

**APPENDIX A**  
**LAND AND WATER USE STUDY**

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**FINAL LAND AND WATER USE  
STUDY FOR THE SHANNON  
ROAD/ EL CAMINO DEL  
CERRO WQARF SITE**

**Prepared for  
Arizona Department of  
Environmental Quality**

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## LIST OF ACRONYMS AND ABBREVIATIONS

ADEQ	Arizona Department of Environmental Quality
ADWR	Arizona Department of Water Resources
CDC	Camino del Cerro
ECDC	El Camino del Cerro
GOU	Groundwater Operable Unit
I-10	Interstate 10
LESP	Landfill Environmental Studies Program
LOU	Landfill Operable Unit
LWU	Land and Water Use
Metro Water	Metropolitan Domestic Water Improvement District
RI	Remedial Investigation
RO	Remedial Objectives
SR/ECDC	Shannon Road/El Camino del Cerro
SRRC	Shannon Road Rillito Creek
VOCs	Volatile Organic Compounds
WQARF	Water Quality Assurance Revolving Fund

## **1.0 INTRODUCTION**

This Land and Water Use Study (LWU) report has been prepared for the Shannon Road/El Camino del Cerro (SR/ECDC) Water Quality Assurance Revolving Fund (WQARF) site. URS Corporation prepared this report for the Arizona Department of Environmental Quality (ADEQ) to meet the requirements established under the Arizona Superfund Response Action Contract guidelines and requirements outlined in the Scope of Work, Version C, dated August 10, 2000. The LWU report identifies current and potential future uses of land and water within the SR/ECDC WQARF Site.

### **1.1 PROCESS OVERVIEW**

The process to complete the remedial investigation (RI) and select remedial objectives (ROs) begins with completion of the Draft RI report, which includes the LWU report. A public meeting is held to solicit input for the selection of ROs within 45 to 90 days after the Draft RI has been available for public comment. Following the RO public meeting and the Draft RI comment period, ADEQ issues the proposed ROs report. The ROs chosen for a site will be based on the uses identified in the LWU report. If there is significant public interest or additional information has been discovered an additional public meeting to discuss the ROs may be held. The final ROs report is then prepared and included in the final RI report.

### **1.2 REPORT OBJECTIVES**

The purpose of the LWU report is to gather information regarding current and foreseeable land or water uses that have been, or are threatened to be impacted by a contaminant release, and to project time frames for future changes of those uses. Information gathered from property owners, water providers, municipalities, and well owners is included in this report.

### **1.3 SITE BACKGROUND**

The SR/ECDC WQARF site combines two WQARF sites, El Camino del Cerro (ECDC) and Shannon Road Rillito Creek (SRRC), and two response areas northeast and southwest of Interstate 10 (I-10). Figure 1 shows the approximate historical boundary of the Site as of 2013 and the Study Area. For the purposes of this report the following definitions apply; the historical plume boundary encompasses the approximate area of groundwater associated with the Site in which a contaminant of concern has been detected, at any point in time, at a concentration greater than a regulatory standard. The Study Area depicts the larger approximate area of focus during the remedial investigation.

Between 1973 and 1977, Pima County operated the Camino del Cerro (CDC) Landfill. Five years after the landfill's closure, Pima County initiated the Landfill Environmental Studies Program (LESP). In 1983, LESP identified groundwater contamination near the Santa Cruz River and between 1983 and 1995, Pima County and ADEQ performed numerous assessments and investigations at the CDC Landfill and ECDC study area.

ADEQ placed the ECDC site on the WQARF Priority List in May 1995. Evaluation of analytical data indicated that volatile organic compounds (VOCs) were leaching into regional groundwater from the former CDC Landfill. Pima County completed the ECDC Study Area Landfill and Groundwater Operable Unit (GOU) Feasibility Study in December 1997, with addendums issued in 1999.

In 1998, the ECDC site was placed on the WQARF Registry. Data from monitor wells documented a VOC groundwater plume migrating from the landfill to the north-northeast. The landfill was the only confirmed source of contamination within the WQARF site boundaries, but other potential sources were investigated to the north and east of I-10.

The CDC Landfill was divided into two distinct operable units: a GOU, which is the area of VOC-affected groundwater within the ECDC site boundaries; and the Landfill Operable Unit (LOU), which is the affected media between land surface and the water table. RIs of the LOU performed by Pima County included soil-gas surveys on the landfill and adjacent properties; drilling and construction of landfill gas monitor wells on the perimeter of the landfill; characterization of the soils and landfill materials; and completion of a Landfill Gas Extraction Pilot Test in September 1996.

In 1999, informal responsibility for the GOU was divided into two response areas—the Pima County Response Area southwest of I-10 and the ADEQ Response Area northeast of I-10. RIs of the GOU performed by Pima County and ADEQ included the following:

- construction of groundwater monitor well networks;
- regular groundwater monitoring and water level measurements;
- evaluation of the lateral and vertical extent of contamination;
- construction of a groundwater extraction well at the CDC Landfill; and
- completion of soil-gas surveys for the purpose of identifying potential sources of VOCs in the groundwater outside the landfill footprint.

To minimize infiltration and protect public health, PDEQ also constructed soil cement bank protection, landfill capping, and drainage improvements to the landfill and connected properties in the vicinity of the site to the public water system.

In the SRRC area, VOCs were detected in Tucson Water supply well Z-006 near Rillito Creek and Shannon Road in 1993. The well was taken out of the water distribution system and an investigation was initiated. In 1994, VOCs were also detected in Metropolitan Domestic Water Improvement District's (Metro Water) S-Shannon well, north of the Tucson well Z-006, and the Acacia Gardens Mobile Home Park water supply well, just south of Tucson well Z-006. In 1995, Pima County connected the mobile home park to the Tucson Water distribution system.

In 1996, ADEQ began a preliminary investigation to determine if SRRC qualified for the WQARF program. Metro Water completed the installation of a wellhead treatment system on the S-Shannon well in June 1997. In April 1999, the site was placed on the WQARF Registry and ADEQ began an RI. Extensive passive soil-gas surveys were conducted south of and adjacent to Rillito Creek to screen for potential sources contributing to the groundwater contamination.

Please reference the SR/ECDC Draft RI report for additional site history.

## 2.0 USE EVALUATION

This section describes the current and reasonably foreseeable future uses of the land and water within the SR/ECDC Site vicinity. The time frame considered reasonably foreseeable is the next 100 years. Figure 1 shows the approximate historical boundary of the Site as of 2013 and the Study Area.

### 2.1 LAND USES

Approximately one-third of the SR/ECDC Site is located within the Tucson city limits and two-thirds is located within unincorporated Pima County. Figure 2 shows the location of the jurisdictions. URS identified well and land owners based on data from Arizona Department of Water Resources (ADWR) and Pima County parcel ownership data. All well owners were contacted and landowners who had submitted a permit since 2010 to develop or change land use were also contacted. Appendix A contains a list of well and property owners and a copy of the letter, Frequently Asked Questions sheet, location map, and questionnaire that were sent to the well and property owners. Appendix B contains the responses that were received.

#### 2.1.1 Current Planning and Zoning

##### Pima County

The Pima County-regulated portion of land within the SR/ECDC Site boundary encompasses approximately 240 acres or 67 percent of the total Site area. Approximately 97 acres or 40 percent of that land is zoned Industrial Multiple Use, which permits residential, commercial, and light industrial uses. Other industrial zones (campus park and general industrial) compose approximately 61 acres or 26 percent of the county area, and Rural Suburban Homestead, residential, and business zones make up the remaining 34 percent or 82 acres. Figure 3 shows the locations of the zoning classifications within the Site. Table 1 lists the county zoning classifications and acreages within the Pima County portion of the Site.

