

# THE PIMA COUNTY EFFLUENT GENERATION AND UTILIZATION REPORT 2004



MARCH 31, 2005

**PIMA COUNTY**  
**EFFLUENT**  
**GENERATION/UTILIZATION**  
CALENDAR YEAR 2004

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## EXECUTIVE SUMMARY

The Pima County Effluent Generation/Utilization Report for calendar year 2004 provides background regarding the treatment plants operated by Pima County Wastewater Management (PCWWM), a narrative description of the processes used at each facility, along with the identification of the class and quantity of water produced at each location. The report also provides background regarding how effluent was allocated amongst the water providers in the community and how Pima County's effluent was used.

During 2004, Pima County Wastewater Management generated 68,253.37 acre feet (AF) of effluent at the metropolitan treatment facilities (Ina Road WPCF, Roger Road WWTP, Randolph Park WRF) and 1,625.22 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, Pima County's share of effluent from the metropolitan treatment facilities amounted to 4,005.34 AF, of which 1,204.55 AF went to direct reuse on County facilities (Ina Road to Arthur Pack Golf Course [581.40 AF], Ina Road plant irrigation [24.15 AF], Roger Road irrigation [4.81 AF], and Roger Road to Parks/Kino [594.19 AF]) as PCWWM started wheeling effluent from the Roger Road facility. In 2004, Pima County will receive approximately 444 managed recharge credits. (Note: Total 2004 recharge credits may increase slightly based on Tucson Water's review of accounting for Randolph Park effluent [97.52 AF]; and impact on Oro Valley Water, Metro Water, and recharge in the Lower Santa Cruz Managed Recharge Project [LSCMRP].) In addition, 71.71 AF of effluent from non-metropolitan facilities (100% Pima County per the IGA) were used on-site for treatment plant reuse, with 1,551.28 AF discharged off-site.

During calendar year 2004, key issues affecting the use of County effluent included the initial operation of the Randolph Park WRF (97.52 AF), the agreement with Tucson Water to provide wheeled water to Arthur Pack Golf Course, and a storage permit to store 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 was originally designed to treat 25 million gallons per day (MGD). However, during the past few years, 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 average daily inflow of influent is approximately 25 MGD.

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.

Effluent from this facility is utilized/managed through three methods: plant irrigation, County facilities irrigation, and recharge into the Santa Cruz. In 2004, PCWWM used 24.15 AF of effluent to irrigate the Ina Road facility. PCWWM also delivered 581.40 AF of effluent through a County-owned/operated line to the Arthur Pack Golf Course to be used for irrigation purposes. The remaining 27,925.50 AF of effluent were discharged into the Santa Cruz River. In order to receive credits for Pima County's share of the effluent being discharged into the Santa Cruz River, PCWWM entered into the Lower Santa Cruz Recharge Agreement with several other entities. In 2004, the County received 444 managed recharge credits from the Arizona Department of Water Resources (ADWR) for the recharging and storage of effluent.

### **Randolph Park Water Reclamation Facility**

The 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, PCWWM was tasked with rebuilding the Randolph Park WRF. The plant is currently rated at 3.0 MGD.

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. Effluent is disinfected through an in-vessel, low-pressure, high-output, ultraviolet disinfection system. Although the facility is currently permitted to produce Class A effluent (which meets the existing requirements of the City of Tucson Reclaimed Water System), it is capable of producing Class A+ effluent.

