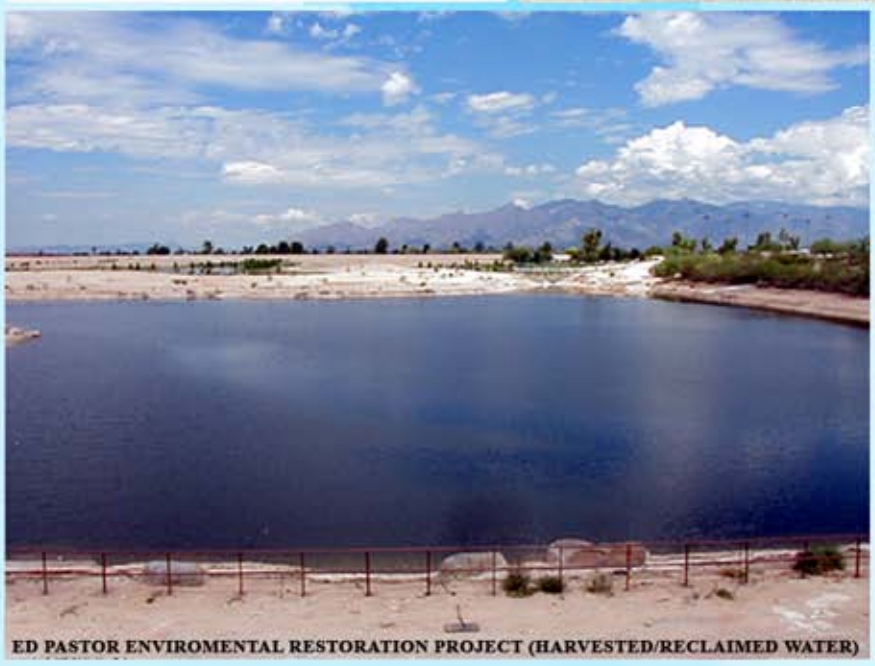
THE PIMA COUNTY EFFLUENT GENERATION AND UTILIZATION REPORT 2005


RANDOLPH PARK WRF


ED PASTOR ENVIROMENTAL RESTORATION PROJECT (HARVESTED/RECLAIMED WATER)


SANTA CRUZ RECHARGE

MARCH 31, 2006

PIMA COUNTY
EFFLUENT GENERATION/UTILIZATION
CALENDAR YEAR 2005

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EXECUTIVE SUMMARY

The Pima County Effluent Generation/Utilization Report for calendar year 2005 provides information regarding the treatment plants operated by Pima County Wastewater Management Department (PCWMD), a narrative description of the processes used at each facility, and identification of the class and quantity of water produced at each facility. The report also provides information regarding how effluent was allocated amongst the water providers in the community and how Pima County's effluent was used.

During 2005, Pima County Wastewater Management generated 69,007.2 acre feet (AF) of effluent at the metropolitan treatment facilities (Ina Road WPCF, Roger Road WWTP, Randolph Park WRF) and 2,152.1 AF of effluent at the outlying facilities (Arivaca Junction WWTF, Avra Valley WWTF, Corona de Tucson WWTF, Pima County Fairgrounds WWTF, Green Valley WWTP, Marana WWTF, Mt. Lemmon WWTP, Rillito Vista WWTF).

Based on the 1979 Intergovernmental Agreement (IGA) between the City of Tucson and Pima County, in 2005, Pima County's share of effluent from the metropolitan treatment facilities amounted to 4,080.7 AF, of which 1,087.7 AF went to direct reuse on County facilities. The Ina Road direct reuse was distributed to on-site plant irrigation (30.7 AF) and Arthur Pack Golf Course irrigation (635.0 AF). The Roger Road direct reuse was distributed to on-site plant irrigation (13.6 AF), Randolph Park to Natural Resources, Parks and Recreation (228.2 AF), and to Ed Pastor Kino Environmental Restoration Project (180.2 AF).

Pima County will receive approximately 535 AF of managed recharge credits in 2005 for its share of effluent that was discharged from the Ina Road plant into the Lower Santa Cruz Managed Recharged Project (LSCMRP). In addition, 2,121.1 AF of effluent from non-metropolitan facilities (Arivaca Junction [45.1 AF], Avra Valley [363.1 AF], Green Valley [1,677.1 AF], Marana [33.0 AF], and Mt. Lemmon [2.8 AF]) was discharged off-site, and Marana used an additional 31.0 AF of effluent for on-site treatment plant reuse.

During calendar year 2005, key issues affecting the use of County effluent included the reopening of the Randolph Park WRF (1,464.3 AF of effluent produced), the agreement with Tucson Water to provide wheeled water through the Tucson Water Reclaimed Water System to Arthur Pack Golf Course (connection construction 2006), and the continued storage of effluent in the LSCMRP. All of these efforts were designed to increase the usage of County effluent on County sites or create effluent storage credits for County effluent not directly reused.

Metropolitan Facility Descriptions

Ina Road Water Pollution Control Facility

The Ina Road Water Pollution Control Facility (WPCF) is in the northwestern part of the Tucson basin. The plant, which was originally designed to treat 25 million gallons per day (MGD), is now at capacity when the Tucson Boulevard diversion structure is in place. However, a new treatment train has been under construction to increase the facility capacity to 37.5 MGD. When the new train is completed, it will provide an additional 12.5 MGD of treatment capacity through a Biological Nutrient Removal Activated Sludge process.