##### City of Tucson

Approximately 116 acres or 33 percent of the SR/ECDC Site are within Tucson city limits. Approximately 49 acres or 42 percent within the city portion of the Site are zoned Rural Suburban Homestead. Light and heavy industrial zones compose approximately 53 acres or 45 percent, and Multiple Use (residential, agricultural, and commercial) and commercial zones make up the remaining 14 acres or 13 percent. Figure 4 shows the locations of the Tucson zoning

classifications within the Site. Table 2 lists the city zoning classifications and acreages within the Site.

## **2.1.2 Future Planning and Zoning**

### **Pima County**

Current Pima County zoning was compared to the planned land use described in the Pima County Comprehensive Plan, which was amended in 2001. Pima County plans to amend its current comprehensive plan in 2013. The strip of land between I-10 and North Highway Drive is currently zoned for business, and light and general industry. The comprehensive plan identifies this area as a future Multifunctional Corridor, which allows for businesses, industrial campus parks, manufactured and mobile homes, single and multiple residences, and mixed dwellings.

The land along Rillito Creek is zoned for Rural Suburban Homesteads. The county plan identifies this location as a future Resource Transition area and also as a special policy area designated for floodplain management. Rural uses along with resorts and open space can be located in the area, as long as the proposed development does not unreasonably diminish existing overbank storage volumes.

The land north of Rillito Creek is zoned for Rural Suburban Homesteads, single residences, mixed-dwellings, and industrial campus parks. The Pima County Comprehensive Plan designates this area for Medium and Medium High Intensity Urban use, along with a few small Urban Industrial areas and a strip of Resource Transition along a tributary of Rillito Creek. Allowed uses include similar current zoning uses as well as multiple residences, manufactured and mobile homes, resorts, offices, and light and general industries.

The land south of Rillito Creek and north of the I-10/North Highway strip is zoned for industrial multiple use (residential, agricultural, commercial), general industrial, and a small area of Rural Suburban Homestead. Planned uses include Medium High Intensity Urban, Multifunctional Corridor, and a small area for Heavy Industrial. These areas allow single and multiple residences, mixed dwellings, manufactured and mobile homes, offices, resorts, businesses, and industrial activities.

### **City of Tucson**

Current City of Tucson zoning was compared to future land uses and zoning provided in the City of Tucson Final Draft General Plan released in March 2013. The portion of the site within Tucson city limits along Rillito Creek is zoned for rural suburban homesteads and multiple use

(residential, agricultural, and commercial). The land south of I-10 is currently zoned for general commercial and light and heavy industrial uses. The city's Final Draft General Plan from 2013 indicates that future land uses in these areas will not change.

### **2.1.3 Summary of Future Planning and Zoning**

The changes to land use regulated by Pima County within the Site include allowing residential uses in the strip between I-10 and North Highway Drive, regulating development along Rillito Creek, and allowing light and general industry north of Rillito Creek. Between Rillito Creek and the I-10/North Highway strip, the plan allows for a wider variety of residential, business, and industrial uses. Pima County considers its land in the vicinity of the SR/ECDC WQARF site as an area for future growth (ADEQ 2008). City of Tucson is not planning to change any of its land uses in the site vicinity.

Development in the site vicinity is expected to continue, but the land uses within the foreseeable future are expected to remain similar to current land uses based on zoning. Both the county and city plans are updated approximately every ten years.

### **2.1.4 Site Specific Land Uses**

This section provides information on site-specific current and foreseeable future land uses at sites that either have been or are threatened to be impacted by "contaminant releases" into the soil or air.

A Land and Water Use Study questionnaire was sent to seven private landowners who applied for a permit from Pima County or the City of Tucson indicating a potential change in land use within the SR/ECDC Site. Three responses to the questionnaire were received from Carlos Sanders/Tucson Care Group, Julie Reese/Taco Bell, and Andrew Way/Riverside Crossing Association. Based on the responses, the three landowners do not anticipate making any future land use changes to their properties.

## **2.2 GROUNDWATER USES**

The SR/ECDC WQARF 2012 historical plume boundary lies within the Tucson Active Management Area, which was created by the Arizona Groundwater Management Code. Under the code, any withdrawal of groundwater must be done under either a grandfathered or service area water right or permit. A grandfathered water right is derived from past water use and a service area water right allows municipalities, water companies, or irrigation districts to withdraw water to serve those within their service areas. The only exception is an exempt well,

which is a well that withdraws less than 35 gallons per minute. These wells are also registered with ADWR. All new well applications within the Site also require ADEQ approval.

The historical plume boundary encompasses 50 ADWR-registered wells: Pima County owns 4 wells, Pima County Regional Wastewater owns 9 wells, Pima County Soil Waste Management owns 7 wells, Metro Water owns 1 well, ADEQ owns 19 wells, ADOT owns 2 wells, the City of Tucson owns 1 well, and 3 wells are privately owned. Four wells have been abandoned. The area does not encompass any appreciable surface water. The water service provider area (Metro Water) and the 50 wells are shown on Figure 5. Table 3 displays a summary of the wells within the historical Site boundary and Table 4 displays a summary of wells within the Study Area but outside of the historical plume boundary. The following is a description of the uses of the wells within the Site. The list of contacts regarding water use is located in Appendix A.

## **2.2.1 Municipal Provider and Local Government Groundwater Use**

### ***2.2.1.1 Metropolitan Domestic Water Improvement District***

Metro Water owns and operates one production well within the SR/ECDC historical Site boundary and five production wells outside the boundary that supply water to local residents. According to the Land and Water Use Study questionnaire received from Metro Water, all of the well sites will remain active over the next 100 years. Metro Water has a Designation of Assured Water Supply which means the service area has a 100-year groundwater supply after full service area build out. Metro Water has long-term plans to replace and drill new wells though specific plans were not provided.

### ***2.2.1.2 Pima County***

Pima County currently owns and operates 4 wells within the SR/ECDC Site, Pima County Regional Wastewater Reclamation Department owns and operates 8 wells, and Pima County Soil Waste Management owns 7 wells.

## **2.2.2 Private Groundwater Use**

Private well owners were contacted regarding current and future uses of their wells. A Land and Water Use Study Questionnaire was mailed to 32 well owners within the Study Area. Responses to the questionnaire were received from nine individuals. Based on the responses, two well owners (Well I.D. Cardinal Castings and Acacia Gardens) do not currently use the wells and have no plans for using them in the foreseeable future. Three well owners (Well I.D. Dalrymple, W22, and AZ Truck) stated that there are no groundwater wells on their property. One well

owner (Well I.D. PCP) is using the well as water supply for maintenance equipment and two well owners (Well I.D. Greenfields-N and Greenfields-S, and White) are using the well as water supply for drinking water, sewer, and irrigation. A summary of known wells is provided in Tables 3 and 4. No responses were received from eight private wells owners; however, these wells are outside of the 2013 plume boundary. The responses to the Land and Water Use Study Questionnaire are provided in Appendix B. Evidence indicates that the Tanner and 4-Hire wells are actively pumped. These wells are not registered as drinking water wells with the ADWR. However, neither the volume of water pumped nor the use of the water is known precisely. Both of these wells have been regularly sampled for water quality by Pima County.

