provide a map of the requested service territory with an identification of the respective property owners requesting service.

Please see Exhibit B.

3. Please provide a drinking water design report which clarifies how water will be provided to the proposed CC&N extension area.

- a. The report should identify existing and future sources, the capacities of existing sources, the estimated capacities of future sources and any existing demand on the present water sources.

There is an abundant groundwater supply in the area. Indeed, the water table in the Maricopa vicinity is rising, a consequence of both the transition of groundwater pumping for agricultural purposes to surface water via the CAP canal, and the cessation of agricultural activities in favor of residential development. As a result of the agricultural past of the planned expansion area, there are a large number of irrigation wells in the vicinity which may be rehabilitated and converted to potable supply wells. The water supply to the new service area will be chlorinated (as it is the existing service area).

SCWC employs rehabilitated agricultural wells to supply raw water to the water treatment plant. Future wells brought into service require:

1. On-site evaluation;
2. Down-hole video scans;
3. Aquifer testing; and
4. Water quality sampling resulting in New Source Approval from ADEQ.

During service negotiations, SCWC requires that all existing agricultural wells on the land under consideration be considered for possible connection to the potable water system. SCWC undertakes a sampling and physical condition survey and makes a determination on the potential for each well. Developers are required to provide sufficient space around designated wells in their master plans. In addition, SCWC requires that developers set aside 2 acres for possible use as satellite water distribution and treatment centers.

- b. The report should include the estimated water demand from a typical dwelling unit, the estimated demand from the proposed CC&N.

In the capacity analysis for the water infrastructure, SCWC has employed the ADEQ design criteria of:

Average Flow 250 GPD/DU
 Maximum Day Flow 495 GPD/DU
 Peak Hour Flow 0.584 GPM/DU (495 x 1.7)

In addition, SCWC requires a minimum fire flow of 1500 GPM for 4 hours.

At build-out, the following capacities are required:

CAPACITY ANALYSIS

			Lots	Flow	
PEAK CAPACITY (Based on Booster Pumps)	10,500	GPM			
ADEQ Peak Hour Capacity	0.584375	GPM per DU			
TOTAL PEAK UNITS SERVICABLE	17968	Units	17,279	10,097	GPM
MAX DAY CAPACITY (Based on Well Production + Storage - Fire Flow)	8760000	GPD			
ADEQ Max Day Capacity	495	GPD/DU			
TOTAL MAX DAY UNITS SERVICEABLE	17697	Units	17,279	8,553,105	GPD
AVERAGE DAY CAPACITY (Based on Well Production)	6,120,000	GPD			
ADEQ Average Flow Capacity	250	GPD/DU			
TOTAL AVERAGE UNITS SERVICEABLE	24480	Units	17,279	4,751,725	GPD

In order to achieve this demand, the following minimum infrastructure is required:

Booster Pumps 10,500 GPM
 Well Production 4,250 GPM
 Storage Capacity 3,000,000 gallons (minimum)

c. The report should identify the location of future and existing transmission mains and include the timing or construction phasing of facilities.

Please see Exhibit G.

d. The design report should describe water quality and address any water quality problems with the existing and future sources of water (as an example, will extra treatment costs arise in order to meet existing or future maximum contaminant levels for arsenic nitrates or fluorides in the drinking water?).

In evaluating the needs of the new service area, SCWC has assumed that the water quality in the area is similar to that of the current service area. Treatment for arsenic, as a result of the EPA reduction of the maximum contaminant level ("MCL") from 0.05 mg/L to 0.010 mg/L (January 2006), will be required and is a driving factor in the evaluation of new wells for inclusion in the SCWC inventory. The present service area wells generate water with an arsenic level of approximately 0.011 mg/L. In addition, there are impacts from nitrates, fluoride, total dissolved solids ("TDS") etc.

Water Evaluation Plan

In the current service area, SCWC is undergoing a three-phased treatment evaluation effort:

1. Water quality analyses for possible installation of physical barrier technology;
2. Blending analysis (slipstream treatment process); and
3. Well rehabilitation studies to determine if segmenting the screened interval of the well casing can yield raw water that can meet the Safe Drinking Water Act ("SDWA") requirements without treatment.

From an operational perspective, the latter of the three options is obviously preferred. The SCWC water model presented herein assumes, however, the worst case scenario (direct treatment) by way of a separation technology.

Treatment Technology Discussion

Arsenic may be removed in a number of ways: ion exchange ("IX"); activated alumina adsorption ("AA"); reverse osmosis ("RO"); blending; and sealing of aquifer layers etc. The current MCL for arsenic is 50 µg/L. In January 2006, the MCL will be reduced to 10 µg/L.

The contaminants of interest at SCWC have interfering properties associated with the removal of the other contaminants. For example, TDS will affect the ability to employ AA processes or IX processes for arsenic removal; nitrates and sulphates will compete for adsorption with arsenic etc.

In order to meet the new MCL for arsenic, SCWC anticipates using a combination of reverse osmosis (or other effective treatment) and blending, plus actively screening perforated intervals in the well casings to obtain a maximum arsenic level of 8 µg/L. While the actual treatment configuration is still under evaluation, under the worst case conditions (ie RO treatment) the analysis indicates that treatment of 60 to 65% of the raw water flow will be sufficient to meet the SCWC blended treatment goal. The application of treatment technology will provide a material increase in the quality of water from the perspective of other elements as well, in particular total dissolved solids (TDS).

SCWC expects that the preliminary data collection and pilot testing/process selection to be completed by the end of 2004, with construction commencing in the first quarter of 2005. Commissioning of the facility is planned for the end of the third quarter 2005.

4. Please provide a copy of the Arizona Department of Water Resources Analysis of Adequate Water Supply for the proposed service territory.

SouthWest Groundwater is preparing an amendment to the SCWC Assured Water Supply Designation in conjunction with this application. This activity will also identify the production, age, condition and initial quality capability of the wells in the new service area. In addition, SCWC requires that all wells in the development area be evaluated for inclusion in the SCWC well inventory. If the wells meet the requirements of the utility, the wells are transferred to the utility (in fee). In addition, any water rights (grandfathered irrigation water rights) associated with the development area are transferred to the utility as the land moves from farming to development.

SCWC has demonstrated a physical availability of 9305 ac-ft/year. The documented assured water supply for SCWC is 5182 ac-ft/year based on the Pinal County Active Management Area ("AMA") allowance of 125 gallons per person per day and the

extinguishment of Grandfathered Irrigation Water Rights. As existing grandfathered rights are extinguished, SCWC is allocated additional groundwater. In addition, SCWC has been allocated 125 GPCPD.

5. Please provide any other information which will allow the Commission to analyze and conclude that the company has sufficient water production capacity, or can develop enough drinking water capacity to service the existing and future demands from the proposed CC&N.

Please see Infrastructure Report, Exhibit A

6. Please provide a set of design plans for the proposed water facilities.

Please see Exhibit H.

7. Please provide an estimate of the water facilities costs to the necessary to serve the proposed CC&N. The costs should include a description of the major components with the cost of the component (i.e., wells, number and size of storage tanks, etc.). Then method of financing for the major components should be described specifically.

Water System Costs

Infrastructure

In general, each section of land (640 acres) requires approximately 103,000 lineal feet of water pipe in the ground.

Based on this, the new service area would include approximately 800,000 feet of water pipeline. At approximately \$45/foot (\$35/foot for infrastructure + \$10/foot for soft costs) the total cost will be in the order of \$3.6MM.

Backbone

The costs associated with providing the backbone are estimated at approximately \$800/EDU

Treatment

The costs of treatment have yet to be finalized as it is dependent on the quality of water found during the on-site investigation. Should an RO plant be required, the cost is estimated at:

\$2.50/gallon @ 4.7 MGal = approx \$10MM

The infrastructure expansions of both plant and backbone will be financed by way of GWR equity. Any portion of pipelines and interceptors constructed within a development by a developer will be constructed under the approval of the company and conveyed to the Company under a line extension agreement, all in accordance with the statutes of the ACC.

8. Please provide a copy of the approved Central Arizona Council of Governments §208 plan, any subsequent amendments to the §208 plan, and any proposed amendments to the §208 plan for the proposed wastewater certificated area.

This new service area is wholly within the City of Maricopa, and is also wholly within PVUC's CAAG Section 208 Planning Area, with the exception of the Bera Ventures et al properties (map reference I). PVUC has prepared application for the inclusion of this property in the 208 Planning Area. This application will be reviewed for the CAAG sessions of the first quarter 2005.

9. If the information is not contained in the §208 plans, please submit a master wastewater design report which clarifies how wastewater service will be provided to the proposed CC&N area.

Please see Exhibit L.

10. The report should identify the location of existing and future wastewater treatment plants and major wastewater interceptors. It should also provide the capacities of existing and future wastewater treatment plants, any existing service base in the proposed C&N, service connections at build out in the proposed CC&N, estimated wastewater flow from a typical dwelling unit.

All wastewater generated by the new service area will be conveyed by gravity to the existing PVUC water reclamation facility located in the NW quarter of T4S R3E section 13. As the land rises to the south east, there is a unique opportunity to employ a fully gravity system which eliminates numerous operational issues associated with lift stations.

PVUC commissioned a new 1.0 MGD wastewater facility (SBR process) in January 2004. This treatment process produces Class A+ treated water, and discharges reclaimed water to re-use sites in the current service area.

See also Exhibit K for determination of per unit flow rates.

11. The report should also include the estimated wastewater total flows or contributions from future build out within the proposed CC&N, the timing or construction phasing of facilities and methods of effluent disposal.

Expected flows are shown in the Infrastructure Report (Exhibit A).

Please see Exhibit D for unit phasing.

12. Please include any other information which will allow the Commission to analyze and conclude that the company has sufficient wastewater treatment capacity, or can develop enough treatment capacity to service the existing and future demands from the proposed CC&N.

Please see Infrastructure Report (Exhibit A).

13. Please provide a copy of the Arizona Department of Environmental Quality's "Aquifer Protection Permit" for the wastewater treatment plant. If that permit has not been issued, please inform the Commission of the status of the application for that permit.

Please see Exhibit E.

14. Please provide a set of design plans for the proposed wastewater facilities.

Please see Exhibit J.

15. Please provide an estimate of the wastewater facilities costs necessary to serve the proposed CC&N. The costs should include a description of the major components with the cost of the component (i.e., 500,000 gallons per day sequencing batch wastewater treatment, lineal feet of off-site sewage interceptors or collection mains, lineal feet of on site collection mains, wells, number and size of storage tanks, etc.). The method of financing for the major components should be specified.

Wastewater System Costs

In-Parcel Infrastructure

In general, each section of land (640 acres) requires approximately 90,000 lineal feet of sewer pipe in the ground.

Based on this, the new service area would include approximately 700,000 feet of sewer pipeline. At approximately \$55/foot (\$45/foot for infrastructure + \$10/foot for soft costs), the total cost will be in the order of \$3.9 MM.

Backbone

The estimated costs associated with providing the backbone are:

Sewer	\$ 1000/edu
Reclaimed Water	\$ 250/edu

Treatment

The costs associated with providing the 3.0 MGD capacity required to service this new area is estimated to be in the order of \$12MM. However, a phasing plan will be developed that allows for a staggered deployment of infrastructure.

The infrastructure expansions of both plant and backbone will be financed by way of GWR equity. Any portion of pipelines and interceptors constructed within a development by a developer will be constructed under the approval of the company and conveyed to the Company under a line extension agreement, all in accordance with the statutes of the ACC.

A

INFRASTRUCTURE REPORT

INTRODUCTION

This report has been prepared in response to questions from the Arizona Corporation Commission (“ACC”) in correspondence dated 12 November 2004. Sections specifically relating to questions in the letter are identified with the Question number in square brackets, bold and underlined, eg **[Question 4]**.

BACKGROUND

PVUC and SCWC are public service corporations as defined in Article 15, Section 2, of the Arizona Constitution and are regulated by the ACC. In addition, the operations of the utilities are governed by the Arizona Department of Environmental Quality (“ADEQ”) and the Arizona Department of Water Resources (“ADWR”). The wastewater utility, PVUC, also falls under the guidance of the Water Quality Management Plan which is delegated under Section 208 of the Clean Water Act (“CWA”) to the designated management authority for Pinal County, the Central Arizona Association of Governments (“CAAG”).

SERVICE AREA

Palo Verde Utilities Company (“PVUC”) and Santa Cruz Water Company (“SCWC”) have been requested to extend services to a non-contiguous area south east of the existing service area. **[Question 8]** This new service area is wholly within the City of Maricopa, and is also wholly within PVUC’s CAAG Section 208 Planning Area, with the exception of the Bera Ventures et al properties (map reference I). PVUC has prepared application for the inclusion of this property in the 208 Planning Area. This application will be reviewed for the CAAG sessions of the first quarter 2005.

SCWC and PVUC currently operate coincident Certificates of Convenience and Necessity (“CC&N”) which are governed by statute and the ACC. At present, the service area includes approximately 9 square miles, and has a potential build-out in the order of [more like 20,000 edus] 18,000 homes. The utilities presently serve 2360 homes in the area, and are adding excess of 200 homes per month.

[Question 2]. The new service area is shown in **Exhibit B**. **[Question 1]** Requests for service have been received from the following developers/land owners and are included in **Exhibit C**:

Development	Lots
L&R Contracting, Inc., Trap King, LLP, Sue Flores, Pro Active Remarketing LLC, Sean Aldrous and Guy Gedeon	322
Cook/El Dorado, L.L.C., Little/El Dorado, L.L.C., and William P. Gore and Margie L. Gore	2,205
Maricopa – Casa Grande Highway 813, L.C. and Western Pinal Industrial Park, L.C.	4,322
JNAN, LLC	2,240

Pitaco Farms Limited Partnership	2,240
Desert Sunrise, L.L.C. and Maricopa 240, L.L.C.	1,680
Mace Holdings, L.L.C., Maricopa 32, L.L.C., and Maricopa 400, L.L.C.	2,240
Kruse Farms	1,680
Bera Ventures, L.L.C., DAC Maricopa Investment, L.L. C., JJD Development L.L.C., Maricopa Investment Group, L.L.C., JACOB/McCASLIN/EDEN, LLC and Mesquite Groves L.L.C.	350

The schedule of development (absorption schedule) is shown in **Exhibit D**.

CURRENT PERMITS

PVUC

PVUC provides service in a certificated area governed by the ACC. This CC&N defines the geographic boundaries of service for the utility.

The wastewater utility, PVUC, is subject to an Aquifer Protection Permit ("APP"), various Re-Use Permits, a surface water discharge permit ("AzPDES") and an air quality permit. The APP is designed to protect the receiving environment from any adverse effects of the location of a wastewater treatment facility. Re-Use permits maintain control over the disposition of water from wastewater facilities, and the AzPDES governs the discharge of water to waters of the US. The air quality permit is designed to limit the amount of particulates and NOx to the atmosphere.

[**Question 8**]PVUC is governed by the 208 Water Quality planning process, and must ensure that all expansion activities are consistent with the 208 Water Quality Management Plan. PVUC's current 208 plan allows for 13.0 MGD of wastewater flow on the site. PVUC has an AzPDES surface water discharge permit that will allow for the disposal of treated water from the treatment facility if required.

[**Questions 11**]A copy of the 3.0 MGD APP is provided at **Exhibit E**.

SCWC

SCWC provides service in a certificated area governed by the ACC. This certificate of convenience and necessity ("CC&N") defines the geographic boundaries of service for the utility.

The water utility must provide assurances of the availability of water for customers via an Assured Water Supply Designation ("AWS") and the quality of the water is governed by ADEQ under the requirements of the Safe Drinking Water Act ("SDWA").

Summary of Permits

A summary of current permits is included at **Exhibit F**.

CURRENT REGULATORY COMPLIANCE

Both SCWC and PVUC are currently in compliance with all regulatory requirements, and are "in good standing" with the ACC and ADEQ.

WATER SYSTEM

New Service Area Groundwater Quantity and Quality

There is an abundant groundwater supply in the area. Indeed, the water table in the Maricopa vicinity is rising, a consequence of both the transition of groundwater pumping for agricultural purposes to surface water via the CAP canal, and the cessation of agricultural activities in favor of residential development. As a result of the agricultural past of the planned expansion area, there are a large number of irrigation wells in the vicinity which may be rehabilitated and converted to potable supply wells. The water supply to the new service area will be chlorinated (as it is the existing service area).

Water Rights Strategy

SouthWest Groundwater is preparing an amendment to the SCWC Assured Water Supply Designation in conjunction with this application. [Question 3a] This activity will also identify the production, age, condition and initial quality capability of the wells in the new service area. [Question 4] In addition, SCWC requires that all wells in the development area be evaluated for inclusion in the SCWC well inventory. If the wells meet the requirements of the utility, the wells are transferred to the utility (in fee). In addition, any water rights (grandfathered irrigation water rights) associated with the development area are transferred to the utility as the land moves from farming to development.

[Question 4] SCWC has demonstrated a physical availability of 9305 ac-ft/year. The documented assured water supply for SCWC is 5182 ac-ft/year based on the Pinal County Active Management Area ("AMA") allowance of 125 gallons per person per day and the extinguishment of Grandfathered Irrigation Water Rights. As existing grandfathered rights are extinguished, SCWC is allocated additional groundwater. In addition, SCWC has been allocated 125 GPCPD.

[Question 3a] SCWC employs rehabilitated agricultural wells to supply raw water to the water treatment plant. Future wells brought into service require:

5. On-site evaluation;
6. Down-hole video scans;
7. Aquifer testing; and
8. Water quality sampling resulting in New Source Approval from ADEQ.

During service negotiations, SCWC requires that all existing agricultural wells on the land under consideration be considered for possible connection to the potable water system. SCWC undertakes a sampling and physical condition survey and makes a determination on the potential for each well. Developers are required to provide sufficient space around designated wells in their master plans. In addition, SCWC requires that developers set aside 2 acres for possible use as satellite water distribution and treatment centers.

Water Conservation Strategy

[Question 3b]As a matter of policy, Global Water Resources requires that minimum reclaimed water uses are employed when developing raw land. Developers submitting plans for approval to the utility must provide the following:

1. Storage capable of handling 6 days with no irrigation use.
2. A minimum configuration of the following is required:
 - a. Turf = 22%
 - b. Xeriscape = 75%
 - c. Lakes = 3%

In conjunction with the State's requirement for low flow fixtures, this policy results in a significant reduction in water consumption, and ultimately reduces any treatment cost pressure on water rates..

ESTIMATED WATER CONSUMPTION FOR NEW SERVICE AREA

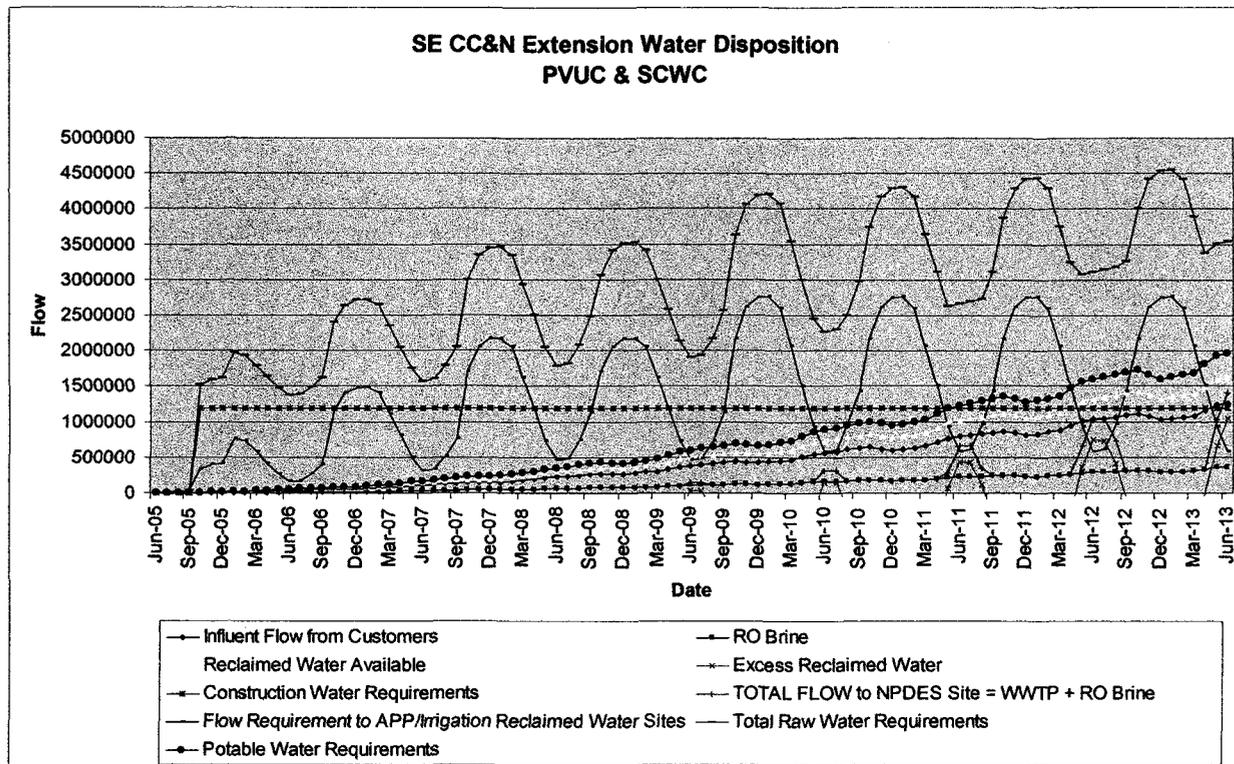
[Question 3b]There are three requirements for water in the new service area:

1. Potable water for residential and commercial consumption/use;
2. Irrigation water for HOA use; and
3. Construction water for mass grading, compaction and other uses.

In order to meet these requirements, there are three sources of water in the new service area:

1. Ground Water;
2. Treated Ground Water (potable); and
3. Reclaimed Water.

[Question 5]GWR has modelled the requirements for all water in the new service area, and the results are presented in the graph below:



This model is based on conservative estimates in order to ensure the utility develops the appropriate water resources. In addition, the model has some limitations, in that it assumes the landscaping for each section of newly developed land is completely landscaped 120 days in advance of the connection of the first consuming customer, etc. It does, however, serve as a planning tool to ensure that the utility is prepared to serve the required volumes of water to the various needs.

WATER TREATMENT

[Question 3d] In evaluating the needs of the new service area, SCWC has assumed that the water quality in the area is similar to that of the current service area. Treatment for arsenic, as a result of the EPA reduction of the maximum contaminant level (“MCL”) from 0.05 mg/L to 0.010 mg/L (January 2006), will be required and is a driving factor in the evaluation of new wells for inclusion in the SCWC inventory. The present service area wells generate water with an arsenic level of approximately 0.011 mg/L. In addition, there are impacts from nitrates, fluoride, total dissolved solids (“TDS”) etc.

Water Evaluation Plan

[Question 3d] In the current service area, SCWC is undergoing a three-phased treatment evaluation effort:

1. Water quality analyses for possible installation of physical barrier technology;
2. Blending analysis (slipstream treatment process); and
3. Well rehabilitation studies to determine if segmenting the screened interval of the well casing can yield raw water that can meet the Safe Drinking Water Act (“SDWA”) requirements without treatment.

From an operational perspective, the latter of the three options is obviously preferred. The SCWC water model presented herein assumes, however, the worst case scenario (direct treatment) by way of a separation technology.

Treatment Technology Discussion

[Question 3d] Arsenic may be removed in a number of ways: ion exchange ("IX"); activated alumina adsorption ("AA"); reverse osmosis ("RO"); blending; and sealing of aquifer layers etc. The current MCL for arsenic is 50 µg/L. In January 2006, the MCL will be reduced to 10 µg/L.

The contaminants of interest at SCWC have interfering properties associated with the removal of the other contaminants. For example, TDS will affect the ability to employ AA processes or IX processes for arsenic removal; nitrates and sulphates will compete for adsorption with arsenic etc.

In order to meet the new MCL for arsenic, SCWC anticipates using a combination of reverse osmosis (or other effective treatment) and blending, plus actively screening perforated intervals in the well casings to obtain a maximum arsenic level of 8 µg/L. While the actual treatment configuration is still under evaluation, under the worst case conditions (ie RO treatment) the analysis indicates that treatment of 60 to 65% of the raw water flow will be sufficient to meet the SCWC blended treatment goal. The application of treatment technology will provide a material increase in the quality of water from the perspective of other elements as well, in particular total dissolved solids (TDS).

SCWC expects that the preliminary data collection and pilot testing/process selection to be completed by the end of 2004, with construction commencing in the first quarter of 2005. Commissioning of the facility is planned for the end of the third quarter 2005.

WATER INFRASTRUCTURE

It is anticipated that initially, potable water will be provided by a connection between the current service area and the new service area ([Question 3c] see attached water master plan at Exhibit G). As the development progresses, there will be a requirement for a satellite water treatment plant ("WTP") modeled on the current site ([Question 6] see site plan of current WTP at Exhibit H). In preparation of this requirement, Global Water requires that each section of new development dedicate a 2 acre site for use as a treatment site.

Capacity Analysis

[Question 3b] In the capacity analysis for the water infrastructure, SCWC has employed the ADEQ design criteria of:

Average Flow	250 GPD/DU
Maximum Day Flow	495 GPD/DU
Peak Hour Flow	0.584 GPM/DU (495 x 1.7)

In addition, SCWC requires a minimum fire flow of 1500 GPM for 4 hours.

At build-out, the following capacities are required:

CAPACITY ANALYSIS

			Lots	Flow	
PEAK CAPACITY (Based on Booster Pumps)	10,500	GPM			
ADEQ Peak Hour Capacity	0.584375	GPM per DU			
TOTAL PEAK UNITS SERVICEABLE	17968	Units	17,279	10,097	GPM
MAX DAY CAPACITY (Based on Well Production + Storage - Fire Flow)	8760000	GPD			
ADEQ Max Day Capacity	495	GPD/DU			
TOTAL MAX DAY UNITS SERVICEABLE	17697	Units	17,279	8,553,105	GPD
AVERAGE DAY CAPACITY (Based on Well Production)	6,120,000	GPD			
ADEQ Average Flow Capacity	250	GPD/DU			
TOTAL AVERAGE UNITS SERVICEABLE	24480	Units	17,279	4,751,725	GPD

In order to achieve this demand, the following minimum infrastructure is required:

Booster Pumps	10,500 GPM
Well Production	4,250 GPM
Storage Capacity	3,000,000 gallons (minimum)

Pipeline Infrastructure

[Question 3c] See Exhibit G for the water master plan.

[Question 7] Water System Costs**Infrastructure**

In general, each section of land (640 acres) requires approximately 103,000 lineal feet of water pipe in the ground.

Based on this, the new service area would include approximately 800,000 feet of water pipeline. At approximately \$45/foot (\$35/foot for infrastructure + \$10/foot for soft costs) the total cost will be in the order of \$3.6MM.

Backbone

The costs associated with providing the backbone are estimated at approximately \$800/EDU

Treatment

The costs of treatment have yet to be finalized as it is dependent on the quality of water found during the on-site investigation. Should an RO plant be required, the cost is estimated at:

$$\$2.50/\text{gallon} @ 4.7 \text{ MGal} = \text{approx } \$10\text{MM}$$

The infrastructure expansions of both plant and backbone will be financed by way of GWR equity. Any portion of pipelines and interceptors constructed within a development by a developer will be constructed under the approval of the company and conveyed to the Company under a line extension agreement, all in accordance with the statutes of the ACC.

WASTEWATER TREATMENT

[Questions 9 & 10] All wastewater generated by the new service area will be conveyed by gravity to the existing PVUC water reclamation facility located in the NW quarter of T4S R3E section 13. As the land rises to the south east, there is a unique opportunity to employ a fully gravity system which eliminates numerous operational issues associated with lift stations.

PVUC commissioned a new 1.0 MGD wastewater facility (SBR process) in January 2004. This treatment process produces Class A+ treated water, and discharges reclaimed water to re-use sites in the current service area.

The utility also has a lagoon treatment facility that is being decommissioned. The structure of this facility will be converted to a combined reclaimed water storage and brine storage facility (if an RO system is required for the water system). This reclaimed water storage facility (RSWF) allows for:

1. diurnal storage for reclaimed water from the PVUC Water Reclamation Facility;
2. brine storage for the provision of brine for use as construction water; and
3. supplement of either source by raw well water.

In order to accomplish this, the existing lagoon treatment system on the site will be decommissioned, cleaned, and configured so that one lagoon is employed for reclaimed water, and the second lagoon as brine storage. The RSWF will be outfitted with aeration, mixing and delivery mechanisms (pump stations, pressurized non-potable water mains, etc) in order that the reclaimed water may be delivered to the various users in the area. A construction water brine delivery system, including a pressurized manifold and truck servicing bays will be constructed to deliver construction water as required.

This solution provides a means of beneficially employing the brine from the arsenic treatment process and allows for maximum flexibility in the provision of water for non-potable uses.

Site

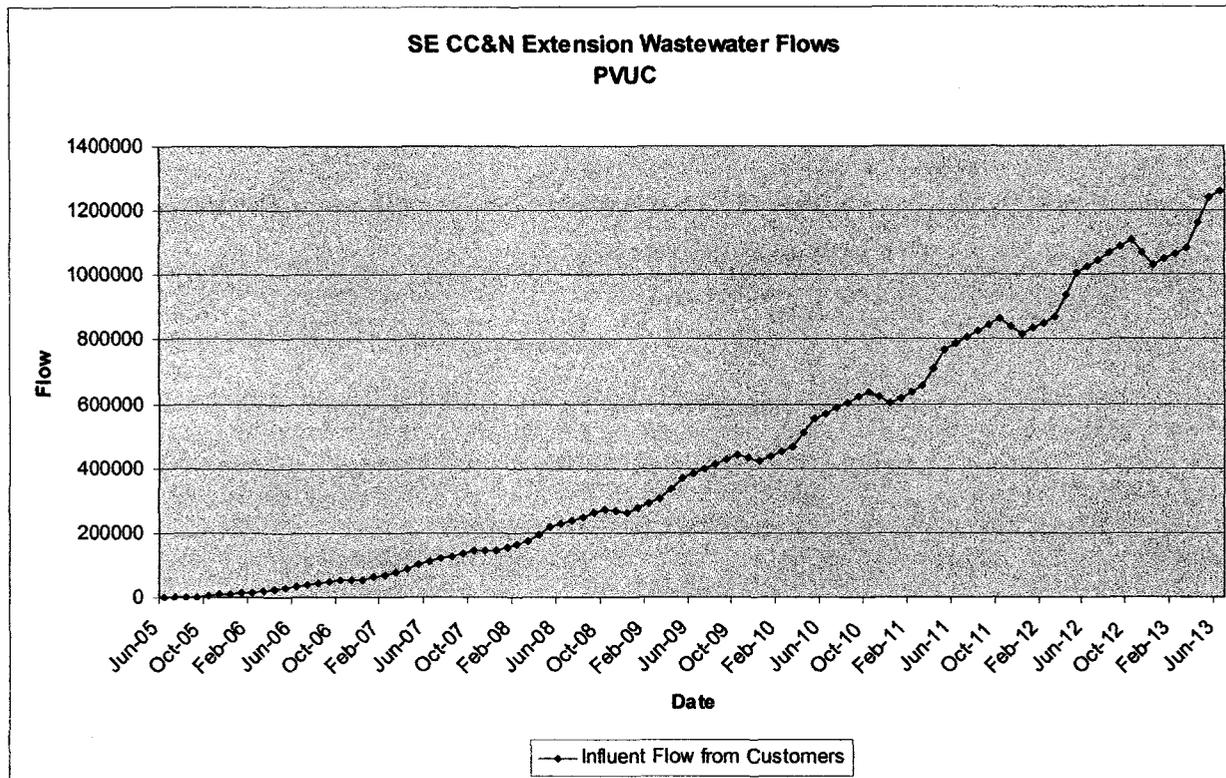
[Questions 10] The site the water reclamation facility is situated on is owned in fee by PVUC, and has been zoned and permitted to include treatment infrastructure up to 13.0 MGD. PVUC has laid out the development plan for 9.0 MGD of treatment (see **Exhibit I**), and has recently launched the expansion of the 1.0 MGD treatment facility to 3.0 MGD. This new capacity will be on-line by 31 December 2005.

[Questions 14] A copy of the design of the 3.0 MGD facility is included at **Exhibit J**. It is important to note that the 9.0 MGD facility simply replicates the 3.0 MGD facility, and that the 3.0 MGD facility is an augmentation of the present 1.0 MGD facility. As a result, all of the technologies employed in the treatment process are well understood and proven in service.

[Question 11] Estimated Flows

PVUC has completed an extensive evaluation of flows in the current service area (see **Exhibit K**) and has established that a 160GPD/DU design figure is appropriate.

The estimated flows for the new service area are shown below:



Pipeline Infrastructure

See **Exhibit L** for the wastewater master plan and **Exhibit M** for the reclaimed water master plan.

[Questions 12] Effluent Management

Global Water Resources mandates a high level of water re-use. As a result, each development in the new service area is required to “take-back” a volume of reclaimed water equivalent to the volume of wastewater produced.

Each development will use Class A+ reclaimed water for irrigation, through a Type 2 Reclaimed Water General Permit. Due to the nature of irrigation activities, during winter months, or periods of extended rainfall, there will be an excess of reclaimed water produced, which will necessitate the employment of a AzPDES discharge.

PVUC’s effluent management plan is based on the following priorities:

1. Irrigation via delivery of reclaimed water to irrigation lakes;
2. Diurnal and seasonal storage at the PVUC WRF;
3. Supply of construction water from reclaimed water mains/storage facility; and
4. Discharge by way of AzPDES Surface Water Discharge Permit

PVUC presently has a 2.25 MGD AzPDES discharge permit. In conjunction with expanding the APP from 3.0 to 9.0 MGD, PVUC will also expand the AzPDES.

[Questions 15] Wastewater System Costs

In-Parcel Infrastructure

In general, each section of land (640 acres) requires approximately 90,000 lineal feet of sewer pipe in the ground.

Based on this, the new service area would include approximately 700,000 feet of sewer pipeline. At approximately \$55/foot (\$45/foot for infrastructure + \$10/foot for soft costs), the total cost will be in the order of \$3.9 MM.

Backbone

The estimated costs associated with providing the backbone are:

Sewer	\$ 1000/edu
Reclaimed Water	\$ 250/edu

Treatment

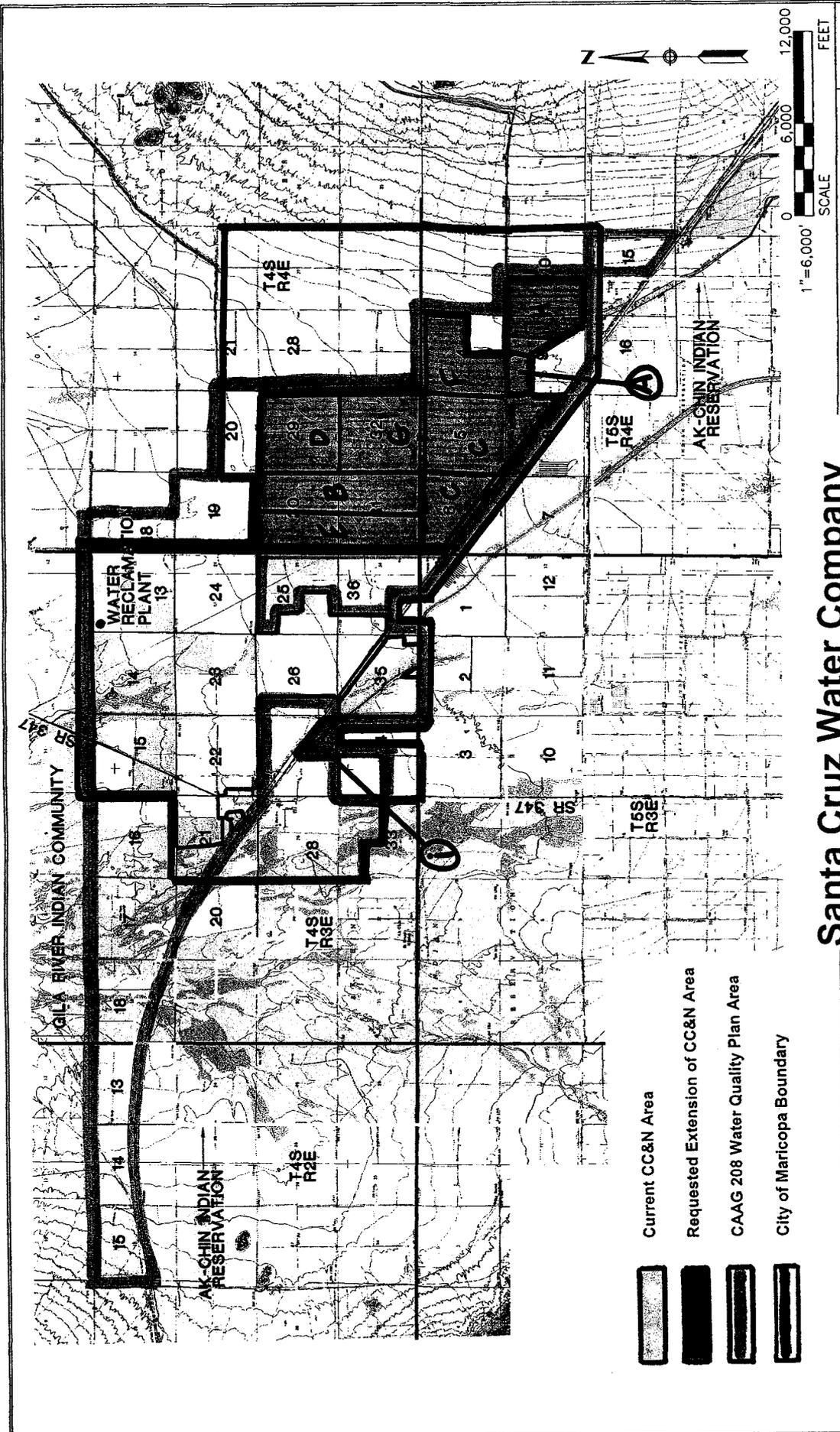
The costs associated with providing the 3.0 MGD capacity required to service this new area is estimated to be in the order of \$12MM. However, a phasing plan will be developed that allows for a staggered deployment of infrastructure.

The infrastructure expansions of both plant and backbone will be financed by way of GWR equity. Any portion of pipelines and interceptors constructed within a development by a developer will be constructed under the approval of the company and conveyed to the Company under a line extension agreement, all in accordance with the statutes of the ACC.

B

EXHIBIT B

<u>Map</u>	<u>Legend Developer/Development</u>	<u>Number of Lots</u>
A	L&R Contracting, Inc., Trap King, LLP, Sue Flores, Pro Active Remarketing LLC, Sean Aldrous and Guy Gedeon	322
B	Cook/El Dorado, L.L.C., Little/El Dorado, L.L.C., and William P. Gore and Margie L. Gore	2,205
C	Maricopa – Casa Grande Highway 813, L.C. and Western Pinal Industrial Park, L.C.	4,322
D	JNAN, LLC	2,240
E	Pitaco Farms Limited Partnership	2,240
F	Desert Sunrise, L.L.C. and Maricopa 240, L.L.C.	1,680
G	Mace Holdings, L.L.C., Maricopa 32, L.L.C., and Maricopa 400, L.L.C.	2,240
H	Kruse Farms	1,680
I	Bera Ventures, L.L.C., DAC Maricopa Investment, L.L. C., JJD Development L.L.C., Maricopa Investment Group, L.L.C., JACOB/McCASLIN/EDEN, LLC and Mesquite Groves L.L.C.	350



Santa Cruz Water Company
Palo Verde Utilities Company

C

**L&R Contracting Inc., Trap King LLLP, Sue Flores, Pro Active
Remarketing LLC, Sean Aldous and Guy Gedeon**

July 16, 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

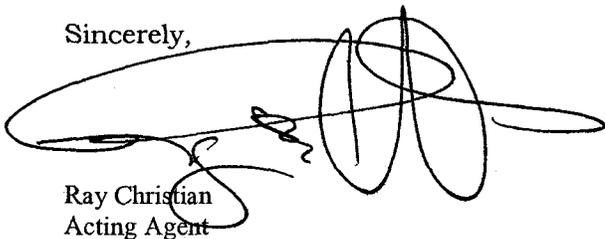
RE: Water and Wastewater Services in the City of Maricopa for L&R Contracting Inc., Trap King LLLP, Sue Flores, Pro Active Remarketing LLC, Sean Aldous and Guy Gedeon (collectively "Landowners")

Dear Ms. Liles:

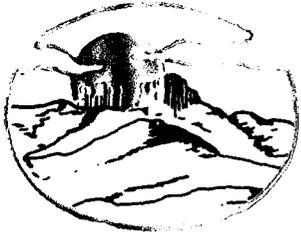
Please accept this letter as a request from the Landowners for water and wastewater services to 92.5 acres in the City of Maricopa, Arizona. The Landowners would like to be included in your next available expansion of service areas for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me with if you have any questions. I can be reached at 480-650-5745.

Sincerely,

A handwritten signature in black ink, appearing to be "Ray Christian", written over a horizontal line. The signature is stylized and somewhat illegible.

Ray Christian
Acting Agent



El Dorado Holdings, Inc.

July 7, 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC.
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

Please accept this letter as a request from Cook/El Dorado, L.L.C. for water and wastewater service to approximately 320 acres in the City of Maricopa, Arizona. The specific areas to be included are in located within the east half of Section 30, Township 4 South, Range 4 East. Cook/El Dorado, L.L.C. would like to be included in your next available expansion of services area for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me if you have any questions. I can be reached at 602-955-2424.

Sincerely,

K.M. Ingram
President, El Dorado Holdings, Inc.
Its: Administrative Agent



El Dorado Holdings, Inc.

July 7, 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC.
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

Please accept this letter as a request from Little/El Dorado, L.L.C. for water and wastewater service to approximately 235 acres in the City of Maricopa, Arizona. The specific areas to be included are in located within the east half of Section 31, Township 4 South, Range 4 East. Little/El Dorado, L.L.C. would like to be included in your next available expansion of services area for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me if you have any questions. I can be reached at 602-955-2424.

Sincerely,

K.M. Ingram
President, El Dorado Holdings, Inc.
Its: Administrative Agent

One Gateway Center

426 North 44th Street, Suite 100 • Phoenix, Arizona 85008 • (602) 955-2424 • FAX (602) 955-3543

July 7, 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC.
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

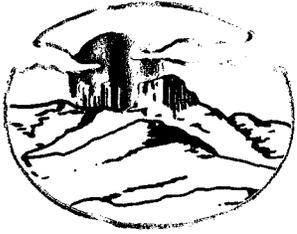
Please accept this letter as a request from William P. Gore and Margie L. Gore for water and wastewater service to 80 acres in the City of Maricopa, Arizona. The specific areas to be included are in the southern portion of Section 31, Township 4 South, Range 4 East. We would like to be included in your next available expansion of services area for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me if you have any questions. I can be reached at 806-244-4459

Sincerely,

A handwritten signature in cursive script that reads "William P. Gore".

William P. Gore



El Dorado Holdings, Inc.