The existing 25 MGD facility uses the high-purity oxygen activated sludge process. It incorporates digestion and centrifuging for solids handling to meet agriculture land application disposal criteria, and provides an energy-recovery system for on-site generation of electrical power to meet plant operations. This portion of the Ina Road facility produces Class B effluent.

In 2005, effluent from this facility (25,217.8 AF) was utilized/managed through three methods: on-site irrigation (30.7 AF), irrigation of County-owned/operated facilities (Arthur Pack Golf Course 635.0 AF), and recharge into the Santa Cruz River (24,552.1 AF).

In order to receive credits for Pima County's share of the effluent being discharged into the Santa Cruz River (2,993.0 AF in 2005), PCWMD entered into the Lower Santa Cruz Managed Recharge Project agreement with several other entities. Based on this agreement, in 2005, the County will receive 535 AF of managed recharge credits from the Arizona Department of Water Resources (ADWR) for the recharging and storage of effluent.

Randolph Park Water Reclamation Facility

The 3.0 MGD Randolph Park Water Reclamation Facility (WRF) is located midtown at City-owned Randolph Park. The WRF was originally built by the City of Tucson in 1975, and its ownership was transferred to the County as part of the 1979 IGA. In February of 2000, a supplemental agreement to the IGA was signed between the two parties. As part of this agreement, PCWMD was tasked with rebuilding the Randolph Park WRF.

Influent to the WRF is processed through a series of mechanically mixed anoxic basins. Effluent from these basins enters a mixed-liquor channel where it is distributed to six parallel aeration and membrane bioreactor cassette basins.

Activated sludge is returned to the cassette basin for reuse, while skimmed solids and excess activated sludge are pumped through a force main back into the sewer system. Effluent is disinfected through an in-vessel, low-pressure, high-output, ultraviolet disinfection system. The facility is currently permitted to produce Class A effluent (which meets the existing requirements of the City of Tucson Reclaimed Water System).

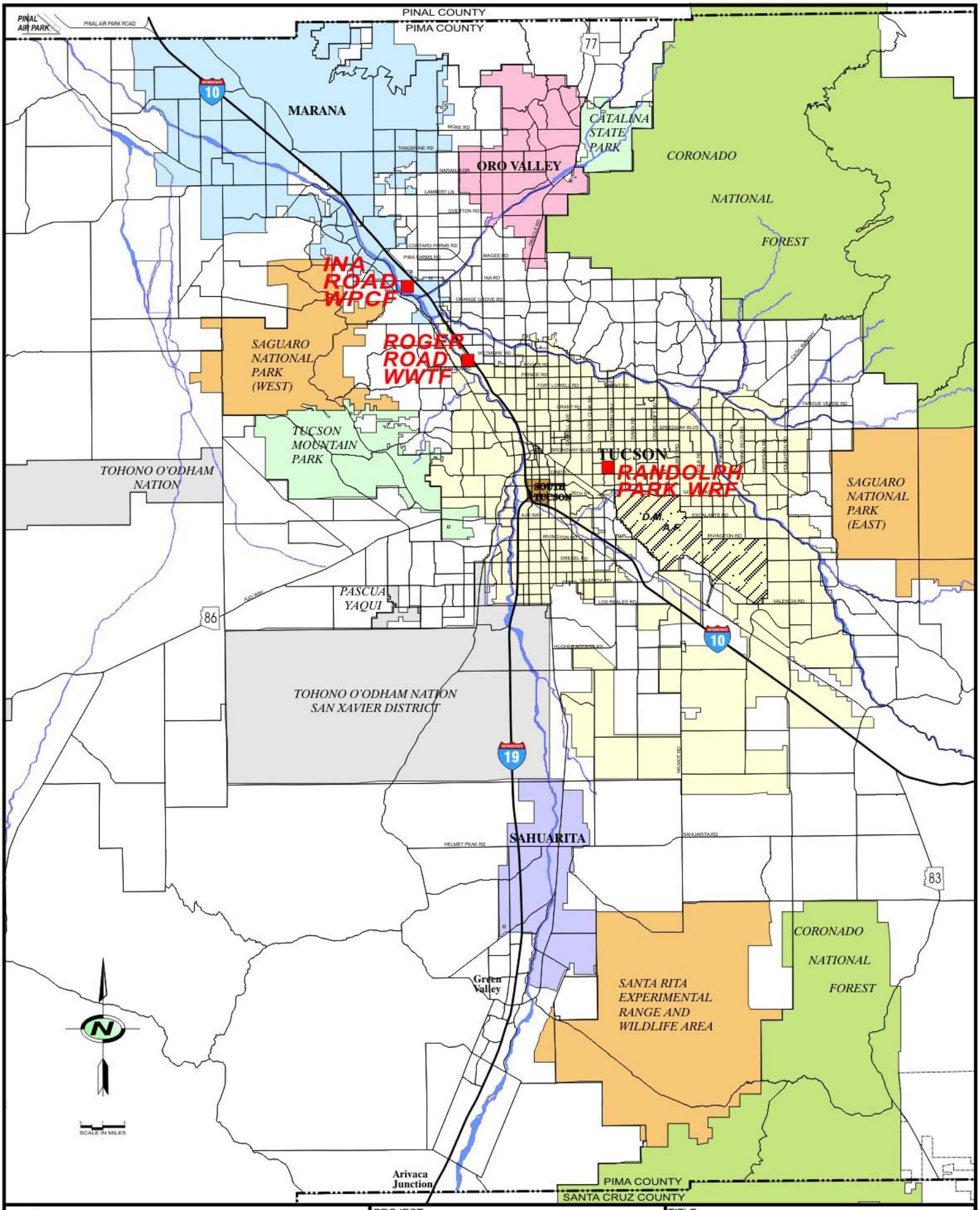
Based on the 2000 Supplemental IGA, effluent is directly delivered into the City of Tucson's Reclaimed Water System (1,464.3 AF in 2005) where it services County Parks (180.2 AF), KERP (282.2 AF), and Tucson Water's reclaimed water customers (1055.9 AF). Later this year, Randolph will also deliver effluent to Arthur Pack.