### **2.3 SURFACE WATER USES**

The SR/ECDC Site is north of the Santa Cruz River and extends approximately 0.5 mile north of Rillito Creek (refer to Figure 1). These streams are the major surface drainages in the Tucson Basin, which is a broad northwest trending alluvial valley. Both the river and creek are ephemeral streams that flow primarily in response to precipitation events and snowmelt. However, there is discharge flow during most of the year on the Santa Cruz River from the Roger Road Wastewater Reclamation Facility located approximately one mile upstream. There are no known uses of surface water within the Site and Study Area.

### 3.0 ANALYSIS AND SUMMARY OF USES

This section describes those land and water uses discussed in Section 2.0 that are most likely to be relevant to the ROs.

#### 3.1 REASONABLY FORESEEABLE LAND USES

The Pima County portion of SR/ECDC is mostly zoned for Industrial Multiple Use, which permits commercial, light industrial, business, and residential uses. The City of Tucson portion is zoned Rural Suburban Homestead, Multiple Use, and Industrial. The current zoning plan for both Pima County and the City of Tucson is not expected to change in the foreseeable future.

#### 3.2 REASONABLY FORESEEABLE GROUNDWATER USES

Current and future groundwater uses include the following:

**Municipal and Local Government Potable Supply** – Metro Water currently uses groundwater to supply potable drinking water to its customers. This use is expected to continue into the future. The Pima County Regional Wastewater Reclamation Department currently uses groundwater to supply irrigation and industrial water on a standby/emergency basis.

**City of Tucson (Tucson Water)** – The City formally adopted a *Water Service Area Policy* in August 2010. The Water Service Area Policy establishes a boundary for Tucson Water based on economic, social and environmental considerations. Tucson Water owns three inactive production wells (Z-004, Z-005, and Z-006) that are near of the 2013 plume boundary. It is possible that Tucson Water may want to bring these wells back online in the foreseeable future based on conversations with field technicians servicing wells in the area. Z-006 is included in annual groundwater sampling for the site.

**Private Domestic Water Supply** – Based on responses provided in the Land and Water Use Study Questionnaire from private well owners, there are no changes anticipated for the use of the private domestic wells for the foreseeable future. However, responses were not received from 8 private well owners within the Site. Four of these wells are potentially active or in use, 3 have been abandoned, and 1 is a monitor well.

#### 3.3 REASONABLY FORESEEABLE SURFACE WATER USES

There are no known or anticipated uses of the ephemeral or intermittent surface water flows within the Site and Study Area.

#### 4.0 REFERENCES

Arizona Department of Environmental Quality (ADEQ). 2008. *Land and Water Use Study for the Miracle Mile WQARF Site, Tucson, Arizona*. Prepared by URS. Phoenix, Arizona.

City of Tucson Planning and Development Services. 2001. City of Tucson General Plan.

Accessed April 12, 2013

<http://cms3.tucsonaz.gov/planning/plans/genplan/genplan.html#TopOfPage>

Pima County Development Services Department. 2012. Pima County Comprehensive Plan Update.

## **TABLES**

**Table 1**  
**Pima County Zoning Within the WQARF Site Plume Boundary**

Zone Code	Description	Area (acres)	Percent of County Jurisdiction
---	<b>Total County Jurisdiction</b>	<b>241.2</b>	<b>100.0</b>
SH	Rural Suburban Homestead (residential, agricultural)	22.1	9.2
CR-3	Residential (single)	18.1	7.4
CR-4	Residential (mixed-dwelling)	21.0	8.7
CB-2	Business (general)	21.2	8.8
MU	Industrial Multiple Use (residential, commercial, light industrial)	97.4	40.4
CPI	Industrial Campus Park (research, manufacturing)	36.1	15.0
CI-1	Industrial (light, warehouse)	18.2	7.6
CI-2	Industrial (general)	7.1	2.9

**Table 2**  
**City of Tucson Zoning Within the WQARF Site Plume Boundary**

Zone Code	Description	Area (acres)	Percent of City Jurisdiction
---	<b>Total City Jurisdiction</b>	<b>116.7</b>	<b>100.0</b>
SH	Rural Suburban Homestead (residential, agricultural)	49.2	42.2
C-2	Commercial (general)	2.9	2.5
MU	Multiple Use (residential, agricultural, commercial)	11.7	10.0
I-1	Industrial (light)	22.2	19.0
I-2	Industrial (heavy)	30.7	26.3

**Table 3**  
**Wells Within Historical Site Plume Boundary**

<b>Fig. 5 Well I.D.</b>	<b>Well Description</b>	<b>Well Owner</b>	<b>ADWR No.</b>	<b>Cadastral Location</b>
Acacia Gardens	Abandoned	Acacia Gardens LLC	55-801579	D(13-13)17ADA
PEX1	Pima County	Pima County	55-906715	D(13-13)17DBC
PW1	Pima County	Pima County	55-625469	D(13-13)17CAA
PW2	Pima County	Pima County	55-906714	D(13-13)17DBB
PW3	Pima County	Pima County	55-906716	D(13-13)17DBD
W2	Pima County	Pima County Regional Wastewater Reclamation Department	unknown	D(13-13)17DCD
W5	Pima County	Pima County Regional Wastewater Reclamation Department	55-513866	D(13-13)17DCB
W11	Pima County	Pima County Regional Wastewater Reclamation Department	55-521331	D(13-13)20ABB
W14	Pima County	Pima County Regional Wastewater Reclamation Department	55-526200	D(13-13)17DBC
W15D	Pima County	Pima County Regional Wastewater Reclamation Department	55-521749	D(13-13)17DCB
W16	Pima County	Pima County Regional Wastewater Reclamation Department	55-526198	D(13-13)17DCA
W17	Pima County	Pima County Regional Wastewater Reclamation Department	55-542137	D(13-13)17DCD
W18	Pima County	Pima County Regional Wastewater Reclamation Department	55-542139	D(13-13)17DCB
W19	Pima County	Pima County Regional Wastewater Reclamation Department	55-542138	D(13-13)17DBC
W20	Monitor	Pima County Soil Waste Management	55-546427	D(13-13)17ACD
W21	Monitor	Pima County Soil Waste Management	55-546425	D(13-13)17ABC
W22	Abandoned	Pima County Soil Waste Management	55-546426	D(13-13)17ADB
W24	Monitor	Pima County Soil Waste Management	55-550444	D(13-13)17ACA
W25	Monitor	Pima County Soil Waste Management	55-550429	D(13-13)17AAC
W27	Dry / Monitor	Pima County Soil Waste Management	55-550462	D(13-13)17ABA
W28D	Monitor	Pima County Soil Waste Management	55-550447	D(13-13)17ACD
W29	Monitor	ADEQ	55-591764	D(13-13)17ACD
W30	Monitor	ADEQ	55-596344	D(13-13)17AAA
W31	Monitor	ADEQ	55-596342	D(13-13)08DAD
W32	Monitor	ADEQ	55-597302	D(13-13)17ACA
W33	Monitor	ADEQ	55-597306	D(13-13)17ABD