July 7, 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC.
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

Please accept this letter as a request from Maricopa-Casa Grande Highway 813, L.C. for water and wastewater service to approximately 841 acres in the City of Maricopa, Arizona. The specific areas to be included are Section 5, Township 5 South, Range 4 East and a portion of Section 8, Township 5 South, Range 4 East. Maricopa-Casa Grande Highway 813, L.C. would like to be included in your next available expansion of services area for Santa Cruz Water Company and Palo Verde Utilities Company.

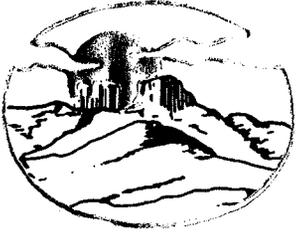
Please contact me if you have any questions. I can be reached at 602-955-2424.

Sincerely,

K.M. Ingram
President, El Dorado Holdings, Inc.
Its: Managing Member

One Gateway Center

426 North 44th Street, Suite 100 • Phoenix, Arizona 85008 • (602) 955-2424 • FAX (602) 955-3543



El Dorado Holdings, Inc.

July 7, 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC.
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

Please accept this letter as a request from Western Pinal Industrial Park, L.C. for water and wastewater service to approximately 397 acres in the City of Maricopa, Arizona. The specific areas to be included are located within a portion of Section 6, Township 5 South, Range 4 East. Western Pinal Industrial Park, L.C. would like to be included in your next available expansion of services area for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me if you have any questions. I can be reached at 602-955-2424.

Sincerely,

K.M. Ingram
President, El Dorado Holdings, Inc.
Its: Managing Member

One Gateway Center

426 North 44th Street, Suite 100 • Phoenix, Arizona 85008 • (602) 955-2424 • FAX (602) 955-3543

J. N. A. N. LLC

July 7, 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

Please accept this letter as a request from JNAN LLC ("JNAN") for water and waste water services to 640 acres in the City of Maricopa, Arizona. JNAN would like to be included in your next available expansion of services area for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me if you have any questions. I can be reached at 480.839.5055.

Sincerely,


Anthony J. Maggio
Manager

July 2, 2004

RECEIVED

JUL 06 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

Please accept this letter as a request from Pitaco Farms Limited Partnership ("Pitaco") for water and wastewater services to 640 acres in the City of Maricopa, Arizona. Pitaco would like to be included in your next available expansion of service areas for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me with if you have any questions. I can be reached at 928-445-5948.

Sincerely,



Louise Neely
for Pitaco Farms Limited Partnership

DESERT SUNRISE, LLC

July 6, 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

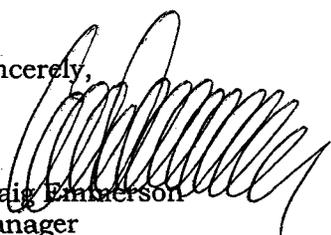
RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

Please accept this letter as a request from DESERT SUNRISE, LLC ("DESERT SUNRISE") for water and wastewater services to 160 acres in the City of Maricopa, Arizona. Desert Sunrise would like to be included in your next available expansion of service areas for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me with if you have any questions. I can be reached at 480-368-5205.

Sincerely,



Craig Emerson
Manager

MARICOPA 240, LLC

July 6, 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

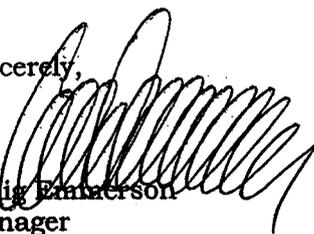
RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

Please accept this letter as a request from MARICOPA 240, LLC ("MARICOPA 240") for water and wastewater services to 240 acres in the City of Maricopa, Arizona. Maricopa 240 would like to be included in your next available expansion of service areas for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me with if you have any questions. I can be reached at 480-368-5205.

Sincerely,



Craig Emerson
Manager

MACE HOLDING, LLC

July 6, 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

Please accept this letter as a request from MACE HOLDING, LLC ("MACE HOLDING") for water and wastewater services to 80 acres in the City of Maricopa, Arizona. Mace Holding would like to be included in your next available expansion of service areas for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me with if you have any questions. I can be reached at 480-368-5205.

Sincerely,



Michael Anderson
Manager

MARICOPA 32, LLC

July 6, 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

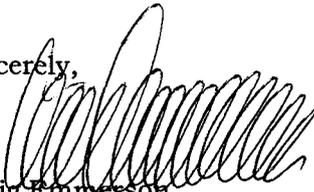
RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

Please accept this letter as a request from MARICOPA 32, LLC ("MARICOPA 32") for water and wastewater services to 160 acres in the City of Maricopa, Arizona. Maricopa 32 would like to be included in your next available expansion of service areas for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me with if you have any questions. I can be reached at 480-368-5205.

Sincerely,



Craig Emmerson
Manager

MARICOPA 400, LLC

July 6, 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

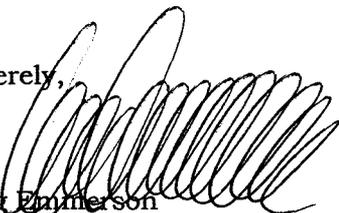
RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

Please accept this letter as a request from MARICOPA 400, LLC ("Maricopa 400") for water and wastewater services to 400 acres in the City of Maricopa, Arizona. Maricopa 400 would like to be included in your next available expansion of service areas for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me with if you have any questions. I can be reached at 480-368-5205.

Sincerely,



Craig Zimmerman
Manager

KRUSE FARMS

July 21, 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

Please accept this letter as a request from KRUSE FARMS for water and wastewater services to approximately 480 acres in the City of Maricopa, Arizona. KRUSE FARMS would like to be included in your next available expansion of service areas for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me with if you have any questions. I can be reached at 1-817-371-9818.

Sincerely,



Bill Kruse

June 30, 2004

RECEIVED

JUL 02 2004

Ms. Cindy Liles
Santa Cruz Water Company, LLC
Palo Verde Utilities Company, LLC
22601 N. 19th Avenue, Suite 210
Phoenix, AZ 85027

RE: Water and Wastewater Services in the City of Maricopa

Dear Ms. Liles:

Please accept this letter as a request from Maricopa Management, Inc. for water and wastewater services to 85+/- acres in the City of Maricopa, Arizona. Maricopa Management Inc. would like to be included in your next available expansion of service areas for Santa Cruz Water Company and Palo Verde Utilities Company.

Please contact me with if you have any questions. I can be reached at 480-446-7110.

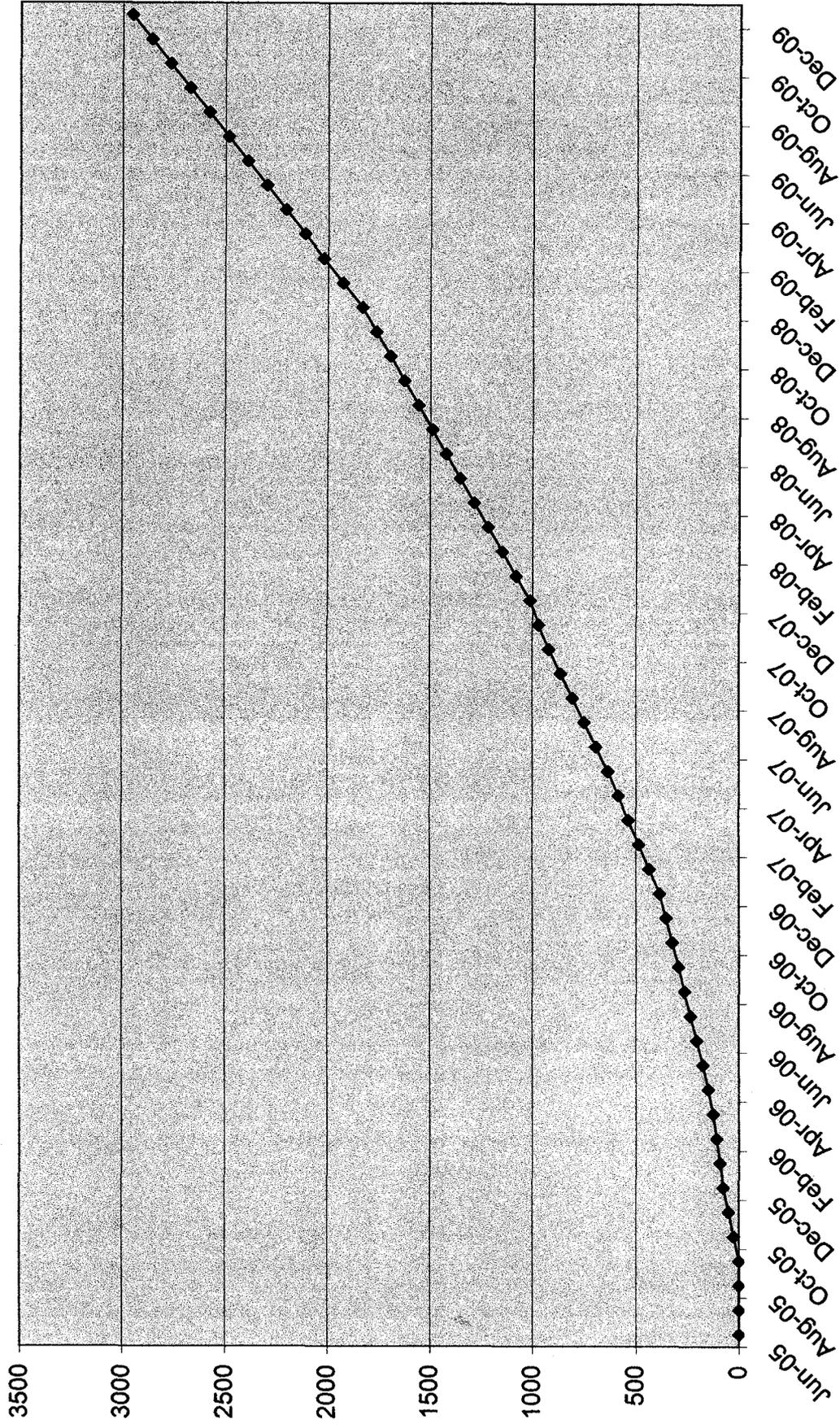
Sincerely,



Blake McKee
Vice President
Maricopa Management, Inc.

D

Total Connections



◆ Total Connections

E



FACT SHEET

Aquifer Protection Permit (APP) # 105228,

Place ID # 12017, LTF #34055

Other Amendment

**Palo Verde Utilities Company L.L.C. Wastewater Reclamation
Facility**

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an amendment to the aquifer protection permit for the subject facility that covers the life of the facility, including operational, closure, and post-closure periods unless suspended or revoked pursuant to A.A.C. R18-9-A213. This document gives pertinent information concerning the issuance of the permit. The requirements contained in this permit will allow the permittee to comply with the two key requirements of the Aquifer Protection Program: 1) meet Aquifer Water Quality Standards at the Point of Compliance; and 2) demonstrate Best Available Demonstrated Control Technology (BADCT). BADCT's purpose is to employ engineering controls, processes, operating methods or other alternatives, including site-specific characteristics (i.e., the local subsurface geology), to reduce discharge of pollutants to the greatest degree achievable before they reach the aquifer.

I. FACILITY INFORMATION

Name and Location

Permittee's Name:	Palo Verde Utilities Company, L.L.C.
Mailing Address:	22601 N. 19 th Ave., Suite 210 Phoenix, AZ 85027
Facility name and location:	Palo Verde Utilities Company, L.L.C. Wastewater Treatment Facility 41265 W. Hiller Road Maricopa, AZ 85239

Regulatory Status

This is a new facility that received an Aquifer Protection Permit (APP) on June 23, 2003. An application for an Other Amendment, was received on September 22, 2004.

There are no known compliance issues for this facility.

Facility Description

The permittee is authorized to operate a 3.0 million gallon per day (MGD) wastewater reclamation facility (WRF). The WRF consists of screening, sequential batch reactors

(SBRs), nitrification, denitrification, filtration, and ultra violet (UV) disinfection. Disposal of the effluent is by reuse under valid reclaimed water permits. Sludge is aerobically digested and dewatered. The depth to groundwater is between 100 and 160 feet below the surface and the direction of groundwater flow is to the southeast. The WRF is designed and constructed according to plans approved by the ADEQ Wastewater Design Review Unit.

All industrial hookups and other non-residential hookups to the WRF shall be authorized according to the applicable federal, state or local regulations.

In addition to the APP conditions pertaining to treatment and disposal of sewage sludge, the permittee must also comply with the requirements for sewage sludge disposal in 40 Code of Federal Regulations (CFR) Part 503 and 18 A.A.C. Ch. 9, Art. 10.

Amendment Description

This amendment is for increasing the flow from 1.0 MGD to 3.0 MGD and was done at the request of the applicant. Normally when there is an increase in flow greater than 10%, a Significant Amendment to the APP is required. However, the total build-out for this facility was approved with the original APP and thus the increase in flow can be done under an Other Amendment.

Listed below are the changes to the permit as a result of this amendment:

1. Section 2.1 - The facility description has been changed to state the flow has been increased to 3.0 MGD from 1.0 MGD.
2. Section 2.3 - Discharge Limitations has been changed to reflect the increase in flow to 3.0 MGD.
3. Section 4.0 - Table II, Discharge Monitoring flow limit has been changed to reflect the increase in the alert level (AL) and the discharge limit (DL) for flow.
4. Other changes include change in permit language to conform to the latest boilerplate language.

II. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)

The facility employs nitrification-denitrification, filtration, and ultra violet (UV) disinfection as part of BADCT. All effluent is disposed of by reuse. BADCT treatment performance standards will be met in the discharge.

III. COMPLIANCE WITH AQUIFER WATER QUALITY STANDARDS (AWQS)

Monitoring and Reporting Requirements

The facility performs discharge monitoring for selected AWQS. All wastewater will be

disposed by reuse under a valid reclaimed water permit. The depth to groundwater is between 100 and 160 feet. Based on these considerations, the AWQS are not expected to be violated at the point of compliance.

To ensure that the site operations do not impact either the surface water or the groundwater, discharge monitoring will be required. Effluent shall be monitored for nutrients monthly, metals quarterly, and Volatile Organic Compounds (VOC) semi-annually.

Point(s) of Compliance (P.O.C)

The Point of Compliance is established by the following designated location:

P.O.C #	P.O.C. Locations	Latitude	Longitude
1	Southeast corner of WRF	33° 05' 11" N	112° 00' 40" W

Groundwater monitoring is not required at the point of compliance well, except as a contingency action. No monitoring well has been installed.

IV. STORM WATER and SURFACE WATER CONSIDERATIONS

There are no storm/surface water concerns for this facility.

V. COMPLIANCE SCHEDULE

Not Applicable.

VI. OTHER REQUIREMENTS FOR ISSUING THIS PERMIT

Technical Capability

The Palo Verde Utilities Company L.L.C. has demonstrated the technical competence necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C. R18-9-A202(B).

The WRF was designed as per the facility design report prepared by Kennedy/Jenks Consultants, dated September 22, 2004. A certified operator will be retained for the operation and maintenance of the WWTP

The permit requires that appropriate documents be sealed by an Arizona registered geologist or professional engineer. This requirement is a part of an on-going demonstration of technical capability. The permittee is expected to maintain technical capability throughout the life of the facility.

Financial Capability

The Palo Verde Utilities Company L.L.C. has demonstrated the financial responsibility necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The permittee is expected to maintain financial capability throughout the life of the facility.

The permittee has submitted a closure cost estimate of \$90,000. The permittee provided a Certificate of deposit to demonstrate financial capability.

Zoning Requirements

The Palo Verde Utilities Company L.L.C. has been properly zoned for the permitted use and the permittee has complied with all Pinal zoning ordinances in accordance with A.R.S. § 49-243(O) and A.A.C. R18-9-A201(A)(2)(c).

VII. ADMINISTRATIVE INFORMATION

Public Notice (A.A.C. R18-9-108(A))

This is an Other Amendment to an APP that ADEQ issued previously, in accordance with A.A.C. R18-9-A211(D). The Public Notice requirement for an Other Amendment consists solely of a written notification in accordance with A.A.C. R18-9-A211(E). On a monthly basis ADEQ provides a list of permits in process to the county departments of health, association of governments and other federal, state and local entities, as well as private parties who have requested notification. For Other Amendments, the publication of this list satisfies the public participation process.

Public Comment Period (A.A.C. R18-9-109(A))

Not Applicable.

Public Hearing (A.A.C R18-9-109(B))

Not Applicable.

VIII.ADDITIONAL INFORMATION

Additional information relating to this proposed permit may be obtained from:

Arizona Department of Environmental Quality
Water Quality Division – Wastewater, Recharge & Reuse Unit
Attn: Matthew Hodge
1110 W. Washington St., Mail Code 5415B-3
Phoenix, Arizona 85007
Phone: (602) 771- 4743

STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-105228
PLACE ID 12017, LTF 34055
OTHER AMENDMENT

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2 and 3, Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2, A.A.C. Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, the Palo Verde Utilities Company, L.L.C. is hereby authorized to operate the Palo Verde Utilities Company, L.L.C. Wastewater Reclamation Facility located in Maricopa, Arizona, in Pinal County, over groundwater of the Pinal Active Management Area, in Township 4S, Range 3E, Section 13 of the Gila and Salt River Base Line and Meridian.

This permit becomes effective on the date of the Water Quality Division Director's signature and shall be valid for the life of the facility (operational, closure, and post-closure periods) unless suspended or revoked pursuant to A.A.C. R18-9-A213. The permittee shall construct, operate and maintain the permitted facilities:

1. Following all the conditions of this permit including the design and operational information documented or referenced below, and
2. such that Aquifer Water Quality Standards (AWQS) are not violated at the applicable point(s) of compliance (POC) set forth below or if an AWQS for a pollutant has been exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant and as determined at the applicable POC occurs as a result of the discharge from the facility.

1.1 PERMITTEE INFORMATION

Facility Name: Palo Verde Utilities Company, L.L.C. Wastewater Reclamation Facility

Permittee:	Mailing Address:	Facility's Street Address:
Palo Verde Utilities Company, L.L.C.	Palo Verde Utilities Company 22601 N. 19 th Avenue Phoenix, AZ 85027	41265 W. Hiller Road Maricopa, AZ 85239

Facility Contact: Graham Symmonds, P. Eng. (623) 580-9600, ext. 106

Emergency Telephone Number: (623) 580-9600

Latitude: 33° 05' 13" N

Longitude: 112° 00' 42" W

Legal Description: Township 4S, Range 3E, W ½ of the NW 1/4 of Section 13 of the Gila and Salt River Base Line and Meridian.

1.2 AUTHORIZING SIGNATURE



Karen L. Smith, Director
Water Quality Division

Arizona Department of Environmental Quality
Signed this 2nd day of DECEMBER, 2004

THIS PERMIT SUPERCEDES ALL PREVIOUS PERMITS.

2.0 SPECIFIC CONDITIONS [A.R.S. §§ 49-203(4), 49-241(A)]

2.1 Facility / Site Description [A.R.S. § 49-243(K)(8)]

The permittee is authorized to operate a 3.0 million gallon per day (MGD) wastewater reclamation facility (WRF). The WRF consists of screening, sequential batch reactors (SBRs), nitrification, denitrification, filtration, and ultra violet (UV) disinfection. Disposal of the effluent will be via reuse. Sludge is aerobically digested and dewatered and hauled off-site. The depth to groundwater is between 100 and 160 feet below the surface and the direction of groundwater flow is to the southeast. The WRF is designed and constructed according to plans approved by the ADEQ Wastewater Design Review Unit.

This amendment is for increasing the flow from 1.0 MGD to 3.0 MGD.

The site includes the following permitted discharging facilities:

Facility	Latitude	Longitude
WRF	33° 05' 13" N	112° 00' 42" W

2.2 Best Available Demonstrated Control Technology [A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]

The Water Reclamation Facility is designed to meet the treatment performance criteria for new facilities as specified in Arizona Administrative Code R18-9-B204.

The facility meets the requirements for the pretreatment by conducting monitoring as per R18-9-B204(A)(6)(b)(iii).

All industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

2.2.1 Engineering Design

The WRF was designed as per the facility design report prepared by Kennedy/Jenks Consultants, dated September 22, 2004.

2.2.2 Site-specific Characteristics

Not Applicable.

2.2.3 Pre-Operational Requirements

Not Applicable.

2.2.4 Operational Requirements

1. The permittee shall maintain a copy of the new O & M manual at the WWTP site at all times and shall be available upon request during inspections by ADEQ personnel.
2. The pollution control structures shall be inspected for the items listed in Section 4.0, Table III - FACILITY INSPECTION.
3. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and material(s)

used shall be documented on the Self-Monitoring Report Form submitted quarterly to the ADEQ Water Quality Compliance.

2.2.5 Wastewater Treatment Plant Classification
A.A.C. R18-9-703(C)(2)(a), A.A.C. R18-11-303 THROUGH 307]

The WRF will produce reclaimed water meeting Class A+ Reclaimed Water Quality Standards and can be used for any allowable use in that class under a valid reclaimed water permit (A.A.C. R18-9, Article 7).

2.3 Discharge Limitations [A.R.S. §§ 49-201(14), 49-243 and A.A.C. R18-9-A205(B)]

1. The permittee is authorized to operate the WRF with a maximum average monthly flow of 3.0 MGD.
2. The permittee shall notify all users that the materials authorized to be disposed of through the WRF are typical household sewage and shall not include motor oil, gasoline, paints, varnishes, hazardous wastes, solvents, pesticides, fertilizers or other materials not generally associated with toilet flushing, food preparation, laundry facilities and personal hygiene.
3. Specific discharge limitations are listed in Section 4.0, Tables IA and IB.

2.4 Points of Compliance (P.O.C.) [A.R.S. § 49-244]

The Point of Compliance is established by the following designated location:

P.O.C.#	P.O.C. Locations	Latitude	Longitude
1	Southeast corner of WRF	33° 05' 11" N	112° 00' 40" W

Groundwater monitoring is not required at the point of compliance wells, except as a contingency action.

The Director may amend this permit to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

2.5 Monitoring Requirements [A.R.S. § 49-243(K)(1), A.A.C. R18-9-A206(A)]

All monitoring required in this permit shall continue for the duration of the permit, regardless of the status of the facility. All sampling, preservation and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks and duplicate samples shall also be obtained, and chain of custody procedures shall be followed, in accordance with currently accepted standards of professional practice. The permittee shall consult the most recent version of the ADEQ Quality Assurance Project Plan (QAPP) and EPA 40 CFR PART 136 for guidance in this regard. Copies of laboratory analyses and chain of custody forms shall be maintained at the permitted facility. Upon request these documents shall be made immediately available for review by ADEQ personnel.

2.5.1 Discharge Monitoring

The permittee shall monitor the wastewater according to Section 4.0, Table IA. A representative sample of the wastewater shall be collected at the point of discharge from the clear water tank.

2.5.1.1 Reclaimed Water Monitoring

The permittee shall monitor the parameters listed under Table 1B in addition to the routine discharge monitoring parameters listed in Table 1A.

2.5.2 Facility / Operational Monitoring

Operational monitoring inspections shall be conducted according to Section 4.0, Table III.

- a. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and materials used shall be documented on the Self-Monitoring Report Form (SMRF) submitted quarterly to the ADEQ Water Quality Compliance. If none of the conditions occur, the report shall say "no event" for a particular reporting period. If the facility is not in operation, the permittee shall indicate that fact in the SMRF.
- b. The permittee shall submit data required in Section 4.0, Table III regardless of the operating status of the facility unless otherwise approved by the Department or allowed in this permit.

2.5.3 Groundwater Monitoring and Sampling Protocols

Routine groundwater monitoring is not required under the terms of this permit.

2.5.4 Surface Water Monitoring and Sampling Protocols

Routine surface water monitoring is not required under the terms of this permit.

2.5.5 Analytical Methodology

All samples collected for compliance monitoring shall be analyzed using Arizona state approved methods. If no state approved method exists, then any appropriate EPA approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of Arizona State certified laboratories can be obtained at the address below:

Arizona Department of Health Services
Office of Laboratory Licensure and Certification
1740 W. Adams Street, Room 203 North
Phoenix, AZ 85007
Phone: (602) 364-0720

2.5.6 Installation and Maintenance of Monitoring Equipment

Monitoring equipment required by this permit shall be installed and maintained so that representative samples required by the permit can be collected. If new groundwater wells are determined to be necessary, the construction details shall be submitted to the ADEQ Water Permits Section for approval prior to installation and the permit shall be amended to include any new points.

2.6 Contingency Plan Requirements

[A.R.S. § 49-243(K)(3), (K)(7) and A.A.C. R18-9-A204 and R18-9-A205]

2.6.1 General Contingency Plan Requirements

At least one copy of the approved contingency and emergency response plan(s) submitted in the application shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall be aware of and follow the contingency and emergency plans.

Any alert level (AL) that is exceeded or any violation of an aquifer quality limit (AQL), discharge limit (DL), or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3.

Some contingency actions involve verification sampling. Verification sampling shall consist of the first follow-up sample collected from a location that previously indicated a violation or the exceedance of an AL. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated an AQL. The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit. Where verification sampling is specified in this permit, it is the option of the permittee to perform such sampling. If verification sampling is not conducted within the timeframe allotted, ADEQ and the permittee shall presume the initial sampling result to be confirmed as if verification sampling has been conducted. The permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of a DL, AQL or any other permit condition.

2.6.2 Exceeding of Alert Levels/Performance Levels

2.6.2.1 Exceeding of Performance Levels (PL) Set for Operational Conditions

1. If the operational PL set in Section 4.0, Table III has been exceeded (permit condition violated) the permittee shall:
 - a. Notify the ADEQ Water Quality Compliance Section within five (5) days of becoming aware of a violation of any permit condition in Table III.
 - b. Submit a written report within thirty (30) days after becoming aware of a violation of a permit condition. The report shall document all of the following:
 1. A description of the violation and its cause;
 2. the period of violation, including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue;
 3. any action taken or planned to mitigate the effects or the violation, or the spill, or to eliminate or prevent recurrence of the violation;
 4. any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an Aquifer Water Quality Standard; and
 5. any malfunction or failure of pollution control devices or other

equipment or process.

2. The facility is no longer on alert status once the operational indicator no longer indicates that a PL is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

2.6.2.2 Exceeding of Alert Levels Set for Discharge Monitoring

1. If an AL set in Section 4.0, Table IA has been exceeded, the permittee may conduct verification sampling within 24 hours of becoming aware of the alert status.
2. If the verification sampling confirms that the AL has been exceeded or if the permittee opts not to perform verification sampling, then the permittee shall immediately investigate to determine the cause of the AL being exceeded. The investigation shall include the following:
 - a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the AL being exceeded.
 - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences;
3. The permittee shall initiate actions identified in the approved contingency plan referenced in Part 5.0 and specific contingency measures identified in Part 2.6 to resolve any problems identified by the investigation which may have led to an AL being exceeded. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6.
4. Within thirty (30) days after confirmation of an AL being exceeded, the permittee shall submit the laboratory results to the ADEQ Water Quality Compliance Section, Data Unit, along with a summary of the findings of the investigation, the cause of the AL being exceeded, and actions taken to resolve the problem.
5. Upon review of the submitted report, the Department may require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

2.6.2.3 Exceeding of Alert Levels in Groundwater Monitoring

2.6.2.3.1 Alert Levels for Indicator Parameters

Not required at time of permit issuance.

2.6.2.3.2 Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards

Not required at time of permit issuance.

2.6.2.3.3 Alert Levels to Protect Downgradient Users from Pollutants Without Numeric Aquifer Water Quality Standards

Not required at time of permit issuance.

2.6.3 Discharge Limitations (DL) Violations

1. If a DL set in Section 4.0, Tables IA and 1B have been exceeded, the permittee may conduct verification sampling within 24 hours of becoming aware of a DL being exceeded.
2. If verification sampling confirms that the DL has been violated or if the permittee opts not to perform verification sampling, then the permittee shall immediately investigate to determine the cause of the violation. The investigation shall include the following:
 - a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the violation;
 - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences;
3. The permittee also shall submit a report according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. The permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ approved contingency plan, or separately approved according to Section 2.6.6.
4. Upon review of the submitted report, the Department may require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

2.6.4 Aquifer Quality Limit (AQL) Violation

Not Applicable.

2.6.5 Emergency Response and Contingency Requirements for Spills and Unauthorized Discharges

2.6.5.1 Duty to Respond

The permittee shall act immediately to correct any condition resulting from a discharge if that condition could pose an imminent and substantial endangerment to public health or the environment.

2.6.5.2 Discharge of Hazardous Substances or Spills of Toxic Pollutants

In the event of any unauthorized discharge (A.R.S. § 49-201(12)) of suspected hazardous substances (A.R.S. § 49-201(18)) or any spills of toxic pollutants (A.R.S. § 49-243(I)) on the facility site, the permittee shall promptly isolate the area and attempt to identify the spilled material. The permittee shall record information, including name, nature of exposure and follow-up medical treatment, if necessary, on persons who may have been exposed during the

incident. Spilled materials, absorbents, and contaminated media generated during emergency response shall be removed and disposed of according to applicable federal, state and local regulations. The permittee shall notify the ADEQ Water Quality Field Services Unit at (602) 771-4841 within 24 hours upon discovering the discharge of hazardous material which: a) has the potential to cause an AWQS or AQL to be exceeded; or b) could pose an endangerment to public health or the environment.

2.6.5.3 Discharge of Non-hazardous Materials

In the event of any unauthorized discharge of non-hazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the ADEQ Water Quality Field Services Unit at (602) 771-4841, within 24 hours upon discovering the discharge of non-hazardous material which: a) has the potential to cause an AQL to be exceeded; or b) could pose an endangerment to public health or the environment.

2.6.5.4 Reporting Requirements

The permittee shall submit a written report for any unauthorized discharges described in Sections 2.6.5.2 and 2.6.5.3 to ADEQ Water Quality Field Services Unit, Mail Code: 5415B-1, 1110 West Washington Street, Phoenix, AZ, within thirty days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, and facility response activities and include all information specified in Section 2.7.3. If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame specified in that notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

2.6.6 Corrective Actions

Specific contingency measures identified in Part 2.6 have already been approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from the Water Permits Section prior to implementing a corrective action to accomplish any of the following goals in response to exceeding an AL or violation of an AQL, DL, or other permit condition:

1. Control of the source of an unauthorized discharge;
2. Soil cleanup;
3. Cleanup of affected surface waters;
4. Cleanup of affected parts of the aquifer;
5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Within 30 days of completion of any corrective action, the operator shall submit to the ADEQ Water Quality Compliance Section, a written report describing the causes, impacts, and actions taken to resolve the problem.

2.7 Reporting and Recordkeeping Requirements

[A.R.S. § 49-243(K)(2) and A.A.C. R18-9-A206(B) and R18-9-A207]

2.7.1 Self Monitoring Report Forms (SMRF)

1. The permittee shall complete the SMRFs provided by ADEQ, and submit them to the Water Quality Compliance Section, Data Unit.
2. The permittee shall complete the SMRF to the extent that the information reported may be entered on the form. If no information is required during a quarter, the permittee shall enter "not required" on the SMRF and submit the report to ADEQ. The permittee shall use the format devised by ADEQ.
3. The tables contained in Sections 4.0 list the parameters to be monitored and the frequency for reporting results for groundwater compliance monitoring. Monitoring methods shall be recorded on the SMRFs. The permittee reserves the right to request a relaxation of the monitoring frequency for metals and volatile organic compounds if the data indicate that water quality standards are being achieved.
4. In addition to the SMRF, the information contained in Section 6.9.3 shall be included for exceeding an AL or violation of an AQL, DL, or any other permit condition being reported in the current reporting period.

2.7.2 Operation Inspection / Log Book Recordkeeping

A signed copy of this permit shall be maintained at all times at the location where day-to-day decisions regarding the operation of the facility are made. A log book (paper copies, forms or electronic data) of the inspections and measurements required by this permit shall be maintained at the location where day-to-day decisions are made regarding the operation of the facility. The log book shall be retained for ten years from the date of each inspection, and upon request, the permit and the log book shall be made immediately available for review by ADEQ personnel. The information in the log book shall include, but not be limited to, the following information as applicable:

1. Name of inspector;
2. Date and shift inspection was conducted;
3. Condition of applicable facility components;
4. Any damage or malfunction, and the date and time any repairs were performed;
5. Documentation of sampling date and time;
6. Any other information required by this permit to be entered in the log book, and
7. Monitoring records for each measurement shall comply with R18-9-A206(B)(2).

2.7.3 Permit Violation and Alert Level Status Reporting

1. The permittee shall notify the Water Quality Compliance Section, Enforcement Unit in writing within five days (except as provided in Section 2.6.5) of becoming aware of a violation of any permit condition, discharge limitation or of an Alert Level being exceeded.
2. The permittee shall submit a written report to the Water Quality Compliance Section, Enforcement Unit within 30 days of becoming aware of the violation of any permit condition or discharge limitation. The report shall document all of the following:
 - a. Identification and description of the permit condition for which there has been a violation and a description of its cause.

- b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue.
- c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation.
- d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an Aquifer Water Quality Standard.
- e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring.
- f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4 Operational, Other or Miscellaneous Reporting

The permittee shall complete the Self-Monitoring Report Form provided by the Department to reflect facility inspection requirements designated in Section 4.0, Table III and submit to the ADEQ, Water Quality Compliance quarterly along with other reports required by this permit. Facility inspection reports shall be submitted no less frequently than quarterly, regardless of operational status.

The permittee shall submit the results of water quality testing for total nitrogen, fecal coliform, turbidity and flow volumes to any of the following in accordance with A.A.C. R18-9-703(C)(2)(c):

- 1. Any reclaimed water agent who has contracted for delivery of reclaimed water from the permittee;
- 2. Any end user who has not waived interest in receiving this information.

2.7.5 Reporting Location

All SMRFs shall be submitted to:

Arizona Department of Environmental Quality
Water Quality Compliance Section, Data Unit
Mail Code: 5415B-1
1110 W. Washington Street
Phoenix, AZ 85007
Phone (602) 771-4681

All documents required by this permit to be submitted to the Water Quality Compliance Section shall be directed to:

Water Quality Compliance Section, Enforcement Unit
Mail Code: 5415B-1
1110 W. Washington Street
Phoenix, AZ 85007
Phone (602) 771-4614

All documents required by this permit to be submitted to the Water Permits Section shall be directed to:

Arizona Department of Environmental Quality
 Water Permits Section
 Mail Code: 5415B-3
 1110 W. Washington Street
 Phoenix, AZ 85007
 Phone (602) 771-4428

2.7.6 Reporting Deadline

The following table lists the quarterly report due dates:

Monitoring conducted during quarter:	Quarterly Report due by:
January-March	April 30
April-June	July 30
July-September	October 30
October-December	January 30

2.7.7 Changes to Facility Information in Section 1.0

The Water Permits Section and Water Quality Compliance Section shall be notified within 10 days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person or Emergency Telephone Number.

2.8 Temporary Cessation [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A209(A)]

The permittee shall give written notice to the Water Quality Compliance Section upon ceasing operation of the facility for a period of 60 days or greater. The permittee shall take the following measures upon temporary cessation:

1. If applicable, direct the wastewater flows from the facility to another State approved wastewater treatment facility.
2. Correct the problem that caused the temporary cessation of the facility.
3. Notify ADEQ with a monthly facility Status Report describing the activities conducted on the WWTP to correct the problem

At the time of notification the permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following ADEQ's approval, the permittee shall implement the approved plan. If necessary, ADEQ shall amend permit conditions to incorporate conditions to address temporary cessation. If the facility ceases operation, the permittee shall submit closure notification, as set forth in Section 2.9 below.

2.9 Closure [A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9-A209(B)]

The permittee shall give written notice of closure to the Water Quality Compliance Section before

closing, or before ceasing use of a facility addressed under this permit if the cessation is projected to last more than three years.

2.9.1 Closure Plan

Within 90 days following notification of closure, the permittee shall submit for approval to the Water Permits Section, a detailed Closure Plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(1)(a).

If the closure plan achieves clean closure immediately, ADEQ shall issue a letter of approval to the permittee. If the closure plan contains a schedule for bringing the facility to a clean closure configuration at a future date, ADEQ may incorporate any part of the schedule as an amendment to this permit.

2.9.2 Closure Completion

Upon completion of closure activities, the permittee shall give written notice to the Water Permits Section indicating that the approved Closure Plan has been implemented fully and providing supporting documentation to demonstrate that clean closure has been achieved (soil sample results, verification sampling results, groundwater data, as applicable). If clean closure has been achieved, ADEQ shall issue a letter of approval to the permittee at that time. If any of the following conditions apply, the permittee shall follow the terms of Post Closure stated in this permit:

1. Clean closure cannot be achieved at the time of closure notification or within one year thereafter under a diligent schedule of closure actions;
2. Further action is necessary to keep the facility in compliance with aquifer water quality standards at the applicable point of compliance;
3. Continued action is required to verify that the closure design has eliminated discharge to the extent intended;
4. Remedial or mitigative measures are necessary to achieve compliance with Title 49, Ch. 2;
5. Further action is necessary to meet property use restrictions.

2.10 Post-Closure [A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9 A209(C)]

Post-closure requirements shall be established based on a review of facility closure actions and will be subject to review and approval by the Water Permits Section.

In the event clean closure cannot be achieved pursuant to A.R.S. § 49-252, the permittee shall submit for approval to the Water Permits Section a Post-Closure Plan that addresses post-closure maintenance and monitoring actions at the facility. The Post-Closure Plan shall meet all requirements of A.R.S. §§ 49-201(29) and 49-252 and A.A.C. R18-9-A209(C). Upon approval of the Post-Closure Plan, this permit shall be amended or a new permit shall be issued to incorporate all post-closure controls and monitoring activities of the Post-Closure Plan.

2.10.1 Post-Closure Plan

A specific post closure plan may be required upon the review of the closure plan.

2.10.2 Post-Closure Completion

Not required at the time of permit issuance.

3.0 COMPLIANCE SCHEDULE [A.R.S. § 49-243(K)(5) and A.A.C. R18-9-A208]

Not Applicable.

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE I A
ROUTINE DISCHARGE MONITORING

Sampling Point Number	Sampling Point Identification		Latitude		Longitude
1	Clear Water Tank		33° 05' 13" N		112° 00' 18" W
Parameter	AL ¹	DL ²	Units	Sampling Frequency	Reporting Frequency
Total Flow: Daily ³	Not Established ⁴	Not Established	MGD ⁵	Daily ⁶	Quarterly
Total Flow: Average Monthly	2.85	3.0	MGD	Monthly ⁷	Quarterly
Flow: Reuse Daily	Not Established	Not Established	MGD	Monthly	Quarterly
Flow: Reuse Average Monthly	2.85	3.0	MGD	Monthly	Quarterly

Sampling Point Number	Sampling Point Identification		Latitude		Longitude
1	Clear Water Tank		33° 05' 13" N		112° 00' 42" W
Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Fecal Coliform Single sample maximum	Not Established	23	CFU or MPN ⁸	Monthly	Quarterly
Fecal Coliform Seven sample median	Not Established	2.2	CFU or MPN	Monthly	Quarterly
Total Nitrogen ⁹ : 5-sampling rolling geometric mean.	8.0	10.0	mg/l	Monthly ¹⁰	Quarterly

¹ AL = Alert Level.
² DL = Discharge Limit.
³ Total flow is flow to reuse site and AZPDES permit.
⁴ Reserved = Monitoring required but no limits have been specified at time of permit issuance.
⁵ MGD = Million Gallons per Day.
⁶ Flow shall be measured using a continuous recording flow meter.
⁷ Monthly = Calculated value = Average of daily flows in a month.
⁸ CFU = Colony Forming Units / 100 ml sample. MPN = Most Probable Number / 100 ml sample
⁹ Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen.
¹⁰ A 5-Month Geometric Mean of the results of the 5 most recent samples.

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IA
ROUTINE DISCHARGE MONITORING (Continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Metals (Total):					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Cyanide (As free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE 1A
 ROUTINE DISCHARGE MONITORING (Continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Volatile Organic Compounds (VOCs):					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.05	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total) ¹¹	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually	Semi-Annually

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Total Trihalomethanes comprises of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

4.0 TABLES OF MONITORING REQUIREMENTS

TABLE IB
RECLAIMED WATER MONITORING TABLE - CLASS A+¹²

Sampling Point Number	Sampling Point Identification	Latitude	Longitude
1	Clear Water Tank	33° 05' 13" N	112° 00' 18" W

Parameter	DL	Units	Sampling Frequency	Reporting Frequency
Fecal Coliform: Single-sample maximum	23	CFU or MPN ¹³	Daily ¹⁴	Quarterly
Fecal Coliform: Four (4) of last seven (7) samples	Non-detect ¹⁵	CFU or MPN	Daily	Quarterly
Turbidity ¹⁶ Single reading	5	NTU ¹⁷	Everyday ¹⁸	Quarterly
Turbidity: 24-hour average	2	NTU	Everyday	Quarterly
Enteric Virus ¹⁹ : Four (4) of last seven (7) samples	Non-Detect	PFU ²⁰	Monthly / Suspended ²¹	Quarterly

¹² Reclaimed water monitoring under Table 1B will be performed anytime effluent is discharged to the reuse site and is in addition to routine discharge monitoring required under Table 1A.

¹³ CFU = Colony Forming Units per 100 ml; MPN = Most Probably Number per 100 ml. For CFU, a value of <1 shall be considered to be non-detect. For MPN, a value of <2.2 shall be considered to be non-detect.

¹⁴ For fecal coliform, "daily" sampling means every day in which a sample can practicably be obtained and delivered in sufficient time for proper analysis, provided that no less than four (4) samples in each calendar week are obtained and analyzed.

¹⁵ If at least four (4) out of the last seven (7) samples are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). However, if at least four (4) out of the last seven (7) samples have detections of fecal coliform, report "no" in the appropriate space on the SMRF (indicating that the standard has not been met).

¹⁶ Turbidity shall be measured with an instrument with a signal averaging time not exceeding 120 seconds. An occasional spike due to back-flushing or instrument malfunction shall not be considered an exceedance. All exceedances must be explained and submitted to the Department with the corresponding quarterly SMRF.

¹⁷ Nephelometric Turbidity Units

¹⁸ For the single turbidity reading, "everyday" means the maximum reading during the 24-hour period.

¹⁹ Initial monthly enteric virus sampling shall be performed to indicate four (4) out of seven (7) sample results of non-detect.

²⁰ Plaque Forming Units per 40 Liters

²¹ Enteric virus sampling shall resume only if two (2) consecutive turbidity limits are exceeded. Monthly enteric virus monitoring shall continue until four (4) out of seven (7) consecutive sample results show no detection. During times when enteric virus sampling is suspended, enter "suspended" in the appropriate space on the SMRF.