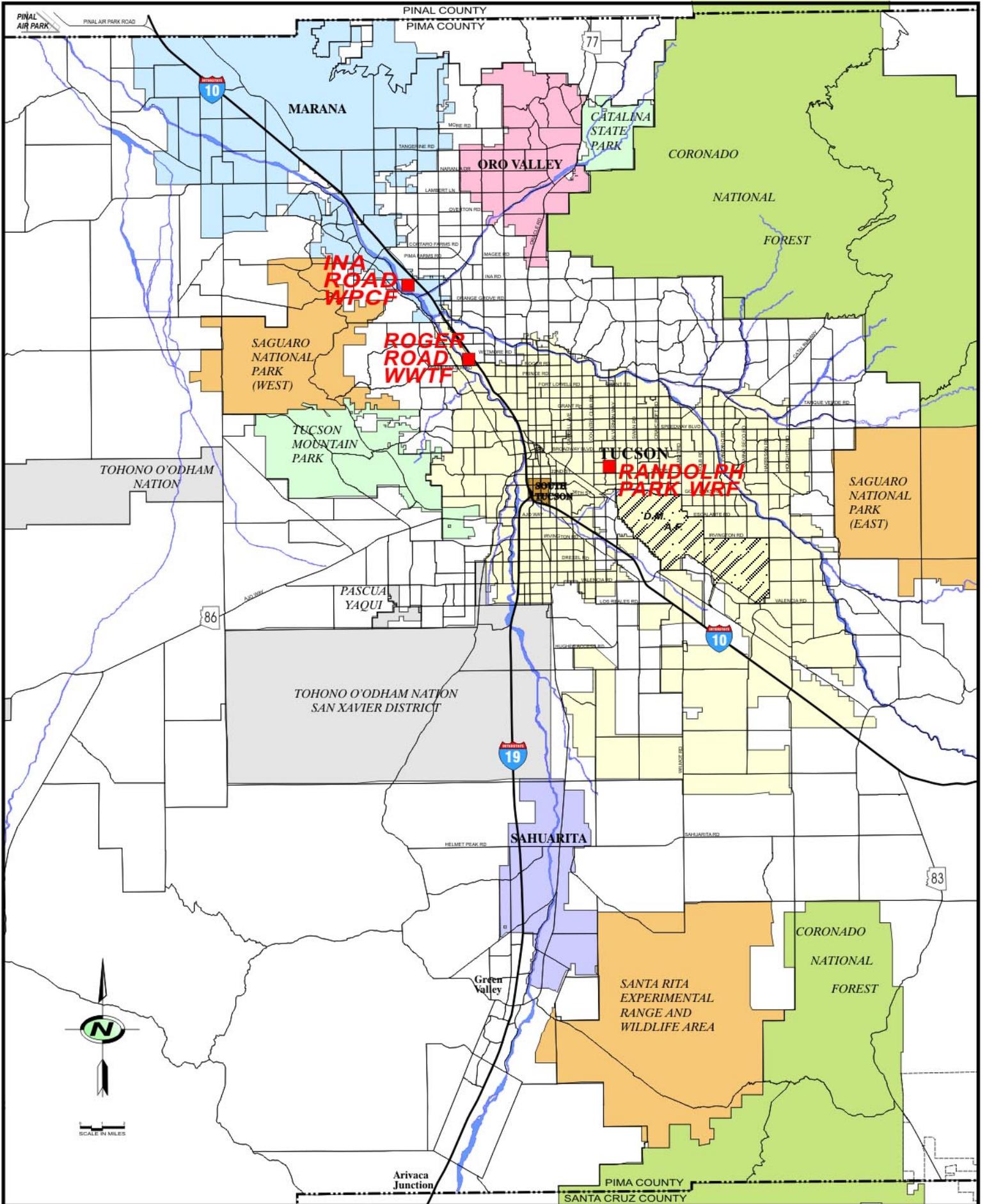
The two methods of effluent disposal consist of plant reuse and direct delivery into the City of Tucson's Reclaimed Water System, per the agreement reached in the 2000 Supplemental IGA.

### **Roger Road Wastewater Treatment Plant**

The Roger Road facility is located on the west side of Tucson. This is currently PCWWM's largest facility, with a capacity of 41 MGD, and receives daily average flows of approximately 36 MGD.

The Roger Road facility process starts with 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 2004, plant site irrigation consisted of 4.81 AF of effluent. In addition, 26,985.10 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 12,634.89 AF of effluent were diverted to the City of Tucson's Sweetwater Facility/Water Filtration Plant and Silverbell Golf Course. Also included in the effluent that is diverted to Sweetwater is the County deliveries for Kino (329.92 AF) and Natural Resources Parks and Recreation (264.27 AF).