**Table 3**  
**Wells Within Historical Site Plume Boundary**

W34	Monitor	ADEQ	55-597307	D(13-13)17ACD
W37M	Monitor	ADEQ	55-900084	D(13-13)17DDD
W38	Monitor	ADEQ	55-901884	D(13-13)17ACA
W39	Monitor	ADEQ	55-904656	D(13-13)09CCC
W40	Monitor	ADEQ	55-904657	D(13-13)17ADB
W41S	Monitor	ADEQ	55-907268	D(13-13)17ACD
W42S	Monitor	ADEQ	55-907267	D(13-13)17ACD
W43S	Monitor	ADEQ	55-907265	D(13-13)17ACD
W44S	Monitor	ADEQ	55-907263	D(13-13)17ACB
W45S	Monitor	ADEQ	55-907269	D(13-13)17ACA
W46M	Monitor	ADEQ	55-908349	D(13-13)17AAC
W47S	Monitor	ADEQ	55-908350	D(13-13)17AAC
W48M	Monitor	ADEQ	55-908351	D(13-13)08DCD
W50S	Monitor	ADEQ	55-908353	D(13-13)17DBB
Z-006	Inactive Production	City of Tucson	55-619843	D(13-13)17AAA
AZ Truck	Private	Gilbert Kaylor	55-633887	D(13-13)17ACC
Smith	Private	Max L. Smith	55-633618	D(13-13)17ABB
S-Shannon	Production	Metropolitan Domestic Water Improvement District	55-626757	D(13-13)08DDA
Sunset Plaza	Private	Arizona Department of Transportation	55-508611	D(13-13)17ACC
4-Hire	Private	Arizona Department of Transportation	unknown	D(13-13)17DBD
Cowtown	Abandoned	Sharon Barlow & Cowtown Boot Co.	55-803972	D(13-13)17ACC
Quality Truck	Abandoned	Dennis Artery	55-700447	D(13-13)17DBA
Tanner	Private	KIEWIT, California Portland Cement Company	unknown	D(13-13)17CAA
Kaylor Trailer	Abandoned	Gilbert Kaylor	55-633887	D(13-13)17ACC

**Table 4****Wells Within Study Area and Outside Historical Site Plume Boundary**

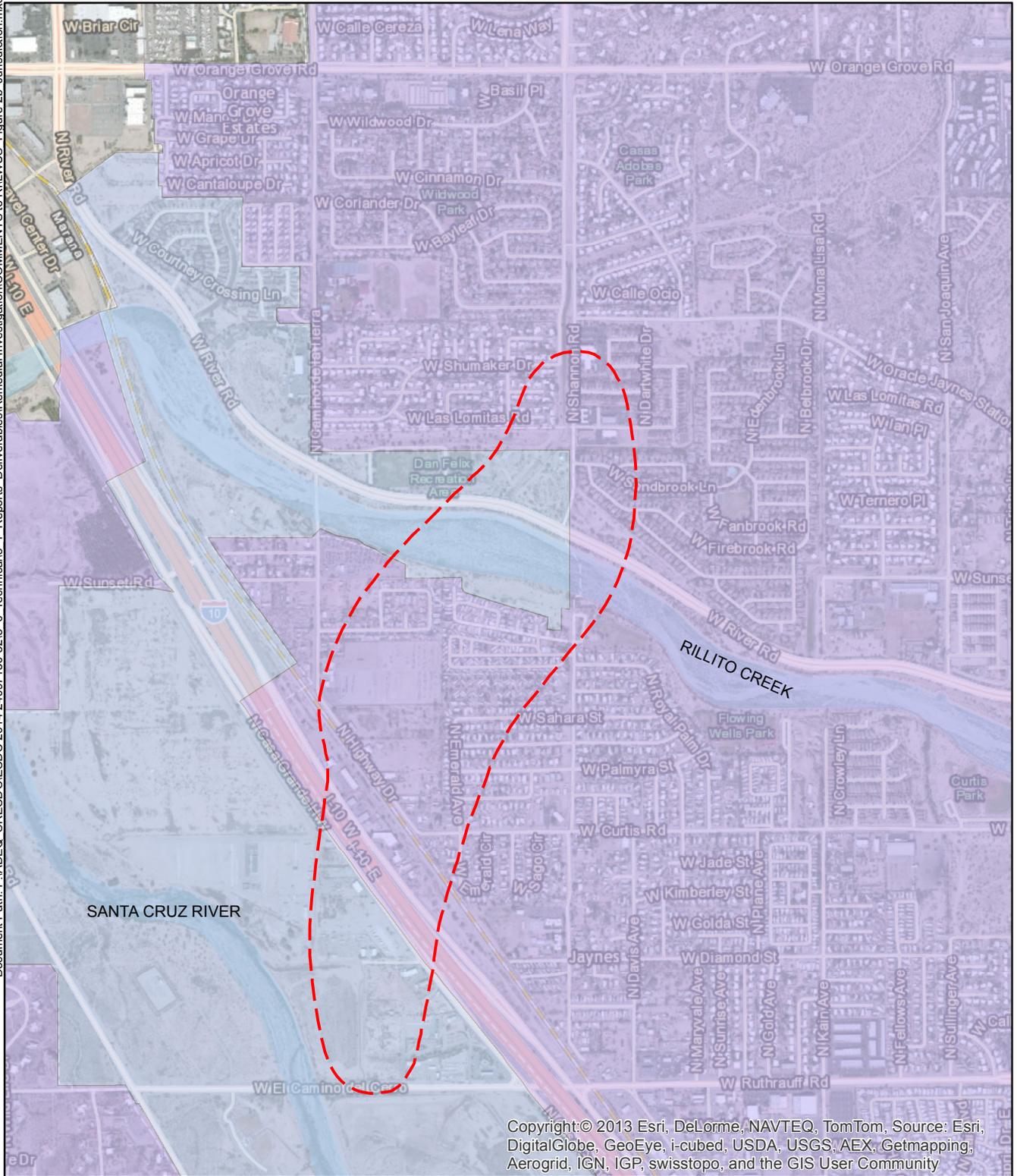
<b>Fig. 5 Well I.D.</b>	<b>Well Description</b>	<b>Well Owner</b>	<b>ADWR No.</b>	<b>Cadastral Location</b>
Cardinal Castings	Abandoned	Arizona Department of Transportation	55-501063	D(13-13)17ACB
Curtis	Irrigation/Industrial	Mark Ingram	55-628095	D(13-13)16BDD
Estes	Production	Metropolitan Domestic Water Improvement District	55-801842	D(13-13)09CAD
Greenfields-N	Production	Green Fields Country Day School	55-800568	D(13-13)08ACC
Greenfields-S	Production	Green Fields Country Day School	55-49490	D(13-13)08DBB
Jenks Café	Abandoned	Arizona Department of Transportation	55-627346	D(13-13)17DAC
Laguna	Private	Flowing Wells School District #8	55-606816	D(13-13)17DDA
Marchese	Private	Harvey Laurence Revocable Trust	55-640094	D(13-13)16ADD
Moore	Production	Metropolitan Domestic Water Improvement District	55-620988	D(13-13)09CDC
National Truck	Abandoned	Arizona Department of Transportation	55-800564	D(13-13)17DDB
Palm Vista	Private	W.S. Hotchkiss, John and Josie Guierrez	55-601903	D(13-13)17AAA
PCP	Private	Martin Lopez	unknown	D(13-13)17DDC
Wildwood	Production	Metropolitan Domestic Water Improvement District	55-626758	D(13-13)08ADA
DeConcini	Production	Metropolitan Domestic Water Improvement District	55-626739	D(13-13)09BCC
Dalrymple	Private	Shannon Business Park LLC	55-803515	D(13-13)09CBA
Oracle Jaynes	Private	Ferdinand Marchese	55-640094	D(13-13)16ADD
W1	Pima County	Pima County Regional Wastewater Reclamation Department	55-508583	D(13-13)17CDA
W4	Pima County	Pima County Regional Wastewater Reclamation Department	55-508587	D(13-13)17CDA
W9	Pima County	Pima County Regional Wastewater Reclamation Department	55-508585	D(13-13)17ACC
W10S	Monitoring	Pima County Regional Wastewater Reclamation Department	55-521332	D(13-13)17CDA
W23	Monitoring	Pima County Soil Waste Management	55-550445	D(13-13)17DAB
W26	Monitoring	Pima County Soil Waste Management	55-550446	D(13-13)17ADA
W35	Monitor	ADEQ	55-597309	D(13-13)08DAD
W49M	Monitoring	ADEQ	55-908352	D(13-13)9CDC
W52M	Monitor	ADEQ	unknown	D(13-13)09CBD
WR369A	Monitoring	City of Tucson	55-581746	D(13-13)08DCB
Z-005	Inactive Production	City of Tucson	55-619842	D(13-13)16BDB
Z-016	Abandoned	City of Tucson	55-619852	D(13-13)08DCB