4.0 TABLES OF MONITORING REQUIREMENTS

**TABLE II
GROUNDWATER MONITORING**

NOT REQUIRED IN THIS PERMIT

**TABLE III
FACILITY INSPECTION (Operational Monitoring)**

Pollution Control Structures/Parameter	Performance Levels	Inspection Frequency
Pump Integrity	Good Working Condition	Weekly
Treatment Plant Components	Good Working Condition	Weekly

5.0 REFERENCES AND PERTINENT INFORMATION

The terms and conditions set forth in this permit have been developed based upon the information contained in the following, which are on file with the Department:

1. APP Application dated: September 9, 2002 (original APP, signed on 6/23/03)
September 22, 2004 (Other Amendment)
2. Contingency Plan, dated: September 9, 2002
3. Final Hydrologist Report dated: December 10, 2002 (original APP)
4. Final Engineering Report dated: November 26, 2002 (original APP)
5. Public Notice dated: March 20, 2003 (original APP)
6. Public Hearing, dated: N/A
7. Responsiveness Summary, dated: N/A

6.0 GENERAL CONDITIONS AND RESPONSIBILITIES

6.1 Annual Registration Fees

The permittee is notified of the obligation to pay an Annual Registration Fee to ADEQ. The Annual Registration Fee is based upon the amount of daily influent or discharge of pollutants in gallons per day as established by A.R.S. § 49-242(D). This fee is payable to ADEQ each year.

6.2 Duty to Comply [A.R.S. §§ 49-221 through 263]

The permittee is notified of the obligation to comply with all conditions of this permit and all applicable provisions of Title 49, Chapter 2, Articles 1, 2 and 3 of the Arizona Revised Statutes, Title 18, Chapter 9, Articles 1 through 4, and Title 18, Chapter 11, Article 4 of the Arizona Administrative Code. Any permit non-compliance constitutes a violation and is grounds for an enforcement action pursuant to Title 49, Chapter 2, Article 4 or permit amendment, suspension, or revocation.

6.3 Duty to Provide Information [A.R.S. §§ 49-243(K)(2) and 49-243(K)(8)]

The permittee shall furnish to the Director, or an authorized representative, within a time specified, any information which the Director may request to determine whether cause exists for amending or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

6.4 Severability [A.R.S. § 49-243(K)(8)]

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

6.5 Proper Operation and Maintenance [A.R.S. § 49-243(K)(8)]

The permittee shall properly operate and maintain all facilities, treatment processes, and discharge control systems which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

6.6 Compliance with Aquifer Water Quality Standards [A.R.S. §§ 49-243(B)(2) and 49-243(B)(3)]

The permittee shall not cause or contribute to a violation of an aquifer water quality standard at the applicable point of compliance for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an aquifer water quality standard for a pollutant, the permittee shall not discharge that pollutant so as to further degrade, at the applicable point of compliance for the facility, the water quality of any aquifer for that pollutant.

6.7 Technical and Financial Capability [A.R.S. §§ 49-243(K)(8) and 49-243(N) and A.A.C. R18-9-A202(B) and R18-9-A203(E) and (F)]

The permittee shall have and maintain the technical and financial capability necessary to fully carry out the terms and conditions of this permit. Any bond, insurance policy, trust fund, or other financial assurance mechanism provided as a demonstration of financial capability in

the permit application, pursuant to A.A.C. R18-9-A203(D), shall be in effect prior to any discharge authorized by this permit and shall remain in effect for the duration of the permit.

6.8 Reporting of Bankruptcy or Environmental Enforcement [A.A.C. R18-9-A207(C)]

The permittee shall notify the Director within five days after the occurrence of any one of the following:

1. The filing of bankruptcy by the permittee.
2. The entry of any order or judgment not issued by the Director against the permittee for the enforcement of any environmental protection statute or rule.

6.9 Monitoring and Records [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A206]

The permittee shall conduct any monitoring activity necessary to assure compliance with this permit, with the applicable water quality standards established pursuant to A.R.S. §§ 49-221 and 49-223 and §§ 49-241 through 49-252.

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. The permittee shall retain records of all monitoring information, including copies of all reports required by this permit and records of all data used to complete the application for this permit, for a period of 10 years from the date of the sample, measurement report, or application. This period may be extended by request of the Director at any time.
3. At a minimum, records of monitoring information shall include:
 - a. Date, time, and exact place of sampling or measurements;
 - b. Individual(s) who performed the sampling or measurements;
 - c. Date(s) analyses were performed;
 - d. Individual(s) or laboratory who performed the analyses;
 - e. Analytical techniques or methods used;
 - f. Results of such analyses;
 - g. Chain of custody records;
 - h. Names of samples;
 - i. Static water level in monitor well prior to sampling;
 - j. Sampling method;
 - k. Purging volume;
 - l. Indicator parameters including field conductance ($\mu\text{mhos/cm}$), field temperature ($^{\circ}\text{C}$), and field pH (standard units);
 - m. Preservation and transportation procedures;
 - n. Name of the analytical facility, and;
 - o. Any field notes relating to the information described in (a) – (n) above.

6.10 Other Information [A.R.S. § 49-243(K)(8)]

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, the permittee shall promptly submit the correct facts or information.

6.11 Inspection and Entry [A.R.S. §§ 49-203(B) and 49-243(K)(8)]

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to enter and inspect the facility

as reasonably necessary to ensure compliance with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, and Title 18, Chapter 9, Articles 1 through 4 of the Arizona Administrative Code and the terms and conditions of this permit. In so doing, the Department representative may:

1. Enter upon the operator's premises where a regulated facility or activity is located or conducted, or locations where records must be kept under the conditions of this permit.
2. Have access to and copy, at reasonable times, any records required to be kept under the conditions of this permit.
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance, any substances or parameters at any location.
5. Take photographs or video tape.
6. Take other actions reasonably necessary to determine compliance with Aquifer Protection Permit statutes or rules or the terms and conditions of this permit.

6.12 Duty to Modify [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A211]

The permittee shall apply for and receive a written amendment before deviating from any of the designs or operational practices authorized by this permit.

6.13 Permit Action: Amendment, Transfer, Suspension & Revocation [A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

This permit may be amended, transferred, renewed, or revoked for cause, under the rules of the Department. The filing of a request by the permittee for a permit action does not stay or suspend the effectiveness of any existing permit condition. The Director shall issue a public notice of all proposed permit actions pursuant to A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213.

6.13.1 Permit Reopen

The Director may reopen this permit and amend it pursuant to A.A.C. R18-9-A211.

6.13.2 Permit Transfer

This permit may not be transferred to any other person except after notice to and approval of the transfer by the Department. No transfer will be approved until the applicant complies with all transfer requirements as specified in A.A.C. R18-9-A212(B) and (C).

The permittee shall notify the Water Permits Section in writing within 15 days after any change in the owner or operator of the facility. The notification shall state the permit number, the name of the facility, the date of property transfer, and the name, address, and phone number where the new owner or operator can be reached. The operator shall advise the new owner or operators of the terms of this permit and the need for permit transfer in accordance with the rules.

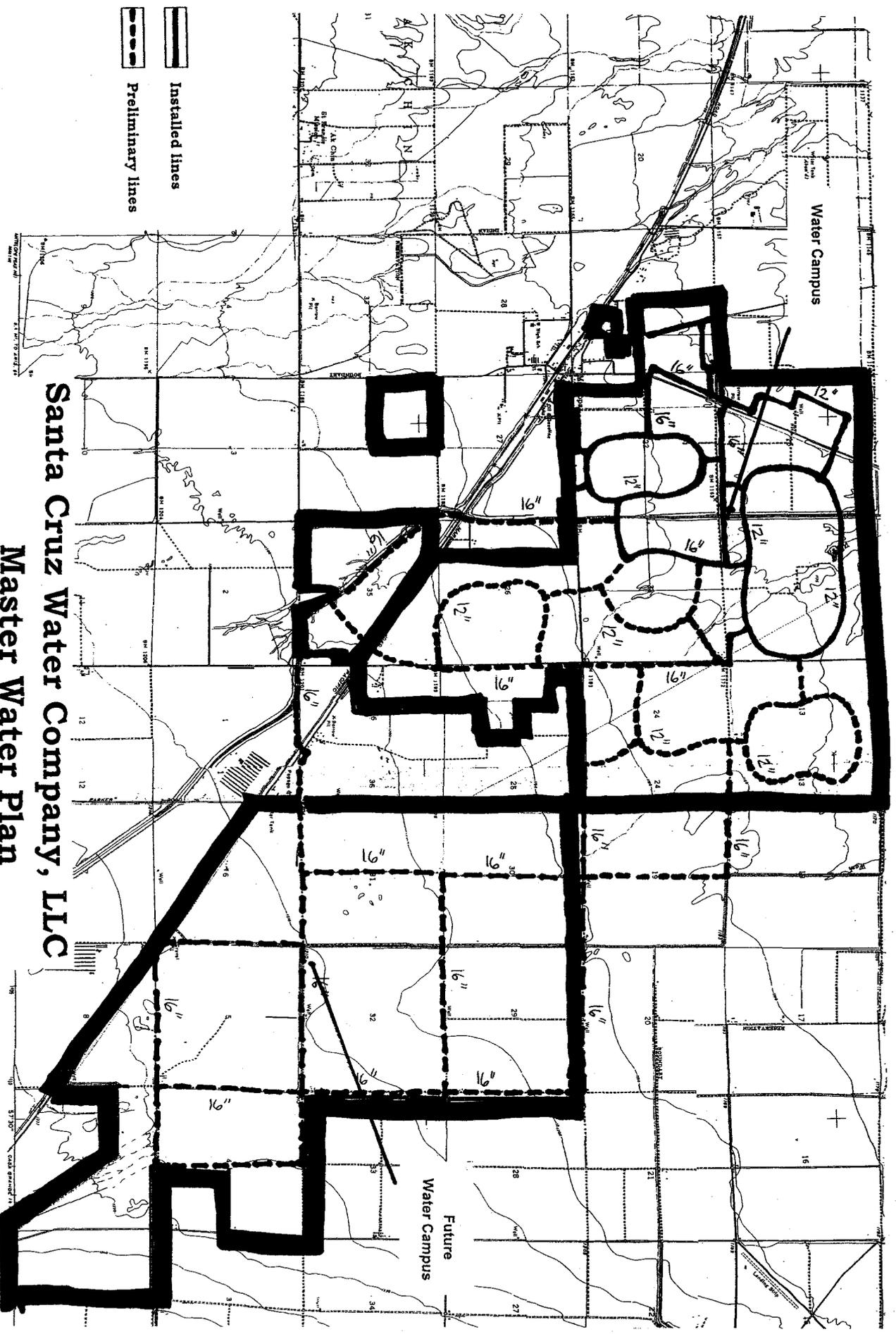
F

PERMIT MATRIX

Palo Verde Utility Company
Santa Cruz Water Company

Permit Name	Details	Permittee	Issuing Agency	ID	Date of Issue	Date of Expiry	Parameters	Description
APP	Aquifer Protection Permit	PVUC	ADEQ	P105228	2-Dec-04	Valid for life of facility	3 MGD	Application for replication of plant to 9.0 MGD is under development.
		PVUC	ADEQ	P103556	8-Jan-99	On commissioning of new WWTP	0.3 MGD	2 x facultative aerated lagoons. Currently being decommissioned
Re-Use	Type 2 Reclaimed Water General Permit -- Class A+	Cobblestone Farms	ADEQ	R105393	8-Sep-03			25 Acres of Turf, 15 Ac of drip irrigation, 1 ac lake
		The Duke Golf Course	ADEQ	R105395	4-Sep-03			90 ac turf, 2.5 ac lake, GC to use 1 mod in summer
		Province	ADEQ	R105394	4-Sep-03			114.4 ac landscaping, 44.55 ac lakes
		The Villages	ADEQ	R105392	4-Sep-03			21.01 ac turf, 56.2 ac landscape, 1.22 ac lake, + school 8.3 ac turf, 2 ac landscape
	Type 2 Reclaimed Water General Permit -- Class A+	PVUC	ADEQ	R105228	5-Oct-04			
Industrial Use Permit	Permanent Sewage Treatment Plant Site	PVUC	Pinal County	IUP-007-97				
Air Quality Permit		PVUC	Pinal County Air Quality Control Dept	S16007.000	Jan-04		<2014 hrs per year	2010 HP Diesel Gen Set.
APDES	Surface Water Discharge Permit	PVUC	ADEQ	AZ00250701	17-Nov-03		2.25 MGD	Seasonal discharge Dec to Feb
208 Plan Amendment	208 Water Quality Management Plan	PVUC	CAAG		20-Jan-04	Indefinite	13.0 MGD	
CC&N	Certificate of Convenience and Necessity	PVUC	ACC	SW-03575A			N/A	Pending extension to areas to south of tracks
		SCWC	ACC	W-03576A			N/A	Pending extension to areas to south of tracks
ASWD	Assured Water Supply Designation	SCWC	ADWR	AWS # 2003-003, decision and order 26-400804	24-Oct-03		5230.4 Ac-ft/yr (4.67 MGD)	Projected 2007 demand = 5181.9 ac-ft/yr. Physical availability demonstration for 9305 ac-ft/yr.

G

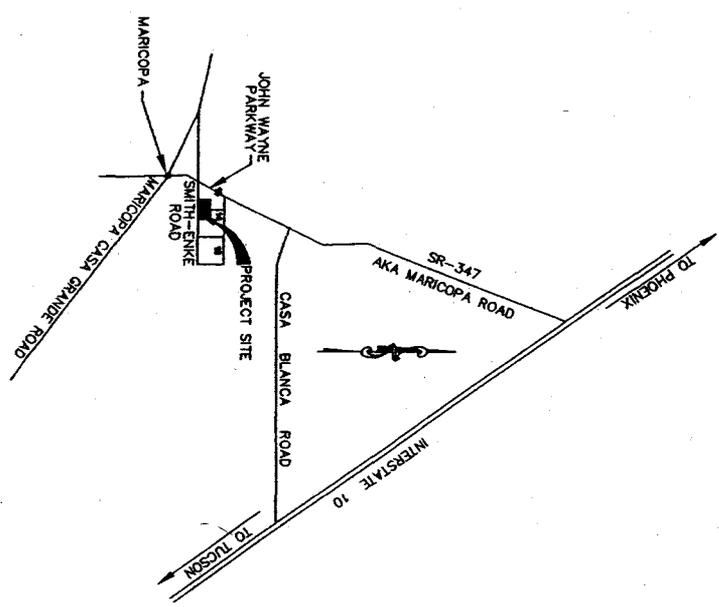


Santa Cruz Water Company, LLC
Master Water Plan

H

RANCHO EL DORADO TANK SITE

A PORTION OF THE SOUTHWEST QUARTER,
OF THE SOUTHWEST QUARTER
SECTION 14, TOWNSHIP 4 SOUTH, RANGE 3 EAST
PINAL COUNTY, ARIZONA



ENGINEER:
ROBERT BERN, WILLIAM FROST & ASSOCIATES
3001 W. LAYTON AVENUE
SUITE 100
PHOENIX, ARIZONA 85026
PH: 602-998-4400

OWNER:
SANTA CRUZ WATER COMPANY
1000 N. GILBERT AVENUE
SUITE 100
PHOENIX, ARIZONA 85028
PH: 602-998-4400

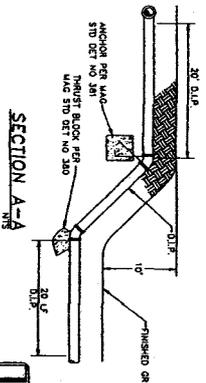
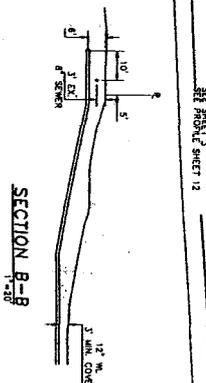
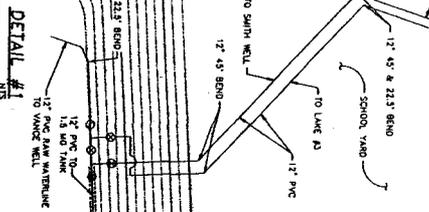
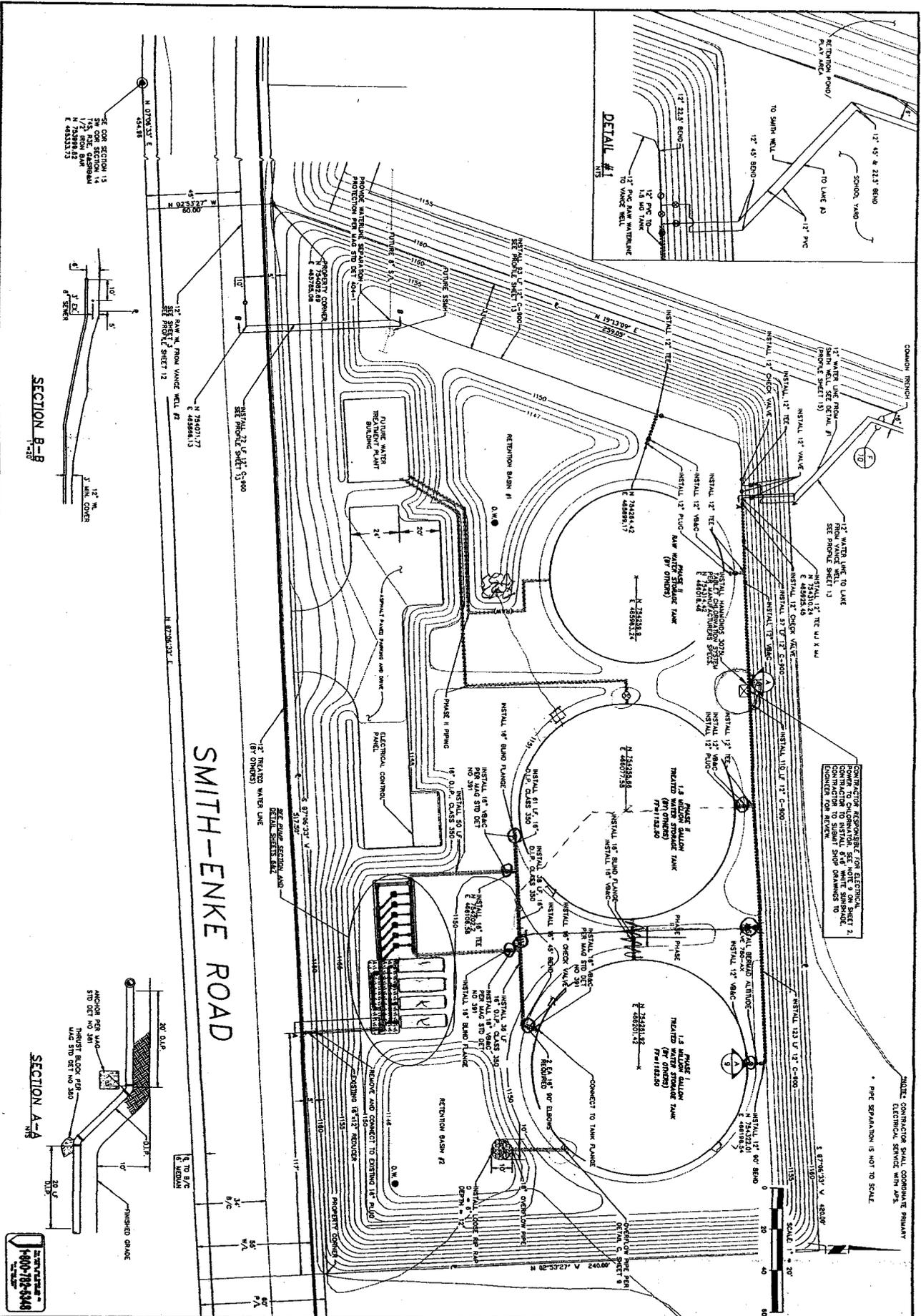
CSZ Robert Bern, William Frost & Associates
Professional Engineers, Planners & Architects
2001 W. LAYTON AVENUE, SUITE 100
PHOENIX, ARIZONA 85026
PH: 602-998-4400

APPROVALS:
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
LETTER DATED: _____
DATE

SANTA CRUZ WATER COMPANY
APPROVED BY: _____
DATE



RANCHO EL DORADO TANK SITE PLANS
ORIGINAL PLAN DATE JAN/1988
REVISION 05/2007 LATEST REVISION DATE JAN/2009

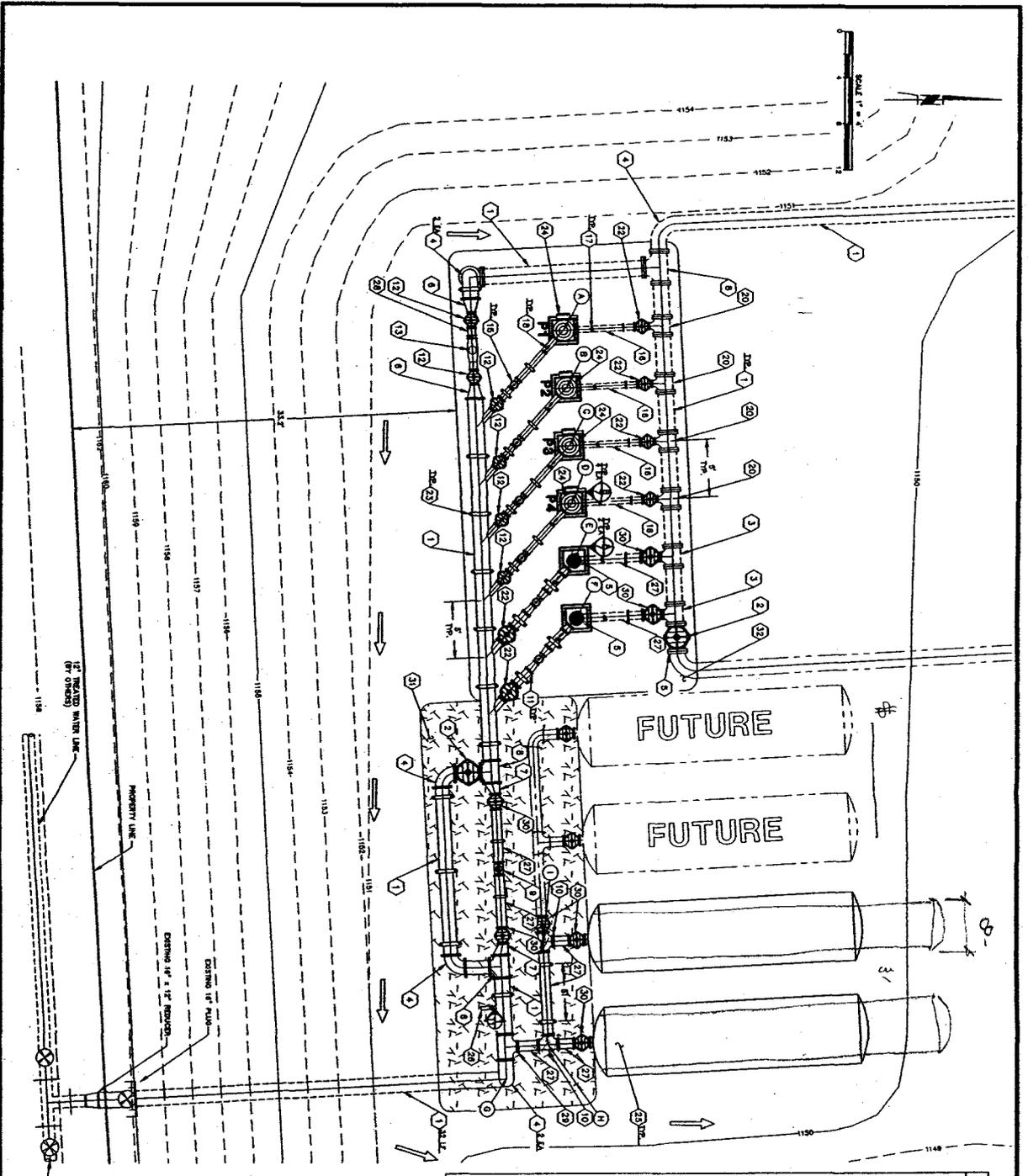


CONTRACTOR RESPONSIBLE FOR ELECTRICAL CONNECTIONS TO SUBMIT SHOP DRAWINGS TO CONTRACTOR FOR REVIEW.

SCALE 1" = 20'

SMITH-ENKE ROAD

<p>SANTA CRUZ WATER COMPANY RANCHO EL DORADO TANK SITE MECHANICAL PIPING</p>	<p>RBF CONSULTING PLANNING • DESIGN • CONSTRUCTION</p>	<p>16605 NORTH 28th AVENUE, SUITE 300 PHOENIX, ARIZONA 85033-7250 602.467.2200 • FAX 602.467.2201 • www.RBF.com</p>	<p>SCOTT M. LARSON, P.E. MICHAEL A. WORTON DATE: 11/18/99 DRAWN: JMM CHECKED: SML SCALE: 1" = 20'</p>
		<p>38097</p>	<p>NOV/2000</p>



EQUIPMENT SCHEDULE

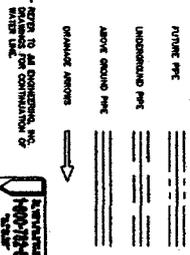
ITEM NO.	DESCRIPTION	QUANTITY
1	1/2" DIA. CLASS 300	2 EA
2	1/2" DIA. WALK W/ EXTENSION AND	4 EA
3	1/2" DIA. WALK W/ EXTENSION AND	4 EA
4	1/2" DIA. WALK W/ EXTENSION AND	4 EA
5	1/2" DIA. WALK W/ EXTENSION AND	4 EA
6	1/2" DIA. WALK W/ EXTENSION AND	4 EA
7	1/2" DIA. WALK W/ EXTENSION AND	4 EA
8	1/2" DIA. WALK W/ EXTENSION AND	4 EA
9	1/2" DIA. WALK W/ EXTENSION AND	4 EA
10	1/2" DIA. WALK W/ EXTENSION AND	4 EA
11	1/2" DIA. WALK W/ EXTENSION AND	4 EA
12	1/2" DIA. WALK W/ EXTENSION AND	4 EA
13	1/2" DIA. WALK W/ EXTENSION AND	4 EA
14	1/2" DIA. WALK W/ EXTENSION AND	4 EA
15	1/2" DIA. WALK W/ EXTENSION AND	4 EA
16	1/2" DIA. WALK W/ EXTENSION AND	4 EA
17	1/2" DIA. WALK W/ EXTENSION AND	4 EA
18	1/2" DIA. WALK W/ EXTENSION AND	4 EA
19	1/2" DIA. WALK W/ EXTENSION AND	4 EA
20	1/2" DIA. WALK W/ EXTENSION AND	4 EA
21	1/2" DIA. WALK W/ EXTENSION AND	4 EA
22	1/2" DIA. WALK W/ EXTENSION AND	4 EA
23	1/2" DIA. WALK W/ EXTENSION AND	4 EA
24	1/2" DIA. WALK W/ EXTENSION AND	4 EA
25	1/2" DIA. WALK W/ EXTENSION AND	4 EA
26	1/2" DIA. WALK W/ EXTENSION AND	4 EA
27	1/2" DIA. WALK W/ EXTENSION AND	4 EA
28	1/2" DIA. WALK W/ EXTENSION AND	4 EA
29	1/2" DIA. WALK W/ EXTENSION AND	4 EA
30	1/2" DIA. WALK W/ EXTENSION AND	4 EA
31	1/2" DIA. WALK W/ EXTENSION AND	4 EA
32	1/2" DIA. WALK W/ EXTENSION AND	4 EA
33	1/2" DIA. WALK W/ EXTENSION AND	4 EA
34	1/2" DIA. WALK W/ EXTENSION AND	4 EA
35	1/2" DIA. WALK W/ EXTENSION AND	4 EA
36	1/2" DIA. WALK W/ EXTENSION AND	4 EA
37	1/2" DIA. WALK W/ EXTENSION AND	4 EA
38	1/2" DIA. WALK W/ EXTENSION AND	4 EA
39	1/2" DIA. WALK W/ EXTENSION AND	4 EA
40	1/2" DIA. WALK W/ EXTENSION AND	4 EA
41	1/2" DIA. WALK W/ EXTENSION AND	4 EA
42	1/2" DIA. WALK W/ EXTENSION AND	4 EA
43	1/2" DIA. WALK W/ EXTENSION AND	4 EA
44	1/2" DIA. WALK W/ EXTENSION AND	4 EA
45	1/2" DIA. WALK W/ EXTENSION AND	4 EA
46	1/2" DIA. WALK W/ EXTENSION AND	4 EA
47	1/2" DIA. WALK W/ EXTENSION AND	4 EA
48	1/2" DIA. WALK W/ EXTENSION AND	4 EA
49	1/2" DIA. WALK W/ EXTENSION AND	4 EA
50	1/2" DIA. WALK W/ EXTENSION AND	4 EA

NOTE: ALL ABOVE QUANTITY CONNECTIONS SHALL BE MADE PER THE SCHEDULE FOR THE PUMP STATION.

POINT TABLE

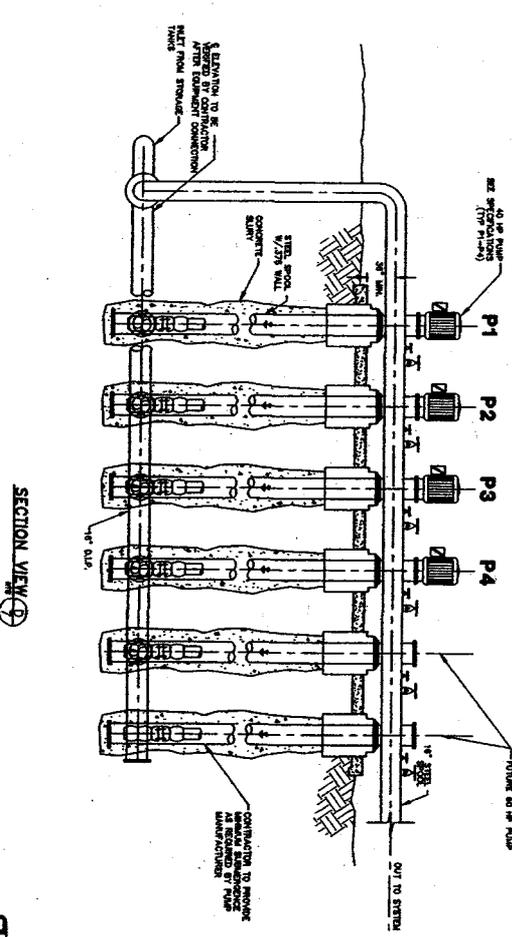
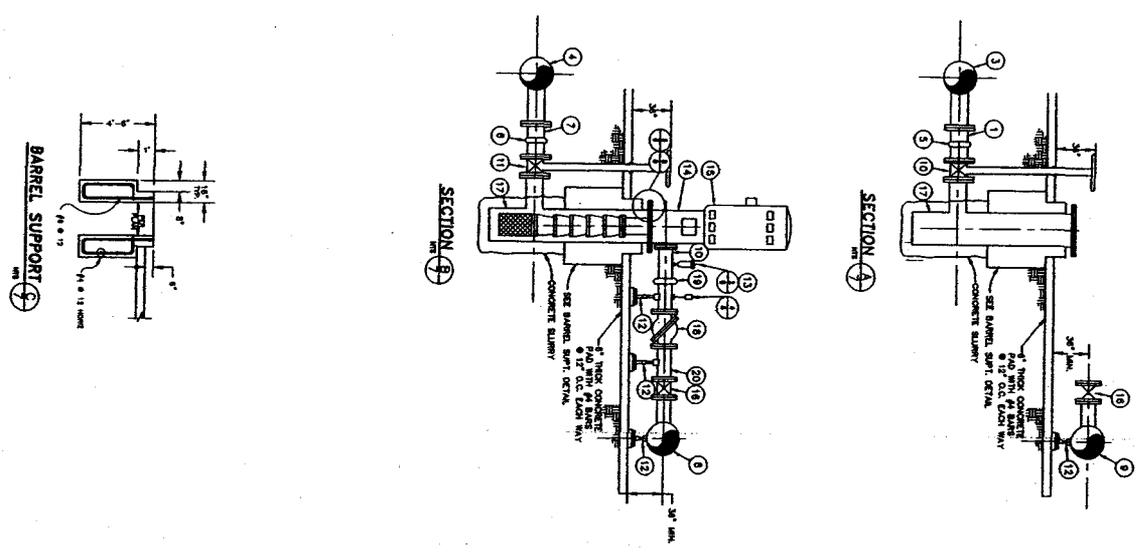
POINT	DESCRIPTION	ELEVATION
1	N. 72414.621	1151.844
2	N. 72414.621	1151.844
3	N. 72414.621	1151.844
4	N. 72414.621	1151.844
5	N. 72414.621	1151.844
6	N. 72414.621	1151.844
7	N. 72414.621	1151.844
8	N. 72414.621	1151.844
9	N. 72414.621	1151.844
10	N. 72414.621	1151.844
11	N. 72414.621	1151.844
12	N. 72414.621	1151.844
13	N. 72414.621	1151.844
14	N. 72414.621	1151.844
15	N. 72414.621	1151.844
16	N. 72414.621	1151.844
17	N. 72414.621	1151.844
18	N. 72414.621	1151.844
19	N. 72414.621	1151.844
20	N. 72414.621	1151.844
21	N. 72414.621	1151.844
22	N. 72414.621	1151.844
23	N. 72414.621	1151.844
24	N. 72414.621	1151.844
25	N. 72414.621	1151.844
26	N. 72414.621	1151.844
27	N. 72414.621	1151.844
28	N. 72414.621	1151.844
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30	N. 72414.621	1151.844
31	N. 72414.621	1151.844
32	N. 72414.621	1151.844
33	N. 72414.621	1151.844
34	N. 72414.621	1151.844
35	N. 72414.621	1151.844
36	N. 72414.621	1151.844
37	N. 72414.621	1151.844
38	N. 72414.621	1151.844
39	N. 72414.621	1151.844
40	N. 72414.621	1151.844
41	N. 72414.621	1151.844
42	N. 72414.621	1151.844
43	N. 72414.621	1151.844
44	N. 72414.621	1151.844
45	N. 72414.621	1151.844
46	N. 72414.621	1151.844
47	N. 72414.621	1151.844
48	N. 72414.621	1151.844
49	N. 72414.621	1151.844
50	N. 72414.621	1151.844

PIPE LEGEND



NOTE TO ALL CONTRACTORS, PERMITS AND INSURANCE FOR CONSTRUCTION OF THIS LINE.

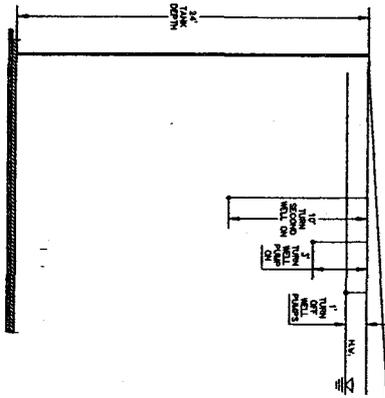
<p>DATE: 1/17/2002 DRAWN: JAW/2002 SHEET: 6 OF 15 PROJECT: 98097</p>	<p>SANTA CRUZ WATER COMPANY RANCHO EL DORADO TANK SITE PUMP STATION</p>	<p>Robert Bein, William Frost & Associates PROFESSIONAL ENGINEERS, PLANNERS & SURVEYORS 1000 SOUTH 20TH AVENUE, SUITE 200, DENVER, COLORADO 80202 (303) 733-8800 • FAX (303) 733-8801 • WWW.RBWA.COM</p>	<p>SCOTT H. LARSON, P.E. MICHAEL A. WORTON REGISTERED PROFESSIONAL ENGINEERS STATE OF COLORADO LICENSE NO. 10001 LICENSE NO. 10002</p>
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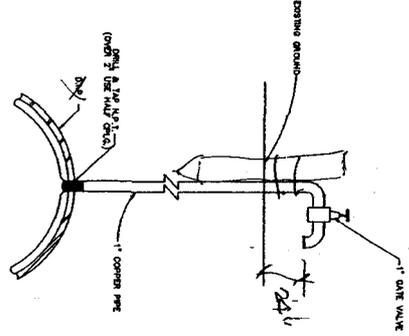
- MATERIALS LIST**
- ① 1/2" dia CLASS 300
 - ② 1/2" TAPPED RESIDENT MONGE GATE VALVE CLASS 150
 - ③ 1/2" x 1/2" TAPPED DR. TE.
 - ④ 1/2" x 1/2" TAPPED DR. TE.
 - ⑤ 1/2" VERTICAL COUPLING STEEL 31
 - ⑥ 1/2" VERTICAL COUPLING STEEL 31
 - ⑦ 1/2" dia CLASS 300
 - ⑧ 1/2" x 1/2" TAPPED DR. WYE
 - ⑨ 1/2" x 1/2" TAPPED DR. WYE
 - ⑩ 1/2" GATE VALVE W/ EXTENSION AND HANDWHEEL, 30" ABOVE SLAB
 - ⑪ 1/2" GATE VALVE W/ EXTENSION AND HANDWHEEL, 30" ABOVE SLAB
 - ⑫ QUALIFIED PIPE SUPPORT PER DETAIL 3 ON SHEET 8
 - ⑬ 1/2" x 1/2" TAPPED DR. WYE
 - ⑭ 1/2" VERTICAL TURNING FLANGE PER APPROVED EQUAL PER MANUFACTURER SPECIFICATIONS
 - ⑮ 1/2" VERTICAL TURNING FLANGE PER APPROVED EQUAL PER MANUFACTURER SPECIFICATIONS
 - ⑯ 1/2" VERTICAL COUPLING STEEL 31
 - ⑰ 1/2" dia CLASS 300
 - ⑱ 1/2" x 1/2" TAPPED DR. WYE
 - ⑲ 1/2" x 1/2" TAPPED DR. WYE
 - ⑳ 1/2" GATE VALVE W/ EXTENSION AND HANDWHEEL, 30" ABOVE SLAB
 - ㉑ 1/2" GATE VALVE W/ EXTENSION AND HANDWHEEL, 30" ABOVE SLAB

	<p>SANTA CRUZ WATER COMPANY RANCHO EL DORADO TANK SITE PUMP STATION</p>	<p>Robert Bein, William Frost & Associates PROFESSIONAL ENGINEERS, PLANNERS & SURVEYORS 2542 NORTH 28TH AVENUE, PHOENIX, ARIZONA, 85017 (602) 944-4400 • FAX (602) 944-4401</p>	<p>SCOTT B. BEIN, P.E. MICHAEL A. WOLTON, P.E. REVISION DATE DESCRIPTION DATE BY</p>
<p>DATE: JAN/2000 7' x 15' 88097</p>	<p>DATE: JAN/2000 7' x 15' 88097</p>	<p>DATE: JAN/2000 7' x 15' 88097</p>	<p>NO SCALE</p>

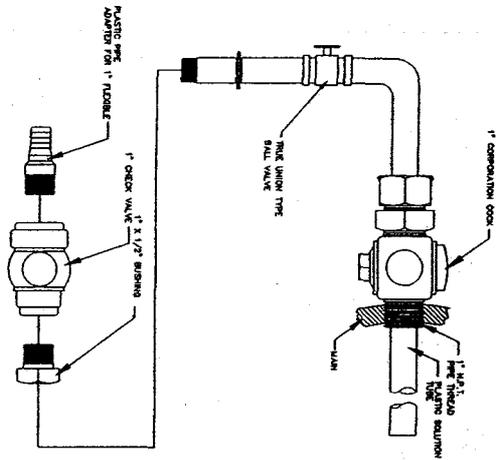
RESERVOIR CONTROL DETAIL
 ALSO SEE ELECTRICAL PLANS



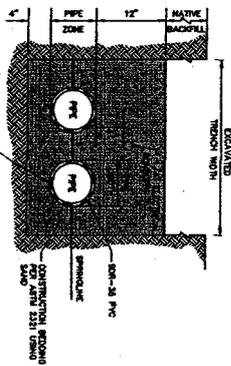
SPIGOT DETAIL



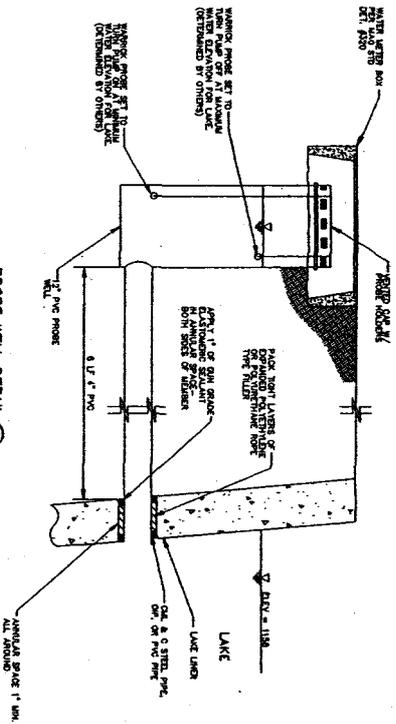
CORPORATION COOK DIAPHRAGM



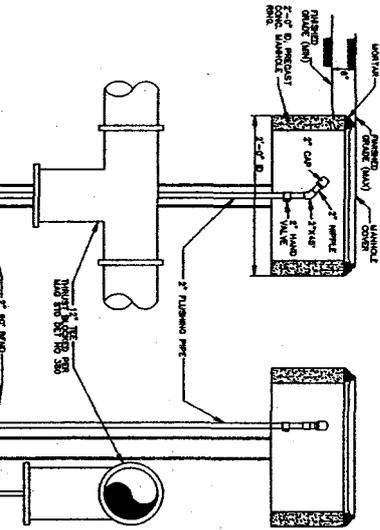
COMMON TRENCH DETAIL



PROBE WELL DETAIL



CLIPP STOP W/ FLUSHING PIPE DETAIL
 REFER TO MAIN STD DET NO 380 TYPE X



800-754-4446
 10-15
 98097

DATE: MAY/1989
 DRAWN: JAH/2000
 SCALE: 10 - 15
 SHEET: 98097

SANTA CRUZ WATER COMPANY
 RANCHO EL DORADO TANK SITE
 WATER SYSTEM DETAILS



Robert Bein, William Frost & Associates
 PROFESSIONAL ENGINEERS, PLANNERS & SURVEYORS
 2700 SOUTH MICHIGAN STREET, SUITE 100, ANIMAS, ARIZONA, 85603
 (602) 262-0200 • FAX (602) 262-0203