Roger Road Wastewater Treatment Plant

The Roger Road facility is located on the west side of Tucson. This is currently PCWMD's largest facility, with a capacity of 41 MGD. The facility receives daily average flows of approximately 38 MGD when Randolph Park WRF is in operation and the Tucson Boulevard diversion structure is in place.

The Roger Road facility process starts at the headworks with screening and degritting followed by primary clarification. Primary influent is then pumped over two 25-foot-tall, 125-foot-diameter biotowers in which biological treatment occurs. Effluent from the biotowers is further treated in aeration basins prior to secondary clarification. Secondary effluent is then chlorinated and discharged as Class B reclaimed water or to the Santa Cruz River. Solids from the primary and secondary clarifiers are thickened and then anaerobically digested. The digested Class B biosolids are then conveyed through a slurry pipeline to Ina Road where they are centrifuged and disposed of through land application.

Effluent from this facility is utilized/managed through three methods: plant irrigation, recharge into the Santa Cruz, and the City of Tucson Reclaimed Water System. In 2005, plant site irrigation consisted of 13.6 AF of effluent. In addition, 29,187.6 AF of effluent were discharged into the Santa Cruz River for storage in the two managed recharge projects (Upper and Lower Santa Cruz Managed Recharge). The remaining 13,123.9 AF of effluent were diverted to the City of Tucson's Sweetwater Facility/Water Filtration Plant and Silverbell Golf Course.



PIMA COUNTY WASTEWATER MANAGEMENT DEPARTMENT	PROJECT: EFFLUENT UTILIZATION		TITLE: METROPOLITAN FACILITIES	
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Non-Metropolitan Facility Descriptions

Arivaca Junction Wastewater Treatment Facility

The Arivaca Junction Wastewater Treatment Facility is located on the eastern side of Interstate I-19, approximately 30 miles south of Tucson. It is made up of a single 3.2-acre, 15-foot-deep, unlined, partially mixed aerated lagoon with a permitted treatment capacity of 100,000 gallons per day (GPD). Effluent disposal is via evaporation, percolation, and reuse. Evaporation ranges from 7,000 to 14,000 GPD, while percolation is approximately 10,000 GPD. PCWMD has a reuse agreement with Reventone Ranch to accept delivery of Class C effluent for restricted agriculture use.

Avra Valley Wastewater Treatment Facility

The Avra Valley Wastewater Treatment Facility is located approximately 20 miles southwest of Tucson. The facility is made up of a flow equalization basin, an oxidation ditch, two secondary clarifiers, four sludge-drying beds, and four percolation basins. The plant is designed to treat 1.2 MGD and is currently averaging approximately 1.0 MGD.

Influent is equalized in a 1.37 million gallon basin prior to being discharged into the 1.2 MGD oxidation ditch. The process is based on extended aeration, nitrification, and de-nitrification within the oxidation ditch by cycling the aeration on and off. The activated sludge mixed liquor flows into two secondary clarifiers, which are designed to provide an overflow rate of 212 GPD per square foot at Average Dry Weather Flow (ADWF) and 813 GPD at Peak Wet Weather Flow (PWWF). The clarifiers are designed to provide quiescent conditions for the sludge to settle. Sludge is returned to the oxidation ditch or wasted to thickeners and then stored in drying beds. Clarified effluent is discharged into the storage ponds or percolation basins. The plant produces Class B+ effluent.

Effluent disposal consists of percolation, evaporation, plant irrigation reuse, and disposal through a spray field into the Black Wash.

Corona de Tucson Wastewater Treatment Facility

The Corona de Tucson WWTF is located 22 miles southeast of Tucson. The facility is made up of two facultative stabilization lagoons, which are approximately 4 feet deep and 3.5 acres in size. The south lagoon is lined with soil cement and the north lagoon is lined with cement around the top and soil cement on the bottom. The facility has one 11-acre lined evaporative disposal pond and provisions for soil aquifer treatment (SAT) as an additional disposal option.

The current WWTF is designed and permitted to treat 300,000 GPD of domestic sewage. Construction of a 500,000 GPD packaged plant and use of percolation ponds will be initiated in early 2006. Currently, there is no reuse permit for the Corona de Tucson facility.