**Table 4****Wells Within Study Area and Outside Historical Site Plume Boundary**

<b>Vicinity Wells Outside of Study Area</b>				
Latamore-N	Production	Metropolitan Domestic Water Improvement District	55-35980	D(13-13)08BDC
Latamore-S	Production	Metropolitan Domestic Water Improvement District	55-626762	D(13-13)08BDC
White	Private	Patricia A. White	55-603842	D(13-13)16ABA
Tucson Sand	Private	unknown	unknown	unknown
Odell	Private	Pima County	55-575421	D(13-13)16ADD
W3	Pima County	Pima County Regional Wastewater Reclamation Department	55-508586	D(13-13)17DCD
W12S	Monitoring	Pima County Regional Wastewater Reclamation Department	55-521329	D(13-13)17CAB
W13	Pima County	Pima County Regional Wastewater Reclamation Department	55-521330	D(13-13)17CAA
W51S	Monitoring	ADEQ	55-915342	D(13-13)08CDD
Z-002	Inactive Production	City of Tucson	55-619839	D(13-13)16DDA
Z-003	Inactive Production	City of Tucson	55-619840	D(13-13)16CCD
Z-004	Inactive Production	City of Tucson	55-619841	D(13-13)17ABC

## **FIGURES**





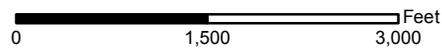
Copyright: © 2013 Esri, DeLorme, NAVTEQ, TomTom, Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**LEGEND**

- - - Historical Plume Boundary
- River
- Pima County
- City of Tucson

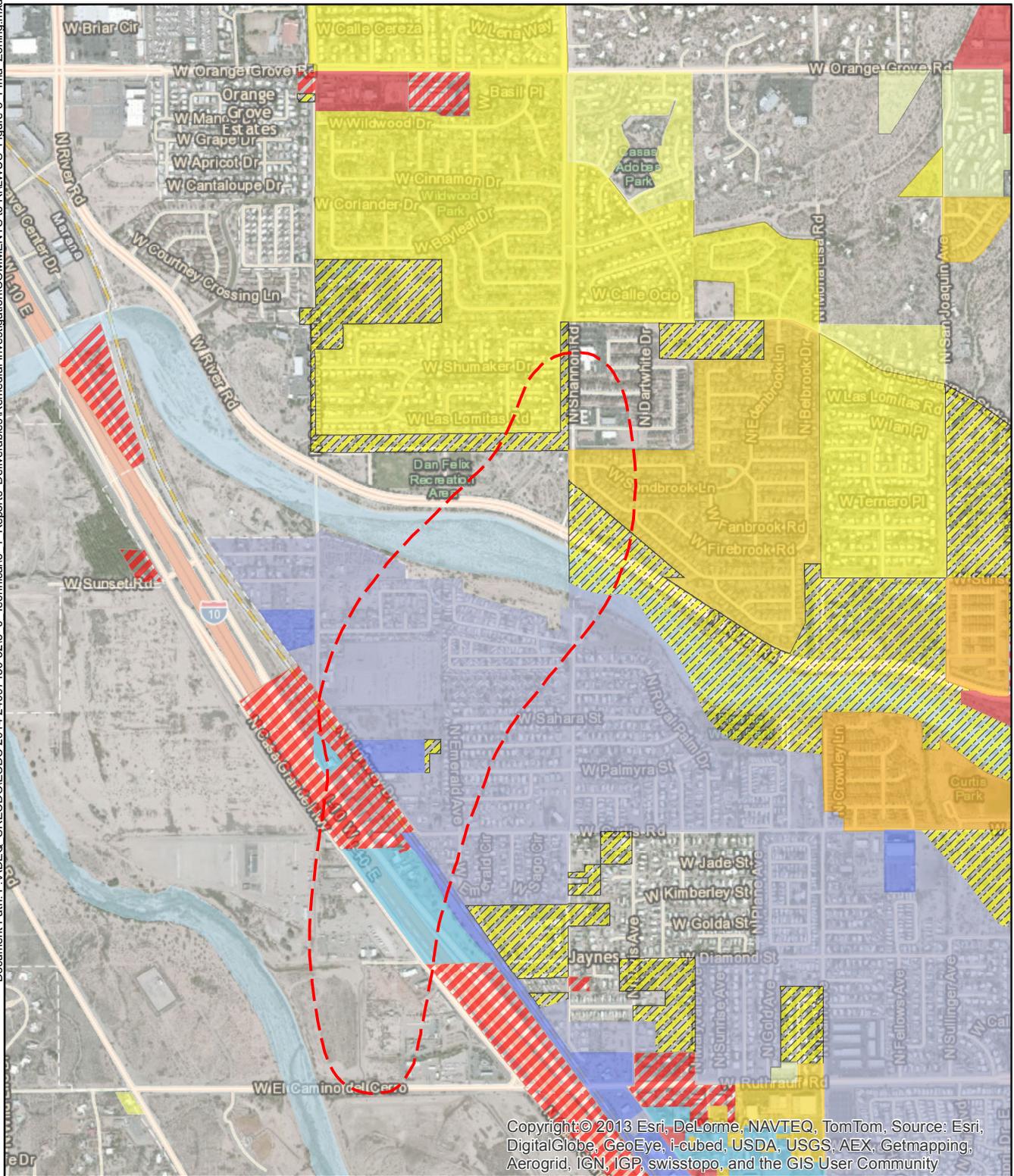
**Figure 2:  
Jurisdiction Map**

**Shannon Road/  
El Camino del Cerro  
WQARF Site  
Tucson, Arizona**



Source: Features: Pima County 2012, URS 2013  
Imagery: (c) 2010 Microsoft Corporation and its data suppliers





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**LEGEND**

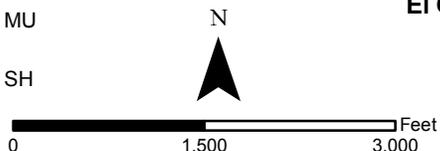
- Historical Plume Boundary
- River
- CB-1
- CB-2
- CI-1
- CI-2
- CR-2
- CR-3
- CR-4
- CR-5
- MU
- SH
- TR