 <p><b>PIMA COUNTY WASTEWATER MANAGEMENT DEPARTMENT</b></p>		PROJECT:	TITLE:
		<p><b>EFFLUENT UTILIZATION</b></p>	<p><b>METROPOLITAN FACILITIES</b></p>
DRAWN BY:	CHECKED BY:	FILE:	DATE:
		METROWWT.CDR	MAY 2004
			FIGURE:
			A

## **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. PCWWM 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 965,000 GPD.

Influent is equalized in a 1.37 million gallon basin prior to being pumped to a channel that discharges 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 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. The spray field is only used under emergency flow conditions.

## **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 each 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 also has one 11-acre HDPE-lined evaporative disposal pond.

The current WWTF is designed to treat 150,000 GPD of domestic sewage, but the permitted capacity is limited to the evaporation capability of the evaporation pond (117,000 GPD) in the current Aquifer Protection Permit dated 12-17-2004. During 2004, average monthly inflows were approximately 84,000 GPD, but the last several months of the year were showing a rapid increase in inflows. 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  $\frac{1}{4}$  acre each and an overflow pond that is approximately  $\frac{1}{2}$  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 inflow is 1.7 MGD. The influent to this facility enters through a 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 denitrification 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 production of 1.25 MGD. PCWWM has a contract with Robson Ranch for up to 1 MGD. Plant reuse for operations and irrigation is .25 MGD.

### **Marana Wastewater Treatment Facility**

The Marana WWTF consists of three package treatment plants that are each rated at 50,000 GPD. The total capacity for Marana is 150,000 gallons. The Marana facility also has two lined facultative/evaporation basins of which one is currently being used as an overflow basin.

The three package treatment plants use a Biological Nutrient Removal process and produce Class B+ effluent.

Effluent disposal consists of approximately 8,000 GPD for plant reuse, and 25,000 GPD of discharge to the Santa Cruz River.