Pima County Fairgrounds Wastewater Treatment Facility

The Pima County Fairgrounds Wastewater Treatment Facility is located approximately 18 miles southeast of Tucson. It is a unique facility as it only has measurable flow in the month of April when the Pima County Fair is held. The capacity for the facility is 20,000 GPD.

The facility consists of two primary stabilization ponds that are approximately ¼ acre each and an overflow pond that is approximately ½ acre. These stabilization lagoons are designed for evaporation and percolation. The class of effluent for this facility has not been qualified/defined as this plant does not discharge effluent.

Green Valley Wastewater Treatment Plant

The Green Valley Wastewater Treatment Plant is located approximately 15 miles south of Tucson. The facility has a capacity of 4.1 MGD and is made up of two wastewater treatment trains. Currently, average influent is 1.7 MGD. The influent to this facility enters through the common headworks comprising automatic screens and degritting, prior to flow being split between two processes.

The first is a 2.1 MGD treatment process made up of two trains of primary and secondary aerated lagoons followed by two effluent maturation/settling lagoons and four percolation basins. This treatment process produces Class B effluent.

The second process is a 2.0 MGD Biological Nutrient Removal Oxidation Ditch (BNROD), which operates on an extended aeration, nitrification, and de-nitrification process within the oxidation ditch by cycling the aeration on and off. The activated sludge mixed liquor flows into two secondary clarifiers. Sludge is returned to the oxidation ditch or wasted solids management facilities onsite. Clarified effluent is then filtered and disinfected. This treatment process produces Class A+ effluent.

Effluent disposal is managed through percolation, reuse, and delivery to Robson/ Quail Creek Inc. Currently, Green Valley has an average daily effluent production of 1.25 MGD. PCWMD has a contract with Robson Ranch for up to 1 MGD. There was no on-site irrigation reuse in 2005.

Marana Wastewater Treatment Facility

The Marana WWTF consists of four package treatment plants that are each rated at 50,000 GPD, for a total capacity of 200,000 gallons. The Marana facility also has a lined emergency overflow basin.

The four package treatment plants incorporate a Biological Nutrient Removal process and chlorine disinfection to produce Class B+ effluent.

Effluent is disposed through landscape irrigation for a riparian habitat restoration project under a Class 2 Reuse Permit. Through the ADEQ's Arizona Pollutant Discharge Elimination and Aquifer Protection permitting programs, Marana can discharge to the Santa Cruz River; however, to date flows have not been sufficent enough for effluent to actually reach the river.

The facility will be expanded during the next 18 months with the phased addition of Biological Nutrient Removal processes to serve the rapidly growing northwest Marana service area.

Mt. Lemmon Wastewater Treatment Plant

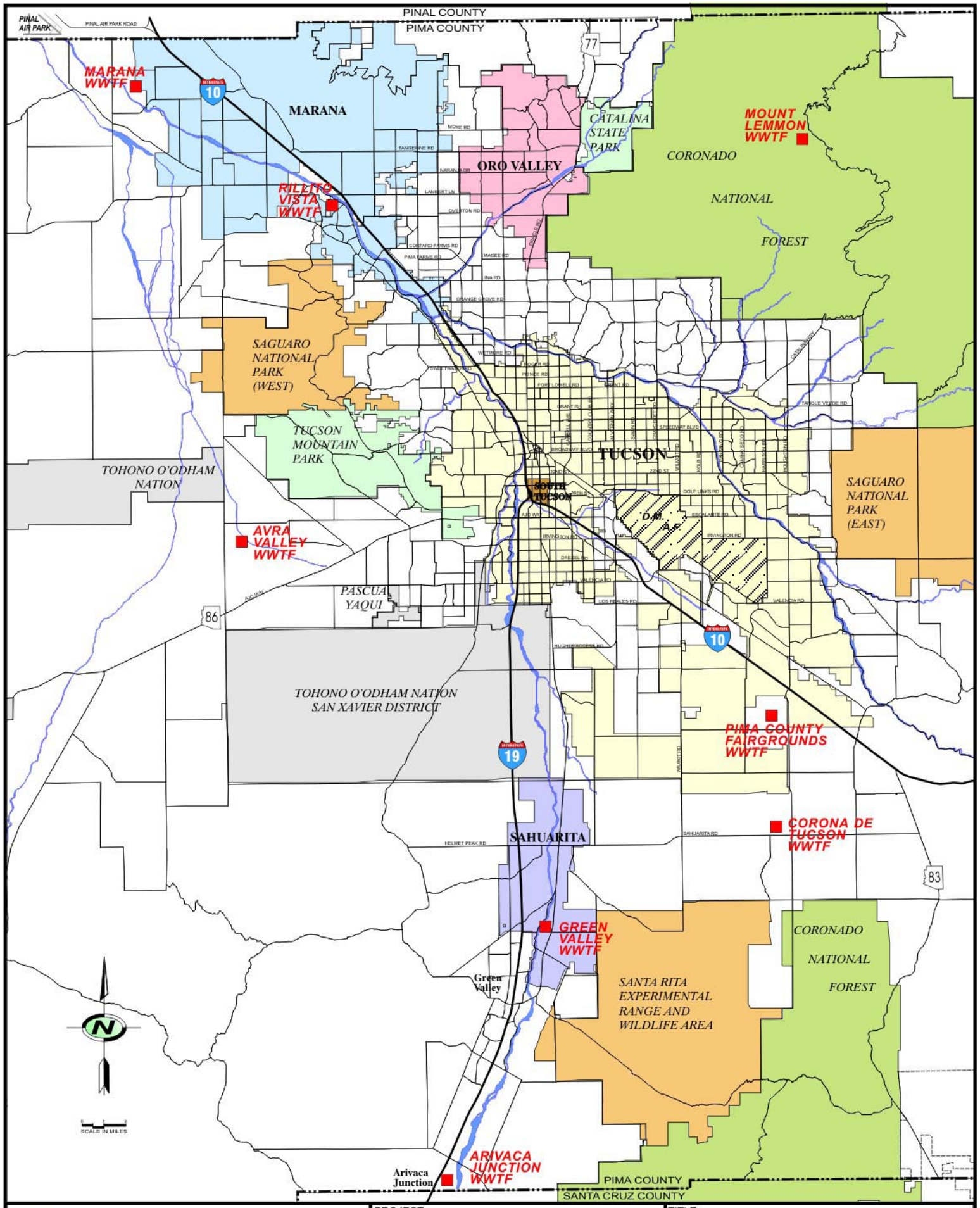
The Mt. Lemmon facility is located in the Town of Summerhaven near the top of Mt. Lemmon. As a result of the 2003 Aspen Fire, the Mt. Lemmon facility is currently operating at minimal flows. In an agreement reached with the United States Forest Service (USFS) in the 1970's, this treatment facility was limited to fewer than 47 customers; however, this number was recently increased by the Forest Service to 77 customers with the same spray field peak daily limitations of 17,000 per day or a monthly average of 12,500 per day. Various options are being reviewed with the Forest Service involving the possible expansion of the conveyance system.