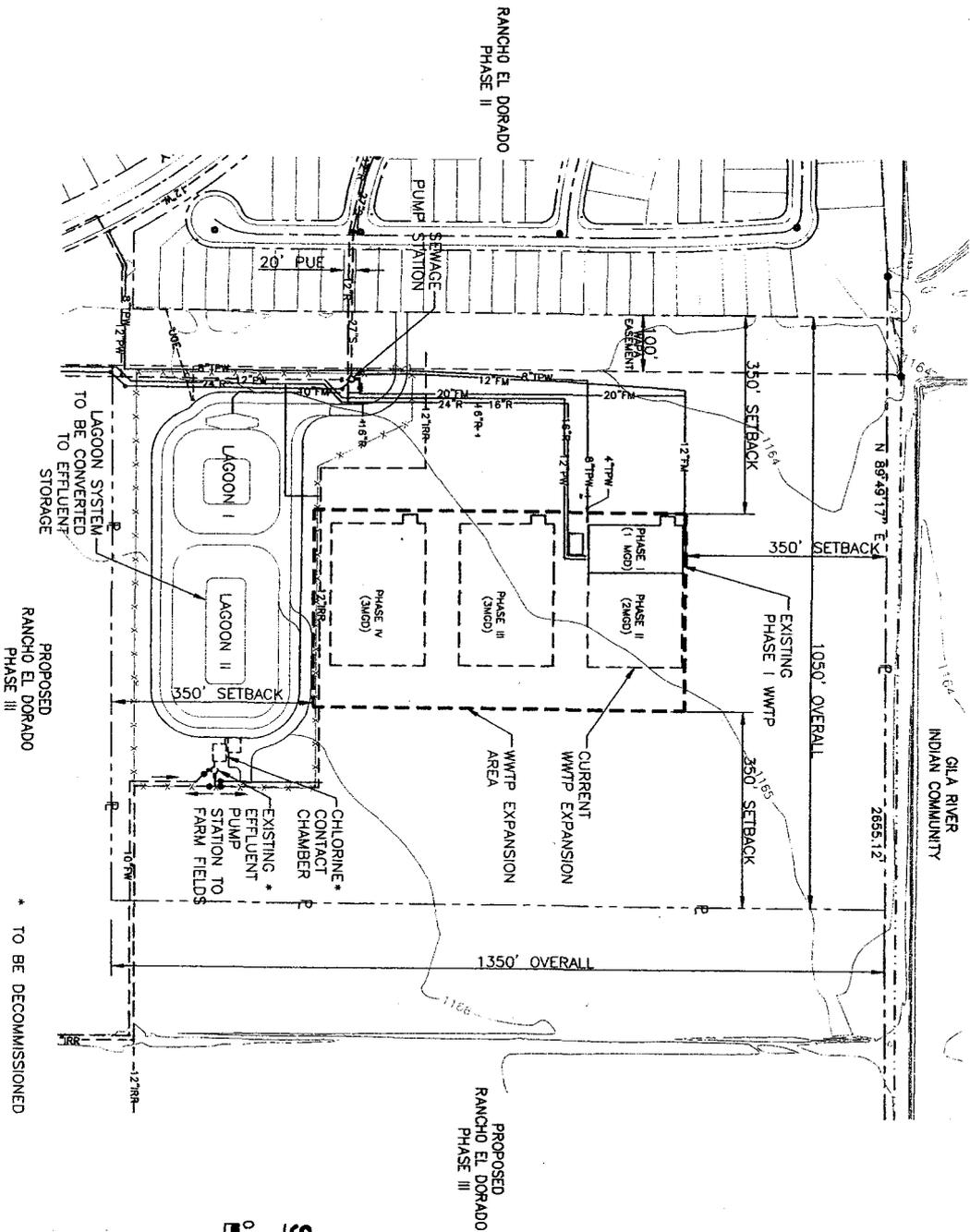
SCOTT L. LARSON, P.E.
 MICHAEL A. WORTON
 REGISTERED PROFESSIONAL ENGINEERS
 STATE OF ARIZONA
 MAY 1988
 NO SCALE

I

Kennedy/Jenks Consultants
Engineers & Scientists
 3101 NORTH CENTRAL AVENUE, SUITE 1470
 PHOENIX, ARIZONA, 85012 • TEL 602.274.8888

PALO VERDE UTILITIES COMPANY, L.L.C.
WASTEWATER RECLAMATION PLANT
SITE PLAN
 OCTOBER 2004

EXHIBIT
1



SITE PLAN



A PORTION OF THE
 NW 1/4, SECTION 13,
 T4S, R3E, G&SRB & M,
 PINAL CO., AZ

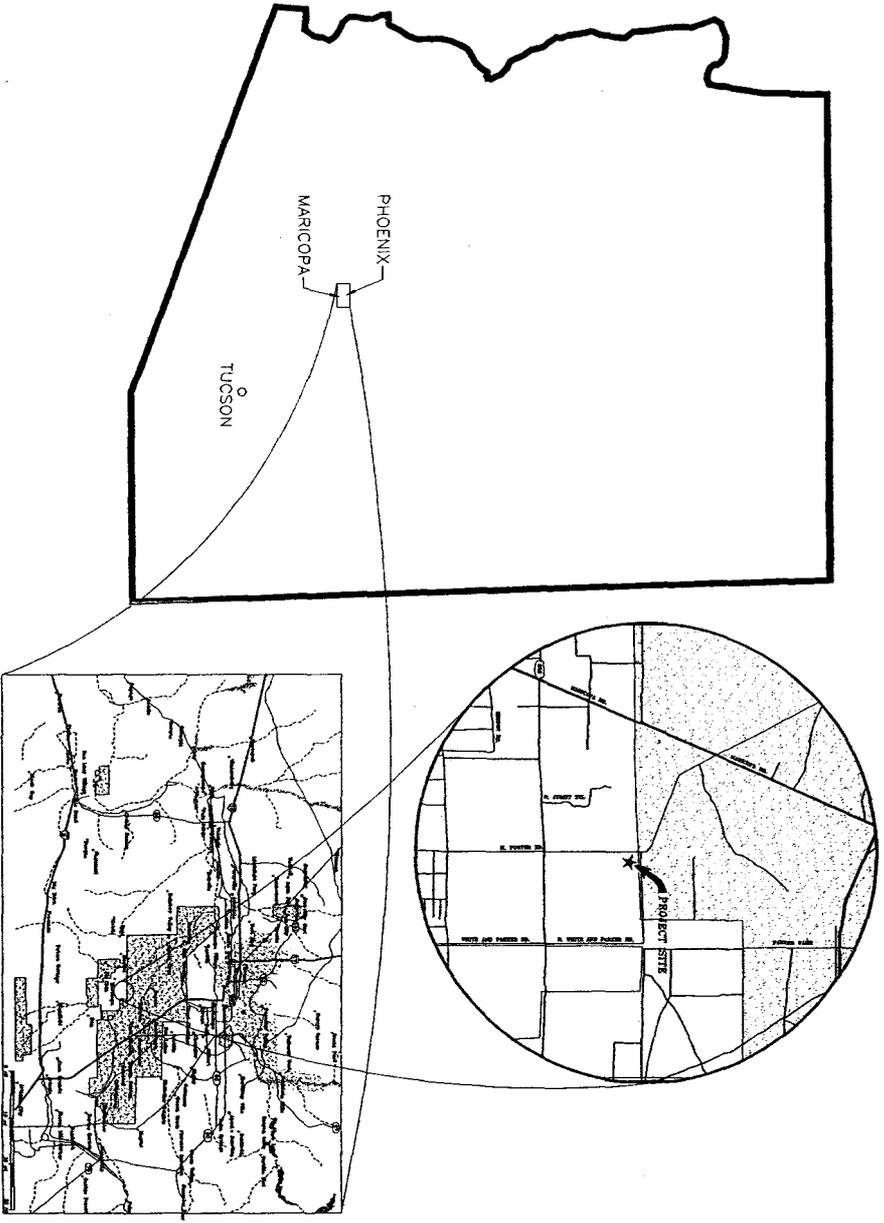
PROPOSED
 RANCHO EL DORADO
 PHASE III

* TO BE DECOMMISSIONED

J

WASTEWATER RECLAMATION FACILITY PHASE II

Palo Verde Utilities Company, L.L.C.
Rancho El Dorado, Arizona



PRELIMINARY ONLY
NOT FOR CONSTRUCTION

DATE: 9/15/04
PROJECT NO.: 2004148

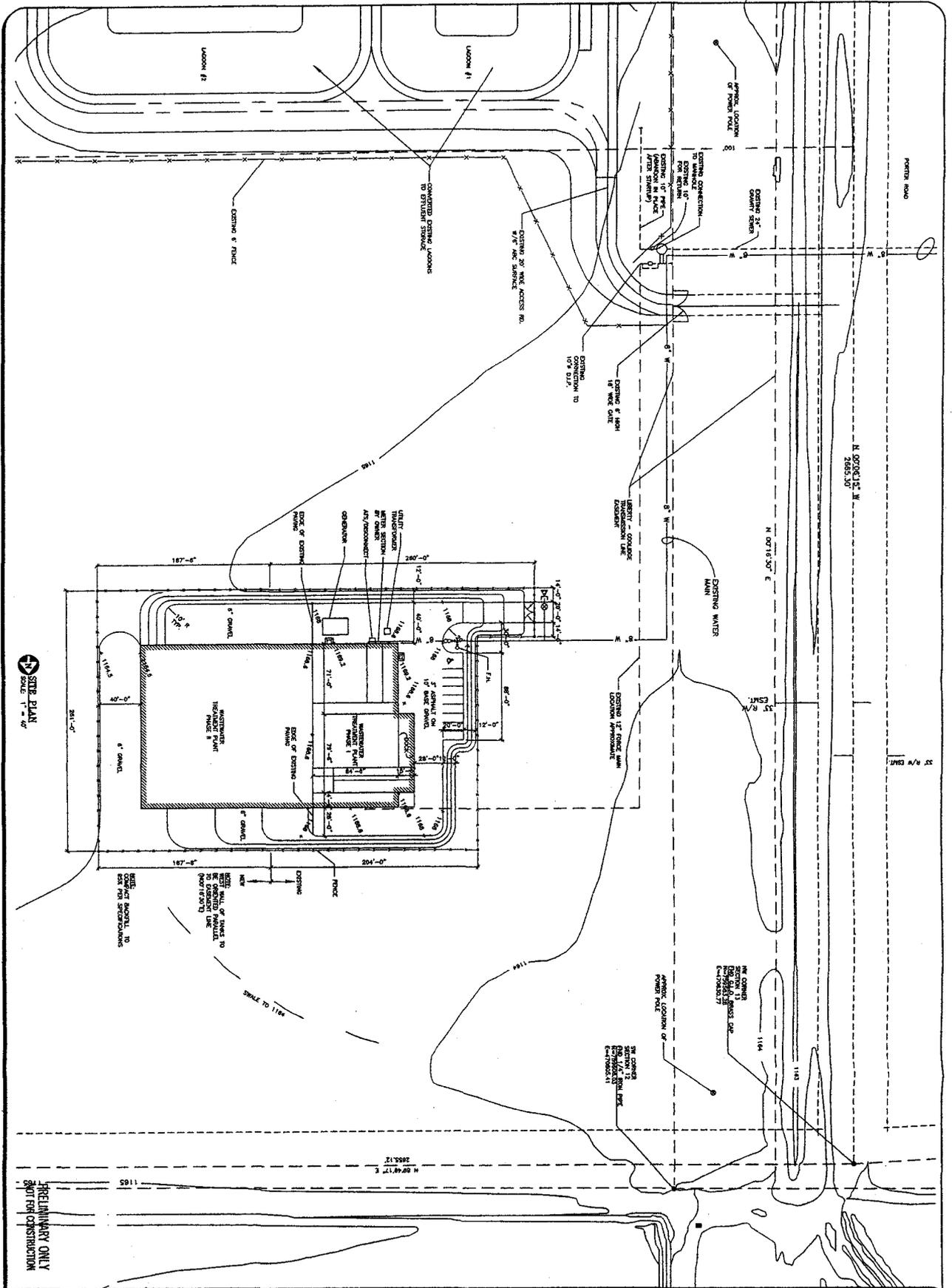
Rancho El Dorado
Wastewater Reclamation Facility Phase II
Maricopa, Arizona

Cover Sheet

ISSUED FOR:	DATE:

REVISIONS:		
NO.	ITEM	DATE

AquaTec, Inc.
1230 Shoppert Drive Rockford, Illinois 61115 (815) 856-1500



⊕ SITE PLAN
SCALE 1" = 40'

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

SCALE 1" = 40'
DATE 9/19/04
SHEETS 4 OF 40
PROJECT NO. 200448
DRAWING NO. C2

Rancho El Dorado
Wastewater Reclamation Facility Phase II
Maricopa, AZ
Site Plan

ISSUED FOR:	DATE:

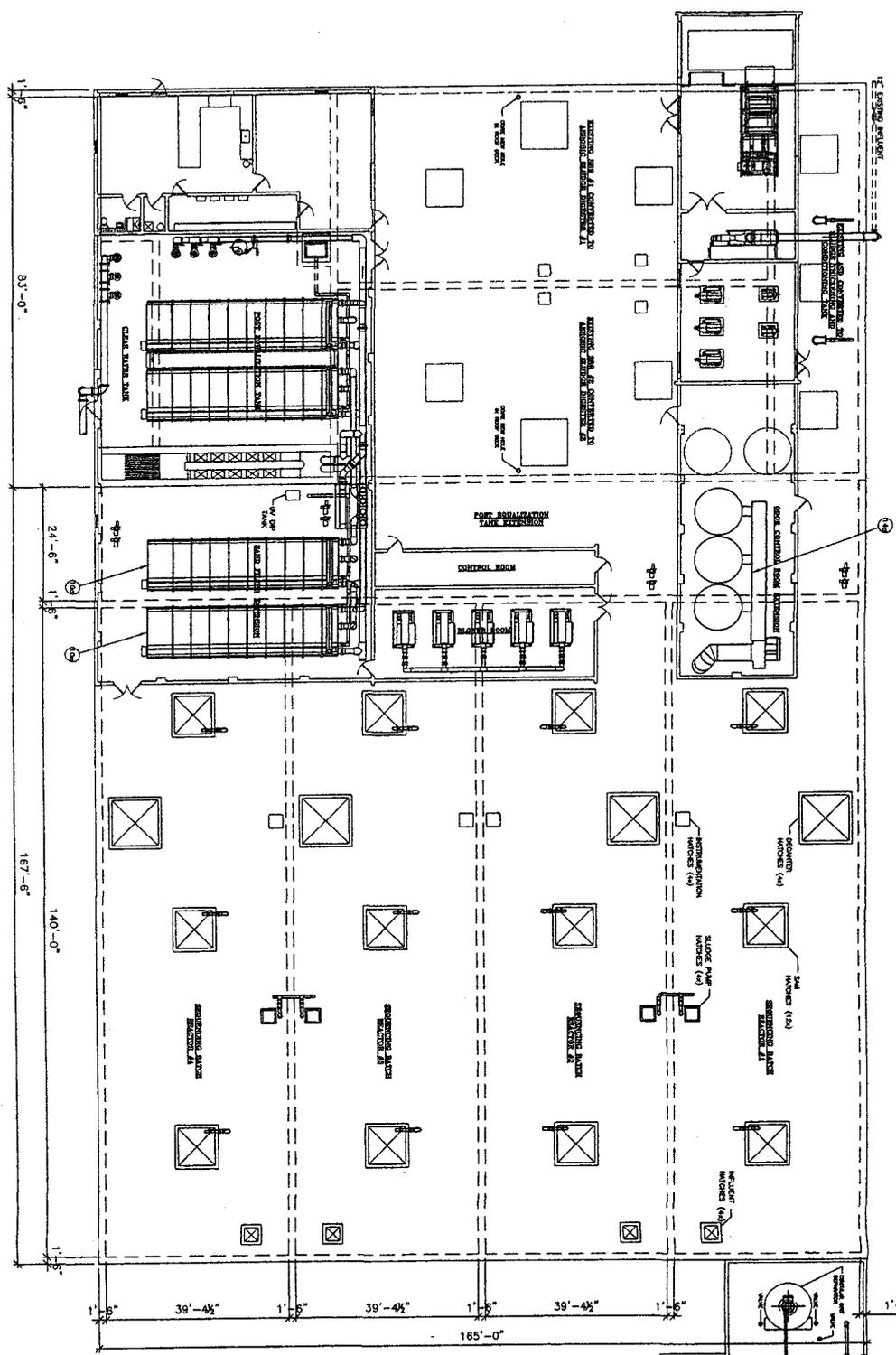
REVISIONS:		
NO.	ITEM	DATE

AquaTec, Inc.
1230 Sheppard Drive, Rockford, Illinois 61110 (815) 964-1800

VALVE IDENTIFICATION LEGEND

XX-18"-CK-HL	VALVE NUMBER
	VALVE SIZE
	VALVE TYPE
	VALVE MATERIAL
	VALVE OPERATOR
	VALVE ACTION
	VALVE LOCATION
	VALVE DATE

○	RELATION TYPE
○	OR - ORIGINATOR
○	OR - CHAIN REVISION
○	OR - CHAIN REVISION (LATEST)
○	OR - NOT APPROVED
○	OR - PROVISIONAL CHANGED



▲ ABOVE TANK MECHANICAL PLAN
SCALE: 1/8" = 1'

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

M2	DRAWING NO.	200448
	PROJECT NO.	200448
	SHEETS	22 OF 40
	DATE	9/15/04

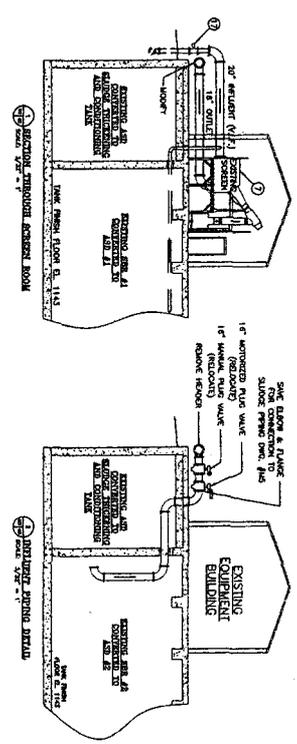
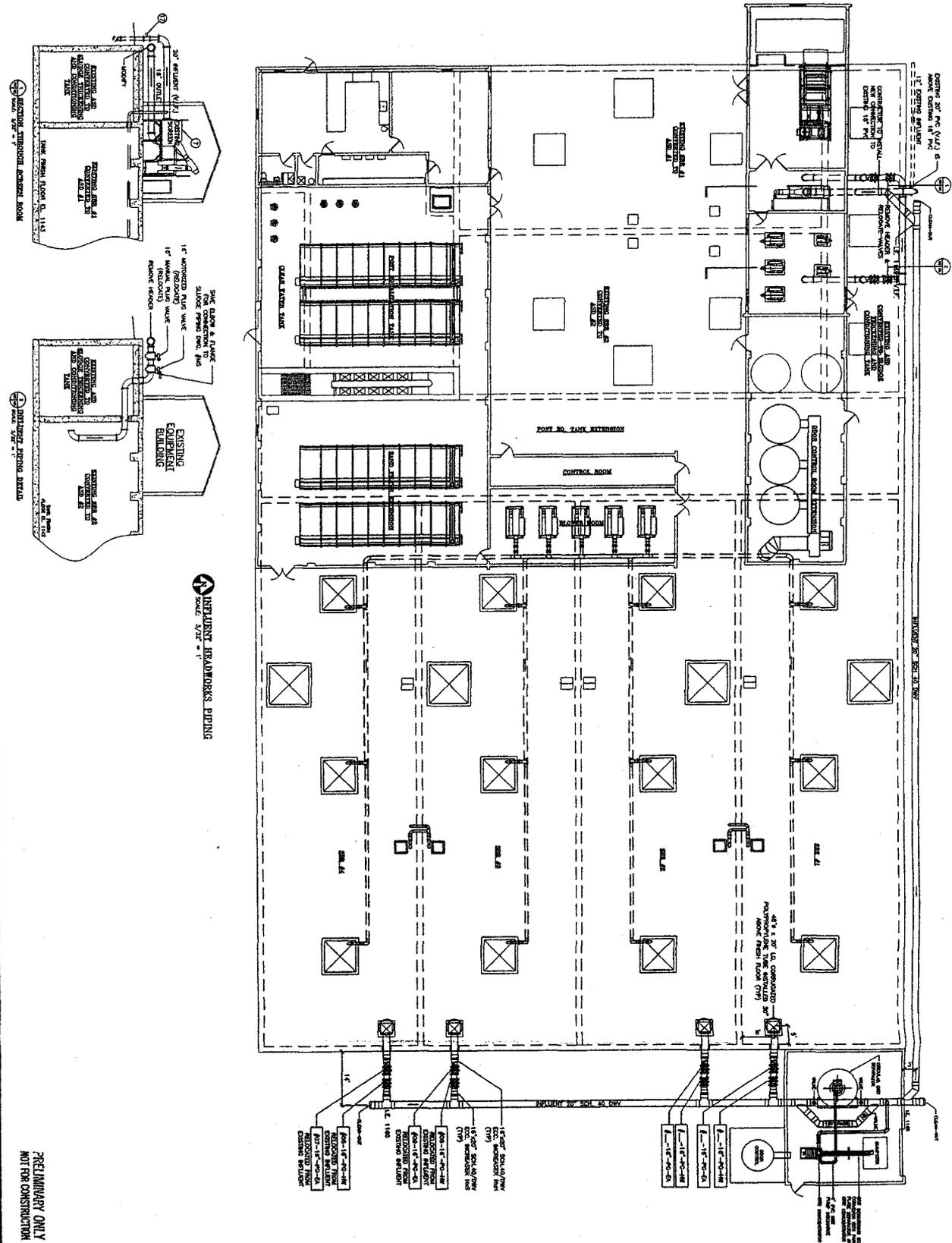
Rancho El Dorado
Wastewater Reclamation Facility Phase II
Maricopa, AZ
Building Mechanical Layout

ISSUED FOR:	DATE:

REVISIONS:	NO.	ITEM	DATE

AquaTec, Inc.

1230 Shoppert Drive Peotone, Illinois 60110 (815) 684-1000



INFLUENT HEADWORKS PIPING

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

SCALE: 3/8" = 1'
DATE: 9/15/04
SHEETS: 23 OF 40
PROJECT NO.: 2004448

M3

Rancho El Dorado
Wastewater Reclamation Facility Phase II
MARICOPA, ARIZONA

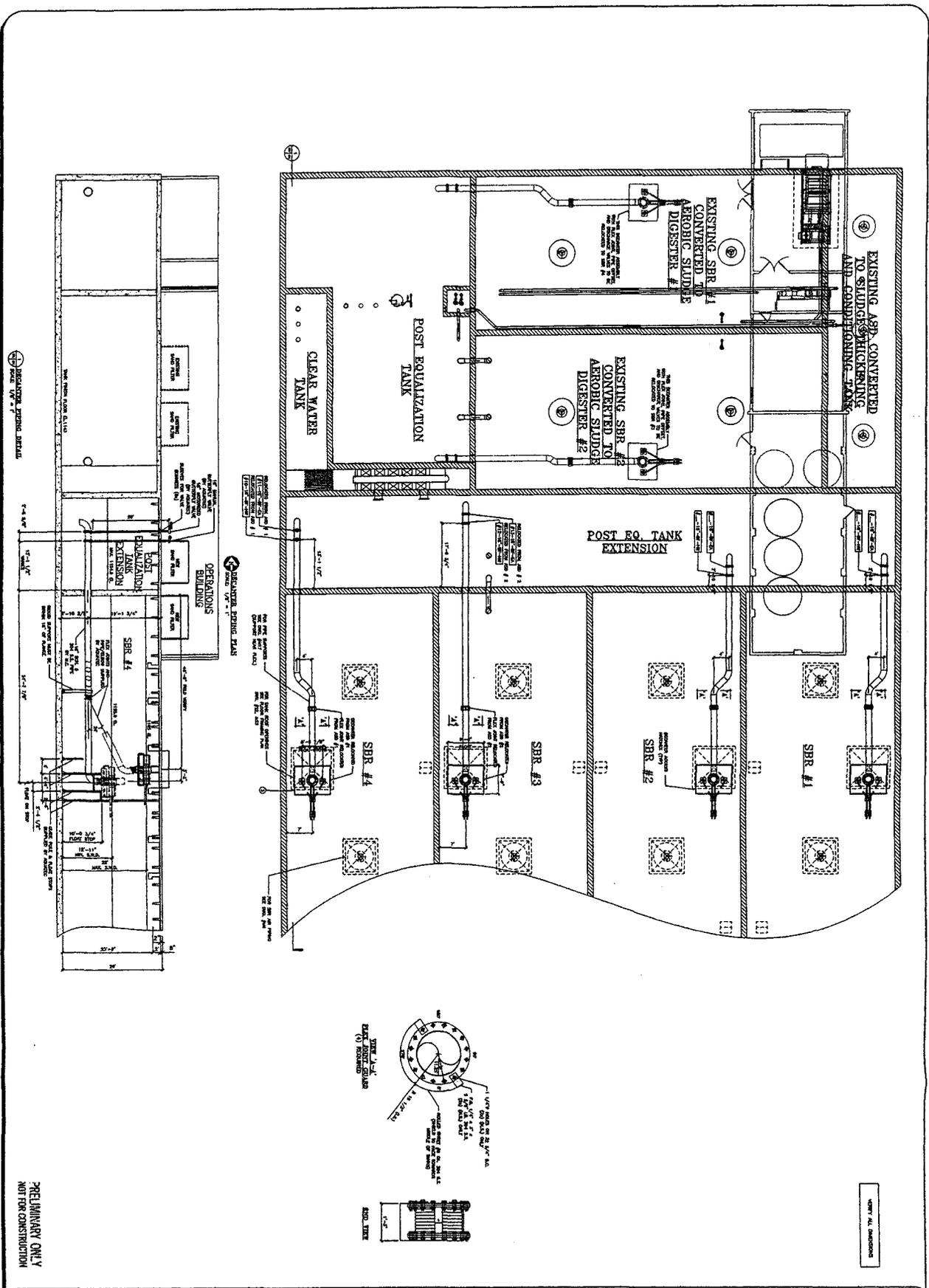
Influent Piping

ISSUED FOR:	DATE:

REVISIONS:		
NO.	ITEM	DATE

AquaTec, Inc.

1520 Shoppert Drive
Rollford, Illinois 61110
(815) 854-1500



Rancho El Dorado
Wastewater Reclamation Facility Phase II
Maricopa, Az.

Decanter Piping

ISSUED FOR:	DATE:	REVISIONS:	
		NO.	ITEM DATE

SCALE: 3/8" = 1'-0"

DATE: 9/15/04

24 OF 40 SHEETS

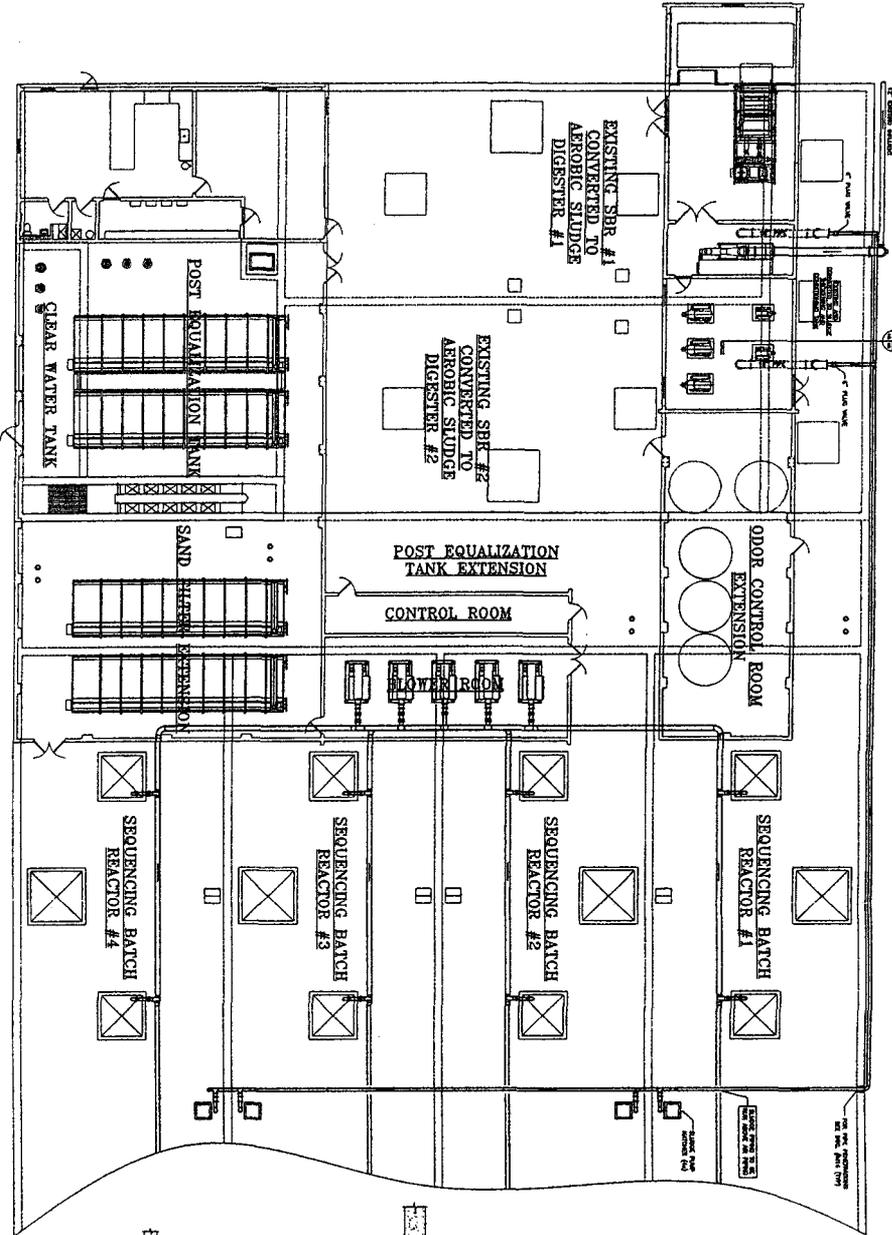
PROJECT NO.: 2004-48

DRAWING NO.: M4

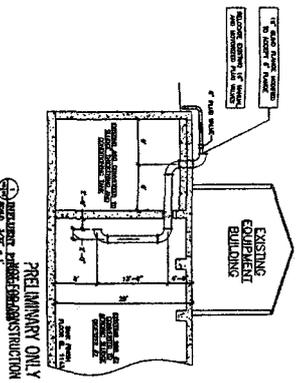
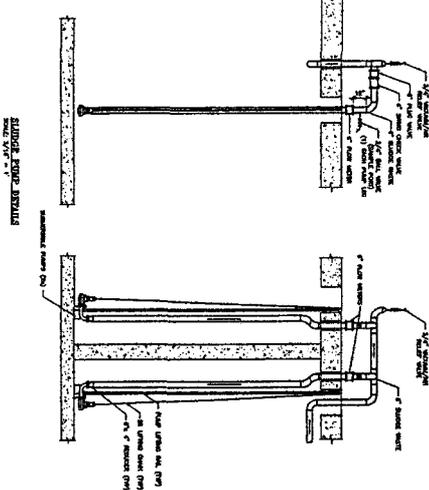
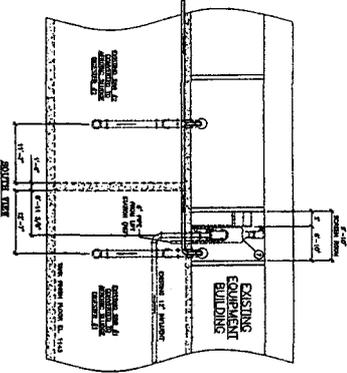
Aquatec, Inc.

1258 Shoppart Drive Peasbush, Illinois 61115 (815) 456-1300

PRELIMINARY ONLY
NOT FOR CONSTRUCTION



PLAN
SCALE: 3/32" = 1'



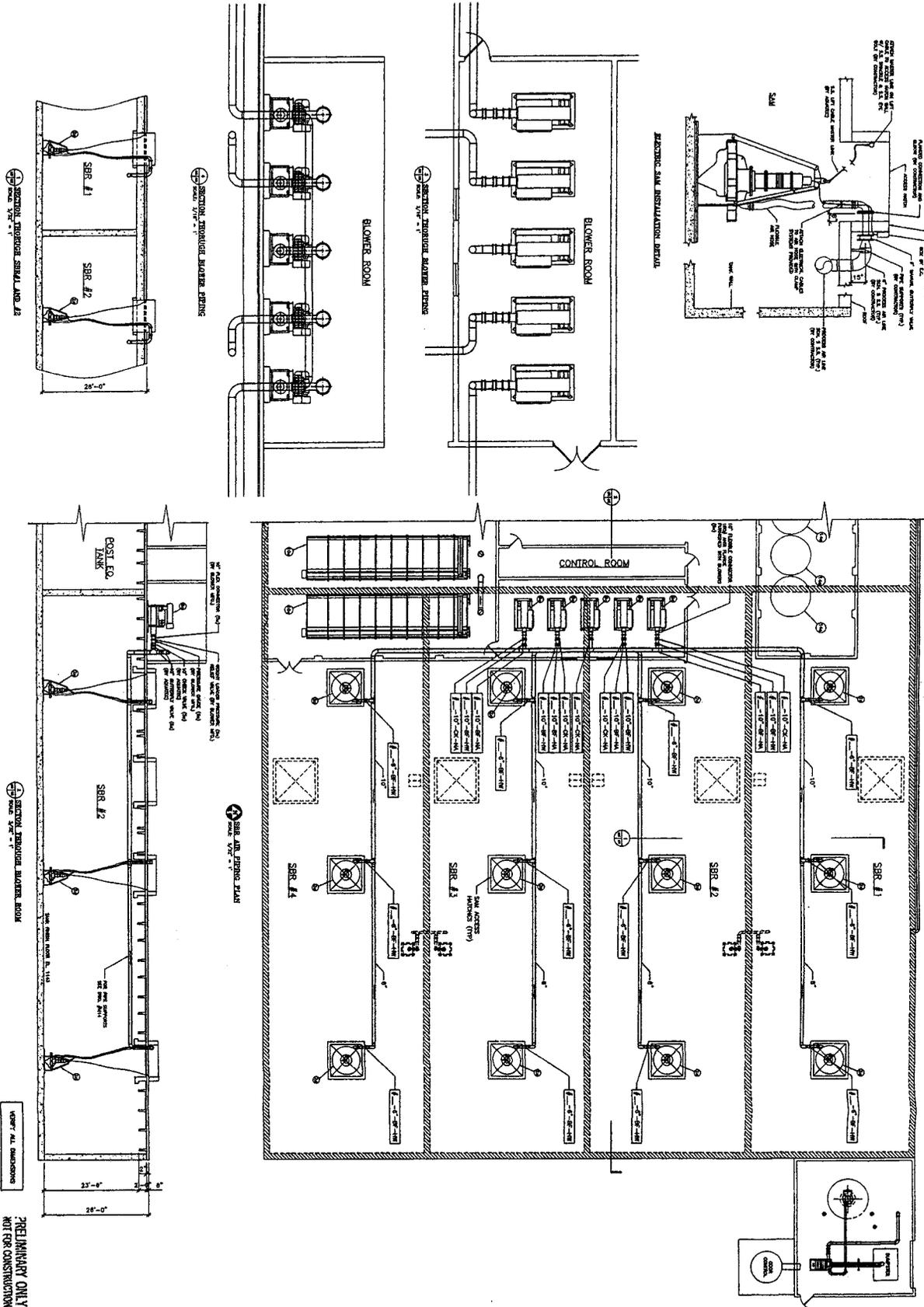
DATE: 9/15/04
SHEETS: 25 OF 40
PROJECT NO.: 200444
DRAWING NO.: M5
PRELIMINARY ONLY
REVISIONS: NONE
DATE: 9/15/04

Rancho El Dorado
Wastewater Reclamation Facility Phase II
Maricopa, AZ
Sludge Waste Piping

ISSUED FOR:	DATE:

REVISIONS:		
NO.	ITEM	DATE

AquaTec, Inc.
1220 Sheppard Drive, Roseburg, Oregon 97116 (503) 684-1500



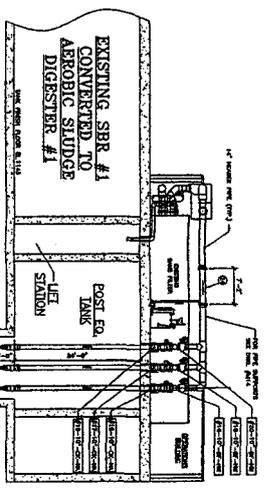
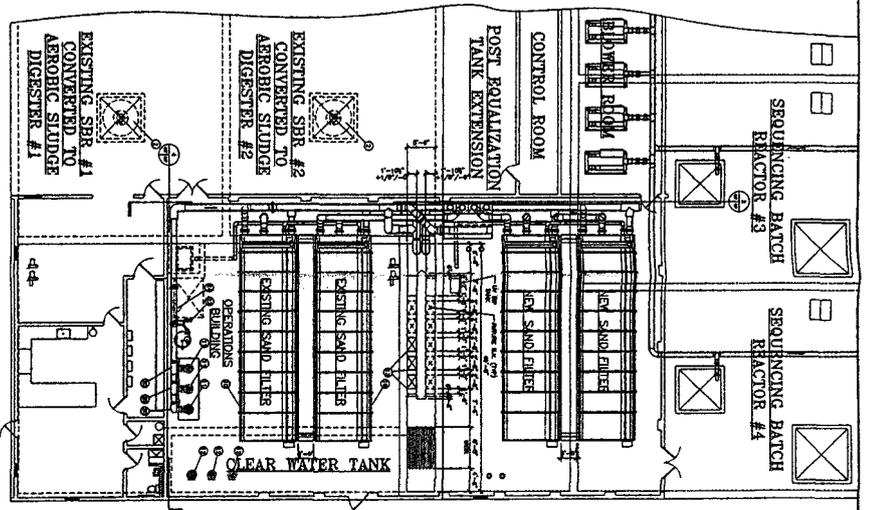
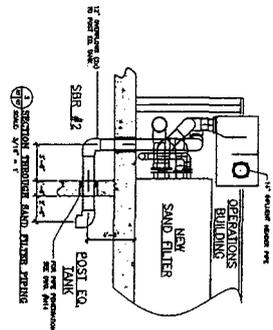
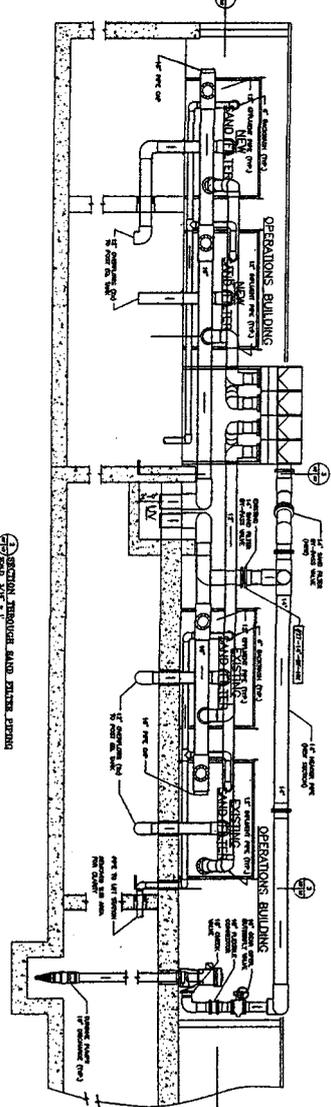
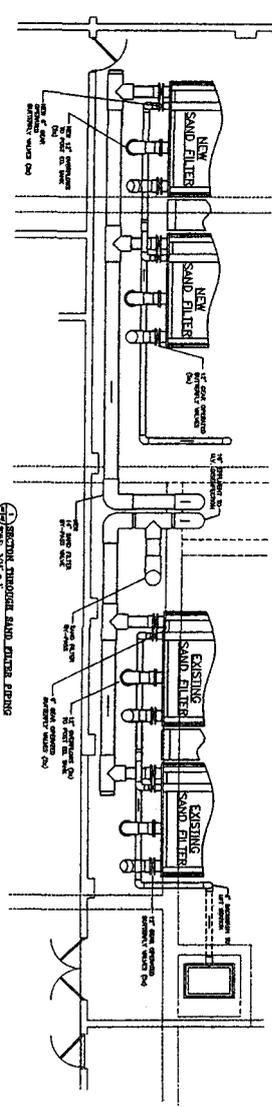
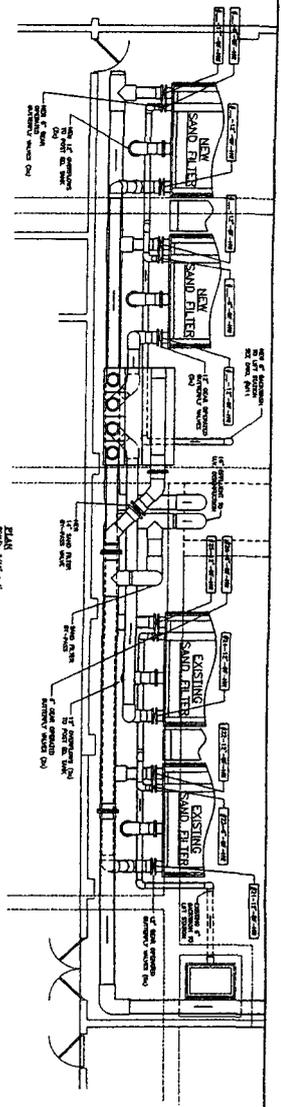
PRELIMINARY ONLY
NOT FOR CONSTRUCTION

SCALE: 1/2" = 1'-0"
DATE: 9/19/04
SHEETS: 28 OF 40
PROJECT NO.: 2004-145
DRAWING NO.: M6

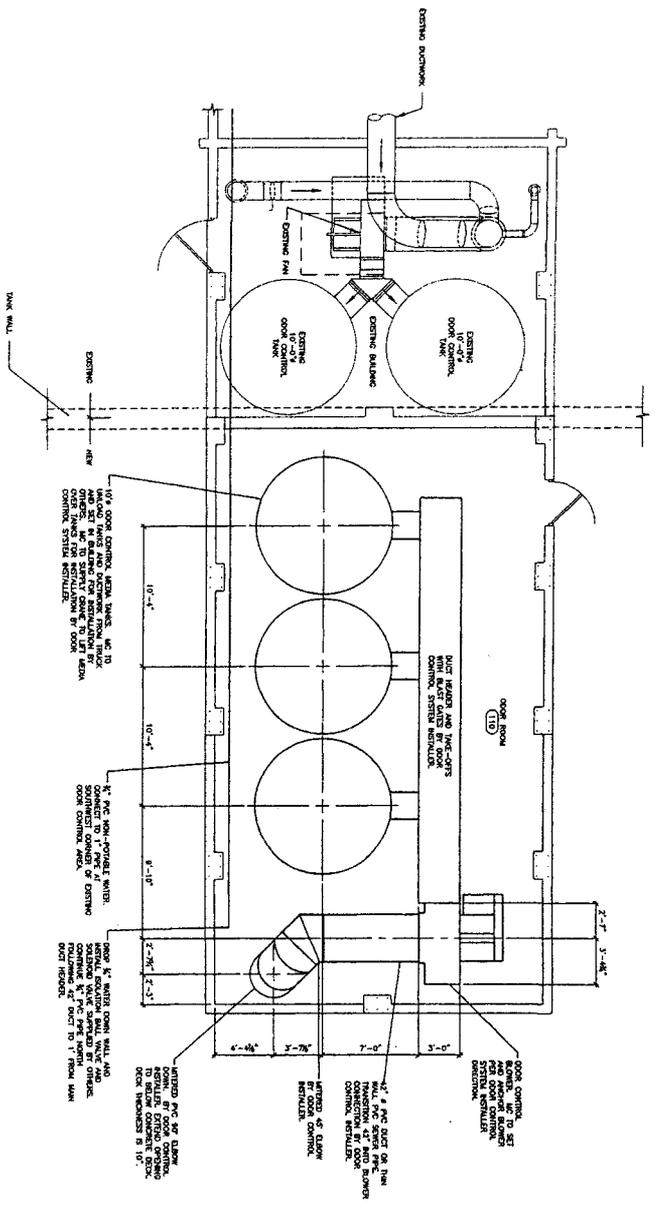
Rancho El Dorado
Wastewater Reclamation Facility Phase II
Maricopa, AZ
SBR Air Piping

ISSUED FOR:	DATE:	
REVISIONS:		
NO.	ITEM	DATE

AquaTec, Inc.
1230 Shoppert Drive
Rockford, Illinois 61115
(815) 954-1200



<p>Rancho El Dorado Wastewater Reclamation Facility Phase II Marlborough, MA</p> <p>Sandfilter / UV Piping</p>	<p>ISSUED FOR: _____ DATE: _____</p>	<p>REVISIONS:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>ITEM</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	ITEM	DATE										<p>AquaTec, Inc.</p> <p>1330 Shoppert Drive Marlborough, Massachusetts 01758 (915) 864-1800</p>
NO.	ITEM	DATE													
<p>SCALE: 3/32" = 1"</p> <p>DATE: 9/15/04</p> <p>SHEETS: 27 OF 40</p> <p>PROJECT NO.: 2004-48</p> <p>DRAWING NO.: M7</p>	<p>PRELIMINARY ONLY NOT FOR CONSTRUCTION</p>														



ODOR CONTROL PLAN
SCALE: 1/4" = 1'-0"



SLEEVE DETAIL FOR ROOF PENETRATION
SCALE: NONE

DOOR CONTROL BLOWER SPECS:
NEW YORK BLUERS
MODEL 1000
12000 CFM @ 1/2" WG
12000 CFM @ 1/2" WG
ELECTRIC MOTOR AND DRIVE
12000 CFM @ 1/2" WG
12000 CFM @ 1/2" WG
12000 CFM @ 1/2" WG
12000 CFM @ 1/2" WG

PRELIMINARY ONLY
NOT FOR CONSTRUCTION


 SCALE: 1/4" = 1'-0"
 DATE: 9/15/04
 SHEETS: 29 OF 40
 PROJECT NO.: 200444
 DRAWING NO.: **M9**

Rancho El Dorado
Wastewater Reclamation Facility Phase II
 Marietta, Ga.
Odor Control System

ISSUED FOR:	DATE:

REVISIONS:	NO.	ITEM	DATE


AquaTec, Inc.
 1230 Shepherd Drive Roscoe, Illinois 61110 (815) 654-1500

K

Kennedy/Jenks Consultants

Engineers & Scientists

3101 North Central Avenue
Suite 1470
Phoenix, Arizona 85012
602-274-0886
FAX 602-274-0764

1 December 2004

Ms. Karen Smith
Water Division Director
Arizona Department of Environmental Quality
1110 W. Washington St.
Phoenix, AZ 85007

Subject: Average Per Unit Flows – Maricopa

Dear Ms. Smith:

I have reviewed the memorandum prepared by Global Water detailing their analysis of per unit flow rates for the Palo Verde Utilities Company. In general, I agree with the approach taken, and as it is based on several years of historic data, I feel that the 160 GPD/DU is a valid design number. I believe that the reduction in water consumption and wastewater flows is driven by the following:

1. The sewer infrastructure is all less than three years old;
2. The homes are plumbed with low flush fixtures and modern water saving appliances.