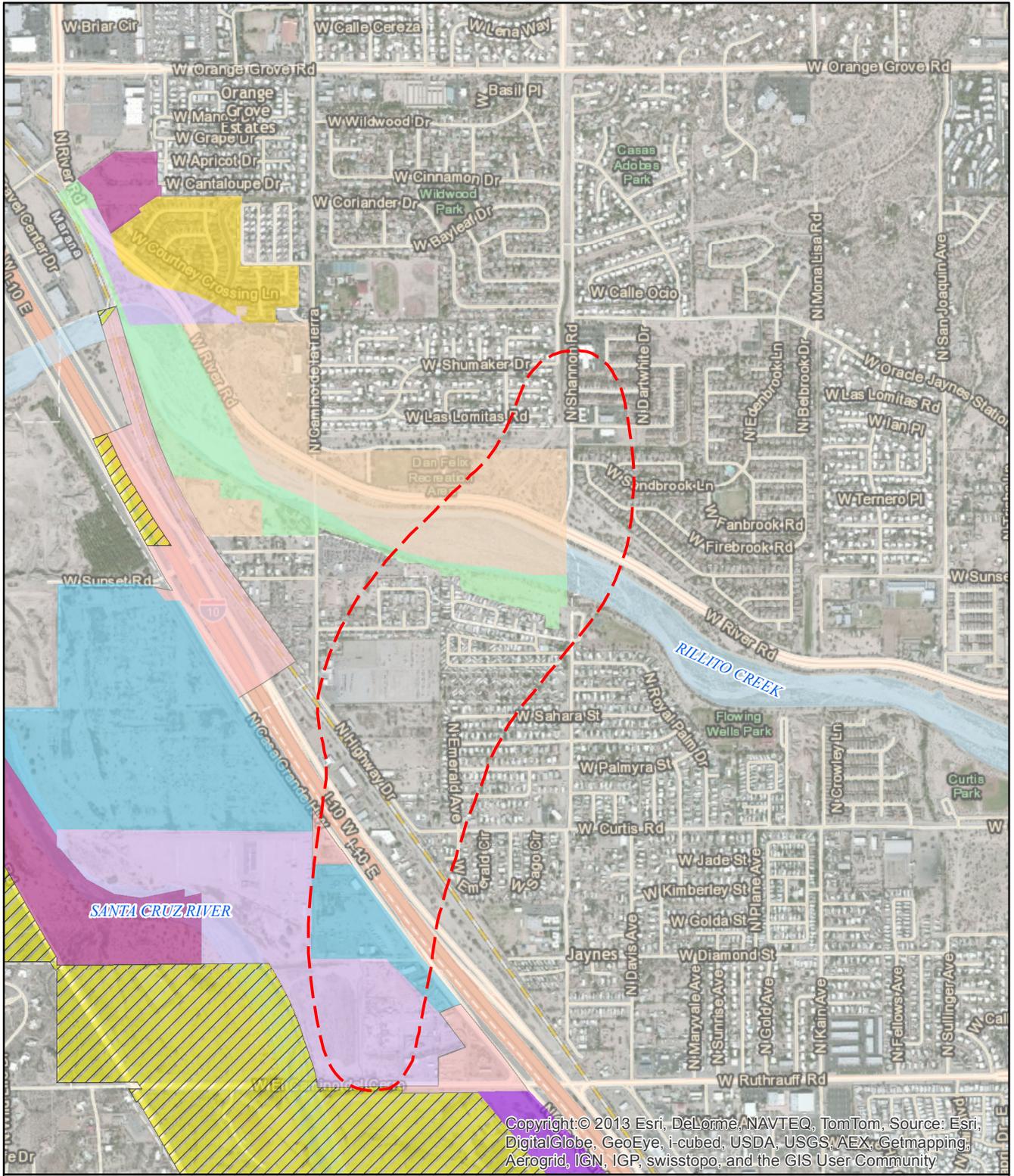
**Figure 3:  
Pima County Zoning**

**Shannon Road/  
El Camino del Cerro  
WQARF Site  
Tucson, Arizona**



Source: Features: Pima County 2012, URS 2013  
Imagery: (c) 2010 Microsoft Corporation and its data suppliers





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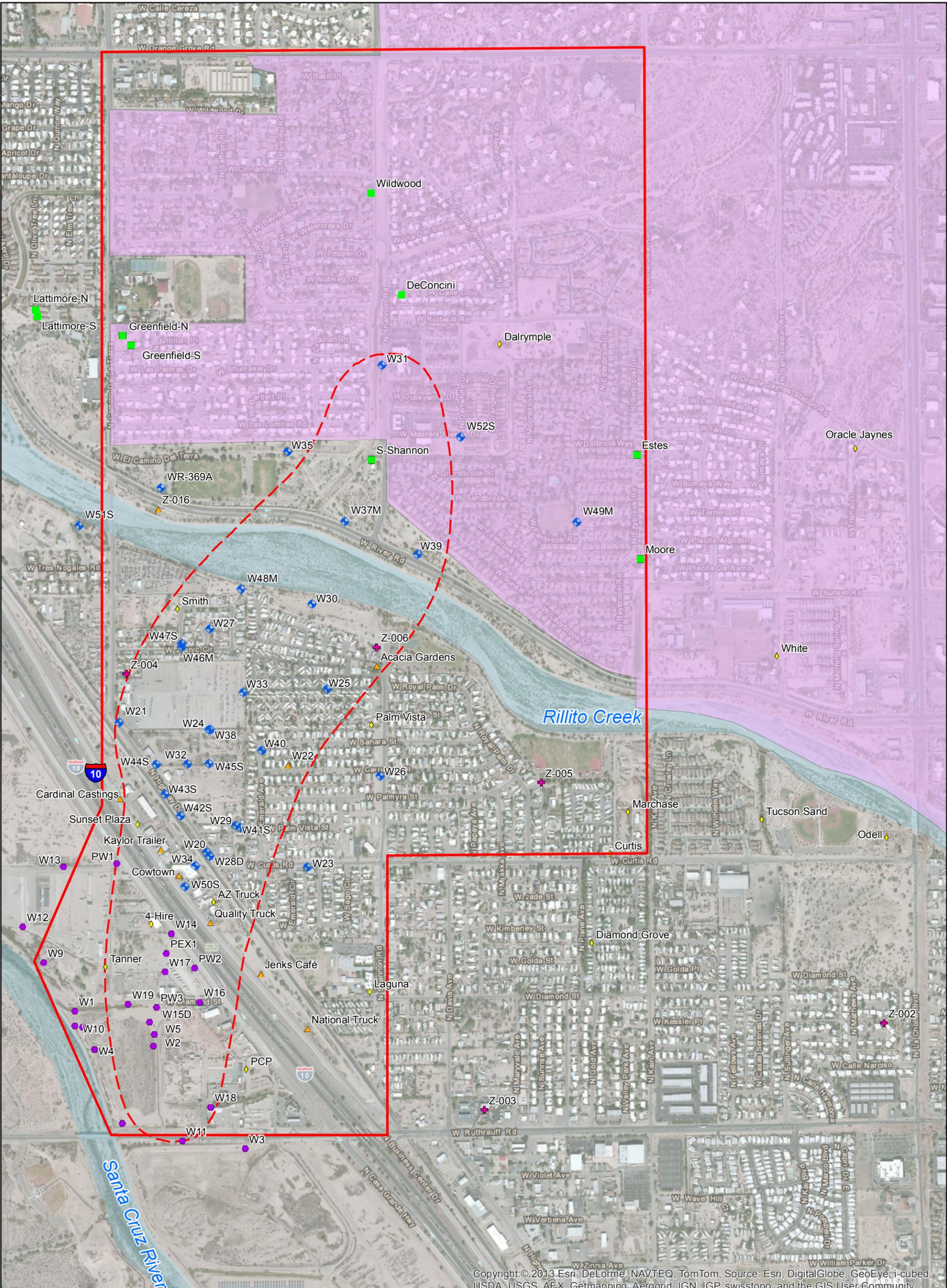
**LEGEND**