The facility uses an oxidation ditch for treatment. Effluent is disposed of through an off-site spray field. The class of effluent for this facility has not been qualified/defined as this plant does not discharge effluent.

Rillito Vista Wastewater Treatment Facility

The Rillito Vista Wastewater Treatment Facility is located on the northwest side of Tucson adjacent to the Arizona Portland Cement plant. This is a small facility with influent averaging approximately 10,000 GPD. The facility consists of two stabilization/evaporation/percolation ponds with a maximum capacity of 20,000 GPD.

This facility is designed for evaporation and percolation with only one pond at a time being operated. The second pond is dried and scraped before it is returned to service. The class of effluent for this facility has not been qualified/defined as this plant does not discharge effluent.



PIMA COUNTY WASTEWATER MANAGEMENT DEPARTMENT

PROJECT: EFFLUENT UTILIZATION

TITLE: NON-METROPOLITAN FACILITIES

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Basis of Effluent Entitlements

1979 Intergovernmental Agreement, Resolution No. 1979 - 78

The 1979 Intergovernmental Agreement, signed on June 26, 1979, was the original agreement between Pima County (PC) and the City of Tucson (COT). This agreement assigned control of wastewater conveyance and treatment activities to Pima County Wastewater Management (PCWMD). In exchange, the COT would receive 90% of all effluent produced at the PCWMD metropolitan sites, which were limited to Ina Road WPCF and Roger Road WWTP.

City of Tucson – Pima County Supplemental Intergovernmental Agreement Relating to Effluent, Resolution No. 2000-28

The 2000 Supplemental Intergovernmental Agreement, signed on February 8, 2000, placed restrictions on how PC could use effluent. This agreement also exempted outlying treatment facilities from the City control, identified the need for reopening the Randolph Park WRF, and provided an avenue for the County to deliver County effluent to County facilities. This supplemental agreement also established a Conservation Effluent Pool for use with riparian habitat projects and identified how the Southern Arizona Water Rights Settlement Act (SAWRSA) volumes are to be treated in determining effluent allocations.

Conservation Effluent Pool Agreement

The Conservation Effluent Pool (CEP), which is a specific quantity of effluent that can be used for conservation projects, was identified in the 2000 Supplemental Intergovernmental Agreement. However, the implementation of the use of this pool requires a separate agreement, which is currently being negotiated with the City of Tucson.

Intergovernmental Agreement between the City of Tucson and Pima County for Treating Effluent and Wheeling Reclaimed Water (Wheeling Agreement), Resolution No. 2003-286

The Wheeling Agreement, signed December 16, 2003, governs reclaimed water transactions between PCWMD (the effluent provider), COT (the distributor and a reclaimed water user) and other County facilities (reclaimed water users). Effluent enters the system at the COT Sweetwater Plant and through direct delivery from the Randolph Park WRF, where it is piped to various locations. The agreement governs the costs per acre foot that will be charged to PC for distribution of PC effluent to County sites.

Intergovernmental Agreement – Permitting and Operating Managed In-Channel Recharge of Effluent in the Santa Cruz River Channel (Managed Recharge IGA 2003)

The Managed Recharge IGA 2003 governs the recharge of effluent and the associated credits made available from recharging effluent into LSCMRP (Lower Santa Cruz Managed Recharge Project) between the Ina Road WPCF and Trico Road in Marana. Participants include the Town of Marana, Cortaro-Marana Irrigation District, Avra Valley Irrigation District, Metropolitan Domestic Water Improvement District, Flowing Wells Irrigation District, Oro Valley, Pima County, and the City of Tucson. During 2004, PCWMD obtained a storage permit from the Arizona Department of Water Resources (ADWR) for the storage of up to 5,980 AF/Yr in this facility.