In 1997, I authored a report for the City of Phoenix which determined that the flows for single family residence in a mature area north of Metrocenter Mall were in the order of 200 GPD/DU (multifamily units were calculated at 150 GPD/DU), which aligns well with Global Water data. Considering the relative ages of the neighborhoods of the two residential areas, I believe that a 160 GPD/DU design value is accurate for the purposes of allocating flow.

Should you have any questions with respect to the development of design figures for wastewater applications, I would be pleased to discuss them with you or your staff at your convenience.

Very truly yours,

KENNEDY/JENKS CONSULTANTS



Fred E. Goldman, Ph.D., P.E.
Principal

MEMORANDUM



TO: ADEQ
FROM: GLOBAL WATER RESOURCES
PALO VERDE UTILITIES COMPANY
DATE: 10 December, 2004
RE: Determination of Gallons per Day per Dwelling Unit (GPD/DU)
PAGES: 3

PURPOSE

The purpose of this memorandum is to provide the background for approval of the appropriate design criteria for the gallons per capita per dwelling unit (GPD/DU) parameter for Palo Verde Utilities Company (PVUC).

In accordance with Arizona Administrative Code Title 18, Chapter 9 Part E301.D.1.:

An applicant shall:

- a. Base design flows for components of the system on unit flows specified in Table 1, Unit Daily Design Flows. If documented by the applicant, the Department may accept lower unit flow values in the served area due to significant use of low flow fixtures.

In addition, the note to Table 1 directs the department to:

Note: Unit flow rates published in standard texts, literature sources or relevant area or regional studies shall be considered by the Department, if appropriate to the project.

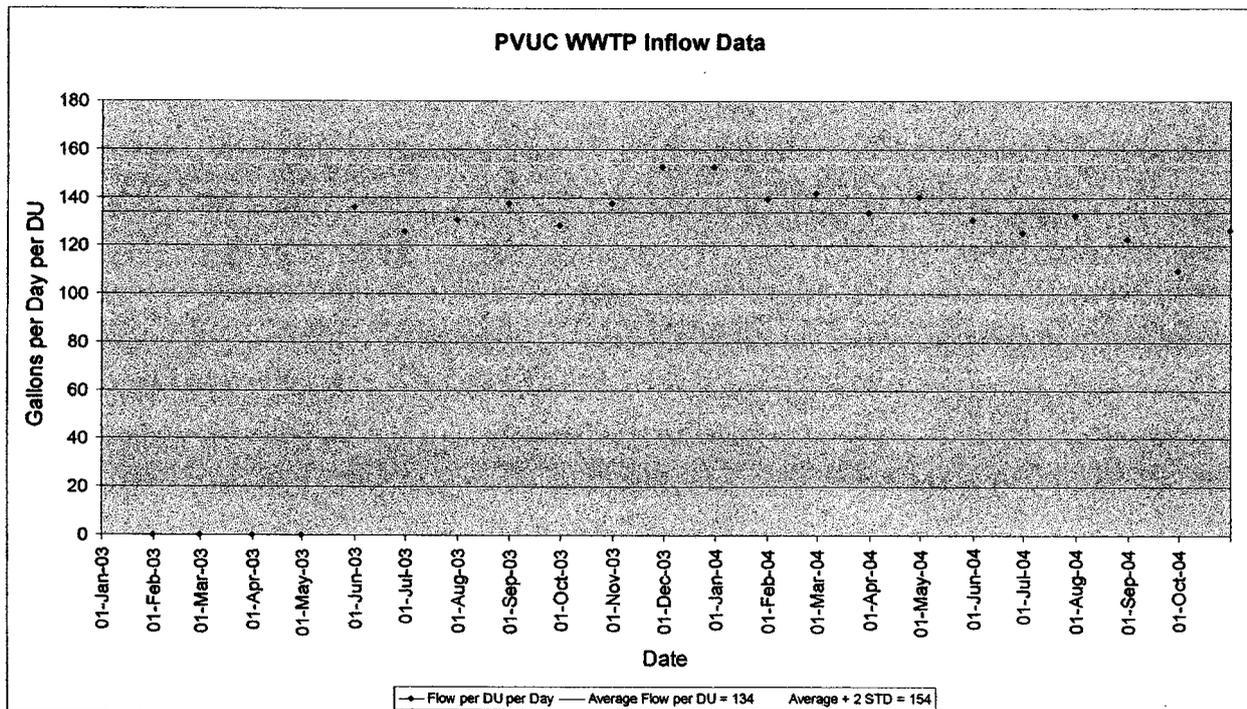
This memorandum provides detailed analysis of the historic flows at PVUC.

PVUC's wastewater treatment infrastructure has been in service since March 2002. During this time, the utility has maintained data relating to the flows received by the treatment infrastructure and the number of units connected in order to determine the actual flow per unit received by the WRF. A statistical analysis of this data is performed in order to maintain an up-to-date design figure for the volume of wastewater generated by a typical home.

ANALYSIS PROCEDURE

Each month, the average per unit flow is calculated, as is the standard deviation. PVUC has determined that the most realistic approach to determining the design flow is to use the average + 2 standard deviations. This approach was chosen for the following reasons:

1. The average + 2 standard deviations will include 90% of all the data points in a "normal" distribution and is therefore more representative range of flows expected to be received at the WRF; and
2. Simply using the average will not account for variation in the flow – using the average + 2 standard deviations provides an envelope encompassing all the average monthly flow data points.



DESIGN CRITERIA

By employing this method, the following data is valid for PVUC:

Average = 134 GPD/DU

Average + 2σ = 154 GPD/DU

In order to account for other variations in the data set, PVUC has established the following Design Criteria for GPD/DU:

$$\text{GPD/DU}_{\text{design}} = 160 \text{ GPD/DU}$$

COMPARISON TO OTHER DESIGN VALUES

Typical Design Values have historically been based on the assumption that a typical residential use is in the order of 100 gallons per day per capita. Metcalf & Eddy indicates that for typical homes, the flow per capita is typically about 70 GPD per capita, with a range of 45 to 90¹.

Assuming 2.5 people per DU, the expected flow would range from 112.5 to 225 GPD per DU with a typical value of 175 GPD/DU. The PVUC data is showing a slightly lower value for the following reasons:

1. The new subdivisions of the service area have been fitted with low flow fixtures, significantly reducing flow; and
2. The new infrastructure has little or no infiltration and inflow;

CONCLUSIONS

By carefully monitoring flow and unit counts in the service area, PVUC has determined that the most representative design flow data for the GPD/DU parameter is best determined by using:

1. An evaluation of real-time data from several years; and
2. A statistical approach to data reduction.

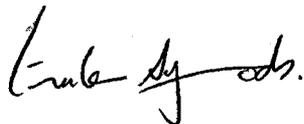
PVUC has established the following Design Criteria for GPD/DU:

$$\boxed{\text{GPD/DU}_{\text{design}} = 160 \text{ GPD/DU}}$$

PVUC updates the value of the average + 2 standard deviations monthly. If this value exceeds current Design Criteria, the Design Criteria will be amended to ensure it continues to reflect reality at PVUC.

This approach has been reviewed by a third party, Fred Goldman of Kennedy-Jenks. His response is attached to this memorandum.

GLOBAL WATER RESOURCES

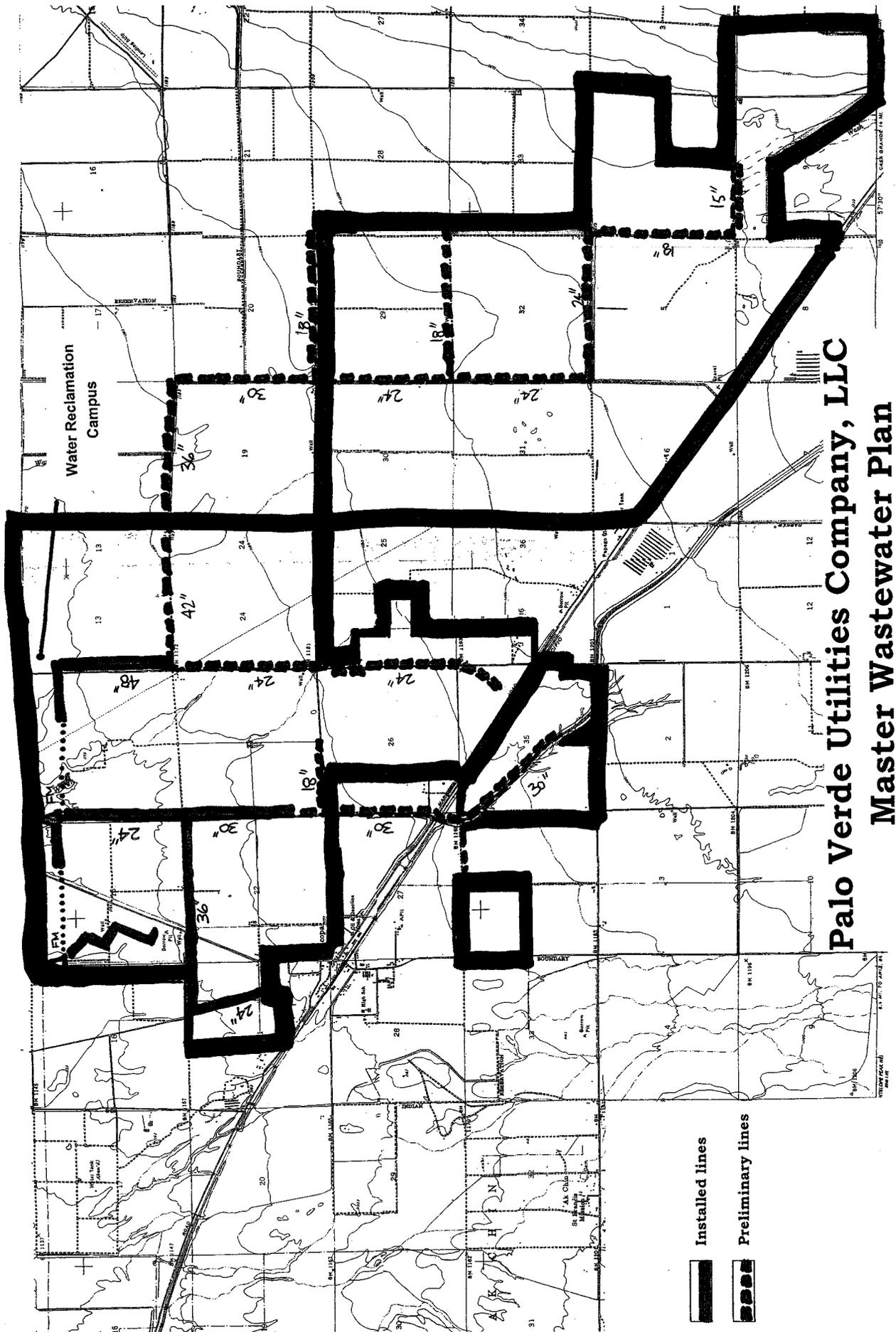


Graham Symmonds
VP Compliance

Enclosure: Kennedy-Jenks Review

¹ Wastewater Engineering, 3rd Edition, Metcalf & Eddy Table 2-9

L

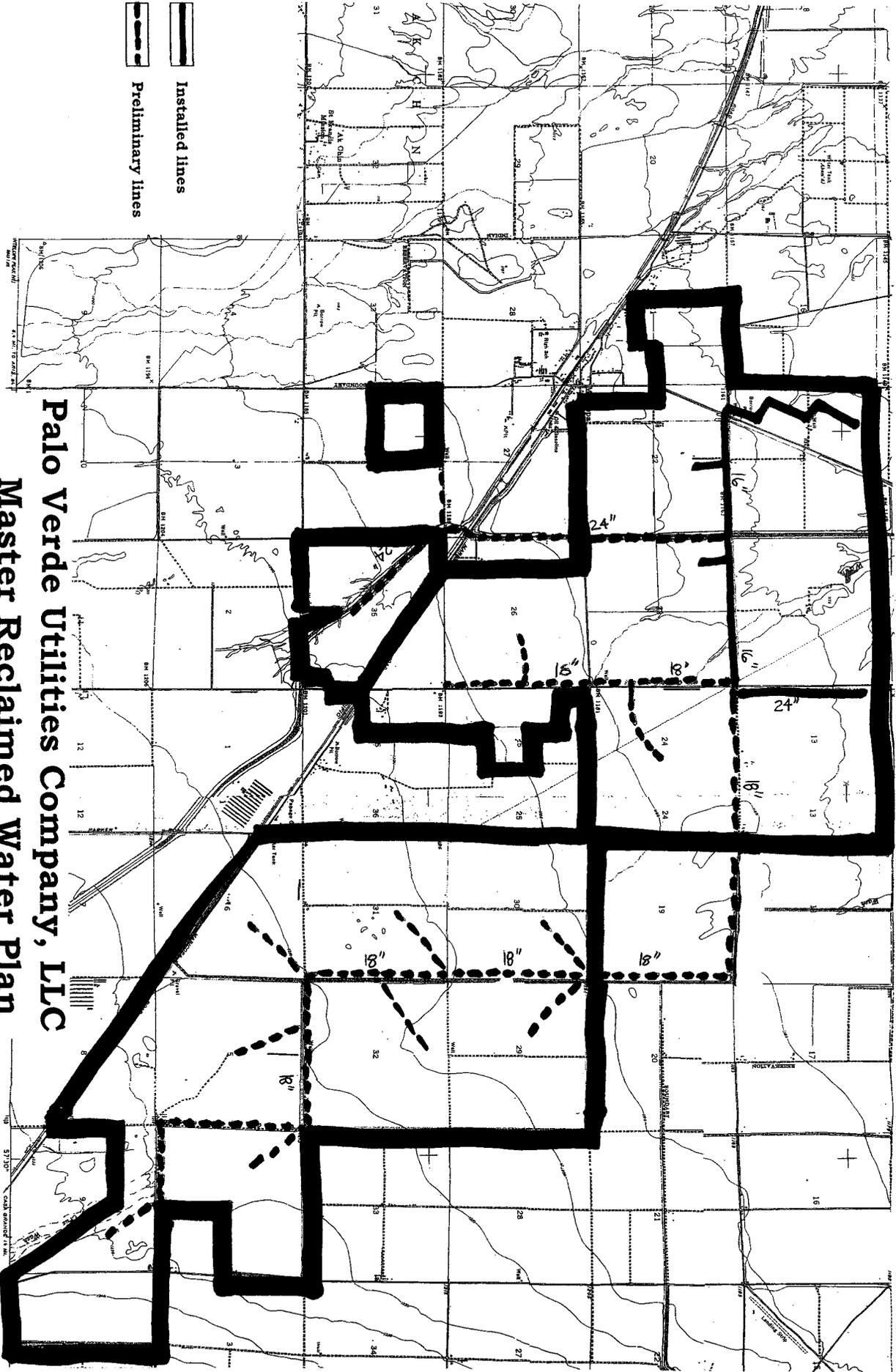


Palo Verde Utilities Company, LLC
Master Wastewater Plan

-  Installed lines
-  Preliminary lines

M

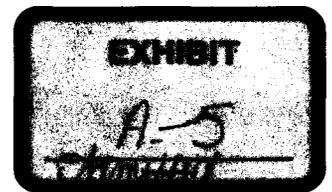
Installed lines
Preliminary lines



**Palo Verde Utilities Company, LLC
Master Reclaimed Water Plan**

ROSHKA HEYMAN & DEWULF

ROSHKA HEYMAN & DEWULF, PLC
ATTORNEYS AT LAW
ONE ARIZONA CENTER
400 EAST VAN BUREN STREET
SUITE 800
PHOENIX, ARIZONA 85004
TELEPHONE NO 602-256-6100
FACSIMILE 602-256-6800



December 21, 2004

Hand-Delivered

Ms. Blessing Chukwu
Utilities Division
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

RE: Palo Verde Utilities' Company, L.L.C./Santa Cruz Water Company, L.L.C.
Docket Nos. SW-03575A-04-0767/Docket No. W-03576A-04-0767

Dear Mr. Chukwu:

Enclosed are slightly revised versions of the responses to Staff's November 12, 2004 letter regarding sufficiency and the related Infrastructure Report (Exhibit A thereto). We had provided you copies of these materials on December 14, 2004. These revised versions correct an arithmetic error and change the cost of the water system infrastructure (Request No. 7) from \$3.6 million to \$36 million. These versions should replace the versions of the documents you previously received on December 14, 2004.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael W. Patten".

Michael W. Patten

MWP:mi

Enclosures

cc: James Fisher, Utilities Division

Specific Responses to ACC Letter Dated 12 November 2004.

1. Please provide a request for service from each of the affected property owners.

Please see Exhibit C.

2. Please provide a map of the requested service territory with an identification of the respective property owners requesting service.

Please see Exhibit B.

3. Please provide a drinking water design report which clarifies how water will be provided to the proposed CC&N extension area.

- a. The report should identify existing and future sources, the capacities of existing sources, the estimated capacities of future sources and any existing demand on the present water sources.

There is an abundant groundwater supply in the area. Indeed, the water table in the Maricopa vicinity is rising, a consequence of both the transition of groundwater pumping for agricultural purposes to surface water via the CAP canal, and the cessation of agricultural activities in favor of residential development. As a result of the agricultural past of the planned expansion area, there are a large number of irrigation wells in the vicinity which may be rehabilitated and converted to potable supply wells. The water supply to the new service area will be chlorinated (as it is the existing service area).

SCWC employs rehabilitated agricultural wells to supply raw water to the water treatment plant. Future wells brought into service require:

1. On-site evaluation;
2. Down-hole video scans;
3. Aquifer testing; and
4. Water quality sampling resulting in New Source Approval from ADEQ.

During service negotiations, SCWC requires that all existing agricultural wells on the land under consideration be considered for possible connection to the potable water system. SCWC undertakes a sampling and physical condition survey and makes a determination on the potential for each well. Developers are required to provide sufficient space around designated wells in their master plans. In addition, SCWC requires that developers set aside 2 acres for possible use as satellite water distribution and treatment centers.

- b. The report should include the estimated water demand from a typical dwelling unit, the estimated demand from the proposed CC&N.

In the capacity analysis for the water infrastructure, SCWC has employed the ADEQ design criteria of:

Average Flow 250 GPD/DU
 Maximum Day Flow 495 GPD/DU
 Peak Hour Flow 0.584 GPM/DU (495 x 1.7)

In addition, SCWC requires a minimum fire flow of 1500 GPM for 4 hours.

At build-out, the following capacities are required:

CAPACITY ANALYSIS			Lots	Flow	
PEAK CAPACITY (Based on Booster Pumps)	10,500	GPM			
ADEQ Peak Hour Capacity	0.584375	GPM per DU			
TOTAL PEAK UNITS SERVICEABLE	17968	Units	17,279	10,097	GPM
MAX DAY CAPACITY (Based on Well Production + Storage - Fire Flow)	8760000	GPD			
ADEQ Max Day Capacity	495	GPD/DU			
TOTAL MAX DAY UNITS SERVICEABLE	17697	Units	17,279	8,553,105	GPD
AVERAGE DAY CAPACITY (Based on Well Production)	6,120,000	GPD			
ADEQ Average Flow Capacity	250	GPD/DU			
TOTAL AVERAGE UNITS SERVICEABLE	24480	Units	17,279	4,751,725	GPD

In order to achieve this demand, the following minimum infrastructure is required:

Booster Pumps 10,500 GPM
 Well Production 4,250 GPM
 Storage Capacity 3,000,000 gallons (minimum)

c. The report should identify the location of future and existing transmission mains and include the timing or construction phasing of facilities.

Please see Exhibit G.

d. The design report should describe water quality and address any water quality problems with the existing and future sources of water (as an example, will extra treatment costs arise in order to meet existing or future maximum contaminant levels for arsenic nitrates or fluorides in the drinking water?).

In evaluating the needs of the new service area, SCWC has assumed that the water quality in the area is similar to that of the current service area. Treatment for arsenic, as a result of the EPA reduction of the maximum contaminant level ("MCL") from 0.05 mg/L to 0.010 mg/L (January 2006), will be required and is a driving factor in the evaluation of new wells for inclusion in the SCWC inventory. The present service area wells generate water with an arsenic level of approximately 0.011 mg/L. In addition, there are impacts from nitrates, fluoride, total dissolved solids ("TDS") etc.

Water Evaluation Plan

In the current service area, SCWC is undergoing a three-phased treatment evaluation effort:

1. Water quality analyses for possible installation of physical barrier technology;
2. Blending analysis (slipstream treatment process); and
3. Well rehabilitation studies to determine if segmenting the screened interval of the well casing can yield raw water that can meet the Safe Drinking Water Act ("SDWA") requirements without treatment.

From an operational perspective, the latter of the three options is obviously preferred. The SCWC water model presented herein assumes, however, the worst case scenario (direct treatment) by way of a separation technology.

Treatment Technology Discussion

Arsenic may be removed in a number of ways: ion exchange ("IX"); activated alumina adsorption ("AA"); reverse osmosis ("RO"); blending; and sealing of aquifer layers etc. The current MCL for arsenic is 50 µg/L. In January 2006, the MCL will be reduced to 10 µg/L.

The contaminants of interest at SCWC have interfering properties associated with the removal of the other contaminants. For example, TDS will affect the ability to employ AA processes or IX processes for arsenic removal; nitrates and sulphates will compete for adsorption with arsenic etc.

In order to meet the new MCL for arsenic, SCWC anticipates using a combination of reverse osmosis (or other effective treatment) and blending, plus actively screening perforated intervals in the well casings to obtain a maximum arsenic level of 8 µg/L. While the actual treatment configuration is still under evaluation, under the worst case conditions (ie RO treatment) the analysis indicates that treatment of 60 to 65% of the raw water flow will be sufficient to meet the SCWC blended treatment goal. The application of treatment technology will provide a material increase in the quality of water from the perspective of other elements as well, in particular total dissolved solids (TDS).

SCWC expects that the preliminary data collection and pilot testing/process selection to be completed by the end of 2004, with construction commencing in the first quarter of 2005. Commissioning of the facility is planned for the end of the third quarter 2005.

4. Please provide a copy of the Arizona Department of Water Resources Analysis of Adequate Water Supply for the proposed service territory.

SouthWest Groundwater is preparing an amendment to the SCWC Assured Water Supply Designation in conjunction with this application. This activity will also identify the production, age, condition and initial quality capability of the wells in the new service area. In addition, SCWC requires that all wells in the development area be evaluated for inclusion in the SCWC well inventory. If the wells meet the requirements of the utility, the wells are transferred to the utility (in fee). In addition, any water rights (grandfathered irrigation water rights) associated with the development area are transferred to the utility as the land moves from farming to development.

SCWC has demonstrated a physical availability of 9305 ac-ft/year. The documented assured water supply for SCWC is 5182 ac-ft/year based on the Pinal County Active Management Area ("AMA") allowance of 125 gallons per person per day and the

extinguishment of Grandfathered Irrigation Water Rights. As existing grandfathered rights are extinguished, SCWC is allocated additional groundwater. In addition, SCWC has been allocated 125 GPCPD.

5. Please provide any other information which will allow the Commission to analyze and conclude that the company has sufficient water production capacity, or can develop enough drinking water capacity to service the existing and future demands from the proposed CC&N.

Please see Infrastructure Report, Exhibit A

6. Please provide a set of design plans for the proposed water facilities.

Please see Exhibit H.

7. Please provide an estimate of the water facilities costs to the necessary to serve the proposed CC&N. The costs should include a description of the major components with the cost of the component (i.e., wells, number and size of storage tanks, etc.). Then method of financing for the major components should be described specifically.

Water System Costs

Infrastructure

In general, each section of land (640 acres) requires approximately 103,000 lineal feet of water pipe in the ground.

Based on this, the new service area would include approximately 800,000 feet of water pipeline. At approximately \$45/foot (\$35/foot for infrastructure + \$10/foot for soft costs) the total cost will be in the order of \$36MM.

Backbone

The costs associated with providing the backbone are estimated at approximately \$800/EDU

Treatment

The costs of treatment have yet to be finalized as it is dependent on the quality of water found during the on-site investigation. Should an RO plant be required, the cost is estimated at:

$$\$2.50/\text{gallon} @ 4.7 \text{ MGal} = \text{approx } \$10\text{MM}$$

The infrastructure expansions of both plant and backbone will be financed by way of GWR equity. Any portion of pipelines and interceptors constructed within a development by a developer will be constructed under the approval of the company and conveyed to the Company under a line extension agreement, all in accordance with the statutes of the ACC.

8. Please provide a copy of the approved Central Arizona Council of Governments §208 plan, any subsequent amendments to the §208 plan, and any proposed amendments to the §208 plan for the proposed wastewater certificated area.

This new service area is wholly within the City of Maricopa, and is also wholly within PVUC's CAAG Section 208 Planning Area, with the exception of the Bera Ventures et al properties (map reference I). PVUC has prepared application for the inclusion of this property in the 208 Planning Area. This application will be reviewed for the CAAG sessions of the first quarter 2005.

9. If the information is not contained in the §208 plans, please submit a master wastewater design report which clarifies how wastewater service will be provided to the proposed CC&N area.

Please see Exhibit L.

10. The report should identify the location of existing and future wastewater treatment plants and major wastewater interceptors. It should also provide the capacities of existing and future wastewater treatment plants, any existing service base in the proposed CC&N, service connections at build out in the proposed CC&N, estimated wastewater flow from a typical dwelling unit.

All wastewater generated by the new service area will be conveyed by gravity to the existing PVUC water reclamation facility located in the NW quarter of T4S R3E section 13. As the land rises to the south east, there is a unique opportunity to employ a fully gravity system which eliminates numerous operational issues associated with lift stations.

PVUC commissioned a new 1.0 MGD wastewater facility (SBR process) in January 2004. This treatment process produces Class A+ treated water, and discharges reclaimed water to re-use sites in the current service area.

See also Exhibit K for determination of per unit flow rates.

11. The report should also include the estimated wastewater total flows or contributions from future build out within the proposed CC&N, the timing or construction phasing of facilities and methods of effluent disposal.

Expected flows are shown in the Infrastructure Report (Exhibit A).

Please see Exhibit D for unit phasing.

12. Please include any other information which will allow the Commission to analyze and conclude that the company has sufficient wastewater treatment capacity, or can develop enough treatment capacity to service the existing and future demands from the proposed CC&N.

Please see Infrastructure Report (Exhibit A).

13. Please provide a copy of the Arizona Department of Environmental Quality's "Aquifer Protection Permit" for the wastewater treatment plant. If that permit has not been issued, please inform the Commission of the status of the application for that permit.

Please see Exhibit E.

14. Please provide a set of design plans for the proposed wastewater facilities.

Please see Exhibit J.

15. Please provide an estimate of the wastewater facilities costs necessary to serve the proposed CC&N. The costs should include a description of the major components with the cost of the component (i.e., 500,000 gallons per day sequencing batch wastewater treatment, lineal feet of off-site sewage interceptors or collection mains, lineal feet of on site collection mains, wells, number and size of storage tanks, etc.). The method of financing for the major components should be specified.

Wastewater System Costs

In-Parcel Infrastructure

In general, each section of land (640 acres) requires approximately 90,000 lineal feet of sewer pipe in the ground.

Based on this, the new service area would include approximately 700,000 feet of sewer pipeline. At approximately \$55/foot (\$45/foot for infrastructure + \$10/foot for soft costs), the total cost will be in the order of \$39 MM.

Backbone

The estimated costs associated with providing the backbone are:

Sewer	\$ 1000/edu
Reclaimed Water	\$ 250/edu

Treatment

The costs associated with providing the 3.0 MGD capacity required to service this new area is estimated to be in the order of \$12MM. However, a phasing plan will be developed that allows for a staggered deployment of infrastructure.

The infrastructure expansions of both plant and backbone will be financed by way of GWR equity. Any portion of pipelines and interceptors constructed within a development by a developer will be constructed under the approval of the company and conveyed to the Company under a line extension agreement, all in accordance with the statutes of the ACC.

A

INFRASTRUCTURE REPORT

INTRODUCTION

This report has been prepared in response to questions from the Arizona Corporation Commission ("ACC") in correspondence dated 12 November 2004. Sections specifically relating to questions in the letter are identified with the Question number in square brackets, bold and underlined, eg [**Question 4**].

BACKGROUND

PVUC and SCWC are public service corporations as defined in Article 15, Section 2, of the Arizona Constitution and are regulated by the ACC. In addition, the operations of the utilities are governed by the Arizona Department of Environmental Quality ("ADEQ") and the Arizona Department of Water Resources ("ADWR"). The wastewater utility, PVUC, also falls under the guidance of the Water Quality Management Plan which is delegated under Section 208 of the Clean Water Act ("CWA") to the designated management authority for Pinal County, the Central Arizona Association of Governments ("CAAG").

SERVICE AREA

Palo Verde Utilities Company ("PVUC") and Santa Cruz Water Company ("SCWC") have been requested to extend services to a non-contiguous area south east of the existing service area. [**Question 8**] This new service area is wholly within the City of Maricopa, and is also wholly within PVUC's CAAG Section 208 Planning Area, with the exception of the Bera Ventures et al properties (map reference I). PVUC has prepared application for the inclusion of this property in the 208 Planning Area. This application will be reviewed for the CAAG sessions of the first quarter 2005.

SCWC and PVUC currently operate coincident Certificates of Convenience and Necessity ("CC&N") which are governed by statute and the ACC. At present, the service area includes approximately 9 square miles, and has a potential build-out in the order of [more like 20,000 edus] 18,000 homes. The utilities presently serve 2360 homes in the area, and are adding excess of 200 homes per month.

[**Question 2**]. The new service area is shown in **Exhibit B**. [**Question 1**] Requests for service have been received from the following developers/land owners and are included in **Exhibit C**:

Development	Lots
L&R Contracting, Inc., Trap King, LLP, Sue Flores, Pro Active Remarketing LLC, Sean Aldrous and Guy Gedeon	322
Cook/El Dorado, L.L.C., Little/El Dorado, L.L.C., and William P. Gore and Margie L. Gore	2,205
Maricopa – Casa Grande Highway 813, L.C. and Western Pinal Industrial Park, L.C.	4,322
JNAN, LLC	2,240

Pitaco Farms Limited Partnership	2,240
Desert Sunrise, L.L.C. and Maricopa 240, L.L.C.	1,680
Mace Holdings, L.L.C., Maricopa 32, L.L.C., and Maricopa 400, L.L.C.	2,240
Kruse Farms	1,680
Bera Ventures, L.L.C., DAC Maricopa Investment, L.L. C., JJD Development L.L.C., Maricopa Investment Group, L.L.C., JACOB/McCASLIN/EDEN, LLC and Mesquite Groves L.L.C.	350

The schedule of development (absorption schedule) is shown in **Exhibit D**.

CURRENT PERMITS

PVUC

PVUC provides service in a certificated area governed by the ACC. This CC&N defines the geographic boundaries of service for the utility.

The wastewater utility, PVUC, is subject to an Aquifer Protection Permit ("APP"), various Re-Use Permits, a surface water discharge permit ("AzPDES") and an air quality permit. The APP is designed to protect the receiving environment from any adverse effects of the location of a wastewater treatment facility. Re-Use permits maintain control over the disposition of water from wastewater facilities, and the AzPDES governs the discharge of water to waters of the US. The air quality permit is designed to limit the amount of particulates and NOx to the atmosphere.

[**Question 8**]PVUC is governed by the 208 Water Quality planning process, and must ensure that all expansion activities are consistent with the 208 Water Quality Management Plan. PVUC's current 208 plan allows for 13.0 MGD of wastewater flow on the site. PVUC has an AzPDES surface water discharge permit that will allow for the disposal of treated water from the treatment facility if required.

[**Questions 11**]A copy of the 3.0 MGD APP is provided at **Exhibit E**.

SCWC

SCWC provides service in a certificated area governed by the ACC. This certificate of convenience and necessity ("CC&N") defines the geographic boundaries of service for the utility.

The water utility must provide assurances of the availability of water for customers via an Assured Water Supply Designation ("AWS") and the quality of the water is governed by ADEQ under the requirements of the Safe Drinking Water Act ("SDWA").

Summary of Permits

A summary of current permits is included at **Exhibit F**.

CURRENT REGULATORY COMPLIANCE

Both SCWC and PVUC are currently in compliance with all regulatory requirements, and are "in good standing" with the ACC and ADEQ.

WATER SYSTEM

New Service Area Groundwater Quantity and Quality

There is an abundant groundwater supply in the area. Indeed, the water table in the Maricopa vicinity is rising, a consequence of both the transition of groundwater pumping for agricultural purposes to surface water via the CAP canal, and the cessation of agricultural activities in favor of residential development. As a result of the agricultural past of the planned expansion area, there are a large number of irrigation wells in the vicinity which may be rehabilitated and converted to potable supply wells. The water supply to the new service area will be chlorinated (as it is the existing service area).

Water Rights Strategy

SouthWest Groundwater is preparing an amendment to the SCWC Assured Water Supply Designation in conjunction with this application. [Question 3a]This activity will also identify the production, age, condition and initial quality capability of the wells in the new service area. [Question 4]In addition, SCWC requires that all wells in the development area be evaluated for inclusion in the SCWC well inventory. If the wells meet the requirements of the utility, the wells are transferred to the utility (in fee). In addition, any water rights (grandfathered irrigation water rights) associated with the development area are transferred to the utility as the land moves from farming to development.

[Question 4]SCWC has demonstrated a physical availability of 9305 ac-ft/year. The documented assured water supply for SCWC is 5182 ac-ft/year based on the Pinal County Active Management Area ("AMA") allowance of 125 gallons per person per day and the extinguishment of Grandfathered Irrigation Water Rights. As existing grandfathered rights are extinguished, SCWC is allocated additional groundwater. In addition, SCWC has been allocated 125 GPCPD.

[Question 3a]SCWC employs rehabilitated agricultural wells to supply raw water to the water treatment plant. Future wells brought into service require:

5. On-site evaluation;
6. Down-hole video scans;
7. Aquifer testing; and
8. Water quality sampling resulting in New Source Approval from ADEQ.

During service negotiations, SCWC requires that all existing agricultural wells on the land under consideration be considered for possible connection to the potable water system. SCWC undertakes a sampling and physical condition survey and makes a determination on the potential for each well. Developers are required to provide sufficient space around designated wells in their master plans. In addition, SCWC requires that developers set aside 2 acres for possible use as satellite water distribution and treatment centers.

Water Conservation Strategy

[Question 3b]As a matter of policy, Global Water Resources requires that minimum reclaimed water uses are employed when developing raw land. Developers submitting plans for approval to the utility must provide the following:

1. Storage capable of handling 6 days with no irrigation use.
2. A minimum configuration of the following is required:
 - a. Turf = 22%
 - b. Xeriscape = 75%
 - c. Lakes = 3%

In conjunction with the State's requirement for low flow fixtures, this policy results in a significant reduction in water consumption, and ultimately reduces any treatment cost pressure on water rates..

ESTIMATED WATER CONSUMPTION FOR NEW SERVICE AREA

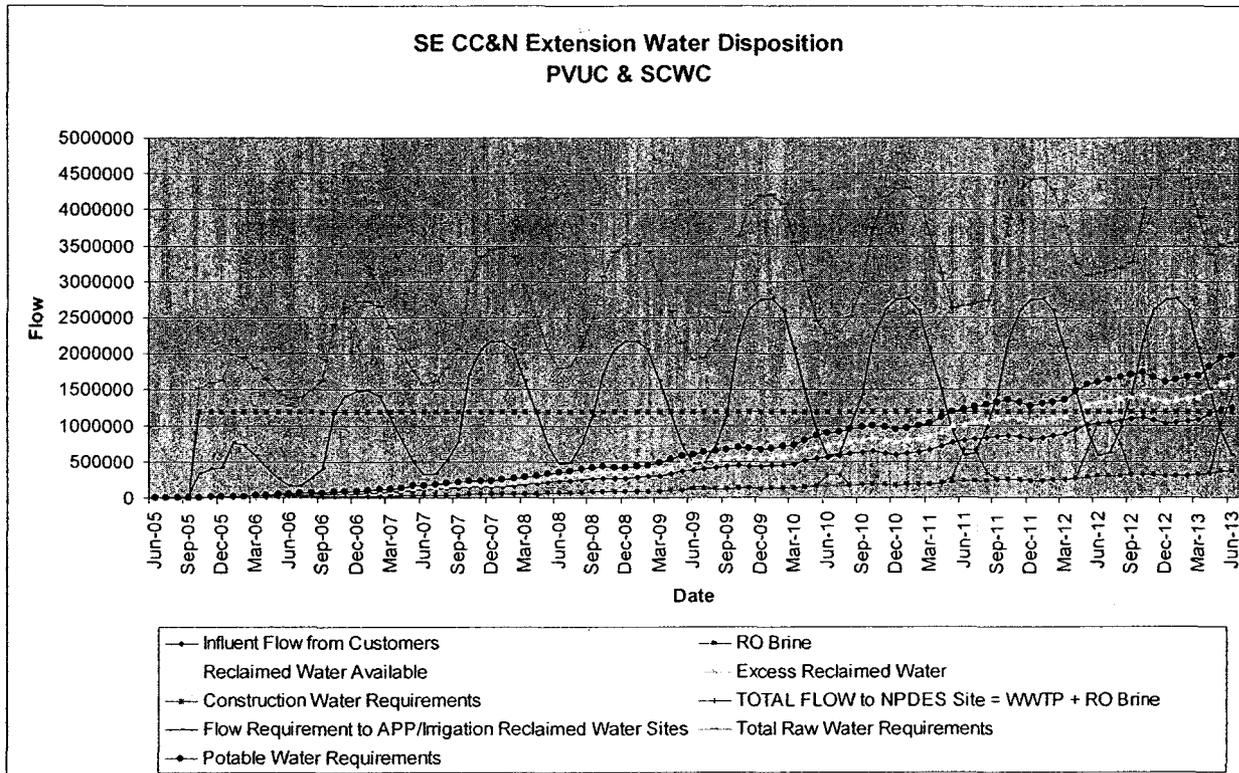
[Question 3b]There are three requirements for water in the new service area:

1. Potable water for residential and commercial consumption/use;
2. Irrigation water for HOA use; and
3. Construction water for mass grading, compaction and other uses.

In order to meet these requirements, there are three sources of water in the new service area:

1. Ground Water;
2. Treated Ground Water (potable); and
3. Reclaimed Water.

[Question 5]GWR has modelled the requirements for all water in the new service area, and the results are presented in the graph below:



This model is based on conservative estimates in order to ensure the utility develops the appropriate water resources. In addition, the model has some limitations, in that it assumes the landscaping for each section of newly developed land is completely landscaped 120 days in advance of the connection of the first consuming customer, etc. It does, however, serve as a planning tool to ensure that the utility is prepared to serve the required volumes of water to the various needs.

WATER TREATMENT

[Question 3d] In evaluating the needs of the new service area, SCWC has assumed that the water quality in the area is similar to that of the current service area. Treatment for arsenic, as a result of the EPA reduction of the maximum contaminant level (“MCL”) from 0.05 mg/L to 0.010 mg/L (January 2006), will be required and is a driving factor in the evaluation of new wells for inclusion in the SCWC inventory. The present service area wells generate water with an arsenic level of approximately 0.011 mg/L. In addition, there are impacts from nitrates, fluoride, total dissolved solids (“TDS”) etc.

Water Evaluation Plan

[Question 3d] In the current service area, SCWC is undergoing a three-phased treatment evaluation effort:

1. Water quality analyses for possible installation of physical barrier technology;
2. Blending analysis (slipstream treatment process); and
3. Well rehabilitation studies to determine if segmenting the screened interval of the well casing can yield raw water that can meet the Safe Drinking Water Act (“SDWA”) requirements without treatment.

From an operational perspective, the latter of the three options is obviously preferred. The SCWC water model presented herein assumes, however, the worst case scenario (direct treatment) by way of a separation technology.

Treatment Technology Discussion

[Question 3d] Arsenic may be removed in a number of ways: ion exchange ("IX"); activated alumina adsorption ("AA"); reverse osmosis ("RO"); blending; and sealing of aquifer layers etc. The current MCL for arsenic is 50 µg/L. In January 2006, the MCL will be reduced to 10 µg/L.

The contaminants of interest at SCWC have interfering properties associated with the removal of the other contaminants. For example, TDS will affect the ability to employ AA processes or IX processes for arsenic removal; nitrates and sulphates will compete for adsorption with arsenic etc.