- - - Historical Plume Boundary
- River
- C-2
- MU
- R-3
- I-1
- O-3
- RX-1
- I-2
- P-1
- SH

**Figure 4:**  
**City of**  
**Tucson Zoning**

Shannon Road/  
El Camino del Cerro  
WQARF Site  
Tucson, Arizona





Copyright: © 2013 Esri, DeLorme, NAVTEQ, TomTom, Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**LEGEND**

- Study Area
- Historical Plume Boundary
- ◆ Monitor Well
- ▲ Abandoned Well
- Inactive Production Well
- Pima County Well
- ◆ Private Well
- Production Well
- MDWID (2014 Pima County GIS data Set)

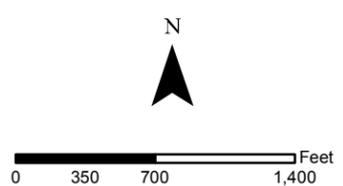
Notes:  
 Status is updated to April 2013 per available information.  
 MDWID - Metropolitan Domestic Water Improvement District

**Figure 5:  
 Well Location Map**

Shannon Road/  
 El Camino del Cerro  
 WQARF Site  
 Tucson, Arizona



Source:  
 Features: Pima County 2012, URS 2013  
 Imagery: (c) 2010 Microsoft Corporation and its data suppliers



**APPENDIX A**

**LAND AND WATER USE CONTACTS AND INFORMATION**

**Table A-1  
Well Owners Contacted**

Below is a list of the well owners that were contacted and sent a Land and Water Use Study Questionnaire.

<b>Name</b>	<b>Business Name 2</b>	<b>Address</b>	<b>City</b>	<b>State</b>
Mary Jane Abril		2657 W. Flamebrook Road	Tucson	AZ
Madhu Bansal		3059 W. Sahara Street	Tucson	AZ
Sharon A. Barlow		P.O. Box 26428	El Paso	TX
California Portland Cement Co.		2025 E. Financial Way, Ste 200	Glendora	CA
City of Tucson	Real Estate Division	P.O. Box 27210	Tucson	AZ
Cowtown Boot Co. Inc.		P.O. Box 26428	El Paso	TX
Cracchiolo Family Trust		P.O. Box 8	Phoenix	AZ
Flowing Wells School District No. 8		1556 W. Prince Road	Tucson	AZ
Friel Investments LLC		7925 N. Oracle Road #272	Tucson	AZ
Granite Kitchen & Bath Inc.		5300 N. Casa Grande Highway	Tucson	AZ
Green Fields School		6000 N. Camino de la Tierra	Tucson	AZ
Kathie Lee Hall		3100 W. Curtis Road	Tucson	AZ
Laurence Harvey Revocable Trust		2435 W. Curtis Road	Tucson	AZ
Harvey Trucking Inc		2435 W. Curtis Road	Tucson	AZ
Heritage Operating LP		P.O. Box 6789	Helena	MT
David R. Hitchings		3300 W. Cinnamon Drive	Tucson	AZ
Mark D. Ingram		1280 Boulevard Way, Ste 208	Walnut Creek	CA
Lopez Living Trust		1609 W. Speedway Boulevard	Tucson	AZ
Metropolitan Domestic Water Improvement	District of Pima County	6265 N. La Cañada	Tucson	AZ
Stephen and Jennifer Numm		2754 W. Appaloosa Road	Tucson	AZ
John H. O'Neal Trust		4851 N. Maryvale Avenue	Tucson	AZ
Palm Vista Estates Inc		P.O. Box 36165	Tucson	AZ
Pima County Development Services		201 N. Stone Avenue	Tucson	AZ
SAISC Inc.		5450 N. Camino de la Tierra	Tucson	AZ
Pima County Regional Wastewater Reclamation Department		201 N. Stone Avenue, 8th Floor	Tucson	AZ
Sierra Shopping Center LLC		1100 N. Sixth Street	Burbank	CA
Max Smith		3221 W. Sunset Road	Tucson	AZ

<b>Name</b>	<b>Business Name 2</b>	<b>Address</b>	<b>City</b>	<b>State</b>
Arizona Department of Transportation	Water Quality Group	1611 W. Jackson Street, Mail Drop EM02	Phoenix	AZ
SZ LLC		5201 N. Melpomene Way	Tucson	AZ
Tin Cup Properties LLC		6262 N. Camino Verde	Tucson	AZ
Tucson Sunset Industrial Plaza		3900 E. Via Palomita	Tucson	AZ
White Family Revocable Trust		5455 N. San Joaquin Drive	Tucson	AZ

**Table A-2**  
**Private Property Owners Contacted**

Provided below is a list of land owners that were contacted and sent a Land and Water Use Study Questionnaire.

<b>Name</b>	<b>Business Name 2</b>	<b>Address</b>	<b>City</b>	<b>State</b>
First American Title Trust	Attn: Riverside Crossing Master HOA	8375 N. Oracle Road, Ste 150	Tucson	AZ
Store Master Funding I LLC		3131 E. Camelback Road, Ste 420	Phoenix	AZ
CRS DQ Holdings LLC		9360 N. Raleigh Drive	Tucson	AZ
Taco Bell Corporation		P.O. Box 35370	Louisville	KY
Levine Investments LP		1702 E. Highland Avenue, Ste 310	Phoenix	AZ
Tucson Care Group LLC		12115 NE 99th St, Ste 1800	Vancouver	WA
Perfecto U. and Pam J. Zacarias		P.O. Box 22155	Tucson	AZ

**APPENDIX B**

**LAND AND WATER USE STUDY QUESTIONNAIRE**



LAND AND WATER USE STUDY QUESTIONNAIRE  
FOR PROPERTY OWNERS WITHIN THE  
SHANNON ROAD/EL CAMINO DEL CERRO WQARF REGISTRY SITE

Please answer all questions. Mark "NA" for questions that are not applicable. Mark "UNK" if the answer is unknown to you at the time of completion. Please attach any additional pages as needed.

Facility Name: Green Fields Country Day School

Date Questionnaire was completed: 4/15/2013

Name of person completing Questionnaire: Rebecca Cordier

Address: 600 N. Camino de la Tierra  
Tucson, AZ 85741

Contact Name: Rebecca Cordier / Don Bishop

Address: Same as above

Phone Number: 520-297-2288 - Don cell 520-349-2673

A. Property Information

1. What is the current use of the property? Please include a detailed facility description.

The facility is being used as a non-profit, independent school grades K-12. The use includes classes, athletics competition, fine arts performances, property rental, and summer school.

2. What are the foreseeable plans for the property (extension of buildings, increased production, etc.) as far into the future as they are known and up to 100 years, if possible?

The known plans are to increase the enrollment from the current 144 to 240 maximum. The only new building would be a new Kindergarten building and an renovation and addition to the Fine Arts facility.

3. Is the property owned or leased?

owned

4. Who is the owner of the property? 501c3

Name: Green Fields Country Day School

Address: 6000 N. Camino de la Tierra  
Tucson, AZ 85741

Phone Number: 520-297-2288

5. If the property is leased, how long is the lease term?

N/A

6. If the property is leased, are there plans to renew the lease and for how long?

N/A

7. If the property is owned, do you plan on relocating and if so in what timeframe?

There are no plans to re-locate.

B. Environmental Information

1. Are there any groundwater wells on the property? If so, what is the current use of water in those wells? (For example, drinking water, water supply, monitoring, irrigation, remediation)

Our groundwater wells are used for drinking water, sewer and irrigation.