Effluent from the Metropolitan Treatment Facility for Calendar Year 2005

Treatment Facilities	Influent Received(a) (AF/YR)(b)	Effluent Utilized County Facilities (AF/YR)	Effluent Discharged/Delivered (AF/YR)	Effluent Utilized (AF/YR)
Ina Road WPCP	26,149.8			
-Arthur Pack		635.0		
-Plant Irrigation		30.7		
-Santa Cruz Discharge			24,552.1	
Ina Road WPCF Total	26,149.8	665.7	24,552.1	25,217.8
Roger Road WWTP	43,239.0			
-Plant Irrigation		13.6		
-Santa Cruz Discharge			29,187.6	
-Sweetwater (Water Providers)			13,123.9	
Roger Road WWTF Total	43,239.0	13.6	42,311.5	42,325.1
Randolph Park WRF	1,579.6			
-KERP(c)		180.2		
-Parks		228.2		
-TW Reclaimed less KERP			1,055.9	
Randolph Park WRF Total	1,579.6	408.4	1,055.9	1,464.3
Total Influent Received	70,968.4			
Total Effluent Used County Facilities		1,087.7		
Total Effluent Discharged/Delivered			67,919.5	
Total				**69,007.2**
SAWRSA (d)				28,200.0
Total Less SAWRSA				40,807.2
Water Providers Share				0.9
Pima County Share				0.1
Entities Share				
-Water Providers (90%)				36,726.4
-Pima County (10%)				**4,080.7**

(a) Influent meters are accurate to +/- 5%

(b) Acre feet per year (AF/YR) = Million Gallons per Year (MGY) divided by 325,851 gallons (the equivalent of one AF).

(c) KERP - Ed Pastor Kino Environmental Restoration Project

(d) SAWRSA - Southern Arizona Water Rights Settlement Act

Yearly Influent and Effluent Utilization/Discharge by Metropolitan Treatment Facility

	Influent Received (AF/YR)	Effluent Utilized County Facilities (AF/YR)	Effluent Discharged/ Delivered (AF/YR)	Effluent Utilized (AF/YR)
Ina Road				
2003	27,071.5	806.9	26,407.6	27,214.5
2004 (a)	28,714.7	605.6	27,925.5	28,531.1
2005 (a)	26,149.8	665.7	24,552.1	25,217.8
Roger Road				
2003	41,991.9	119.7	40,862.2	40,981.9
2004	40,957.0	599.0	39,025.8	39,624.8
2005 (a)	43,239.0	13.6	42,311.5	42,325.1
Randolph Park				
2003	1.4	1.4	0.0	1.4
2004	114.7	0.0	97.5	97.5
2005	1,579.6	(b) 408.4	1,055.9	1,464.3

(a) When the diversion structure at Tucson Blvd. is in place, flows at Ina increase as they did in 2004, and, when it is not in place, home flows return to Roger, which then decreases the flows to Ina as it did in 2005.

(b) In accordance with the Wheeling Agreement, all wheeled effluent is now being accounted for through the Randolph Park facility.

Metropolitan Facility Totals				
2003	69,064.8	927.9	67,269.9	68,197.8
2004	69,786.4	1,204.6	67,048.8	68,253.4
2005	70,968.4	1,087.7	67,919.5	69,007.2

	County Share Effluent (AF/YR)	County Storage Credits (AF/YR)	Cumulative Credits (AF/YR)
2003	3,999.8	58.1	58.1
2004	4,005.3	(c) 449.0	507.1
2005	4,080.7	535.0	1,042.1

(c) In 2005, Randolph Park WRF was added to the recharge credit formula and this increased the County's total credits from in 2004 from 444 AF to 449 AF.

Effluent From the Non-Metropolitan Treatment Facility for Calendar Year 2005

Treatment Facilities	Influent Received(a) (AF/YR) (b)	Effluent Utilized County Facilities (AF/YR)	Effluent Discharged/ Delivered (AF/YR)	Effluent Utilized (AF/YR)
Arivaca Junction Influent	90.0			
-Reventone Ranch			45.1	
Arivaca Junction Total	90.0	0.0	45.1	45.1
Avra Valley Influent	1,130.9		363.1	363.1
Corona de Tucson Influent	116.8			N/A
Fairgrounds Influent	0.0			N/A
Green Valley Influent	1,924.1			
-Plant Reuse		0.0		
-Quail Creek			1,677.1	
Green Valley Total	1,924.1	0.0	1,677.1	1,677.1
Marana Influent	97.9			
-Plant Reuse		31.0		
-Santa Cruz Discharge			33.0	
Marana Total	97.9	31.0	33.0	64.0
Mt. Lemmon Influent	3.0			
-Spray Field			2.8	
Mt. Lemmon Total	3.0	0.0	2.8	2.8
Rillito Vista Influent	20.6			N/A
Total Influent	3,383.3			
Total Effluent Utilized on County Facilities		31.0		
Total Effluent Discharged/Delivered			2,121.1	
Total				2,152.1

(a) Influent meters are accurate to +/-5%

(b) Acre feet per year (AF/YR) = Million Gallons per Year (MGY) divided by 325,851 gallons (is the equivalent of one AF).