In order to meet the new MCL for arsenic, SCWC anticipates using a combination of reverse osmosis (or other effective treatment) and blending, plus actively screening perforated intervals in the well casings to obtain a maximum arsenic level of 8 µg/L. While the actual treatment configuration is still under evaluation, under the worst case conditions (ie RO treatment) the analysis indicates that treatment of 60 to 65% of the raw water flow will be sufficient to meet the SCWC blended treatment goal. The application of treatment technology will provide a material increase in the quality of water from the perspective of other elements as well, in particular total dissolved solids (TDS).

SCWC expects that the preliminary data collection and pilot testing/process selection to be completed by the end of 2004, with construction commencing in the first quarter of 2005. Commissioning of the facility is planned for the end of the third quarter 2005.

WATER INFRASTRUCTURE

It is anticipated that initially, potable water will be provided by a connection between the current service area and the new service area (**[Question 3c]** see attached water master plan at **Exhibit G**). As the development progresses, there will be a requirement for a satellite water treatment plant ("WTP") modeled on the current site (**[Question 6]** see site plan of current WTP at **Exhibit H**). In preparation of this requirement, Global Water requires that each section of new development dedicate a 2 acre site for use as a treatment site.

Capacity Analysis

[Question 3b] In the capacity analysis for the water infrastructure, SCWC has employed the ADEQ design criteria of:

Average Flow	250 GPD/DU
Maximum Day Flow	495 GPD/DU
Peak Hour Flow	0.584 GPM/DU (495 x 1.7)

In addition, SCWC requires a minimum fire flow of 1500 GPM for 4 hours.

At build-out, the following capacities are required:

CAPACITY ANALYSIS

			Lots	Flow	
PEAK CAPACITY (Based on Booster Pumps)	10,500	GPM			
ADEQ Peak Hour Capacity	0.584375	GPM per DU			
TOTAL PEAK UNITS SERVICEABLE	17968	Units	17,279	10,097	GPM
MAX DAY CAPACITY (Based on Well Production + Storage - Fire Flow)	8760000	GPD			
ADEQ Max Day Capacity	495	GPD/DU			
TOTAL MAX DAY UNITS SERVICEABLE	17697	Units	17,279	8,553,105	GPD
AVERAGE DAY CAPACITY (Based on Well Production)	6,120,000	GPD			
ADEQ Average Flow Capacity	250	GPD/DU			
TOTAL AVERAGE UNITS SERVICEABLE	24480	Units	17,279	4,751,725	GPD

In order to achieve this demand, the following minimum infrastructure is required:

Booster Pumps	10,500 GPM
Well Production	4,250 GPM
Storage Capacity	3,000,000 gallons (minimum)

Pipeline Infrastructure

[Question 3c] See Exhibit G for the water master plan.

[Question 7] Water System Costs

Infrastructure

In general, each section of land (640 acres) requires approximately 103,000 lineal feet of water pipe in the ground.

Based on this, the new service area would include approximately 800,000 feet of water pipeline. At approximately \$45/foot (\$35/foot for infrastructure + \$10/foot for soft costs) the total cost will be in the order of \$36MM.

Backbone

The costs associated with providing the backbone are estimated at approximately \$800/EDU

Treatment

The costs of treatment have yet to be finalized as it is dependent on the quality of water found during the on-site investigation. Should an RO plant be required, the cost is estimated at:

$$\text{\$2.50/gallon @ 4.7 MGal} = \text{approx \$12MM}$$

The infrastructure expansions of both plant and backbone will be financed by way of GWR equity. Any portion of pipelines and interceptors constructed within a development by a developer will be constructed under the approval of the company and conveyed to the Company under a line extension agreement, all in accordance with the statutes of the ACC.

WASTEWATER TREATMENT

[Questions 9 & 10] All wastewater generated by the new service area will be conveyed by gravity to the existing PVUC water reclamation facility located in the NW quarter of T4S R3E section 13. As the land rises to the south east, there is a unique opportunity to employ a fully gravity system which eliminates numerous operational issues associated with lift stations.

PVUC commissioned a new 1.0 MGD wastewater facility (SBR process) in January 2004. This treatment process produces Class A+ treated water, and discharges reclaimed water to re-use sites in the current service area.

The utility also has a lagoon treatment facility that is being decommissioned. The structure of this facility will be converted to a combined reclaimed water storage and brine storage facility (if an RO system is required for the water system). This reclaimed water storage facility (RSWF) allows for:

1. diurnal storage for reclaimed water from the PVUC Water Reclamation Facility;
2. brine storage for the provision of brine for use as construction water; and
3. supplement of either source by raw well water.

In order to accomplish this, the existing lagoon treatment system on the site will be decommissioned, cleaned, and configured so that one lagoon is employed for reclaimed water, and the second lagoon as brine storage. The RWSF will be outfitted with aeration, mixing and delivery mechanisms (pump stations, pressurized non-potable water mains, etc) in order that the reclaimed water may be delivered to the various users in the area. A construction water brine delivery system, including a pressurized manifold and truck servicing bays will be constructed to deliver construction water as required.

This solution provides a means of beneficially employing the brine from the arsenic treatment process and allows for maximum flexibility in the provision of water for non-potable uses.

Site

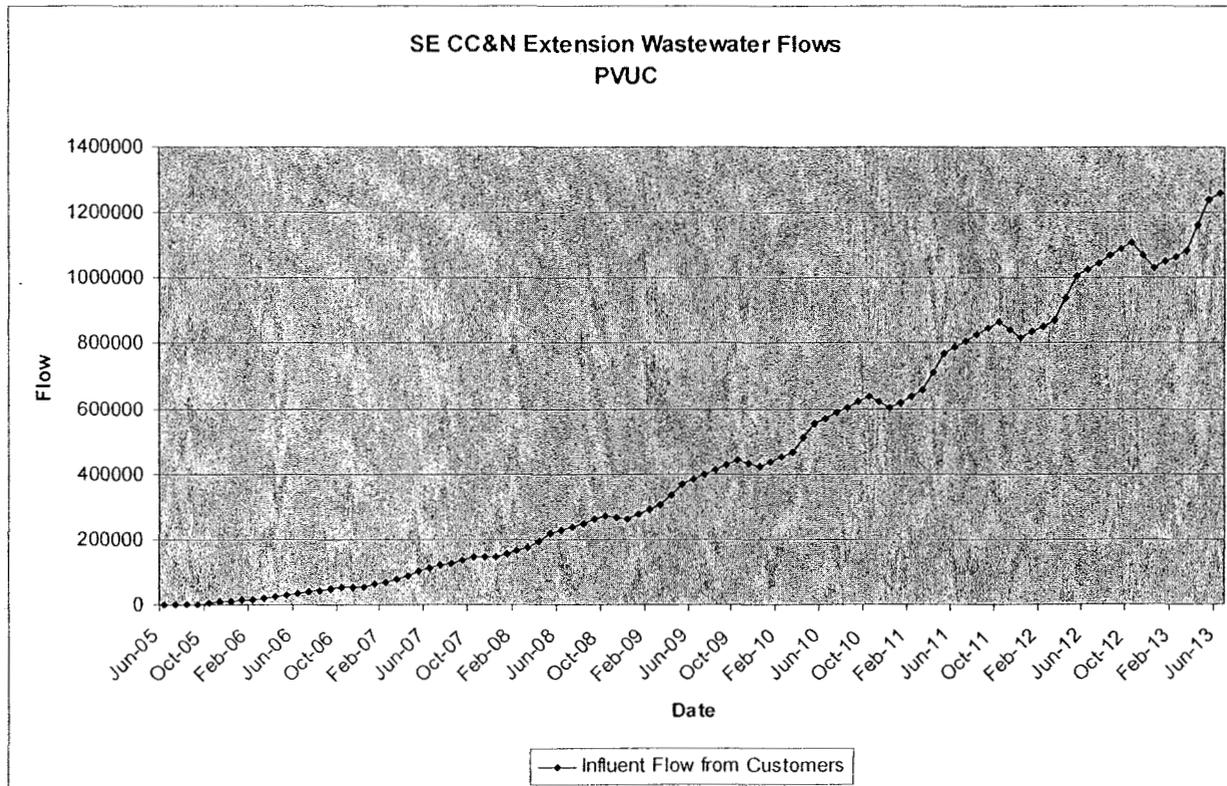
[Questions 10] The site the water reclamation facility is situated on is owned in fee by PVUC, and has been zoned and permitted to include treatment infrastructure up to 13.0 MGD. PVUC has laid out the development plan for 9.0 MGD of treatment (see **Exhibit I**), and has recently launched the expansion of the 1.0 MGD treatment facility to 3.0 MGD. This new capacity will be on-line by 31 December 2005.

[Questions 14] A copy of the design of the 3.0 MGD facility is included at **Exhibit J**. It is important to note that the 9.0 MGD facility simply replicates the 3.0 MGD facility, and that the 3.0 MGD facility is an augmentation of the present 1.0 MGD facility. As a result, all of the technologies employed in the treatment process are well understood and proven in service.

[Question 11] Estimated Flows

PVUC has completed an extensive evaluation of flows in the current service area (see **Exhibit K**) and has established that a 160GPD/DU design figure is appropriate.

The estimated flows for the new service area are shown below:



Pipeline Infrastructure

See **Exhibit L** for the wastewater master plan and **Exhibit M** for the reclaimed water master plan.

[Questions 12] Effluent Management

Global Water Resources mandates a high level of water re-use. As a result, each development in the new service area is required to “take-back” a volume of reclaimed water equivalent to the volume of wastewater produced.

Each development will use Class A+ reclaimed water for irrigation, through a Type 2 Reclaimed Water General Permit. Due to the nature of irrigation activities, during winter months, or periods of extended rainfall, there will be an excess of reclaimed water produced, which will necessitate the employment of a AzPDES discharge.

PVUC’s effluent management plan is based on the following priorities:

1. Irrigation via delivery of reclaimed water to irrigation lakes;
2. Diurnal and seasonal storage at the PVUC WRF;
3. Supply of construction water from reclaimed water mains/storage facility; and
4. Discharge by way of AzPDES Surface Water Discharge Permit

PVUC presently has a 2.25 MGD AzPDES discharge permit. In conjunction with expanding the APP from 3.0 to 9.0 MGD, PVUC will also expand the AzPDES.

[Questions 15] Wastewater System Costs

In-Parcel Infrastructure

In general, each section of land (640 acres) requires approximately 90,000 lineal feet of sewer pipe in the ground.

Based on this, the new service area would include approximately 700,000 feet of sewer pipeline. At approximately \$55/foot (\$45/foot for infrastructure + \$10/foot for soft costs), the total cost will be in the order of \$39 MM.

Backbone

The estimated costs associated with providing the backbone are:

Sewer	\$ 1000/edu
Reclaimed Water	\$ 250/edu

Treatment

The costs associated with providing the 3.0 MGD capacity required to service this new area is estimated to be in the order of \$12MM. However, a phasing plan will be developed that allows for a staggered deployment of infrastructure.

The infrastructure expansions of both plant and backbone will be financed by way of GWR equity. Any portion of pipelines and interceptors constructed within a development by a developer will be constructed under the approval of the company and conveyed to the Company under a line extension agreement, all in accordance with the statutes of the ACC.

Office Copy.

**THE INDUSTRIAL DEVELOPMENT AUTHORITY
OF THE COUNTY OF PIMA**

**APPLICATION RELATING TO THE ISSUANCE
OF BONDS BY THE AUTHORITY**

APPLICATION

The Application should contain sufficient amount of the following information to allow the Authority to review the Applicant and the Project. The Application must be accompanied by a signature of an authorized officer of the Applicant.

Up to and prior to the issuance of bonds, if the Authority considers the application to be incomplete or for any reason, the Authority reserves the right to request from the Applicant any additional information the Authority deems necessary for approval of the application and/or issuance of bonds.

**SECTION 1
IDENTITY OF PARTICIPANT**

- 1.1 Applicant's Legal Name: Global Water Resources LLC
Business Address: 22601 North 19th Avenue, Suite 210
Phoenix, Arizona 85086
Principal Contact(s): Leo Commandeur, Trevor Hill
Telephone Numbers(s): 623 580-9600
Facsimile Number(s): 623 580-9659
E-mail Address(es): leo.commandeur@qwresources.com,
Trevor.hill@qwresources.com
- 1.2 Applicant's Council: Burch & Cracchiolo, P.A.
Business Address: 702 East Osborn Road, Phoenix, Arizona
85014 P.O. Box 16882
Principal Contact(s): Andrew Abraham
Telephone Number(s): (602) 234-9917
Facsimile Number(s): (602) 274-7611
E-Mail Address(es): aabraham@bcattorneys.com
Web Site: <http://www.bcattorneys.com>

- 1.3 Placement Agent or Underwriter: Hutchinson, Shockey, Erley & Co.
Business Address: 1702 East Highland Avenue, Suite 301
Phoenix, Arizona 85016
Principal Contact(s): Brian J. O'Connor, Curtis A. Shook & Leo V. Valdez
Telephone Number(s): (602) 263-0163
Facsimile Number(s): (602) 263 - 0181
- 1.4 Placement Agent's or Underwriter's Council: Squire, Sanders & Dempsey, LLP
Business Address: Two Renaissance Square 40 North Central Avenue, Suite 2700 Phoenix, Arizona 85004-4498
Principal Contact(s): Timothy E. Pickrell
Telephone Number(s) :602-528-4031
Facsimile Number(s) :602-253-8129
E-mail Address: tpickrell@ssd.com
- 1.5 Applicant's Independent Certified Public Accountant
Deloitte & Touche USA LLP
Business Address: 2901 N. Central Ave.
Suite 1200,Phoenix, Arizona 85012-2799
Telephone Number(s): (602)-234-5100
Facsimiles Number(s): (602)-234-5186
- 1.6 Suggested Bond Council: Kutak Rock
Business Address: 8601 North Scottsdale Road, Suite 300
Scottsdale, Arizona 85253-2742
Principal Contact(s): Jorge Albala
Telephone Numbers(s): 480-429-5000
Facsimile Number(s): 480-429-5001
E-mail Address:
Web Site:
- 1.7 Suggested Trustee: US Bank Trust National Association
Business Address: 7310 N. 16th Street, #275 Phoenix, Arizona 85020
Principal Contact(s): Debbie Scherer
Telephone Number(s): 602-371-3488
Facsimile Number(s): 602-371-3728
E-mail Address(es): Deborah.scherer@usbank.com
Web Site:
- 1.8 Suggested Other Professionals on financing Team:
Business Address:
Principal Contact(s):

Telephone Number(s):
Facsimile Number(s):
E-mail Address(es):
Web Site:

SECTION 2 FINANCIAL SUMMARY

- 2.1 Provide a short, plain statement of the type of business or businesses engaged in by the applicant and a description of the Applicant's corporate structure and management. If the Applicant is a subsidiary corporation or has subsidiaries, include a short, concise description of the business of all affiliated companies.

Global Water Resources, LLC (GWR) is the owner and aggregator of private water and wastewater utilities in Arizona and the Southwestern United States. This parent company currently owns two subsidiary utility companies, Santa Cruz Water Company (SCWC), and Palo Verde Utilities Company (PVUC), which are private water and wastewater utilities providing services to existing and planned developments in the City of Maricopa. GWR is currently negotiating with several other private utility companies as possible acquisitions.

The companies provides water, wastewater and reclaimed water to residents of new developments in the City of Maricopa, including Rancho El Dorado, Provinces, Villages, Cobblestone, Acacia and their appurtenant commercial developments. In addition, SCWC and PVUC are being asked to service additional development outside the existing service area. These services include the production, treatment and distribution of potable water for domestic and commercial use; the collection and treatment of wastewater and the distribution of reclaimed water in the service area; and the provision of raw water for construction use.

The company's management and administrative services are performed from its head office at 22601 North 19th Avenue, Phoenix, while the day to day operations of the utilities are performed by local on site operations personnel, who manage the water reclamation facility operations, water production and distribution, wastewater collection, as well as meter installations, and customer service calls.

See Appendix A included with this submission management résumé's.

2.2

Provide a short, plain description of the Project.

Location: Located in the City of Maricopa, specifically in current and planned developments that are located in the City of Maricopa.

Intended use: The intended use of the bond proceeds are to install and expand wastewater treatment facilities, water treatment facilities, as well as water reclamation pipelines, water pipelines, and wastewater collection pipelines.

Present and projected number of employees and the nature and quality of employment opportunities created by the project: There are currently six operating field personnel employed by the company in Maricopa, as well as numerous management and customer service personnel to support their efforts at Global Water. There will be additional operating field personnel positions created by the wastewater treatment facility expansion, as well as the water treatment facility construction. It is likely that as many as 10 to 15 new positions will be created by the growth and expansion of the company.

The projects include the installation of water, wastewater and reclaimed water infrastructure for the provision of service described above. This includes water mains, sewer mains, reclaimed water mains, water treatment facilities, water distribution centers, wastewater lift stations, wastewater treatment facilities, and reclaimed water mixing and distribution centers. In addition, the Company intends to improve management and operational control through the provision of geographical information systems (GIS), computerized maintenance management systems (CMMS), and Supervisory, Control and Data Acquisition Systems (SCADA).

2.3 List the principal amount of financing requested.

Global Water Resources, LLC
Santa Cruz Water Company & Palo Verde Utilities Company
Projects

Estimated Sources and Uses of Funds
(August 23, 2004)

Sources

Series 2004 Bonds	\$36,505,000.00
Global Water Resources Contribution	\$ <u>535,000.00</u>
Total Estimated Sources	\$<u>37,040,000.00</u>

Uses

Series 2004 Project Fund	\$32,000,000.00
Debt Service Reserve Fund	\$ 3,704,000.00
Underwriting Discount	\$ 975,000.00
Cost of Issuance	\$ 300,000.00
Capitalized Interest	\$ 0.00
Contingency	\$ <u>61,000.00</u>
Total Estimated Uses	\$<u>37,040,000.00</u>

2.4 Brief statement of the estimated sources and uses for the Project, and whether and other funding sources will be used.

See: page 16 of the Engineer's Feasibility Report Table 3

2.5 Credit Enhancement, if any.

The Company believes it has some credit enhancement options and will conduct a cost benefit analysis to determine the cost effectiveness of the use of credit enhancement if available.

2.6 Will any of the bond proceeds be used to repay or refinance and existing mortgage or outstanding loan? If yes, please indicate particulars.

None of the bond proceeds will be used to repay existing mortgages or loans.

2.7 Sale of Bonds:

2.7.1 Public Offering or Private Placement

The bonds are likely to be marketed to institutional investors with the appropriate level of available capital to meet the needs of the bond issue. They will not be marketed to the general public, unless investment grade ratings or credit enhancement are obtained.

2.7.2 Underwriter/Placement Agent/Purchaser
See: section 1.3 above

2.7.3 Restrictions on investors:

Yes

2.8 Proposed Schedule from Applicant:

- 2.8.1 Preliminary approval by Authority;
- 2.8.2 TEFRA Hearing;
- 2.8.3 Finalization of any preliminary Official Statement or other offering document;
- 2.8.4 Applicant approval of Bonds;
- 2.8.5 Authority Final Approval of Bonds;
- 2.8.6 Pima County Board of Supervisors' Approval of Bonds;
- 2.8.7 Pricing;
- 2.8.8 Expected construction and completion of the Project (if applicable);and
- 2.8.9 Issuance of Bonds.

**SECTION 3
DETAILED INFORMATION
REGARDING THE APPLICANT**

(NOTE: If the Bonds are to be Guaranteed/or a parent entity of the applicant provides credit or tax status, the information required by this Section should also be supplied by that party.)

3.1 Applicant's form of business organization (check one):

- | | |
|--|---|
| <input type="checkbox"/> Corporation | <input type="checkbox"/> General Partnership |
| <input type="checkbox"/> Limited Partnership | <input checked="" type="checkbox"/> Limited Liability Co. |
| <input type="checkbox"/> Joint Venture | <input type="checkbox"/> Sole Proprietorship |

Date of formation:

State where incorporated or organized: Delaware

- 3.2 Provide a list of all executive or managing officers and directors of the Applicant. If any such officer or director has been convicted – or is currently under indictment or complaint alleging commission – of a felony or of a misdemeanor involving moral turpitude in any court of any state or of the courts of the United States or Canada or is now or has ever been charged or convicted of any civil, administrative or criminal offense regarding or growing out the conduct of the business of the Applicant or any similar concern or out of the issuance, sale or solicitation or sale of any type of security, the applicant must so state.

- William S. Levine – Chairman of the Board
- Daniel Cracchiolo – Member of the Board
- Trevor T, Hill – President & CEO
- Leo Commandeur – Secretary/Treasurer

All of the above management and directors are in compliance with 3.2

- 3.3 A statement describing any pending litigation either by or against the company or its subsidiaries (other than ordinary litigation concerning matters which would generally have little bearing on the earnings of the Applicant.) If any litigation of any nature is pending or threatened concerning either the Project site, the Project or the Bonds sought to be issued, such litigation must be noted.

There is no pending litigation against the Company of its subsidiaries.

- 3.4 The Application shall also include the following attachments:

1. Applicant's financial statement (audited) for the previous three years or for the full life of the Applicant, if the Applicant has not been in business for three full years.

See attached draft Audited financial statements for the two years the subsidiaries have been in operation.

2. Applicant's most recent quarterly statement.

See attached quarterly financial statements

3. Applicant's annual report for the past three years.

Not applicable company is private.

3.5 If the Applicant is required to file periodic reports or disclosure statements under the Securities Exchange Act of 1934 or any similar law in any state or any other similar law of the United States, attach a copy of the most recent reports.

Not applicable

SECTION 4 PROJECT INFORMATION

4.1 Project name: Global Water Resources LLC Project, Water and Wastewater Revenue Bonds.

4.2 Location of Project, including address and legal description.

See: Page 6 of the Engineer's Feasibility Report.

4.3 Provide a detailed description of the project.

1. Location and present zoning and a statement detailing any zoning changes which may be necessary before construction may begin, including a timetable for such approval;

SCWC and PVUC are public service corporations regulated by statute in Arizona and administered by the Arizona Corporation Commission (ACC). Under ACC rules, SCWC and PVUC are granted Certificates of Convenience and Necessity (CC&N) which allow for the exclusive right and obligation to provide water and wastewater services to developments and homeowners in the certificated areas.

PVUC owns a 40 acre site which is the site of the existing water reclamation facility, which is to be expanded as part of this proposed bond application, and has the necessary County, State and Federal permits for this activity. SCWC owns the water treatment plant site, in addition to well sites to provide water treatment and distribution services. In addition, both PVUC and SCWC own easements and rights of ways to allow for the delivery of water, the collection of wastewater, and the redistribution of reclaimed water.

The Companies currently have the zoning required to serve their existing and future customers in the current CC&N, to complete the water reclamation facility expansion, and provide arsenic treatment for SCWC. Many of the pipeline projects are subject to regulatory approval by various governmental agencies like the Arizona Department of Environmental Quality, and the Arizona Department of Water Resources.

2. Intended use; See Table 2(a) and 2(b) of the Engineer's Report. Page 14, 15.
3. Present and projected number of employees of the Applicant at the Project and in Pima County as a whole; There are currently six operating field personnel employed by the company in Maricopa, as well as numerous management and customer service personnel to support their efforts at Global Water. There will be additional operating field personnel positions created by the wastewater treatment facility expansion, as well as the water treatment facility construction. It is likely that as many as 10 to 15 new positions will be created by the growth and expansion of the company.
4. Present ownership of the Project site and the Applicant's interest therein – if the Applicant is purchasing the property, a statement of the terms of the purchase; the necessary Project site is already owned by the subsidiary companies.
5. A statement of the environmental impact to be caused by the Project, and if the statement shows the Project will adversely effect the surrounding environment, that fact shall be fully explained and justified; and – See page 9, of the Engineer's Feasibility Report., for a complete list of all the current permits held by the companies.
6. Whether any other review of the Project or its financing are being conducted by any public agency or authority and whether the applicant has applied to any other entity (either public or private) for the financing of the Project and financing has been denied. – There is no other review of this project being conducted by any public agency or authority. No application for financing for this Project has been submitted for review and been declined.

4.4 Set forth how the public purpose will be met by the Project.

The public purpose will be met by this Project, with the provisioning of high quality infrastructure to serve the residents of the communities that these projects will serve. These projects will ensure the highest quality of drinking water, wastewater services,

and reclaimed water for landscape irrigation and reuse are produced for these residents.

- 4.5 If the Applicant is not now the owner of the Project site, does the Applicant have an option or contract to purchase the site and any buildings on the site? If yes indicate the date of option agreement or contract, purchase price, the expiration date of the option, and/or the closing date.

The site's for these projects are currently owned by the subsidiary companies.

- 4.6 Is there a blood or legal relationship or common control or ownership between or among (A) the Applicant and the seller, lessor, or lessee of the Project site; (B) the Authority's officers, directors or counsel, and anyone listed in response to Sections 3.2, 3.3, or 3.4; (C) the County or any member of it's Board of Supervisors or other elected or appointed official of the County of Pima and the seller, lessor, or lessee of the Project site; (D) the County or any member of its Board of Supervisors or other elected or appointed official of the County of Pima and the Applicant or anyone listed in response to Sections 3.2, 3.3, or 3.4; and (E) the Authority's officers, directors, counsel and the Applicant and/or the seller, lessor, or lessee of the Project site? If yes, describe in full detail.

There is no known blood or legal relationship with any of the parties to this Project. Inclusive of the Applicant, Board of Supervisors, and relatives of the Applicant and Board of Supervisors.

- 4.7 If previously prepared, provide an appraisal or environmental assessment

See the attached Engineer's Feasibility Report.

- 4.8 If the Project to be financed through the issuance of the Authority's bonds has additional sources of funding, explain the status of each other source, including expected closing date.

No other source of financing has been contemplated at this time.

**SECTION 5
ADDITIONAL INFORMATION
REGARDING THE PROPOSED BONDS**

- 5.1 List the following information for all tax-exempt financings previously arranged by or for the benefit of the Applicant.

The Applicant has no previous tax-exempt financings.

- 5.2 Has the Applicant or any affiliate or related person thereof previously been denied financing, whether conventional, tax-exempt or otherwise, for the proposed or a similar Project? If yes, please describe.

No previous application for tax-exempt financing has been made.

- 5.3 Has the Applicant or any affiliate or related person thereof ever defaulted on any debt obligation including, without limitation, any public or private bond, mortgage, note, or debenture? If yes, please describe.

The Applicant has not previously defaulted on any private bond, mortgage, note, or debenture.

**SECTION 6
BOND PROCEEDS TO BE USED BY
SECTION 501(C) (3) ORGANIZATIONS**

(NOTE: Question 6.1 through 6.3 are to be completed only if the applicant is an organization described in Section 501(c)(3). If an Applicant is not such and entity, then the Applicant should so indicate.)

- 6.1 Attach a copy of the Applicant's Determination Letter from the Internal Revenue Service to the effect that the Applicant is an organization described in Section 501 (c)(3) of the Internal Revenue Code of 1986, as amended.

Not Applicable

- 6.2 Will the Applicant conduct at the Project any "unrelated trade or business", as that term is described in Section 513 of the Internal Revenue Code of 1986, as amended?, If yes, indicate particulars.

Not Applicable

- 6.3 Briefly describe the Applicant's history of operations, including a discussion of management's experience with the ownership and/or operations of facilities similar to the proposed Project. As well as a discussion of any limitations management may have which could adversely impact the operation of the proposed Project.

Not Applicable

APPENDIX A

William S. Levine
Chairman of the Board

Mr. Levine was one of the founders of Outdoor Systems, now known as Viacom Outdoor, an outdoor advertising / billboard firm. The company grew through acquisitions to become the largest outdoor advertising company in the nation. In December of 1999, Outdoor Systems was acquired by Infinity Broadcasting

Corporation, which was subsequently acquired by Viacom. Mr. Levine is a significant stockholder of Viacom, owning in excess of 14 million shares of Viacom stock.

Mr. Levine is the founder, director and officer of several successful operating companies.

Mr. Levine is also the co-founder and majority owner of Allstate U Lok Storage Co., a chain of self storage / mini-warehouses totaling over one million square feet.

Mr. Levine has been a significant real estate developer, owner, operator and lender for many years. He has been involved in land development, master planning, office, industrial and commercial projects. He is currently involved in developing ten grocery-anchored shopping centers in the Phoenix Metro area. Mr. Levine's portfolio of real estate exceeds \$200 million of equity.

Mr. Levine has been a resident of Phoenix for over forty years.

Daniel Cracchiolo
Member of the Board

Raised in Arizona, Mr. Cracchiolo served as a 1st Lieutenant in the United States Air Force from 1954 to 1956 after attending the University of Arizona where he received his Juris Doctorate in 1952. He was admitted to the Arizona State Bar in 1952 and was admitted to practice before the U.S. Supreme Court in 1957. From 1952 through 1954 and from 1956 to 1957 Mr. Cracchiolo served as Deputy County Attorney of Maricopa County, thereafter entering private practice and co-founding the firm of Burch & Cracchiolo in 1970.

Mr. Cracchiolo is a member of the Maricopa County and American Bar Associations, the State Bar of Arizona, Phoenix Association of Defense Counsel, American Board of Trial Advocates, American Judicature Society, International Association of Defense Counsel and International Academy of Trial Lawyers. He is listed in two categories in "Best Lawyers in America". He is a Regent of Brophy College Preparatory, a member of the Board and past President of COMPAS and serves as President and Director of the Steele Foundation, an organization dedicated to the support of charitable, religious, educational and scientific purposes.

Mr. Cracchiolo has been a resident of Arizona and in the water business through his family owned *Bella Vista Water Co.*, in Sierra Vista for over 50 years.

Trevor T. Hill, P.Eng
President & CEO

Raised in Vancouver, British Columbia, Mr. Hill graduated from Royal Roads Military College with a bachelor of Engineering in Mechanical Engineering in 1987. Mr. Hill attended the Royal Naval Engineering College in Plymouth, England where he completed his post-graduate studies in 1988. He served with the Canadian Navy as an Engineering officer retiring in 1994 after serving as Deputy Engineering officer in HMCS Huron in the 1991 Gulf War where he was decorated with the Gulf Kuwait Medal.

In 1994 Mr. Hill co-founded Hill, Murray & Associates, a design-build firm specializing in the construction and operation of water reclamation facilities in British Columbia and the Canadian Arctic. In 2000, Mr. Hill co-founded Algonquin Water Resources of America, a division of the Algonquin Power Income Fund. In his role of Director of Operations for AWRA, he led the acquisition team, acquiring 6 utilities in 3 years and amassing 37,000 customers in Arizona and Texas. In 2003, Mr. Hill co-founded Global Water Resources, a company established to acquire regulated utilities in the Southwestern United States. As President and CEO of Global Water, Mr. Hill is responsible for acquisition activities and the overall operations of Global Water Resources. Mr. Hill is a registered Professional Engineer and has been a resident of Arizona for 3 years.

The Executive Management Team

Leo Commandeur VP Business Development

Raised in Nelson, British Columbia, Mr. Commandeur attended Selkirk College where he studied accounting and business. Mr. Commandeur then further studied accounting through the society of management accountants or CMA Association. Mr. Commandeur spent several years in public accounting practice then branched out into the private sector.

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Graham Symmonds, P.Eng

VP Regulatory & Compliance

Mr. Symmonds was born in Uk and graduated from the University of Toronto in 1985 with a Bachelor of Applied Science degree in Mechanical Engineering. In 1986, Mr. Symmonds was commissioned as an officer in the Canadian Navy and spent nine years employed in a variety of operational and support units, and concluded his post-graduate education at the Royal Naval Engineering College in Plymouth, England.

In 1995, Mr. Symmonds joined Hill, Murray & Associates as Director of Operations and developed the formal design control practices for membrane bioreactor water reclamation facilities. Mr. Symmonds subsequently implemented the mechanisms required to measure the performance of the plants and implemented Design Validation trials agenda for each system.

In 2001, Mr. Symmonds joined Algonquin Water Resources of America, where, after a brief stint as the staff engineer, was promoted to Utility Manager for all of AWRA's utilities in Arizona and Texas, responsible for all business, technical and regulatory operations. In 2003, Mr. Symmonds joined the Global Water team as the VP Regulatory and Compliance.

Cindy Liles, CPA CFO & VP Operations

Ms. Liles was raised in Mississippi and graduated from Delta State University with a bachelor's degree in accounting. Ms. Liles is a certified public accountant (CPA) and was employed by Holiday Inns Worldwide, headquartered in Memphis, Tennessee. Ms. Liles was asked to join the team assigned to structure the sale of Holiday Inns balance sheet to Bass, PLC in 1990 while brands Embassy Suites, Homewood Suites, Hampton Inns and Harrah's Casinos were spun off to form Promus Corporation.

Ms. Liles, as Manager of Accounting, hired the staff for the Bass, PLC offices in Atlanta, Georgia and provided consulting to Promus Corporation until 1994. For the next six years, Ms. Liles was the Senior Vice President and Chief Accounting Officer for Mid-America Apartment Communities, an apartment real estate investment trust (REIT) headquartered in Memphis, TN trading on the New York Stock Exchange as MAA. Ms. Liles relocated to Phoenix, Arizona in 2001 to partner with the development company who formed Santa Cruz Water Company and Palo Verde Utilities Company.

Ms. Liles was CFO and General Manager of these companies which were formed to provide water and wastewater services to the fast growing area near Maricopa, AZ. Upon the acquisition by Global Water in 2004, Ms. Liles joined the team as CFO and VP Operations.

**Larry Braund, PE, RLS
VP Engineering**

Mr. Braund was raised in Michigan and served for 4 years in the United States Air Force. He graduated from the University of North Dakota with a Bachelor of Science in Civil Engineering.

In 1975, he co-founded Johnson Braund Design Group in Seattle, Washington and served as President of the firm for 10 years. The firm specialized in hotels, multi-family projects, and land development. The firm was sold to employees in 1985.

In 1985, he founded and became President of LSB International, Inc., an Arizona Corporation. LSB International (LSB) is a consulting engineering firm which specializes in providing it's clients with land development expertise in the areas of master land planning, entitlements and zoning, engineering design of streets and infrastructure, and construction management.

In 1996, Mr. Braund assisted in the formation Santa Cruz Water Company and Palo Verde Utilities Company to serve Rancho El Dorado and the surrounding, adjacent developments, in and near Maricopa, AZ. Mr. Braund served as Vice President of both companies. Mr. Braund now holds the position of VP Engineering for Global Water.

Mr. Braund holds registrations as a Professional Engineer in Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, Oregon, Texas, and Washington. In some of the States he also holds registrations as a Registered Land Surveyor.



ARIZONA DEPARTMENT OF COMMERCE

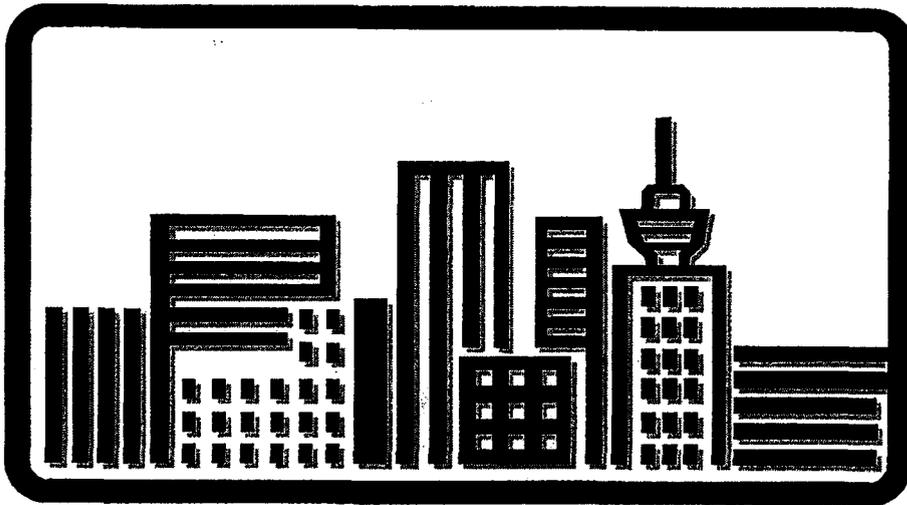
JANET NAPOLITANO
GOVERNOR

Our Job is JOBS!

GILBERT JIMENEZ
DIRECTOR

INFORMATION REQUIREMENTS

**FOR PROJECTS TO BE REVIEWED FOR POSSIBLE
ALLOCATION OF PRIVATE ACTIVITY BOND VOLUME
CAP FROM DIRECTOR'S DISCRETION CATEGORY**



**ARIZONA DEPARTMENT OF COMMERCE
INFORMATION REQUIREMENTS
FOR PROJECTS TO BE REVIEWED FOR DIRECTOR'S DISCRETION**

Introduction

Arizona Revised Statutes §35-902(B) states that ten per cent of the state ceiling of private activity bond volume cap shall be allocated to projects that are designated at the sole discretion of the director of the Department of Commerce. In order to facilitate a fully informed orderly process of review for each Project seeking volume cap from the Director, this pamphlet setting forth minimum information requirements has been established.

Application Procedures

The Department requires all applicants requesting director's discretion volume cap to submit to the Department, five (5) complete applications in accordance with the requirements of this pamphlet. An application shall be submitted by the industrial development authority, ("Corporation"), the AzHFA or on behalf of the Corporation by the User, bond counsel or underwriter as so authorized by the Corporation. Copies of the application will be distributed to other persons, as the Department deems necessary. No application will be considered completed unless all documents required by this pamphlet are submitted.

The application, files and records of the Applicant (and any Guarantor) filed with the Department will be available for inspection by the public. Thus the Applicant, by filing the application, agrees that any information delivered to the Department by or on behalf of such Applicant is not privileged and may be disclosed to the public. By making the application, the Applicant is expected to have disclosed any and all matters, which could be in any way material to the proposed financing at the date of application.

Application format

Material must be in 8-1/2 x 11 format, side bound, indexed and tabbed to correspond with the enumeration prescribed below. Exceptions: items of significant volume may be submitted as separate bound items. The following items must be tabbed as follows:

Please provide a copy of the application made to the Industrial Development Authority or the Arizona Housing Finance Authority in addition to the information listed below:

Parties

1. With respect to the Applicant, User or beneficiary of the Bond proceeds (if not the Applicant) and the Guarantors, provide the following information:
 - a. Name: Global Water Resources, LLC
 - b. Type of legal entity (if 501(c)(3) provide IRS determination letter): Limited Liability Corporation
 - c. Address: 22601 North 19th Avenue, Suite 210 Phoenix, Arizona 85027
 - d. Phone: 623.580.9600
 - e. Fax: 623.580.9659
 - f. E-mail: leo.commandeur@gwresources.com
 - g. Contact person: Leo Commandeur

2. Issuer
 - a. Name: The Industrial Development Authority of the County of Pima
 - b. Address: c/o RUSSO, RUSSO & SLANIA, P.C.
 - c. Phone: 520.529.1515
 - d. Fax: 520.529.9040
 - e. E-mail: mike@russolaw.net
 - f. Contact person: Michael A. Slania

3. Underwriter
 - a. Name: Hutchinson, shockey, Erley & Co.
 - b. Address: 1702 East Highland Avenue, Suite 301, Phoenix, Arizona 85016
 - c. Phone: 602.263.0163
 - d. Fax: 602.263.0181
 - e. E-mail: lvaldez@hsemuni.com
 - f. Contact person: Leo V. Valdez

4. Bond Counsel
 - a. Name: Kutak Rock, LLP
 - b. Address: 8601 North Scottsdale Road, Suite 300, Scottsdale, Arizona 85253-2742
 - c. Phone: 480.429.5000
 - d. Fax: 480.429.5001
 - e. E-mail: jorge.albala@kutakrock.com
 - f. Contact person: Jorge Albala

1. Short statement describing the type of Project, including:
 - a. Reference to the relevant sections of the Internal Revenue Code and regulations that cause the financing to be tax-exempt;

Section 142(a)(4) of the Internal Revenue Code of 1986, as amended and regulations related thereto

Section 142(a)(5) of the Internal Revenue Code of 1986, as amended and regulations related thereto.

These Sections describe "Exempt Facility Bonds" which include water and wastewater projects.

- b. The timetable for acquisition or construction and commencing operations; and

The project will be delivered over the next 36 months.

- c. The total investment made in connection with the Project if different from the amount of the Bonds.

The project investment will be the total amount of the Bond Issue, plus equity contributions as required.

2. Description of Project location (by address if available), name of present owner, if not the Applicant, of the Project, zoning and the environmental impact of the Project on the area.

Located in the City of Maricopa, specifically in current and planned developments that are located in or near the City of Maricopa.

The intended use of the bond proceeds are to install and expand wastewater treatment facilities, as well as water reclamation pipelines, and wastewater collection pipelines. The proceeds will also be used for water well development, water distribution pipelines, water storage facilities, and arsenic Treatment Facilities. Since all zoning and environmental issues have been addressed and approved through all the appropriate agencies, we anticipate no impact on the project area.

Present and projected number of employees and the nature and quality of employment opportunities created by the project: There are currently six operating field personnel employed by the company in Maricopa, as well as numerous management and customer service personnel to support their efforts at Global Water. There will be additional operating field personnel positions created by the wastewater treatment facility expansion, as well as the water treatment facility construction. It is likely that as many as 10 to 15 new positions will be created by the growth and expansion of the company.

The projects include the installation of wastewater and reclaimed water infrastructure for the provision of service described above. sewer mains, reclaimed water mains, wastewater lift stations, wastewater treatment facilities, and reclaimed water mixing and distribution centers. The projects also include

the installation of water mains, water treatment facilities, water distribution centers, and water production facilities. In addition, the Company intends to improve management and operational control through the provision of geographical information systems (GIS), computerized maintenance management systems (CMMS), and Supervisory, Control and Data Acquisition Systems (SCADA).

3. Describe in detail the public benefit of the Project. For example, number of jobs created; average wages/salaries of jobs created; benefits available to employees; Project's impact on the Local or State tax base or amount of taxes paid; economic benefits to the local and state economy; market area served by utility extension; type and number of set aside units; any special needs populations served; special services; and any other public benefit.

The project once completed and fully staffed, will create 10 to 15 new positions in the City of Maricopa, and through the procurement of products and services as well as the payment of property taxes, create a significant financial impact on the City of Maricopa and the surrounding Counties.

- a. The average wages and salaries will vary by specific training requirements and certifications, but will all be full time positions ranging from a low of \$10.00 to \$12.00 per hour to a high of \$30.00 to \$35.00 per hour. All full time positions are eligible for full health care benefits, inclusive of medical, dental, short and long term disability, vision care and 401K plan.
 - b. Currently the City of Maricopa, does not provide water and wastewater services to its residents, Global Water is the major provider of these services within the City of Maricopa's jurisdictional boundaries and planning area.
4. Provide Project financial information, including but not limited to Project pro forma income and expense statement for five (5) years, including debt service coverage ratios of the bonds. The financial statements should clearly state all material assumptions. For existing Projects, submit the past three (3) years income and expense statements.

See the attached Engineers Feasibility Report (attachment 2), attached Audited Financial Statements and Interim Financial Statements, sections 9-11.