### **Mt. Lemmon Wastewater Treatment Plant**

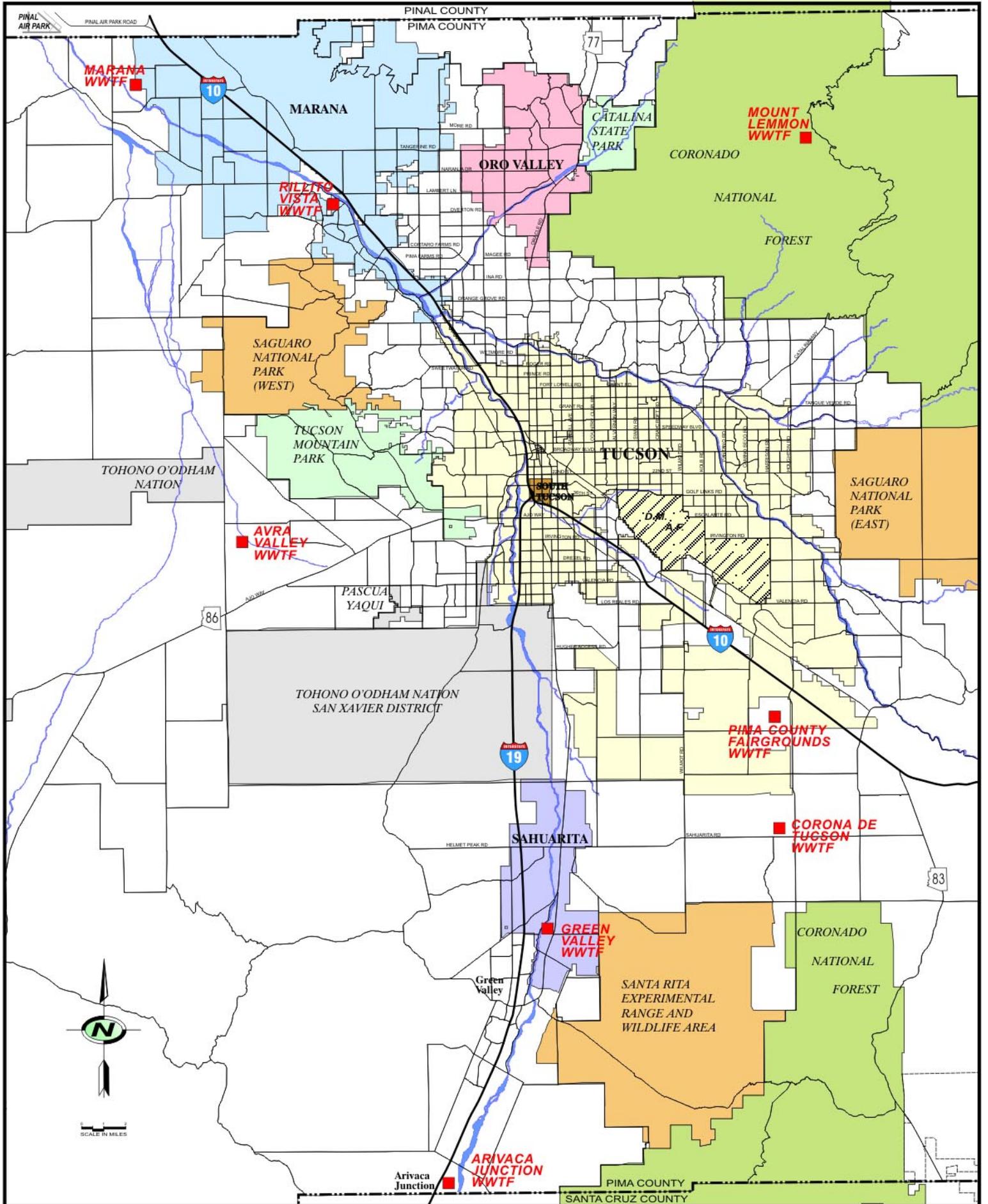
The Mt. Lemmon facility is located in the Town of Summerhaven near the top of Mt. Lemmon. As a result of the 2003 Aspen Fire, the Mt. Lemmon facility is currently operating at minimal flows. In an agreement reached with the United States Forest Service (USFS) in the 1970's, the treatment facility was limited to fewer than 50 customers, since, at that time, the USFS expressed concern about excessive effluent disposal from the Mt. Lemmon spray field.

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 inflows 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.



 <b>PIMA COUNTY WASTEWATER MANAGEMENT DEPARTMENT</b> 	PROJECT:	TITLE:
	<b>EFFLUENT UTILIZATION</b>	<b>NON-METROPOLITAN FACILITIES</b>
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	MAY 2004	B

## **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 (PCWWM). In exchange, the COT would receive 90% of all effluent produced at the PCWWM 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 Supplemental Intergovernmental Agreement (2000). 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 PCWWM (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 Water, Flowing Wells Irrigation District, Oro Valley, Pima County, and the City of Tucson. During 2004, PCWWM 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 2004

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 WPCF	28,714.70			
-Arthur Pack		581.40		
-Plant Irrigation		24.15		
-Santa Cruz Discharge			27,925.50	
<b>Ina Road WPCF Total</b>	<b>28,714.70</b>	<b>605.55</b>	<b>27,925.50</b>	<b>28,531.05</b>
Roger Road WWTF	40,957.80			
-Plant Irrigation		4.81		
-Santa Cruz Discharge			26,985.10	
-TW Sweetwater less KERP(c)			11,507.20	
-Parks/KERP (c)		594.19		
-Silverbell Golf Course			533.50	
<b>Roger Road WWTF Total</b>	<b>40,957.80</b>	<b>599.00</b>	<b>39,025.80</b>	<b>39,624.80</b>
Randolph Park WRF	114.69			
-TW Reclaimed System			97.52	97.52
<b>Randolph Park WRF Total</b>	<b>114.69</b>		<b>97.52</b>	<b>97.52</b>
<b>Total Influent Received</b>	<b>69,787.19</b>			
<b>Total Effluent Used County Facilities</b>		<b>1,204.55</b>		
<b>Total Effluent Discharged/Delivered</b>			<b>67,048.82</b>	
<b>Total</b>				<b>68,253.37</b>
SAWRSA (d)				28,200.00
Total Less SAWRSA				40,053.37
City of Tucson Share				0.90
Pima County Share				0.10
<b>Entities Share</b>				
-Tucson Water (90%)				36,048.03
-Pima County (10%) (e)				<b>4,005.34</b>