Yearly Influent and Effluent Utilization/Discharge by Outlying Treatment Facility

	Influent Received (AF/YR)	Effluent Utilized County Facilities (AF/YR)	Effluent Discharged/ Delivered (AF/YR)	Effluent Utilized (AF/YR)
Arivaca Junction				
2003	62.1	0.0	49.0	49.0
2004	74.4	0.0	41.6	41.6
2005	90.0	0.0	45.1	45.1
Avra Valley				
2003	1,065.9	0.0	0.0	0.0
2004	1,085.5	0.0	0.0	0.0
2005	1,130.9	0.0	363.1	363.1
Corona de Tucson				
2003	56.2	0.0	0.0	0.0
2004	79.2	0.0	0.0	0.0
2005	116.8	0.0	0.0	0.0
Fairgrounds				
2003	0.1	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0
2005	0.0	0.0	0.0	0.0
Green Valley				
2003	1,898.0	9.2	116.6	125.8
2004	1,830.9	52.7	1,475.9	1,528.6
2005	1,924.1	0.0	1,677.1	1,677.1
Marana				
2003	45.0	10.5	31.3	41.9
2004	57.8	19.1	33.0	52.0
2005	97.9	31.0	33.0	64.0
Mt. Lemmon				
2003	2.2	0.0	2.2	2.2
2004	2.2	0.0	0.8	0.8
2005	3.0		2.8	2.8
Rillito Vista				
2003	11.0	0.0	0.0	0.0
2004	18.7	0.0	0.0	0.0
2005	20.6	0.0	0.0	0.0

Pima County
Effluent Generation/Utilization
Calendar Year 2005

Facility	Metered (h) Influent (AF/YR)	Effluent Generated (AF/YR)	Disposition	User	Effluent Utilization (AF/YR)	Regulatory Programs Classifications	PC Recharge Credits (AF)
Arivaca Junction	90.0	45.1	Percolation, Evaporation, Reuse	Reventone Ranch (a)	45.1	Class C	
Avra Valley	1,130.9	363.1	Percolation, Evaporation, Plant Reuse		N/A	Class B+	
			Spray Field Disposal		363.1		
Corona de Tucson	116.8	N/A (g)	Percolation, Evaporation		N/A	N/A	
Fairgrounds	0.0	N/A (g)	Percolation, Evaporation		N/A	N/A	
Green Valley	1,924.1	1,677.1	Percolation, Evaporation, Reuse	Quail Creek (b)	1,677.1	Class A+	
			Plant Irrigation		0.0	Class B	
Ina Road	26,149.8	25,217.8	Reuse	Arthur Pack Golf Course	635.0	Class B	
			Plant Irrigation		30.7		
			Santa Cruz Discharge		24,552.1		
			Lower Santa Cruz Recharge (Recharged)		N/A		535 AF (d)
Marana	97.9	64.0	Santa Cruz Discharge		33.0	Class B+	
			Plant Irrigation		31.0		
Mt. Lemmon	3.0	2.8	Spray Field Discharge	USFS	2.8	Permit (f)	
Randolph Park (c)	1,579.6	1,464.3	Reuse	Tucson Water	1,055.9	Class A	
			Reuse	KERP (e)	180.2		
				County Parks	228.2		
Roger Road	43,239.0	42,325.1	Santa Cruz Discharge		29,187.6	Class B	
			Plant Irrigation		13.6		
			Reuse	Sweetwater (Water Providers)	13,123.9		
Rillito Vista	20.6	N/A (g)	Percolation, Evaporation		N/A	N/A	

(a) Reventone Ranch costs PCWMD $566 per quarter for disposal.

(b) PCWMD invoiced Quail Creek $42,280 in 2005.

(c) Due to a facility malfunction, Randolph Park WRF didn't resumed delivery of reclaimed water to the City of Tucson until May 1, 2005.

(d) The Lower Santa Cruz Managed Recharge Project (LSCMRP) stored 535 AF in 2005.

(e) Ed Pastor Kino Environmental Restoration Project (KERP)

(f) PCWMD has a permit for its Mt. Lemmon facility, which allows it to spray up to 17,000 GPD or a monthly average of 12,500 GPD per day.

(g) Treated effluent sites marked N/A have inflow meters, but no meters for effluent generated.

(h) Influent meters are accurate to +/- 5%

Note: Pima County has performed no groundwater recovery against its credits.