5. Terms of the purchase of the Project or Project land.

The company currently owns the roughly 40 acre parcel of land that the current water reclamation facility is on, and the future expansion will be constructed on. Also any pump station locations will be owned by the utility company. The company also owns well sites and a water storage tank site which will be used for the installation of the Arsenic treatment facility. All land for wells, and storage tanks will be owned by the company in fee, and none of the bond proceeds will be used for the acquisition of land.

1. Submit the following:

- a. Short statement of the type of business engaged in by the Applicant.

Global Water Resources, LLC (GWR) is the owner and aggregator of private water and wastewater utilities in Arizona and the Southwestern United States. This parent company currently owns two subsidiary utility companies, Santa Cruz Water Company (SCWC), and Palo Verde Utilities Company (PVUC), which are private water and wastewater utilities providing services to existing and planned developments in the City of Maricopa. As previously discussed, GWR serves the majority of the City of Maricopa's residents water and sewer services. The City does not currently own and operate either a water or sewer service provider. GWR is an aggregator of small to medium sized regulated utilities in the Southwest and is currently negotiating with several other private utility companies as possible acquisitions.

The companies provide water, wastewater and reclaimed water to residents of new developments in the City of Maricopa, including Rancho El Dorado, Provinces, Villages, Cobblestone, Acacia and their appurtenant commercial developments. The proceeds of this pending bond issue will be used to expand water and wastewater service only inside the existing service area. In addition, SCWC and PVUC are being asked to service additional development outside the existing service area. These services include the production, treatment and distribution of potable water for domestic and commercial use; the collection and treatment of wastewater and the distribution of reclaimed water in the service area; and the provision of raw water for construction use.

The company's management and administrative services are performed from its head office at 22601 North 19th Avenue, Phoenix, while the day to day operations of the utilities are performed by local on site operations personnel in the City of Maricopa, who manage the water reclamation facility operations, water production and distribution, wastewater collection, as well as meter installations, and customer service calls.

- b. Description of the Applicant's corporate structure, including Applicant's parent, subsidiaries, affiliated corporation and general partners.

The applicant is the parent company, which wholly owns the subsidiary Utility Companies called Santa Cruz Water Company (SCWC) and Palo Verde Utilities Company (PVUC).

- c. Description of Applicant's (or User's) experience in operating other projects similar to the Project for which volume cap is requested.

The executive management and senior management of the company have many years of professional operating experience with this type of project and similar projects. The following executive resumes will demonstrate the company has numerous years of experience in the ownership, engineering, finance and operations of utility companies in the state of Arizona, as well as many years of experience in the sector, with the finance and operations of businesses in general.

The executive management of the company has previous experience in the development of a regulated utility business in the State of Arizona. Where they successfully acquired and expanded five regulated utilities with over 30,000 customers in their service areas. This utility company called Algonquin Water Resources of America is part of the Algonquin Power Income Fund. Algonquin Water Resources of America is the holding company for Bella Vista Water Company, Gold Canyon Sewer Company, Black Mountain Sewer Company, and Litchfield Park Services Company; are all Arizona private regulated utilities.

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Chairman of the Board

Mr. Levine was one of the founders of Outdoor Systems, now known as Viacom Outdoor, an outdoor advertising / billboard firm. The company grew through acquisitions to become the largest outdoor advertising company in the nation. In December of 1999, Outdoor Systems was acquired by Infinity Broadcasting Corporation, which was subsequently acquired by Viacom. Mr. Levine is a significant stockholder of Viacom, owning in excess of 14 million shares of Viacom stock.

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**Cindy Liles, CPA
CFO & VP Operations**

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**Larry Braund, PE, RLS
VP Engineering**

Mr. Braund was raised in Michigan and served for 4 years in the United States Air Force. He graduated from the University of North Dakota with a Bachelor of Science in Civil Engineering.

In 1975, he co-founded Johnson Braund Design Group in Seattle, Washington and served as President of the firm for 10 years. The firm specialized in hotels, multi-family projects, and land development. The firm was sold to employees in 1985.

In 1985, he founded and became President of LSB International, Inc., an Arizona Corporation. LSB International (LSB) is a consulting engineering firm which specializes in providing it's clients with land development expertise in the areas of master land

planning, entitlements and zoning, engineering design of streets and infrastructure, and construction management.

In 1996, Mr. Braund assisted in the formation Santa Cruz Water Company and Palo Verde Utilities Company to serve Rancho El Dorado and the surrounding, adjacent developments, in and near Maricopa, AZ. Mr. Braund served as Vice President of both companies. Mr. Braund now holds the position of VP Engineering for Global Water.

Mr. Braund holds registrations as a Professional Engineer in Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, Oregon, Texas, and Washington. In some of the States he also holds registrations as a Registered Land Surveyor.

- d. Provide last three years (audited, if available), financial statements and most recent quarterly reports for the Applicant, User and Guarantor.

See the attached Audited Financial Statements, and Quarterly Reports

2. Submit the following:

- a. A statement describing any pending litigation either by or against the User, it's subsidiaries or any related concern. If litigation of any nature is pending or threatened concerning either the Project, proposed site, or the bonds sought to be issued, such litigation must be noted.

There is no pending litigation against the user, its subsidiaries or any related concern.

- b. A list of all executive or managing officers, directors and general partners of the Applicant and User. The application must state if any such officer, director, general partner or officer, director or general partner of any Related Concerns has been convicted, is currently under indictment or is the subject of a complaint alleging the commission of a felony or of a misdemeanor involving fraud or moral turpitude in any court of any state or of the courts of the United States or Canada or is now or ever has been charged or convicted of any civil, administrative or criminal offense regarding or growing out of the conduct of the business of the User or a similar Concern or out of the issuance, sale or solicitation of any type of security.

The Arizona Corporation Commission became privy to a number of newspaper articles involving a previous business dispute, regarding Trevor Hill but not related to GWR, SCWC or PVUC; this matter was thoroughly researched by the Commission and found to be without merit.

None of the officer, director, general partner or officer, director or general partner of any Related Concerns has been convicted, is currently under indictment alleging the commission of a felony or of a misdemeanor involving fraud or moral turpitude in any court of any state or of the courts of the United States or Canada or is now or ever has been charged or convicted of any civil, administrative or criminal offense regarding or growing out of the conduct of the business of the User or a similar Concern or out of the issuance, sale or solicitation of any type of security.

William S. Levine – Chairman of the Board
Daniel Cracchiolo – Member of the Board
Trevor T, Hill – President & CEO
Leo Commandeur – Secretary/Treasurer

Bonds

1. Describe the terms and provisions of all Bonds and other financial commitments, including but not limited to estimated debt service schedules. In the case of a bond structure that does not allow bond proceeds to be spent on the Project on the day of bond closing, provide a complete list of all conditions that must be satisfied in order for all Bond proceeds to be spent on Project costs and the date each condition is expected to be satisfied.

We expect to offer bonds with a twenty five year maturity in two or three term bonds (if offered privately) with level amortization and a two year interest only period. If credit enhanced we expect to offer bonds publicly in a twenty five year serial maturity structure. In either case we do not anticipate any conditions to be imposed prior to release of bond proceeds.

Please see attachment 1 for a sample estimated debt service schedules and estimated debt service coverage.

2. Provide a detailed sources and uses of funds.

ESTIMATED SOURCES AND USES OF FUNDS

Sources

Series 2005 Bonds	\$ 36,495,000
Global Water Contribution	<u>680,000</u>
Total Estimated Sources	<u>\$ 37,175,000</u>

Uses

Series 2004 Project Fund - Wastewater	\$ 13,320,000
Series 2004 Project Fund - Water	18,800,000
Debt Service Reserve Fund	3,649,500
Underwriting Discount	1,035,000
Cost of Issuance	370,500
Capitalized Interest	0
Contingency	<u>0</u>
Total Estimated Uses	<u>\$ 37,175,000</u>

3. Provide a detailed list of all costs of issuance.

ESTIMATED COST OF ISSUANCE

Bond Counsel (Kutak Rock)	\$ 85,000
Bond Counsel Expenses	5,000
Underwriters Counsel (Squire Sanders & Dempsey)	45,000
Underwriters Counsel Expenses	5,000
Borrowers Counsel (Roshka, Heyman & DeWolf)	15,000
Standard & Poors	40,000
Financial Consultant	20,000
Paying Agent, Registrar, Trustee (JP Morgan Chase)	20,000
Official Statement Printing (Bowne of Phoenix)	10,000
Travel	5,500
Feasibility Study (Kennedy Jenks)	50,000
Borrowers CPA (Deloitte Touche)	44,500
Miscellaneous	<u>25,000</u>
Sub-Total	370,000
Underwriting Discount	<u>1,035,000</u>
Grand Total	<u>\$ 1,405,000</u>

Note:

Should the issue be approved for municipal bond insurance we estimate the premium to be in the \$1,300,000 to \$1,600,000 range. This would be provided for an equity contribution from Global Water Resources.

4. Provide bond rating, if applicable

The proposed bond issue for Global Water Resources LLC has not yet been rated. A feasibility study, engineering design and capital cost estimates and two years of audited financial statements for the Company and its subsidiary utilities have been submitted to Standard & Poors for a rating, they are planning a site visit for rating purposes in the next several weeks.

5. Describe all credit enhancements for the Bonds.

Ambac made a utility site visit on November 10, 2004. Decisions regarding rating and insurance are expected in the next few weeks. Initial discussions with both S&P and Ambac based upon the above listed submittals have been very positive. Audited financials and utility connection experience suggest a projected coverage ratio of between 1.59 and 2.45 times.

XL Capital also made a utility site visit on November 16, 2004, for the purpose of considering credit enhancement for the issue.

6. Discuss the method of sale, including but not limited to:

- a. Timetable for mailing the preliminary official statements, bond sale and bond closing

We expect to be able to mail a preliminary official statement around the week of January 10-17, 2005 and offer bonds the week of February 7-14, 2005. We would anticipate a bond closing around March 1, 2005.

b. Public or private sale; and

If we are successful in getting credit enhancement the offering will be a public sale, if not we will offer bonds privately to institutional investors with investor suitability letters, minimum \$100,000 denominations and transfer restrictions.

c. Investor suitability letters, minimum denominations or other transfer restrictions;

See b. above.

7. Copy of the IDA, AzHFA and council or supervisors approval resolution.

Copies of the preliminary and amended inducement resolutions of the Pima County IDA appear in Section 8 of this application.

1. With respect to any multifamily residential rental projects:
 - a. Provide an independent market demand analysis or other third party information which demonstrates demand for the Project. All market studies submitted should conform to the Department of Housing's Market Study Guide. The guide is available by contacting the Department of Housing at (602) 771-1000 or on the Department of Housing website at http://www.housingaz.com/UPLOAD/Market_Study_Guide_2003_QAP.pdf
 - b. Provide a list of all apartment projects (including the number of units) within a two-mile radius of the Project;
 - c. Provide a schedule of rents and fees to be charged for the different units;
 - d. Provide a schedule of Project expenses;
 - e. Provide a marketing plan for low and moderate-income families and any other special needs populations.

2. Provide an Affidavit to be executed by a general partner, managing partner, one officer or one director of the Applicant, stating that all facts and statements contained in the materials and the attachments are true and correct to the best of such general partner's, managing partner's, officer's or director's knowledge and belief that he/she knows of no material adverse fact relating to the Applicant and/or User having authority to make such statement and the application is made in accordance with these requirements and the Applicant consents to all investigations deemed reasonably necessary by the Department as set forth therein.

The original affidavit appears in this section of the application marked "original", the subsequent four copies of this affidavit will be reproductions.

3. An application and all exhibits, appendices and attachments thereto and all legal proceedings submitted to the Department are an "instrument" for purposes of A.R.S. §39-161. The knowing inclusion of any false information is a Class 6 felony.

Acknowledged and understood.

4. The information requested by this pamphlet will be considered to set forth minimum requirements and the Department reserves the right to add additional requirements on a case-by-case basis.

Acknowledged and understood.

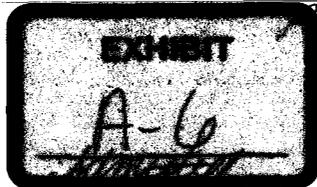
5. All applications shall be delivered to:

Arizona Department of Commerce
Attn: Sandy Brown
1700 W. Washington St., Suite 600
Phoenix, Arizona 85007

6. The Department and its members are covered by Arizona's conflict of Interest Law (Section §38-501, et seq., Arizona Revised Statutes). The Applicant should take every precaution available to it to learn of any possible conflict between itself, the Department or officers or employees of the Department or any "relative" (as defined in the Conflict of Interest Law) of any of the foregoing which might prohibit the Department from completing the financing, especially where construction or other contracts may be signed before the bonds are authorized or issued.

Review

1. The Department may refer the information to its legal counsel, financial advisor, and such others, as it deems necessary for their review.
2. The Director's decision in selecting a Project for receipt of volume cap is made solely in her or his sole and absolute discretion and is final.
3. It is the Department's policy that bonds which are to be publicly placed shall receive an investment grade rating of "A" or higher from a nationally recognized rating organization, or be secured by credit enhancement issued or confirmed by an entity rated as "A" or higher.
4. Any bonds not rated or rated in a category less than an "A" shall be sold in a private placement and shall be purchased, and transfer restricted to, Accredited Investors or Qualified Institutional Buyers as those terms are redefined in the federal securities laws.
5. Upon receipt of the complete information required in this pamphlet, The Department will commence a review and analysis process lasting not more than three weeks. Applicant will be notified of the Director's Discretion determination at that time.



HEARING

BEFORE THE ARIZONA CORPORATION COMMISSION

2005 MAR 22 P 4:47

COMMISSIONERS

Jeff Hatch-Miller, Chairman

William A. Mundell

Marc Spitzer

Mike Gleason

Kristin K. Mayes

AZ CORP COMMISSION
DOCUMENT CONTROL

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MAR 23 2005

ARIZONA CORPORATION COMMISSION
HEARING DIVISION

IN THE MATTER OF THE APPLICATION OF
PALO VERDE UTILITIES COMPANY FOR AN
EXTENSION OF ITS EXISTING CERTIFICATE
OF CONVENIENCE AND NECESSITY.

Docket No. SW-03575A-04-0767

IN THE MATTER OF THE APPLICATION OF
SANTA CRUZ WATER COMPANY FOR AN
EXTENSION OF ITS EXISTING CERTIFICATE
OF CONVENIENCE AND NECESSITY.

Docket No. W-03576A-04-0767

**NOTICE OF
FILING AFFIDAVIT OF MAILING**

Palo Verde Utilities Company, L.L.C. and Santa Cruz Water Company, L.L.C., through its undersigned counsel, hereby submit the attached affidavit of proof of mailing of the notice in this docket.

RESPECTFULLY submitted this 22^d day of March 2005.

ROSHKA HEYMAN & DEWULF, PLC

By

Raymond S. Heyman
Michael W. Patten
One Arizona Center
400 East Van Buren Street, Suite 800
Phoenix, Arizona 85004

Original + 15 copies of the foregoing
filed this 22nd day of March 2005, with:

Docket Control
ARIZONA CORPORATION COMMISSION
1200 West Washington
Phoenix, Arizona 85007

ROSHKA HEYMAN & DEWULF, PLC
ONE ARIZONA CENTER
400 EAST VAN BUREN STREET - SUITE 800
PHOENIX, ARIZONA 85004
TELEPHONE NO 602-256-6100
FACSIMILE 602-256-6800

- 1 Copies of the foregoing hand-delivered/mailed
- 2 this 22 day of March 2005, to:
- 3 Dwight Nodes, Esq.
- 4 Administrative Law Judge
- 5 Hearing Division
- 6 Arizona Corporation Commission
- 7 1200 West Washington
- 8 Phoenix, Arizona 85007
- 9 David Ronald, Esq.
- 10 Legal Division
- 11 Arizona Corporation Commission
- 12 1200 West Washington
- 13 Phoenix, Arizona 85007
- 14 Steve Olea
- 15 Utilities Division
- 16 Arizona Corporation Commission
- 17 1200 West Washington
- 18 Phoenix, Arizona 85007
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ROSHKA HEYMAN & DEWULF, PLC
ONE ARIZONA CENTER
400 EAST VAN BUREN STREET - SUITE 800
PHOENIX, ARIZONA 85004
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AFFIDAVIT OF PROOF OF MAILING

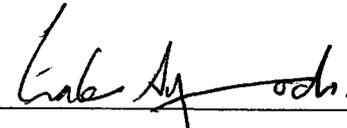
Docket No. SW-03575A-04-0767

Docket No. W-03576A-04-0767

1
2
3 STATE OF ARIZONA)
4) ss.
5 County of Maricopa)
6

7 I, Graham Symmonds, states as follows:

- 8 1. I am the Vice President, Compliance for Global Water Resources.
9 2. I certify that a copy of the attached notice was included in the March
10 customer billing statements that were mailed via U.S. First-Class Mail to all Palo Verde Utilities
11 Company and Santa Cruz Water Company customers on March 18, 2005.

12
13 
14 _____
15 Graham Symmonds

16
17 SUBSCRIBED AND SWORN to before me by Graham Symmonds, this 22nd day of
18 March, 2005.

19
20 
21 _____
22 Notary Public

23 My Commission Expires:

24 9/18/06
25
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27



PUBLIC NOTICE OF HEARING ON THE APPLICATION OF PALO VERDE UTILITIES COMPANY, LLC, AND SANTA CRUZ WATER COMPANY, LLC, FOR AN EXTENSION OF THEIR CERTIFICATES OF CONVENIENCE AND NECESSITY

(SW-03575A-04-0767 et al.)

On October 25, 2004, Palo Verde Utilities Company, LLC, and Santa Cruz Water Company, LLC ("Applicants"), filed an application with the Arizona Corporation Commission ("Commission") for an extension of their Certificates of Convenience and Necessity ("CC&N") to provide wastewater and water service in Pinal County, Arizona. If the applications are granted, the Applicants would be the exclusive provider of wastewater and water to the proposed area, and would be required by the Commission to provide service under rates and charges and terms and conditions established by the Commission. The application is available for inspection during regular business hours at the offices of the Commission in Phoenix, at 1200 West Washington Street, Phoenix, Arizona, and at the offices of Global Water, 22601 N. 19th Ave. Ste. 210, Phoenix, AZ 85027.

The Commission will hold a hearing on this matter beginning on **April 13, 2005, at 10:00 a.m.**, at the Commission's offices, 1200 West Washington Street, Phoenix, Arizona. Public comment will be taken on the first day of the hearing.

The law provides for an open public hearing at which, under appropriate circumstances, interested parties may intervene. Intervention shall be permitted to any person entitled by law to intervene and having a direct and substantial interest in the matter. Persons desiring to intervene must file a written motion to intervene with the Commission, which motion should be sent to the Applicants or its counsel and to all parties of record, and which, at the minimum, shall contain the following:

1. The name, address, and telephone number of the proposed intervener and of any party upon whom service of documents is to be made if different than the intervener.
2. A short statement of the proposed intervener's interest in the proceeding (e.g., a customer of the Applicants, a shareholder of the Applicants, etc.)
3. A statement certifying that a copy of the motion to intervene has been mailed to the Applicants or their counsel and to all parties of record in the case.

The granting of motions to intervene shall be governed by A.A.C. R14-3-105, except that all motions to intervene must be filed on or before April 12, 2005. The granting of intervention, among other things, entitles a party to present sworn evidence at hearing and to cross-examine other witnesses. Failure to intervene will not preclude any potential customer from appearing at the hearing and making a statement on such person's own behalf. You will not, however, receive any further notice of the proceeding unless requested by you.

The commission does not discriminate on the basis of disability in admission to its public meetings. Persons with a disability may request a reasonable accommodation such as a sign language interpreter, as well as request this document in an alternative format, by contacting Linda Hogan, ADA Coordinator, voice phone number 602-542-3931, E-mail Lhogan@admin.cc.state.az.us. Requests should be made as early as possible to allow time to arrange the accommodation.

EXHIBIT
A-7

HEARING

BEFORE THE ARIZONA CORPORATION COMMISSION

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COMMISSIONERS

Jeff Hatch-Miller, Chairman
William A. Mundell
Marc Spitzer
Mike Gleason
Kristin K. Mayes

2005 MAR 28 P 4:42
AZ CORP COMMISSION
DOCUMENT CONTROL

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MAR 29 2005
ARIZONA CORPORATION COMMISSION
HEARING DIVISION

IN THE MATTER OF THE APPLICATION OF
PALO VERDE UTILITIES COMPANY FOR AN
EXTENSION OF ITS EXISTING CERTIFICATE
OF CONVENIENCE AND NECESSITY.

Docket No. SW-03575A-04-0767

IN THE MATTER OF THE APPLICATION OF
SANTA CRUZ WATER COMPANY FOR AN
EXTENSION OF ITS EXISTING CERTIFICATE
OF CONVENIENCE AND NECESSITY.

Docket No. W-03576A-04-0767

**NOTICE OF
FILING AFFIDAVIT OF
PUBLICATION**

Palo Verde Utilities Company, L.L.C. and Santa Cruz Water Company, L.L.C., through its undersigned counsel, hereby submit the attached affidavit of publication.

RESPECTFULLY submitted this 28th day of March 2005.

ROSHKA HEYMAN & DEWULF, PLC

By 

Raymond S. Heyman
Michael W. Patten
One Arizona Center
400 East Van Buren Street, Suite 800
Phoenix, Arizona 85004

Original + 15 copies of the foregoing
filed this 28th day of March 2005, with:

Docket Control
ARIZONA CORPORATION COMMISSION
1200 West Washington
Phoenix, Arizona 85007

ROSHKA HEYMAN & DEWULF, PLC
ONE ARIZONA CENTER
400 EAST VAN BUREN STREET - SUITE 800
PHOENIX, ARIZONA 85004
TELEPHONE NO 602-256-6100
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Mary Jppolits

Affidavit of Publication

DONOVAN M. KRAMER SR.

STATE OF ARIZONA

COUNTY OF PINAL

} ss.

PUBLIC NOTICE

PUBLIC NOTICE OF HEARING
ON THE APPLICATION OF
PALO VERDE UTILITIES COMPANY,
LLC AND
SANTA CRUZ WATER COMPANY, LLC,
FOR AN EXTENSION OF THEIR
CERTIFICATES OF CONVENIENCE
AND NECESSITY
(SW-03575A-04-0767 et al.)

On October 25, 2004, Palo Verde Utilities Company, LLC, and Santa Cruz Water Company, LLC ("Applicants") filed an application with the Arizona Corporation Commission ("Commission") for an extension of their Certificates of Convenience and Necessity ("CC&N") to provide wastewater and water service in Pinal County, Arizona. If the applications are granted, the Applicants would be the exclusive provider of wastewater and water to the proposed area, and would be required by the Commission to provide service under rates and charges, and terms and conditions established by the Commission. The application is available for inspection during regular business hours at the offices of the Commission in Phoenix, at 1200 West Washington Street, Phoenix, Arizona, and at the offices of the Companies, Dear Valley Financial Centre, 22601 North 19th Avenue, Suite 210, Phoenix, Arizona 85027.

The Commission will hold a hearing on this matter beginning on April 13, 2005, at 10:00 a.m. at the Commission's offices, 1200 West Washington Street, Phoenix, Arizona. Public comment will be taken on the first day of the hearing.

The law provides for an open public hearing at which, under appropriate circumstances, interested parties may intervene. Intervention shall be permitted to any person entitled by law to intervene and having a direct and substantial interest in the matter. Persons desiring to intervene must file a written motion to intervene with the Commission, which motion should be sent to the Applicants or its counsel and to all parties of record, and which, at the minimum, shall contain the following:

1. The name, address, and telephone number of the proposed intervenor and of any party upon whom service of documents is to be made if different than the intervenor.

2. A short statement of the proposed intervenor's interest in the proceeding (e.g., a customer of the company, a shareholder of the company, a competitor, etc.).

3. A statement certifying that a copy of the motion to intervene has been mailed to the Company or its counsel and to all parties of record in the case.

The granting of motions to intervene shall be governed by A.A.C. R14-3-105, except that all motions to intervene must be filed on or before April 12, 2005. The granting of intervention, among other things, entitles a party to present sworn evidence at the hearing and to cross-examine other witnesses. Failure to intervene will not preclude any potential customer from appearing at the hearing and making a statement on such person's own behalf. You will not, however, receive any further notice of the proceeding unless requested by you.

The Commission does not discriminate on the basis of disability in admission to its public meetings. Persons with a disability may request reasonable accommodations such as sign language interpreter, as well as request this document in an alternative format by contacting Linda Hogan, ADA Coordinator, voice phone number 602-542-1931, e-mail Lhogan@admin.cc.state.az.us. Requests should be made as early as possible to allow time to arrange the accommodation.

No. of publications: 1, date of publication: March 23, 2005.

_____ first being duly sworn deposes and says: That he is a native born citizen of the United States of America, over 21 years of age, that he is publisher of the Casa Grande Dispatch, a daily newspaper published at Casa Grande, Pinal County, Arizona, Monday through Saturday of each week; that a notice, a full, true and complete printed copy of which is hereunto attached, was printed in the regular edition of said newspaper, and not in a supplement thereto, for ONE consecutive issues the first publication thereof having been on the 23RD

day of MARCH A.D., 2005

Second publication _____

Third publication _____

Fourth publication _____

Fifth publication _____

Sixth publication _____

TRI-VALLEY DISPATCH

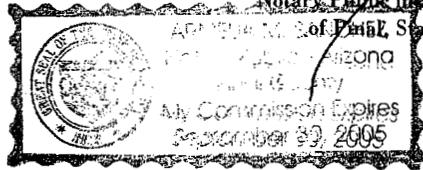
CASA GRANDE DISPATCH

By Donovan Kramer
DONOVAN M. KRAMER SR., Publisher

Sworn to before me this 24th
day of March A.D., 2005

[Signature]

Notary Public in and for the County
of PINAL, State of Arizona
My Commission Expires
September 30, 2005



LEGAL

MEMORANDUM

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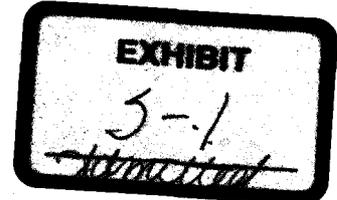
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TO: Docket Control
Arizona Corporation Commission

AZ CORP COMMISSION
DOCUMENT CONTROL

FROM: Ernest G. Johnson
Director
Utilities Division

Date: March 25, 2005



RE: STAFF REPORT FOR PALO VERDE UTILITIES COMPANY, L.L.C. AND
SANTA CRUZ WATER COMPANY, L.L.C. - APPLICATION FOR
EXTENSION OF CERTIFICATES OF CONVENIENCE AND NECESSITY
FOR WASTEWATER AND WATER SERVICES (DOCKET NOS. SW-
03575A-04-0767 AND W-03576A-04-0767)

Attached is the Staff Report for Palo Verde Utilities Company, L.L.C. and Santa Cruz Water Company, L.L.C. application for extension of their existing Certificates of Convenience and Necessity for wastewater and water services. Staff is recommending approval with conditions.

EGJ:BNC:red

Originator: Blessing Chukwu

Attachment: Original and 13 Copies

RECEIVED

MAR 28 2005

LEGAL DIV.
ARIZ. CORPORATION COMMISSION

Service List for: Palo Verde Utilities Company, L.L.C. and Santa Cruz Water Company, L.L.C.
Docket Nos. SW-03575A-04-0767 and W-03576A-04-0767

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Chief, Legal Division
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Mr. Ernest G. Johnson
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Phoenix, Arizona 85007

Ms. Lyn Farmer
Chief, Hearing Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

STAFF REPORT
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

PALO VERDE UTILITIES COMPANY, L.L.C.
AND
SANTA CRUZ WATER COMPANY, L.L.C.

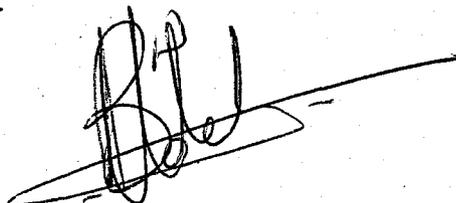
DOCKET NOS. SW-03575A-04-0767
AND
W-03576A-04-0767

APPLICATION FOR EXTENSION
OF EXISTING CERTIFICATES OF
CONVENIENCE AND NECESSITY

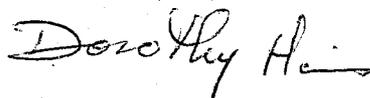
MARCH 2005

STAFF ACKNOWLEDGMENT

The Staff Report for Palo Verde Utilities Company, L.L.C. and Santa Cruz Water Company, L.L.C. (Docket Nos. SW-03575A-04-0767 and W-03576A-04-0767) was the responsibility of the Staff members signed below. Blessing Chukwu was responsible for the review and analysis of the Companies' application. Dorothy Hains was responsible for the engineering and technical analysis.

A handwritten signature in black ink, appearing to be 'Blessing Chukwu', with a long horizontal stroke extending to the right.

Blessing Chukwu
Executive Consultant

A handwritten signature in black ink, appearing to be 'Dorothy Hains', written in a cursive style.

Dorothy Hains
Utilities Engineer

EXECUTIVE SUMMARY
PALO VERDE UTILITIES COMPANY, L.L.C. AND
SANTA CRUZ WATER COMPANY, L.L.C.
APPLICATION FOR EXTENSION OF CERTIFICATES OF CONVENIENCE AND
NECESSITY
DOCKET NOS. SW-03575A-04-0767 and W-03576A-04-0767

On October 25, 2004, Palo Verde Utilities Company, L.L.C. ("Palo Verde" or "Wastewater Company") and Santa Cruz Water Company, L.L.C. ("Santa Cruz" or "Water Company") collectively referred to as ("The Utilities") jointly filed an application with the Arizona Corporation Commission ("ACC" or "Commission") for an extension of their respective Certificates of Convenience and Necessity ("CC&N") to provide wastewater and water services in portions of Pinal County, Arizona. On February 16, 2005, Staff filed a Sufficiency Letter indicating that the application had met the sufficiency requirements of Arizona Administrative Code.

On September 23, 2004, the Commission issued Decision No. 67240, which authorized Palo Verde and Santa Cruz to extend their respective service territories and required compliance with numerous conditions. On January 27, 2005, the Utilities filed documentation to comply with portions of Decision No. 67240.

By this application, Palo Verde and Santa Cruz are seeking Commission authority to extend their service territory to include approximately seven and one-half (7.5) square miles. The proposed extension area is to be developed into several master planned communities comprised of over 17,000 lots.

Based on the present facilities and planned improvements, Staff believes both Palo Verde and Santa Cruz will have adequate production and treatment capacities to serve the requested area. Palo Verde and Santa Cruz are in compliance with the Arizona Department of Environmental Quality, the Commission, and the Arizona Department of Water Resources.

Staff recommends the Commission approve the application jointly filed by Palo Verde and Santa Cruz for an extension of their respective CC&N within portions of Pinal County, Arizona, as amended, to provide wastewater and water services, subject to compliance with the following conditions:

1. To require Santa Cruz to charge its authorized rates and charges in the extension area.
2. To require Santa Cruz to file a copy of the Arizona Department of Environmental Quality ("ADEQ") "Approval To Construct" ("ATC") for the Neely Well Production/Treatment Plant with Docket Control by December 31, 2005.
3. To require Santa Cruz to file a copy of the ATC for the Rancho Mirage Production/Treatment Plants and the Glennwilde Well Production/Treatment Plants with Docket Control by June 30, 2008.

4. To require Santa Cruz to file with Docket Control a copy of the amendment to its existing Designation of Assured Water Supply, stating that there is adequate water supply, where applicable or when required by statute, within a year of the effective date of the final decision and order issued pursuant to this application.
5. To require Santa Cruz to submit its ADEQ Certificate of ATC for arsenic treatment to Docket Control by November 30, 2005.
6. To require Santa Cruz to prepare an amended curtailment tariff to limit delivery to those irrigation customers who use drinking water to perform irrigation purpose during Stage 2, 3 and 4.
7. To require Santa Cruz to file its amended curtailment tariff for Staff's review and approval with Docket Control within thirty days of the effective date of the final decision and order issued pursuant to this application.
8. To require Santa Cruz to take appropriate action so that the necessary corrections to ADWR registration records are made to indicate that the three Neely Wells are owned by Santa Cruz, and to submit such to Docket Control within sixty days of the effective date of the decision in this case.
9. To require Santa Cruz to take appropriate action so that the necessary corrections to ADWR registration records are made to indicate that the two Glennwilde wells and the two Rancho Mirage wells are owned by Santa Cruz and to submit proof of such to Docket Control within one year of the effective date of the final decision and order issued pursuant to this application.
10. To require Santa Cruz to file a copy of the municipal franchise agreement for the current CC&N and the extension area, with Docket Control within 365 days of the decision in this matter.
11. To require Palo Verde to charge its authorized rates and charges in the extension area.
12. To require Palo Verde to file a copy of the ADEQ Engineering Completion Documents of the 3 MGD plant expansion project with Docket Control by December 31, 2006.
13. To require Palo Verde to file a copy of the amended CAAG Section 208 Plan with Docket Control by December 31, 2005.
14. To require Palo Verde to file a copy of the municipal franchise agreement for the current CC&N and the extension area, with Docket Control within 365 days of the decision in this matter.

Staff further recommends that the Commission's Decision granting the requested CC&N extensions to Palo Verde and Santa Cruz be considered null and void without further order from

the Commission should Palo Verde and Santa Cruz fail to meet Conditions Nos. 2, 3, 4, 5, 7, 8, 9, 10, 12, 13, and 14 listed above within the time specified.

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Introduction

On October 25, 2004, Palo Verde Utilities Company, L.L.C. ("Palo Verde" or "Wastewater Company") and Santa Cruz Water Company, L.L.C. ("Santa Cruz" or "Water Company") collectively referred to as ("The Utilities") jointly filed an application with the Arizona Corporation Commission ("ACC" or "Commission") for an extension of their respective Certificates of Convenience and Necessity ("CC&N") to provide wastewater and water services in portions of Pinal County, Arizona. On November 12, 2004, the Utilities filed an amendment to the application to include an additional parcel of approximately 100 acres.

On November 12, 2004, the ACC Utilities Division ("Staff") filed an Insufficiency Letter, indicating that the Utilities' application did not meet the sufficiency requirements of Arizona Administrative Code ("A.A.C.") R14-2-402(C) and R14-2-602(B). A copy of the Insufficiency Letter was sent to the Utilities via U.S mail. In the Letter, Staff listed the deficiencies that need to be cured for administrative purposes.

On December 14 and 21, 2004, January 14 and 25, 2005, and February 14, 2005, the Utilities provided additional documentation to support their relief requested.

On February 16, 2005, Staff filed a Sufficiency Letter indicating that the application had met the sufficiency requirements of A.A.C.

Background

Palo Verde and Santa Cruz are Arizona Limited Liability Companies ("LLCs"), in good standing, and engaged in providing wastewater utility service to approximately 3,300 customers and water utility service to approximately 3,400 customers, respectively, in portions of Pinal County, Arizona. The original CC&Ns for the Utilities were granted by the Commission in Decision No. 61943 (September 17, 1999) as Arizona corporations. On October 6, 2003, the Commission issued Decision No. 66394 which approved the transfer of the CC&Ns from the corporations to the LLCs.

The Utilities are wholly-owned subsidiaries of Global Water Resources, LLC ("GWR"). GWR is a utility holding company, formed as an LLC, and is engaged in the business of acquiring utility companies. To date, GWR owns three certificated utility companies in the State of Arizona including Palo Verde, Santa Cruz, and Cave Creek Water Company ("Cave Creek")¹ and acts as the Interim Manager for Sabrosa Water Company ("Sabrosa")². Altogether, GWR's subsidiaries provide utility service to approximately 10,000 customers in Arizona.

¹ Global Water Resources, Inc. ("GWRINC") a wholly-owned subsidiary of GWR, formed to acquire the stock of utility companies that are structured as corporations, purchased Cave Creek on March 3, 2005. Currently, Cave Creek provides water utility service to approximately 2,300 customers in Arizona.

²Pursuant to ACC Decision Nos. 62572 and 63136, the Utilities Division vested with the authority to appoint GWR as interim manager of Sabrosa located in New River, Arizona, entered into an Interim Management Agreement with

On September 23, 2004, the Commission issued Decision No. 67240, which authorized the Utilities to extend their service territories to include approximately 600 acres consistent with the associated conditions required by the Commission. The conditions included, among other things, a requirement for the Utilities to increase their current performance bonds to \$750,000 each, maintain such bonds for a minimum of five years, and to provide evidence on a quarterly basis of the maintenance of the required performance bond by filing of a letter of bond confirmation.

The Commission further required the Utilities to submit quarterly reports documenting compliance with all Arizona Department of Environmental Quality ("ADEQ"), Arizona Department of Water Resources ("ADWR"), and Commission requirements. The Commission also required GWR, the Utilities' parent company, to file an Acquisition Schedule describing each acquisition GWR makes in a utility. The Utilities and GWR were also ordered to notify the Commission of any proposed change in the ownership of their membership interests (including transfer or additional memberships), prior to execution, through filing of a Notice of Intent (which indicates the filing is made pursuant to Decision No. 67240).

On January 27, 2005, the Utilities filed Proof of Performance Bonds ("Proof") in compliance to Decision No. 67240. The Proof included riders increasing the bonds issued by Travelers Casualty and Surety Company of America from \$368,000 to \$750,000 for Palo Verde (Bond No. 104367406) and from \$332,000 to \$750,000 for Santa Cruz (Bond No. 104367407).

A check of the compliance database by the Utilities Division Compliance Section on March 16, 2005, indicated that there are no delinquencies for the Utilities.

The Extension Request

Palo Verde and Santa Cruz are currently certificated by the Commission to provide wastewater and water services to approximately a nine (9) square mile area within the corporate city limits of the City of Maricopa, in northwest Pinal County, Arizona. By this application, the Utilities are seeking Commission authority to extend their service territory to include approximately seven and one-half (7.5) square miles. The requested extension area includes approximately 5,000 acres. Approximately 4,900 acres of the requested extension area is located southeast of the existing CC&N area, whereas, the remaining approximately 100 acres is located southwest of the existing CC&N area.

The proposed extension area is to be developed into several master planned communities comprised of over 17,000 lots.

Request for Service

Below is a listing of the requesting developer/development and the number of lots to be served:

<u>Developer/Development</u>	<u>Number of Lots</u>
L&R Contracting, Inc., Trap King, LLP, Sue Flores, Pro Active Remarketing LLC, Sean Aldrous and Guy Gedeaon	322
Cook/El Dorado, L.L.C., Little/El Dorado, L.L.C., And William P. Gore and Margie L. Gore	2,205
Maricopa – Casa Grande Highway 813, L.C. And Western Pinal Industrial Park, L.C.	4,322
JNAN, LLC	2,240
Pitaco Farms Limited Partnership	2,240
Desert Sunrise, L.L.C. and Maricopa 240, L.L.C.	1,680
Mace Holdings, L.L.C., Maricopa 32, L.L.C., and Maricopa 400, L.L.C.	2,240
Kruse Farms	1,680
Bera Venture, L.L.C., DAC Maricopa Investment, L.L.C., JJD Development L.L.C., Maricopa Investment Group, L.L.C., JACOB/McCASLIN/EDEN, LLC and Mesquite Groves L.L.C.	322

Finance of Utility Facilities

The Utilities indicated in the application and during a telephone conversation with Staff³ that they will finance the required utility facilities through a combination of shareholder equity and advances in aid of construction. Advances in aid of construction are often in the form of Main Extension Agreements (“MXAs”). MXAs are standard industry practice. The minimal acceptable criteria for line extension agreements between water and wastewater utilities and

³ Telephone conversation between the Utilities Representative, Cindy Liles, and Blessing Chukwu on March 18, 2005, at 2:30pm, regarding the financing of the required utility facilities and main extension agreements.

private parties are established by A.A.C. R14-2-406 and 606. These agreements generally require the developer to design, construct and install (or cause to be), all facilities to provide adequate service to the development. The developer is required to pay all costs of constructing the required facilities necessary to serve the development. Upon acceptance of the facilities by the Utility Company, the developer conveys the utility facilities through a warranty deed to the Utility Company. Utility Companies will often refund ten (10) percent of the annual water revenue associated with development for a period of ten (10) years.

Santa Cruz has model MXAs that have been reviewed and approved by Staff, which the Company offers to developers requesting service. According to the Company Representative, the MXAs will be executed upon Commission approval of this application.⁴ The model MXAs provide that the utility shall refund seven percent of the gross annual revenue received from associated facilities beginning four (4) years after the facilities are accepted by the utility. The utility will pay the seven (7) percent annual refund to the developer for twenty-two (22) years. This refund provision exceeds the minimum refund standard in the current applicable rule, A.A.C. R14-2-406(D).

Palo Verde has model MXAs that have been reviewed and approved by Staff, which the Company offers to developers requesting service. According to the Company Representative, the MXAs will be executed upon Commission approval of this application.⁵ The wastewater MXAs provide that the utility shall refund two and one-half (2.5) percent of the gross annual revenue received from the associated facilities beginning four (4) years after the facilities are accepted by the utility. The Utility will pay the two and one-half (2.5) percent annual refund to the developer for twenty-two (22) years. The Commission's rule on wastewater MXAs does not currently require a refund of the advance. As such, Palo Verde's refund provision exceeds the minimum refund standard in the current applicable rule.

The Water System

Santa Cruz operates a water system that consists of two drinking water wells (having a combined production rate of 3,150 gallons per minute), two storage tanks (having a combined capacity of 3,000,000 gallons), a booster pump station, two pressure tanks (having a combined capacity of 20,000 gallons) and one irrigation well. Santa Cruz has an existing customer base of approximately 3,400 customers. The Company currently experiences an average monthly growth rate of over 200 new connections and projects growth of more than 17,000 additional connections within the next five years.

Santa Cruz is in the process of reconstructing three irrigation wells (Neely West, Neely East, and Neely North), known herein as the Neely Well Production/Treatment Plant, to meet drinking water well standards. The Company expects these three wells to add additional flow of 6,000 gallons per minute ("GPM") to the system. These three wells are expected to be in service

⁴ Id

⁵ Id

in June of this year. This will give the Company adequate capacity to meet the needs of its existing customer base and growth for approximately three years. Santa Cruz has told Staff that it will acquire four additional wells (the Rancho Mirage wells and Glennwilde wells) upon Commission approval of this application. Although it did not provide any flow data on these wells, Staff believes that Santa Cruz will have adequate production capacity to serve its existing service area and the extension area for the next five year planning horizon once these wells have been added to the system.

Staff recommends that Santa Cruz file a copy of the ADEQ "Approval To Construct" ("ATC") for the Neely Well Production/Treatment Plant with Docket Control by December 31, 2005.

Staff also recommends that Santa Cruz take appropriate action so that the necessary corrections to ADWR registration records are made to indicate that the three Neely Wells are owned by Santa Cruz. Staff further recommends that Santa Cruz submit a copy of the corrected ADWR records to Docket Control within sixty days of the effective date of the final decision and order issued pursuant to this application.

Staff, in addition, recommends that Santa Cruz file a copy of the ATC for the Rancho Mirage Production/Treatment Plants and the Glennwilde Well Production/Treatment Plants with Docket Control by June 30, 2008.

Staff also recommends that Santa Cruz take appropriate action so that the necessary corrections to ADWR registration records are made to indicate that the two Glennwilde wells and two Rancho Mirage wells are owned by Santa Cruz. Staff further recommends that Santa Cruz submit a copy of the corrected ADWR records to Docket Control within one year of the effective date of the final decision and order issued pursuant to this application.