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

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

(c) KERP - Ed Pastor Kino Environmental Restoration Project

(d) SAWRSA - Southern Arizona Water Rights Settlement Act

(e) TW is currently reporting 68,156 AF of total effluent and PCWWM's share as 3,996 AF of effluent

(TW 2004 Effluent Recharge Calculation Report); however, when TW includes the effluent generated at Randolph Park, total effluent will increase to 68,253.37 AF and PCWWM's share of effluent should increase to 4,005.34 AF.

When this change occurs, PCWWM's total recharge credits should increase slightly.

## Effluent From the Non-Metropolitan Treatment Facility for Calendar Year 2004

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	74.44			
-Reventone Ranch			41.60	
<b>Arivaca Junction Total</b>	<b>74.44</b>	<b>0.00</b>	<b>41.60</b>	<b>41.60</b>
Avra Valley Influent	1,085.54			N/A
Corona de Tucson Influent	79.22			N/A
Fairgrounds Influent	0.00			N/A
Green Valley Influent	1,830.88			
-Plant Reuse		52.66		
-Quail Creek			1,475.94	
<b>Green Valley Total</b>	<b>1,830.88</b>	<b>52.66</b>	<b>1,475.94</b>	<b>1,528.60</b>
Marana Influent	57.84			
-Plant Reuse		19.05		
-Santa Cruz Discharge			32.99	
<b>Marana Total</b>	<b>57.84</b>	<b>19.05</b>	<b>32.99</b>	<b>52.04</b>
Mt. Lemmon Influent	2.23			
-Spray Field			0.75	
<b>Mt. Lemmon Total</b>	<b>2.23</b>	<b>0.00</b>	<b>0.75</b>	<b>2.98</b>
Rillito Vista Influent	18.71			N/A
<b>Total Influent</b>	<b>3,148.86</b>			
<b>Total Effluent Utilized on County Facilities</b>		<b>71.71</b>		
<b>Total Effluent Discharged/Delivered</b>			<b>1,551.28</b>	
<b>Total</b>				<b>1,625.22</b>

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

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

**Pima County**  
**Effluent Generation/Utilization**  
**Calendar Year 2004**

Facility	Metered (i) Influent (AF/YR)	Effluent Generated (AF/YR)	Disposition	User	Effluent Utilization (AF/YR)	Regulatory Programs Classifications	PC Recharge Credits (AF)
Arivaca Junction Avra Valley	74.44 1,085.54	41.60 N/A (g)	Percolation, Evaporation and Reuse Percolation, Evaporation, Plant Reuse (h) , Spray Field Disposal	Reventone Ranch (a)	41.60 N/A 0.00	Class C Class B+	
Corona de Tucson Fairgrounds Green Valley	79.22 0.00 1,830.88	N/A (g) N/A (g) 1,721.42	Percolation and Evaporation Percolation and Evaporation Percolation, Evaporation and Reuse Plant Reuse	Quail Creek (b)	N/A N/A 1,475.94 52.66	N/A N/A Class A+ Class B	
Ina Road	28,714.70	28,531.05	Reuse Plant Irrigation	Arthur Pack Golf Course	581.40 24.15 27,925.50	Class B Class B	
Marana	57.84	52.04	Santa Cruz Discharge Lower Santa Cruz Recharge ( Recharged ) Santa Cruz Discharge		N/A 32.99 19.05	Class B+	444 (d)
Mt. Lemmon Randolph Park (c)	2.23 114.69	0.75 97.52	Spray Field Discharge Reuse Wheeling Agreement	USFS Tucson Water	0.75 97.52 0.00	Permit (f) Class A	
Roger Road	40,957.80	39,624.80	Santa Cruz Discharge Plant Irrigation Reuse Reuse Reuse	Tucson Water - Sweetwater Silverbell Golf Course County Parks/KERP (e)	26,985.10 4.81 11,507.20 533.50 594.19	Class B	
Rillito Vista	18.71	N/A (g)	Percolation and Evaporation		N/A	N/A	

(a) Reventone Ranch costs PCWWM \$566 per Quarter for disposal.