Kino Sports Complex
Reclaimed/Harvested Water Allocation
For Calendar Year - 2005

Month	Gallons/Month	Ccf/Month	Cost	AF/Month	Cost/AF
January	1,181,092.0	1,579.0	2,210.60	3.6	609.88
February	375,496.0	502.0	702.80	1.2	609.88
March	0.0	0.0	0.00	0.0	609.88
April	4,815,624.0	6,438.0	9,013.20	14.8	609.88
May	786,148.0	1,051.0	1,471.40	2.4	609.88
June	11,296,296.0	15,102.0	21,142.80	34.7	609.88
July	23,185,756.0	30,997.0	43,395.80	71.2	609.88
August	13,321,132.0	17,809.0	24,932.60	40.9	609.88
September	0.0	0.0	0.00	0.0	609.88
October	1,855,040.0	2,480.0	3,472.00	5.7	609.88
November	0.0	0.0	3,472.00	0.0	609.88
December	1,896,180.0	2,535.0	3,549.00	5.8	609.88
Yearly Total	**58,712,764.0**	**78,493.0**	**113,362.20**	**180.2**	

Reclaimed Water Allocation by Year

Year	Gallons/Year	Ccf/Year	Cost	AF/YR
2003	116,720,000.0	156,042.8	(a)	358.0
2004	107,504,804.0	143,723.0	189,281.00	329.9
2005	58,712,764.0	78,493.00	113,362.20	180.2

(a) In 2003, usage information was collected differently, and at that time, costs were not available.

Reclaimed/Harvested by Year

Year	Reclaimed AF/YR	Harvested AF/YR	Total Irrigation AF/YR
2003	87.0	358.0	445.0
2004	329.9	30.7	360.6
2005	180.2	64.9	245.1

Natural Resources, Parks and Recreation
Monthly Reclaimed Water Usage
For Calendar Year - 2005

Month	Gallons/Month	Ccf/Month	Cost	AF/Month	Cost/AF
January	2,921,688.0	3,906.0	2,460.78	9.0	274.45
February	2,736,932.0	3,659.0	2,305.17	8.4	274.45
March	2,548,436.0	3,407.0	2,146.41	7.8	274.45
April	3,583,668.0	4,791.0	3,018.33	11.0	274.45
May	5,692,280.0	7,610.0	4,794.30	17.5	274.45
June	9,599,832.0	12,834.0	8,085.42	29.5	274.45
July	9,379,860.2	12,539.9	7,900.15	28.8	274.45
July (a)	2,416,099.8	3,230.1	1,938.05	7.4	261.38
August	10,342,596.0	13,827.0	8,296.20	31.7	261.38
September	6,140,332.0	8,209.0	4,925.40	18.8	261.38
October	6,926,480.0	9,260.0	5,556.00	21.3	261.38
November	6,518,072.0	8,714.0	5,228.40	20.0	261.38
December	5,538,192.0	7,404.0	4,442.40	17.0	261.38
Yearly Total	**74,344,468.0**	**99,391.0**	**61,097.01**	**228.2**	

(a) July 1-15 was billed at $274.45 (environmental rate) and July 16-31 was billed at the new environmental rate of $261.38.

Yearly Reclaimed Water Usage

Year	Gallons/Year	Ccf/Year	Cost	AF/YR
2003	69,569,188.5	93,006.9	(b)	213.5
2004	86,112,707.1	115,123.9	73,165.51	264.3
2005	74,344,468.0	99,391.0	61,097.01	228.2

(b) In 2003, usage information was collected differently, and, at that time, costs were not available.

	Delivery Area	Location #	METER #	METER ADDRESS	City of Tucson Water Acct #
RILLITO RIVER PARK	La Canada to Shannon (North Bank) & La Cholla to Shannon (South Bank)	1	44032260	4845 N Flowing Wells	34955-81934
		2	44032261	4845 N Flowing Wells	34955-81936
		3	44032262	4845 N Flowing Wells	34955-81938
	La Canada to Shannon (South Bank)	4	44032257	4765 N Flowing Wells	34955-81946
		5	44032258	4765 N Flowing Wells	34955-81942
		6	44032259	4765 N Flowing Wells	34955-81944
	Flowing Wells to Stone (North Bank) & Children's Memorial Park	7	44228452	4840 N La Canada	28007-70852
		8	96111196	4841 N La Canada	28007-70854
	Flowing Wells to Stone (South Bank)	9	44228454	4760 N Flowing Wells #1	28007-70856
		10	44228455	4760 N Flowing Wells	28007-70858
	Stone to Campbell (North Bank)	11	44228457	1500 E River Rd. #2	28007-30698
		12	44228458	1500 E River Rd. #1	28007-30696
	Stone to Campbell (South Bank)	15	44228462	1321 E Prospect Lane #1	28007-28972
		16	44228463	1321 E Prospect Lane #2	28007-28974
	Alvernon to Craycroft (South Bank)	17	98527043	3400 N Alvernon Way	428133449522
		18	98520734	3800 N. Alvernon Way	428133449510
	Rillito Track & Park	13	97738770	1490 E. River Rd. #2	428133-456432
		14	1476849	1490 E River Rd. #1	428133-456434
	Alamo Wash	19	41787647	5097 E Glenn #1	151921-152684
		20	41787579	5097 E Glenn #2	34951-52682
SANTA CRUZ RIVER	Speedway to St Mary's (West Bank)	21	95428756	756 N Riverside	29551-62910
		22	95111193	757 N Riverside	29551-62914
	Grant to Speedway (East & West Banks)	23	44032284	830 W Speedway	29551-77272
		24	44032283	831 W Speedway	29551-77274
	George Mehl (Foothills) Park	25	1566591	4000 E. River Rd	428133471852
		26	1565590	4000 E. River Rd	428133471850
	Kino Sports Park	28	1529351	3000 S. Sunland Vista	478853-532412
		29	1518515.	3000 S. Sunland Vista	478853-432414