Arizona Department of Environmental Quality Compliance

The ADEQ regulates the water system under ADEQ Public Water System I.D. No. 11-131. Staff received a compliance status report from ADEQ dated October 15, 2004, in which ADEQ stated that it has determined that Santa Cruz is currently delivering water that meets the water quality standards required by Arizona Administrative Code, Title 18, Chapter 4.

Arizona Department of Water Resources Compliance

There are five (5) Active Management Areas ("AMAs") in Arizona and each has a different goal depending on the water supply need of the area. Santa Cruz is located in the Pinal AMA, as designated by ADWR. The goal of the Pinal AMA is to allow the development of non-irrigation water uses, extend the life of the agricultural economy for as long as feasible, and preserve water supplies for future non-agricultural uses. As a result, Santa Cruz is subject to the reporting and conservation rules of ADWR. ADWR has indicated that Santa Cruz is in compliance with the Pinal AMA requirements.

Staff recommends that Santa Cruz be required to file with Docket Control a copy of the amendment to its existing Designation of Assured Water Supply, stating that there is adequate water supply, where applicable or when required by statute, within a year of the effective date of the final decision and order issued pursuant to this application.

ACC Compliance

According to the Utilities Division Compliance Section, Santa Cruz has no outstanding ACC compliance issues.

Arsenic

The U.S. Environmental Protection Agency ("EPA") has reduced the arsenic maximum contaminant level ("MCL") in drinking water from 50 micrograms per liter (" $\mu\text{g/l}$ ") or parts per billion ("ppb") to 10 $\mu\text{g/l}$. The date for compliance with the new MCL is January 23, 2006. The most recent lab analysis provided by Santa Cruz indicates that the arsenic levels in both Wells are 10.1 $\mu\text{g/l}$ and 17.71 $\mu\text{g/l}$ which are above the new arsenic MCL. Santa Cruz indicated that a blending method will be used to reduce its arsenic level; however Santa Cruz's proposed treatment plan has not been submitted to ADEQ for its review and approval. Therefore, Staff recommends that Santa Cruz submit its ADEQ Certificate of ATC for arsenic treatment to Docket Control by November 30, 2005.

Curtailement Plan Tariff

A Curtailement Plan Tariff ("CPT") is an effective tool to allow a water company to manage its resources during periods of shortages due to pump breakdowns, droughts, or other unforeseeable events.

Santa Cruz has an approved curtailement tariff (See Decision No. 66394). During the site inspection, Staff was informed that some manmade lakes were filled by drinking water. According to Santa Cruz, the Company sells drinking water to some of its customers who utilizes the drinking water for commercial large irrigation purposes, such as filling lakes and rivers. Therefore, Staff recommends that Santa Cruz prepare an amended curtailement tariff to limit delivery to those customers during Stage 2, 3, and 4. Staff further recommends that Santa Cruz file its amended curtailement tariff for Staff's review and approval with Docket Control within thirty days of the effective date of the final decision and order issued pursuant to this application.

The Wastewater System

Palo Verde owns and operates an enclosed one million gallons per day ("MGD") sequential batch reactor treatment plant, sand filters, ultra violet disinfection units and an effluent reuse and/or surface water disposal system to serve its existing CC&N area. The existing plant does not have adequate capacity to properly treat wastewater flow from the requested extension area. However, Palo Verde is in the process of expanding the plant's treatment capacity to 3

MGD (Phase II Expansion). Palo Verde indicates that the plant expansion project is scheduled to be completed by the end of December 2005. ADEQ has granted an Aquifer Protection Permit ("APP") that allows Palo Verde to build a 3 MGD treatment plant. Palo Verde states that it will expand its treatment capacity to 9 MGD (Phase III) in the future.

Staff recommends that Palo Verde file a copy of the ADEQ Engineering Completion Documents for the 3 MGD plant expansion project with Docket Control by December 31, 2006.

Clean Water Act Section 208 Plan

Pursuant to Section 208 of the Federal Water Pollution Control Act, the Central Arizona Association of Governments ("CAAG") is the designated water quality planning agency for the requested CC&N extension area. The CAAG has the authority to develop and approve general wastewater plans which include land development policies, service areas, objectives, principles, and standards for local growth and development.

A majority of the requested extension area is located in Palo Verde's existing CAAG Section 208 Plan; however, a portion of the extension area southwest of the current CC&N area (specifically, the Bera Venture, L.L.C., DAC Maricopa Investment, L.L.C., JJD Development L.L.C., Maricopa Investment Group, L.L.C., JACOB/McCASLIN/EDEN, LLC and Mesquite Groves L.L.C. area collectively referred to as ("Bera Venture area")) is excluded. Palo Verde stated that an amended Section 208 Plan had been submitted to the CAAG for review and approval.

Staff recommends that Palo Verde file a copy of the amended Section 208 Plan with Docket Control by December 31, 2005.

ADEQ Compliance

Staff received a compliance status report from ADEQ dated January 10, 2005, in which ADEQ stated that Palo Verde is in total compliance.

ACC Compliance

According to the Utilities Division Compliance Section, Palo Verde has no outstanding ACC compliance issues.

Proposed Rates

Palo Verde and Santa Cruz have proposed to provide utility services to the extension area under their respective authorized rates and charges.

Municipal Franchise

Every applicant for a CC&N and/or CC&N extension is required to submit to the Commission evidence showing that the applicant has received the required consent, franchise or permit from the proper authority. If the applicant operates in an unincorporated area, the company has to obtain the franchise from the County. If the applicant operates in an incorporated area of the County, the applicant has to obtain the franchise from the City/Town.

Palo Verde and Santa Cruz entered into franchise agreements with Pinal County at the time the City of Maricopa was unincorporated. Since the City of Maricopa is now incorporated, this application provides an opportune time for the Utilities to obtain franchise agreements from the City of Maricopa and file with the ACC. Staff recommends that Palo Verde and Santa Cruz be required to file a copy of the municipal franchise agreements from the City of Maricopa pursuant to this application, with Docket Control within 365 days of the decision in this matter.

Recommendations

Water Service CC&N Extension

Staff recommends the Commission approve the Santa Cruz application for an extension of its CC&N within portions of Pinal County, Arizona, as amended, to provide water service, subject to compliance with the following conditions:

1. To require Santa Cruz to charge its authorized rates and charges in the extension area.
2. To require Santa Cruz to file a copy of the Arizona Department of Environmental Quality ("ADEQ") "Approval To Construct" ("ATC") for the Neely Well Production/Treatment Plant with Docket Control by December 31, 2005.
3. To require Santa Cruz to file a copy of the ATC for the Rancho Mirage Production/Treatment Plants and the Glennwilde Well Production/Treatment Plants with Docket Control by June 30, 2008.
4. To require Santa Cruz to file with Docket Control a copy of the amendment to its existing Designation of Assured Water Supply, stating that there is adequate water supply, where applicable or when required by statute, within a year of the effective date of the final decision and order issued pursuant to this application.
5. To require Santa Cruz to submit its ADEQ Certificate of ATC for arsenic treatment to Docket Control by November 30, 2005.
6. To require Santa Cruz to prepare an amended curtailment tariff to limit delivery to those irrigation customers who use drinking water to perform irrigation purpose during Stage 2, 3 and 4.

7. To require Santa Cruz to file its amended curtailment tariff for Staff's review and approval with Docket Control within thirty days of the effective date of the final decision and order issued pursuant to this application.
8. To require Santa Cruz to take appropriate action so that the necessary corrections to ADWR registration records are made to indicate that the three Neely Wells are owned by Santa Cruz, and to submit such to Docket Control within sixty days of the effective date of the decision in this case.
9. To require Santa Cruz to take appropriate action so that the necessary corrections to ADWR registration records are made to indicate that the two Glennwilde wells and the two Rancho Mirage wells are owned by Santa Cruz and to submit proof of such to Docket Control within one year of the effective date of the final decision and order issued pursuant to this application.
10. To require Santa Cruz to file a copy of the municipal franchise agreement for the current CC&N and the extension area, with Docket Control within 365 days of the decision in this matter.

Staff further recommends that the Commission's Decision granting the requested CC&N extension to Santa Cruz be considered null and void without further order from the Commission should Santa Cruz fail to meet Conditions Nos. 2, 3, 4, 5, 7, 8, 9, and 10 listed above within the time specified.

Wastewater Service CC&N Extension

Staff recommends the Commission approve the Palo Verde application for an extension of its CC&N within portions of Pinal County, Arizona, as amended, to provide wastewater service, subject to compliance with the following conditions:

1. To require Palo Verde to charge its authorized rates and charges in the extension area.
2. To require Palo Verde to file a copy of the ADEQ Engineering Completion Documents of the 3 MGD plant expansion project with Docket Control by December 31, 2006.
3. To require Palo Verde to file a copy of the amended CAAG Section 208 Plan with Docket Control by December 31, 2005.
4. To require Palo Verde to file a copy of the municipal franchise agreement for the current CC&N and the extension area, with Docket Control within 365 days of the decision in this matter.

Staff further recommends that the Commission's Decision granting the requested CC&N extension to Palo Verde be considered null and void without further order from the Commission

Palo Verde Utilities Company, L.L.C. and Santa Cruz Water Company, L.L.C.

Docket Nos. SW- 03575A-04-0767 and W-03576A-04-0767

Page 10

should Palo Verde fail to meet the Conditions Nos. 2, 3, and 4 listed above within the time specified.

MEMORANDUM

DATE March 17, 2005

TO: Blessing Chukwu

FROM: Dorothy Hains

RE: **Water & Wastewater CC&N Extension for Santa Cruz Water & Palo Verde Utilities, LLC**
Docket Nos. W-03576A-04-0767 & SW-03575A-04-0767

I. Introduction

Santa Cruz Water Co. ("Santa Cruz") and Palo Verde Utilities Co. ("Palo Verde") have submitted Certificate of Convenience and Necessity (CC&N) extension applications to provide water and wastewater services near the City of Maricopa in northwest Pinal County. Both Santa Cruz and Palo Verde currently serve nine square mile areas. The requested extension area is approximately seven and one-half square miles in size and southeast of the existing CC&N area.

II. Water System

A. System Analysis

Santa Cruz operates a water system that consists of two drinking water wells (having a combined production rate of 3,150 gallons per minute), two storage tanks (having a combined capacity of 3,000,000 gallons), a booster pump station, two pressure tanks (having a combined capacity of 20,000 gallons) and one irrigation well. Santa Cruz has an existing customer base of approximately 3,365 customers. The Company currently experiences an average monthly growth rate of over 200 new connections and projects growth of more than 17,000 additional connections within the next five years.

Santa Cruz is in the process of reconstructing three irrigation wells (Neely West, Neely East and Neely North), known herein as the Neely Well Production/Treatment Plant, to meet drinking water well standards. The Company expects these three wells to add additional flow of 6,000 gallons per minute ("GPM") to the system. These three wells are expected to be in service in June of this year. This will give the Company adequate capacity to meet the needs of its existing customer base and growth for approximately three years. Santa Cruz has told Staff that it will acquire four additional wells (the Rancho Mirage wells and Glennwilde wells) upon Commission approval of this application. Although it did not provide any flow data on these wells, Staff

believes that Santa Cruz will have adequate production capacity to serve its existing service area and the extension area for the next five year planning horizon once these wells have been added to the system.

Staff recommends that Santa Cruz file a copy of the Arizona Department of Environmental Quality ("ADEQ") "Approval To Construct" ("ATC") for the Neely Well Production/Treatment Plant to Docket Control by December 31, 2005. Staff further recommends that Santa Cruz file a copy of the ATC for the Rancho Mirage and Glennwilde Well Production/Treatment Plant to Docket Control by June 30, 2008.

B. Arizona Department of Environmental Quality ("ADEQ")

Staff received a compliance status report from ADEQ dated October 15, 2004, in which ADEQ stated that it has determined that Santa Cruz is currently delivering water that meets the water quality standards required by Arizona Administrative Code, Title 18, Chapter 4.

C. Arizona Department of Water Resources ("ADWR")

Santa Cruz is located in Pinal Active Management Area ("AMA"), as designated by ADWR. ADWR has indicated that Santa Cruz is in compliance with the Pinal AMA requirements.

D. Arizona Corporation Commission ("ACC")

According to the Utilities Division Compliance Section, Santa Cruz has no outstanding ACC compliance issues.

E. Arsenic

The U.S. Environmental Protection Agency ("EPA") has reduced the arsenic maximum contaminant level ("MCL") in drinking water from 50 micrograms per liter (" $\mu\text{g/l}$ ") or parts per billion ("ppb") to 10 $\mu\text{g/l}$. The date for compliance with the new MCL is January 23, 2006. The most recent lab analysis provided by Santa Cruz indicates that the arsenic levels in both Wells are 10.1 $\mu\text{g/l}$ and 17.71 $\mu\text{g/l}$ which are above the new arsenic MCL. Santa Cruz indicated that a blending method will be used to reduce its arsenic level; however Santa Cruz's proposed treatment plan has not been submitted to ADEQ for its review and approval. Therefore, Staff recommends that Santa Cruz submit its ADEQ Certificate of ATC for arsenic treatment to Docket Control by November 30, 2005.

F. Curtailment Tariff

Santa Cruz has an approved curtailment tariff (See Decision No. 66394). During the site inspection, Staff was informed that some manmade lakes were filled by

drinking water. According to Santa Cruz, the Company sells drinking water to some of its customers who utilizes the drinking water for commercial large irrigation purposes, such as filling lakes and rivers. Therefore, Staff recommends that Santa Cruz prepare an amended curtailment tariff to limit delivery to those customers during Stage 2, 3, and 4. Staff further recommends that Santa Cruz file its amended curtailment tariff for staff's review and approval with Docket Control within thirty days of the effective date of the final decision and order issued pursuant to this application.

G. Neely Wells, Glennwilde Wells and Rancho Mirage Wells

1. Staff recommends that Santa Cruz take appropriate action so that the necessary corrections to ADWR registration records are made to indicate that the Neely Wells are owned by Santa Cruz. Staff further recommends that Santa Cruz submit a copy of the corrected ADWR records to Docket Control within sixty days of the effective date of the final decision and order issued pursuant to this application.
2. Staff recommends that Santa Cruz take appropriate action so that the necessary corrections to ADWR registration records are made to indicate that the Glennwilde wells and Rancho Mirage wells are owned by Santa Cruz. Staff further recommends that Santa Cruz submit a copy of the corrected ADWR records to Docket Control within one year of the effective date of the final decision and order issued pursuant to this application.

III. Wastewater System

A. Wastewater System

Palo Verde owns and operates an enclosed one million gallons per day ("MGD") sequential batch reactor treatment plant, sand filters, ultra violet disinfection units and an effluent reuse and/or surface water disposal system to serve its existing CC&N area. The existing plant does not have adequate capacity to properly treat wastewater flow from the requested extension area. However, Palo Verde is in the process of expanding the plant's treatment capacity to 3 MGD (Phase II Expansion). Palo Verde indicates that the plant expansion project is scheduled to be completed by the end of December 2005. ADEQ has granted an Aquifer Protection Permit ("APP") that allows Palo Verde to build a 3 MGD treatment plant. Palo Verde states that it will expand its treatment capacity to 9 MGD (Phase III) in the future. Staff recommends that Palo Verde file a copy of the ADEQ Engineering Completion Documents for the 3 MGD plant expansion project to Docket Control by December 31, 2006.

B. Clean Water Act Section 208 Plan

A majority of the requested extension area is located in Palo Verde's existing Section 208 Plan; however, a portion of the extension area near the City of Maricopa (specifically, the Bera Venture area) is excluded. Palo Verde stated that an amended Section 208 Plan had been submitted to the Central Arizona Associated Government ("CAAG") for review and approval. Staff recommends that Palo Verde file a copy of the amended Section 208 Plan to Docket Control by December 31, 2005.

C. ADEQ Compliance

Staff received a compliance status report from ADEQ dated January 10, 2005, in which ADEQ stated that Palo Verde is in total compliance.

D. ACC Compliance

According to the Utilities Division Compliance Section, Palo Verde has no outstanding ACC compliance issues.

Summary

I. Conclusions

1. Staff concludes that both Santa Cruz and Palo Verde are in compliance with ADEQ's regulation.
2. Staff concludes that Santa Cruz is in compliance with ADWR Pinal AMA monitoring and reporting program.
3. When the plant improvements discussed herein are completed, Staff believes both Santa Cruz and Palo Verde will have adequate production and treatment capacities to serve the requested area.

II. Recommendations

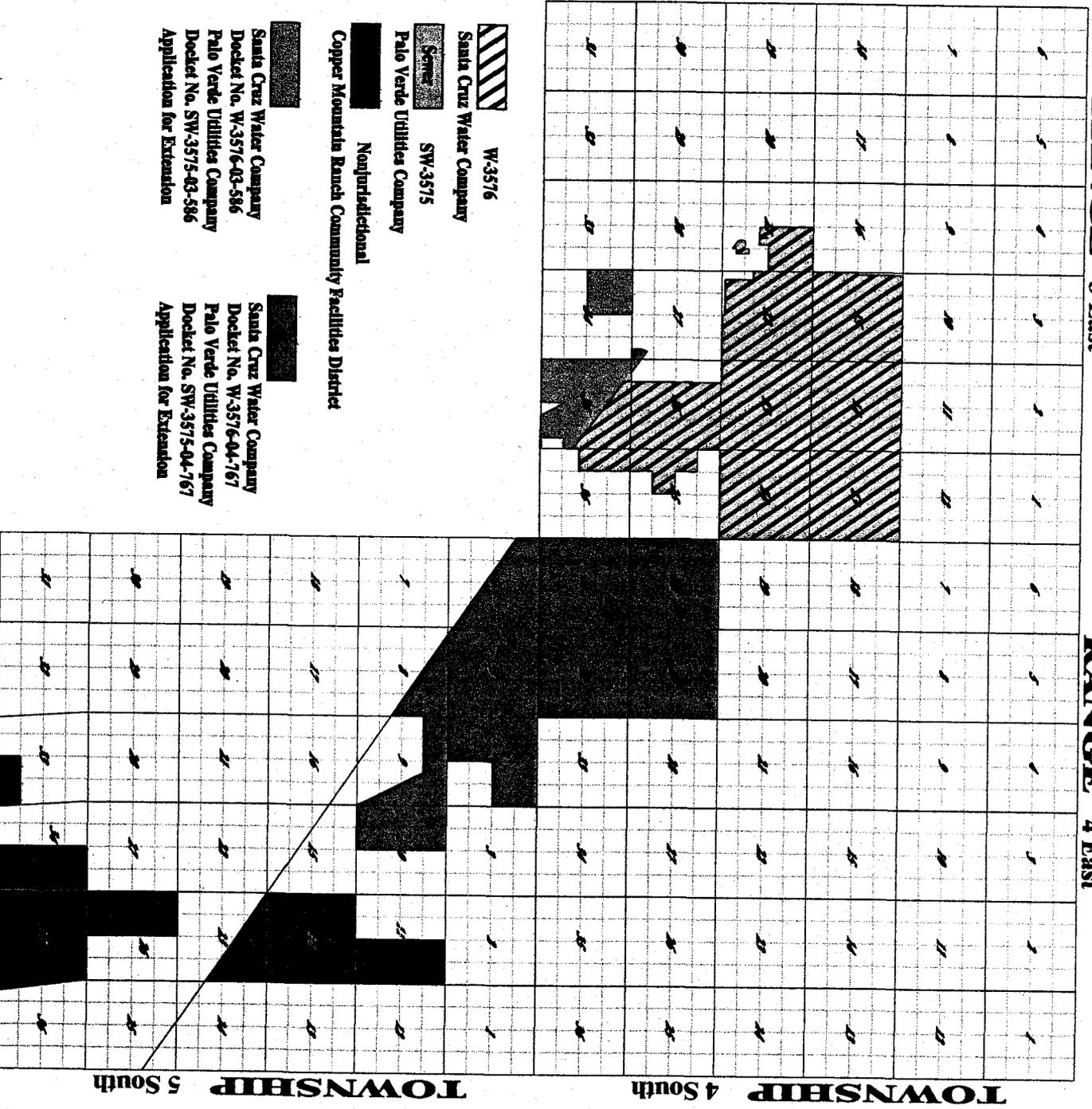
1. Staff recommends that Santa Cruz file a copy of the Arizona Department of Environmental Quality ("ADEQ") "Approval to Construct" ("ATC") for the Neely Well Production/Treatment Plant to Docket Control by December 31, 2005.
2. Staff further recommends that Santa Cruz file a copy of the ATC for the Rancho Mirage Well Production/Treatment Plant and Glennwilde Well Production/Treatment Plant to Docket Control by June 30, 2008.

3. Staff recommends that the Company file with the Commission a copy of the amendment to its existing Designation of Assured Water Supply, stating that there is adequate water supply, where applicable or when required by statute, to Docket Control within a year of the effective date of the final decision and order issued pursuant to this application.
4. Staff recommends that Santa Cruz submit its ADEQ Certificate of ATC for arsenic treatment to Docket Control by November 30, 2005.
5. Staff recommends that Santa Cruz prepare an amended curtailment tariff to limit delivery to those irrigation customers who use drinking water to perform irrigation purpose during Stage 2, 3 and 4.
6. Staff further recommends that Santa Cruz file its amended curtailment tariff for staff's review and approval with Docket Control within thirty days of the effective date of the final decision and order issued pursuant to this application.
7. Staff recommends that Santa Cruz take appropriate action so that the necessary corrections to ADWR registration records are made to indicate that the three Neely Wells are owned by Santa Cruz, and submit such to Docket Control within sixty days of the effective date of the decision in this case.
8. Staff recommends that Santa Cruz take appropriate action so that the necessary corrections to ADWR registration records are made to indicate that the Glennwilde wells and the Rancho Mirage wells are owned by Santa Cruz and submit proof of such to Docket Control within one year of the effective date of the final decision and order issued pursuant to this application.
9. Staff recommends that Palo Verde file a copy of the ADEQ Engineering Completion Documents of the 3 MGD plant expansion project to Docket Control by December 31, 2006.
10. Staff recommends that Palo Verde file a copy of the amended Section 208 Plan to Docket Control by December 31, 2005.

COUNTY: Pinal

RANGE 3 East

RANGE 4 East



MEMORANDUM

TO: Jim Fisher
Executive Consultant II
Utilities Division

FROM: Barb Wells *low*
Information Technology Specialist
Utilities Division

THRU: Del Smith *DS*
Engineering Supervisor
Utilities Division

DATE: November 29, 2004

RE: **AMENDED LEGAL DESCRIPTION**
SANTA CRUZ WATER COMPANY (DOCKET NO. W-03576A-04-0767)
PALO VERDE UTILITIES COMPANY (DOCKET NO. SW-03575A-04-0767)

Santa Cruz and Palo Verde have filed an amended legal description to include a parcel that was inadvertently left out of the original application. The correct legal description (in its entirety) is attached and should be used in place of the original description submitted with the application.

Also attached is a copy of the map which shows the additional parcel for your files. The two maps that show the original area are attached to my memo dated November 3, 2004.

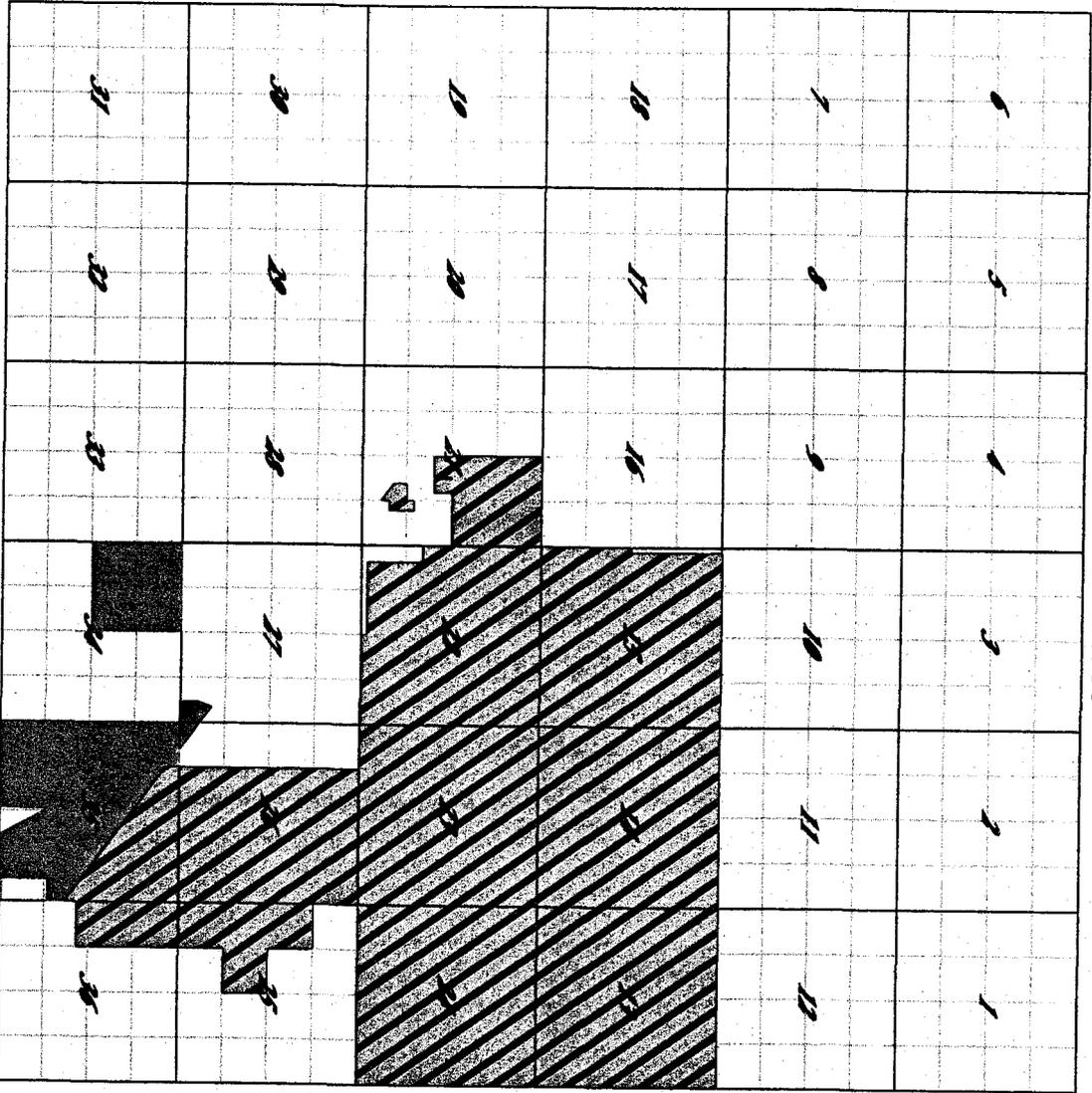
:bsw

Attachments

cc: Docket Control
Ms. Cindy Liles
Deb Person (Hand Carried)
File

COUNTY OF PINAL

RANGE 3 East



TOWNSHIP 4 South



W-3576 (1)

Santa Cruz Water Company



Series

SW-3575 (1)

Palo Verde Utilities Company



Santa Cruz Water Company

Docket No. W-3576-03-586

Palo Verde Utilities Company

Docket No. SW-3575-03-586

Application for Extension



Santa Cruz Water Company

Docket No. W-3576-04-767

Palo Verde Utilities Company

Docket No. SW-3575-04-767

Application for Extension

EXHIBIT "3"
(AMENDED)
LEGAL DESCRIPTION

LEGAL DESCRIPTION FOR PORTION OF EXPANSION EAST OF CURRENT SERVICE AREA:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 30, TOWNSHIP 4 SOUTH, RANGE 4 EAST, GILA & SALT RIVER BASE & MERIDIAN, PINAL COUNTY, ARIZONA, SAID NORTHWEST CORNER OF SAID SECTION 30 BEING THE TRUE POINT OF BEGINNING;

THENCE EASTERLY ALONG THE NORTH LINE OF SAID SECTION 30 AND CONTINUING EASTERLY ALONG THE NORTH LINE OF SECTION 29, TOWNSHIP 4 SOUTH, RANGE 4 EAST, TO THE NORTHEAST CORNER OF SAID SECTION 29;

THENCE SOUTHERLY ALONG THE EASTERLY LINES OF SAID SECTION 29 AND SECTION 32, TOWNSHIP 4 SOUTH, RANGE 4 EAST, TO THE SOUTHEASTERLY CORNER OF SAID SECTION 32;

THENCE EASTERLY ALONG THE NORTH LINE OF SECTION 4, TOWNSHIP 5 SOUTH, RANGE 4 EAST, TO THE NORTHEAST CORNER OF SAID SECTION 4;

THENCE SOUTHERLY ALONG THE EASTERLY LINE OF SAID SECTION 4 TO THE EAST QUARTER CORNER THEREOF;

THENCE WESTERLY ALONG THE EAST-WEST MIDSECTION LINE OF SAID SECTION 4 TO THE CENTER OF SAID SECTION 4;

THENCE SOUTHERLY ALONG THE NORTH-SOUTH MIDSECTION LINE OF SAID SECTION 4 TO THE SOUTH QUARTER CORNER THEREOF;

THENCE EASTERLY ALONG THE COMMON EAST-WEST SECTION LINE BETWEEN SAID SECTION 4 AND SECTION 9, TOWNSHIP 5 SOUTH, RANGE 4 EAST TO THE SOUTHEASTERLY CORNER OF SAID SECTION 4;

THENCE CONTINUING EASTERLY ALONG THE NORTH LINE OF SECTION 10, TOWNSHIP 5 SOUTH, RANGE 4 EAST TO THE NORTH QUARTER CORNER OF SAID SECTION 10;

THENCE SOUTHERLY ALONG THE NORTH-SOUTH MIDSECTION LINE OF SAID SECTION 10 TO THE SOUTH QUARTER CORNER OF SAID SECTION 10;

THENCE WESTERLY ALONG THE SOUTH LINE OF SAID SECTION 10 TO THE SOUTHWEST CORNER OF SAID SECTION 10;

THENCE NORTHWESTERLY ALONG A LINE DESCRIBED AS FOLLOWS:
BEGINNING AT THE COMMON SOUTHERLY SECTION CORNER BETWEEN
THE AFOREMENTIONED SECTIONS 9 AND 10, THENCE NORTHWESTERLY
ON A LINE TOWARDS THE NORTH QUARTER CORNER OF SAID SECTION 9
TO A POINT, SAID POINT BEING DESCRIBED AS THE INTERSECTION OF SAID
NORTHWESTERLY LINE AND AN EAST-WEST LINE LYING 1397.53 FEET
SOUTH, AND PARALLEL TO THE NORTH LINE OF SAID SECTION 9;

THENCE WESTERLY ALONG THE LINE WHICH LIES 1397.53 FEET
SOUTHERLY OF THE NORTH LINE OF SECTION 9 TO THE WEST LINE OF
SAID SECTION 9;

THENCE SOUTHERLY ALONG THE WEST LINE OF SAID SECTION 9 TO THE
INTERSECTION OF THE WEST LINE OF SAID SECTION 9 AND THE
NORTHERLY RIGHT-OF-WAY LINE OF THE UNION PACIFIC RAILROAD;

THENCE NORTHWESTERLY ALONG THE UNION PACIFIC RAILROAD RIGHT-
OF-WAY TO THE INTERSECTION OF SAID RAILROAD RIGHT-OF-WAY AND
THE WEST LINE OF SECTION 6, TOWNSHIP 5 SOUTH, RANGE 4 EAST;

THENCE NORTHERLY ALONG THE WEST LINE OF SAID SECTION 6 TO THE
NORTHWEST CORNER THEREOF;

THENCE CONTINUING NORTHERLY ALONG THE WEST LINES OF SECTIONS
31 AND 30, TOWNSHIP 4 SOUTH, RANGE 4 EAST, TO THE NORTHWEST
CORNER OF SAID SECTION 30 AND THE TRUE POINT OF BEGINNING.

**LEGAL DESCRIPTION FOR PORTION OF EXPANSION SOUTH OF THE
UNION PACIFIC RAILROAD:**

**Lots 1 through 3, inclusive, Block 43, and Lots 1 through 8, inclusive, Block 45,
MARICOPA TOWNSITE, according to the plat of record in the office of the
County Recorder of Pinal County, Arizona, recorded in Book 3 of Maps, Page 6;**

**EXCEPT all of Lot 2, and a portion of Lots 1 and 3, Block 45, MARICOPA
TOWNSITE, according to the plat of record in the office of the County Recorder of
Pinal County, Arizona, recorded in Book 3 of Maps, Page 6, a subdivision located in
Section 26 and 27, Township 4 South, Range 3 East, of the Gila and Salt River Base
and Meridian, Pinal County, Arizona, more particularly described as follows;**

**Commencing at the South quarter corner of said Section 26, from which the
Southwest corner of Section 26 bears South 89 degrees 05 minutes 38 seconds West,
a distance of 2635.13 feet;**

**thence South 89 degrees 05 minutes 38 seconds West along the South line of the
Southwest quarter of said section 26, to the intersection of the South line of the**

Southwest quarter of said Section 26 with the Southerly right-of-way line of the Southern Pacific Railroad, a distance of 1811.49 feet;

thence North 53 degrees 52 minutes 12 seconds West along said Southerly right-of-way line to a point 30 feet North of the South line of the Southwest quarter of Section 26, a distance of 49.81 feet and the POINT OF BEGINNING;

thence South 89 degrees 05 minutes 38 seconds West and parallel with the South line of the Southwest quarter of Section 26 to a point on the East line of the Southeast quarter of said Section 27 that bears North 00 degrees 03 minutes 29 seconds East a distance of 30.00 feet from the Southeast corner of said Section 27, a distance of 783.38 feet;

thence South 89 degrees 05 minutes 38 seconds West and parallel with the South line of the Southwest quarter of Section 26, a distance of 0.23 feet;

thence North 89 degrees 51 minutes 46 seconds West and parallel with the South line of the Southeast quarter of Section 27, a distance of 569.55 feet;

thence North 24 degrees 43 minutes 54 seconds West along the West line of the Santa Rosa Wash Easement recorded in Fee number 2003-008603, a distance of 121.99 feet;

thence North 00 degrees 47 minutes 54 seconds West along the West line of said easement, a distance of 428.42 feet;

thence North 20 degrees 03 minutes 27 seconds East along the West line of said easement, to the intersection of the West line of said easement with the Southerly right-of-way line of the Southern Pacific Railroad, a distance of 421.29 feet;

thence South 53 degrees 52 minutes 12 seconds East along the Southerly right-of-way line of the Southern Pacific Railroad to the intersection of said Southerly right-of-way line with the East line of the Southeast quarter of said Section 27, a distance of 597.88 feet;

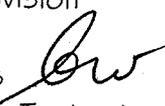
thence South 53 degrees 52 minutes 12 seconds East along said Southerly right-of-way line, a distance of 969.05 feet to the POINT OF BEGINNING; and

EXCEPT all oil, gas and other mineral rights as reserved in instrument recorded in Docket 15, Page 66, records of Pinal County, Arizona.

CC&N EXPANSION CONTAINS 5,000 ACRES, MORE OR LESS.

MEMORANDUM

TO: Jim Fisher
Executive Consultant II
Utilities Division

FROM: Barb Wells 
Information Technology Specialist
Utilities Division

THRU: Del Smith 
Engineering Supervisor
Utilities Division

DATE: November 3, 2004

RE: **SANTA CRUZ WATER COMPANY (DOCKET NO. W-03576A-04-0767)**
PALO VERDE UTILITIES COMPANY (DOCKET NO. SW-03575A-04-0767)

The area requested by Santa Cruz and Palo Verde for an extension has been plotted with no complications using the legal description provided with the application (a copy of which is attached).

Also attached are copies of the maps for your files.

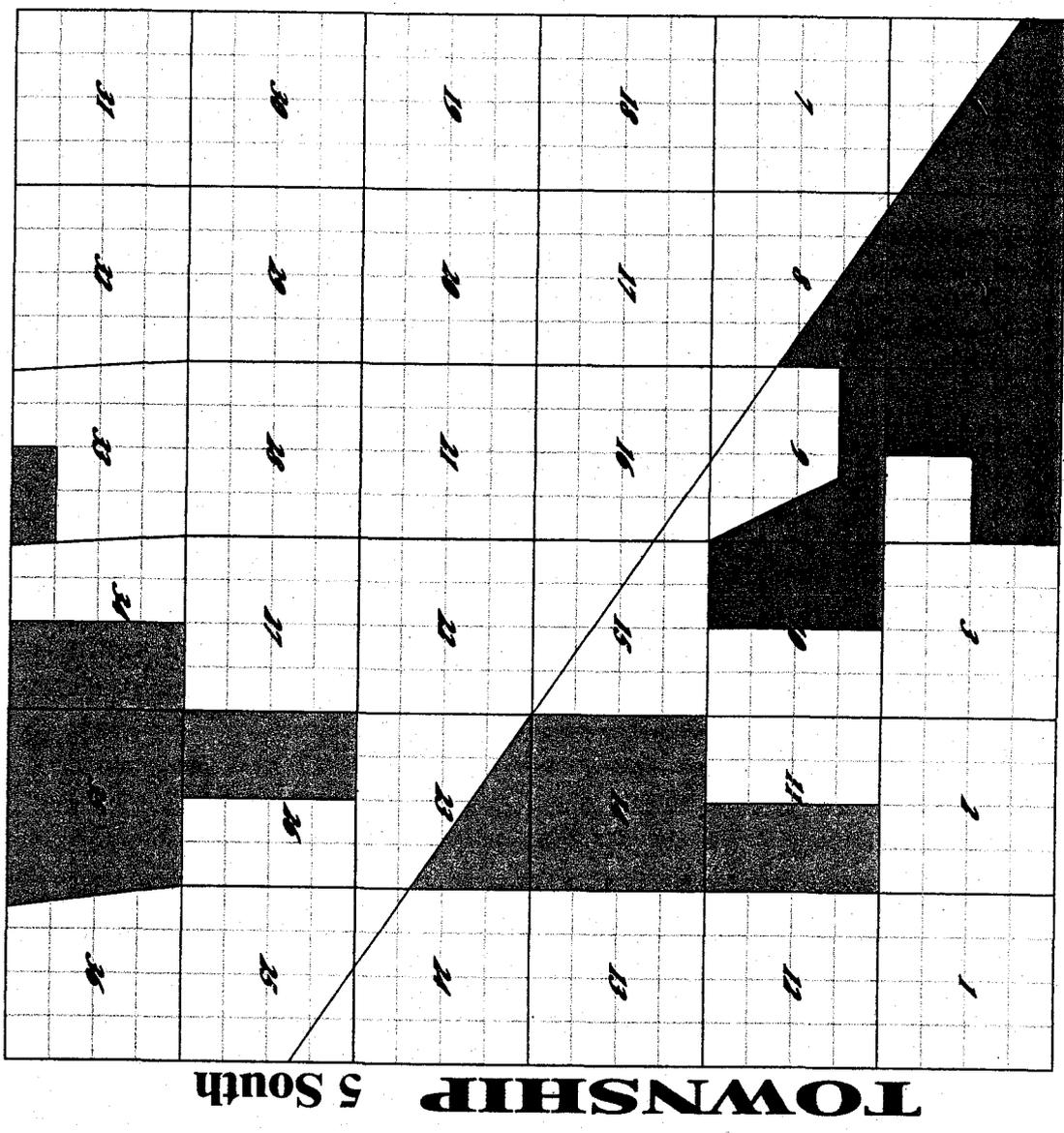
:bsw

Attachments

cc: Docket Control
Ms. Cindy Liles
Ms. Deb Person (Hand Carried)
File

COUNTY OF PINAL

RANGE 4 East



Nonjurisdictional (2)
 Copper Mountain Ranch Community Facilities District

W-3576
 Santa Cruz Water Company
 Docket No. W-3576-04-767
 Palo Verde Utilities Company
 Docket No. SW-3575-04-767
 Application for Extension

COUNTY: Pinal

RANGE 4 East

1	5	1	3	1	1
1	8	1	10	11	12
10	11	16	15	16	13
10	20	11	22	23	24
		20	21	26	25
		23	24	25	26

TOWNSHIP 4 South



W-3576

Santa Cruz Water Company
Docket No. W-3576-04-767
Palo Verde Utilities Company
Docket No. SW-3575-04-767
Application for Extension

EXHIBIT "3"
LEGAL DESCRIPTION

COMMENCING AT THE NORTHWEST CORNER OF SECTION 30, TOWNSHIP 4 SOUTH, RANGE 4 EAST, GILA & SALT RIVER BASE & MERIDIAN, PINAL COUNTY, ARIZONA, SAID NORTHWEST CORNER OF SAID SECTION 30 BEING THE TRUE POINT OF BEGINNING;

THENCE EASTERLY ALONG THE NORTH LINE OF SAID SECTION 30 AND CONTINUING EASTERLY ALONG THE NORTH LINE OF SECTION 29, TOWNSHIP 4 SOUTH, RANGE 4 EAST, TO THE NORTHEAST CORNER OF SAID SECTION 29;

THENCE SOUTHERLY ALONG THE EASTERLY LINES OF SAID SECTION 29 AND SECTION 32, TOWNSHIP 4 SOUTH, RANGE 4 EAST, TO THE SOUTHEASTERLY CORNER OF SAID SECTION 32;

THENCE EASTERLY ALONG THE NORTH LINE OF SECTION 4, TOWNSHIP 5 SOUTH, RANGE 4 EAST, TO THE NORTHEAST CORNER OF SAID SECTION 4;

THENCE SOUTHERLY ALONG THE EASTERLY LINE OF SAID SECTION 4 TO THE EAST QUARTER CORNER THEREOF;

THENCE WESTERLY ALONG THE EAST-WEST MIDSECTION LINE OF SAID SECTION 4 TO THE CENTER OF SAID SECTION 4;

THENCE SOUTHERLY ALONG THE NORTH-SOUTH MIDSECTION LINE OF SAID SECTION 4 TO THE SOUTH QUARTER CORNER THEREOF;

THENCE EASTERLY ALONG THE COMMON EAST-WEST SECTION LINE BETWEEN SAID SECTION 4 AND SECTION 9, TOWNSHIP 5 SOUTH, RANGE 4 EAST TO THE SOUTHEASTERLY CORNER OF SAID SECTION 4;

THENCE CONTINUING EASTERLY ALONG THE NORTH LINE OF SECTION 10, TOWNSHIP 5 SOUTH, RANGE 4 EAST TO THE NORTH QUARTER CORNER OF SAID SECTION 10;

THENCE SOUTHERLY ALONG THE NORTH-SOUTH MIDSECTION LINE OF SAID SECTION 10 TO THE SOUTH QUARTER CORNER OF SAID SECTION 10;

THENCE WESTERLY ALONG THE SOUTH LINE OF SAID SECTION 10 TO THE SOUTHWEST CORNER OF SAID SECTION 10;

LEGAL DESCRIPTION FOR CC&N EXPANSION

THENCE NORTHWESTERLY ALONG A LINE DESCRIBED AS FOLLOWS:
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CORNER OF SAID SECTION 30 AND THE TRUE POINT OF BEGINNING.

CC&N EXPANSION CONTAINS 4900 ACRES, MORE OR LESS.