(b) PCWWM invoiced Quail Creek \$53,272 in 2004.

(c) Due to a malfunction, Randolph Park WRF only delivered reclaimed water to the City of Tucson from January 1, 2004, to May 2, 2004.

(d) The Lower Santa Cruz Managed Recharge Project (LSCMRP) stored 444 AF in 2004 (subject to TW accounting adjustment).

(e) PCWWM's Roger Road effluent is delivered to the TW Sweetwater facility and transported through the City of Tucson Reclaimed Water System where a portion of it is delivered to the Ed Pastor Kino Environmental Restoration Project (392.92 AF) and Natural Resources Parks and Recreation (264.27).

(f) PCWWM has a permit 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) Permit is currently pending for Avra Valley Reuse.

(i) Influent Meters are accurate to +/- 5%.

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

**Kino Sports Complex  
Reclaimed/Harvested Water Allocations for 2004**

	<b>Gallons</b>	<b>Ccf</b>	<b>Cost</b>	<b>AF</b>	<b>Cost/AF</b>
January	4,349,620	5815.00	7,617.65	13.35	570.67
February	0.00	0.00	0.00	0.00	0.00
March	6,991,556	9347.00	12,244.57	21.46	570.67
April	122,672	164.00	214.84	0.38	570.67
May	15,006,376	20062.00	26,281.22	46.05	570.67
June	36,500,156	48797.00	63,924.07	112.01	570.67
July	36,189,736	48382.00	63,380.42	111.06	570.67
August	6,126,120	8190.00	11,466.00	18.80	609.88
September	1,145,936	1532.00	2,144.80	3.52	609.88
October	5,236	7.00	9.80	0.02	609.88
November	238,612	319.00	446.60	0.73	609.88
December	828,784	1108.00	1,551.20	2.54	609.88
<b>Yearly Total</b>	<b>107,504,804</b>	<b>143,723.00</b>	<b>189,281.17</b>	<b>329.92013</b>	

**Reclaimed/Harvested Water Used for Irrigation Purposes**

	<b>Harvested</b>	<b>Reclaimed</b>	<b>Total</b>
Year	AF/YR	AF/YR	Irrigation
2004	30.69	329.92	360.61

**Natural Resources Parks and Recreation  
Monthly Reclaimed Water Usage  
For Calendar Year 2004**

	<b>Gallons/Month</b>	<b>Ccf/Month</b>	<b>Cost</b>	<b>AF/Month</b>	<b>Cost/AF</b>
January	701,018.12	937.19	1,227.80	2.15135	570.71
January (a)	1,424,005.00	1,903.75	1,199.38	4.37011	274.45
February	1,500,488.00	2,006.00	1,263.78	4.60483	274.45
March	2,601,544.00	3,478.00	2,191.24	7.98385	274.46
April	5,256,196.00	7,027.00	4,427.01	16.13067	274.45
May	6,740,976.00	9,012.00	5,677.56	20.68730	274.45
June	11,388,300.00	15,225.00	9,591.75	34.94941	274.45
July	12,629,980.00	16,885.00	10,637.49	38.75999	274.45
August	12,037,564.00	16,093.00	10,138.59	36.94193	274.45
September	10,818,324.00	14,463.00	9,111.69	33.20022	274.45
October	10,081,544.00	13,478.00	8,491.14	30.93912	274.45
November	6,243,556.00	8,347.00	5,258.61	19.16077	274.45
December	4,689,212.00	6,269.00	3,949.47	14.39066	274.45
<b>Yearly Total</b>	<b>86,112,707.12</b>	<b>115,123.94</b>	<b>73,165.51</b>	<b>264.27019</b>	

(a) January 1-15 was billed at \$570 (commodity rate) and January 16-31 was billed at \$274 (environmental rate).

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	