2. Are there any proposed changes to the current use of water in the wells from item #1 anticipated for the next 100 years?

No

3. Please list the company's waste streams.

UNK

4. Please list any spill of material or waste products that has occurred at the facility in the past 5 years.

UNK

5. Is your company currently sampling any groundwater wells on the property? If so, how often is the sampling conducted? Are analytical results being submitted to ADEQ for the groundwater database?

Yes, annually. Results are submitted.

6. If there are any groundwater wells on the property that supply drinking water, how many people are served and what is the Public Water Supply (PWS) number?

We have 180 people on campus. Most drinking water is bottled water. PWS is UNK

7. Do you anticipate that any groundwater wells will be drilled in the next 100 years at this property? If yes, what will the water be used for?

If the table reduces, I anticipate more drilling to continue to irrigate and provide water supply to campus.

8. Does your facility have an environmental manager or is environmental management outsourced to an environmental consulting firm? If so, please list the person's information: UNK

Name: \_\_\_\_\_

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

Phone Number: \_\_\_\_\_

Thank you for your time. The Senior Hydrologist, Robert Wallin, or a representative from ADEQ's consultant, URS Corporation, may follow-up on answers provided.



LAND AND WATER USE STUDY QUESTIONNAIRE  
FOR PROPERTY OWNERS WITHIN THE  
SHANNON ROAD/EL CAMINO DEL CERRO WQARF REGISTRY SITE

Please answer all questions. Mark "NA" for questions that are not applicable. Mark "UNK" if the answer is unknown to you at the time of completion. Please attach any additional pages as needed.

Facility Name: GRANITE KITCHEN + BATH

Date Questionnaire was completed: 4/15/2012

Name of person completing Questionnaire: MICHAEL SCHIFFLER

Address: 5300 N. CASA GRANDE HWY  
TUCSON, AZ 85743

Contact Name: MICHAEL SCHIFFLER

Address: 5300 N. CASA GRANDE HWY

Phone Number: 520-206-0676

A. Property Information

1. What is the current use of the property? Please include a detailed facility description.

GRANITE FABRICATION FACILITY  
- CUT + POLISH SLABS OF NATURAL STONE

2. What are the foreseeable plans for the property (extension of buildings, increased production, etc.) as far into the future as they are known and up to 100 years, if possible?

NO EXPANSIONS IN FUTURE

3. Is the property owned or leased?

OWNED

4. Who is the owner of the property?

Name: GRANITE KITCHEN + BATH, INC.

Address: 5300 N. CASA GRANDE HWY  
TUCSON, AZ 85743

Phone Number: 520-206-0676

5. If the property is leased, how long is the lease term?

N/A

6. If the property is leased, are there plans to renew the lease and for how long?

N/A

7. If the property is owned, do you plan on relocating and if so in what timeframe?

N/A

B. Environmental Information

1. Are there any groundwater wells on the property? If so, what is the current use of water in those wells? (For example, drinking water, water supply, monitoring, irrigation, remediation)

I UNDERSTAND THERE IS A "CAPPED" WELL IN THE SOUTHWESTERN CORNER OF THE PROPERTY. IT IS NOT BE USED.

2. Are there any proposed changes to the current use of water in the wells from item #1 anticipated for the next 100 years?

N/A

3. Please list the company's waste streams.

WE HAVE CITY SEWER.

4. Please list any spill of material or waste products that has occurred at the facility in the past 5 years.

NONE

5. Is your company currently sampling any groundwater wells on the property? If so, how often is the sampling conducted? Are analytical results being submitted to ADEQ for the groundwater database?

NO

6. If there are any groundwater wells on the property that supply drinking water, how many people are served and what is the Public Water Supply (PWS) number?

N/A

7. Do you anticipate that any groundwater wells will be drilled in the next 100 years at this property? If yes, what will the water be used for?

N/A

8. Does your facility have an environmental manager or is environmental management outsourced to an environmental consulting firm? If so, please list the person's information:

N/A

Name:

\_\_\_\_\_

Address:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone Number:

\_\_\_\_\_

Thank you for your time. The Senior Hydrologist, Robert Wallin, or a representative from ADEQ's consultant, URS Corporation, may follow-up on answers provided.

LAND AND WATER USE STUDY QUESTIONNAIRE  
FOR PROPERTY OWNERS WITHIN THE  
SHANNON ROAD/EL CAMINO DEL CERRO WQARF REGISTRY SITE



Please answer all questions. Mark "NA" for questions that are not applicable. Mark "UNK" if the answer is unknown to you at the time of completion. Please attach any additional pages as needed.

Facility Name: Metro Water

Date Questionnaire was completed: 4/24/13

Name of person completing Questionnaire: MARY JANE ADELL

Address: 2657 W. FLAMEBROOK RD  
Town AZ 85741

Contact Name: MARY JANE ADELL

Address: 2657 W. FLAMEBROOK RD  
Town AZ 85741

Phone Number: (520) 425-7306

A. Property Information

1. What is the current use of the property? Please include a detailed facility description.

Residential

2. What are the foreseeable plans for the property (extension of buildings, increased production, etc.) as far into the future as they are known and up to 100 years, if possible?

Rental Property

3. Is the property owned or leased?

Owned

4. Who is the owner of the property?

Name:

MARY JANE ABEL

Address:

2657 W. FLAMEBROOK RD

TOWN AZ 85741

Phone Number:

(520) 425-7306

5. If the property is leased, how long is the lease term?

NA

6. If the property is leased, are there plans to renew the lease and for how long?

NA

7. If the property is owned, do you plan on relocating and if so in what timeframe?

No

B. Environmental Information

1. Are there any groundwater wells on the property? If so, what is the current use of water in those wells? (For example, drinking water, water supply, monitoring, irrigation, remediation)

WATER SERVICE IS RECEIVED FROM METRO WATER.

THERE ARE NO GROUNDWATER WELLS ON THE PROPERTY.

2. Are there any proposed changes to the current use of water in the wells from item #1 anticipated for the next 100 years?

NA

3. Please list the company's waste streams.

METAS WATER (UNKNOWN)

4. Please list any spill of material or waste products that has occurred at the facility in the past 5 years.

NONE ON RESIDENTIAL AREA  
UNKNOWN ABOUT METAS WATER

5. Is your company currently sampling any groundwater wells on the property? If so, how often is the sampling conducted? Are analytical results being submitted to ADEQ for the groundwater database?

NA

6. If there are any groundwater wells on the property that supply drinking water, how many people are served and what is the Public Water Supply (PWS) number?

Metro Water

7. Do you anticipate that any groundwater wells will be drilled in the next 100 years at this property? If yes, what will the water be used for?

NA

8. Does your facility have an environmental manager or is environmental management outsourced to an environmental consulting firm? If so, please list the person's information:

Name:

NA

Address:

NA

Phone Number:

Thank you for your time. The Senior Hydrologist, Robert Wallin, or a representative from ADEQ's consultant, URS Corporation, may follow-up on answers provided.



LAND AND WATER USE STUDY QUESTIONNAIRE  
FOR PROPERTY OWNERS WITHIN THE  
SHANNON ROAD/EL CAMINO DEL CERRO WQARF REGISTRY SITE

Please answer all questions. Mark "NA" for questions that are not applicable. Mark "UNK" if the answer is unknown to you at the time of completion. Please attach any additional pages as needed.

Facility Name: PREFERRED CONCRETE PUMPING, INC.

Date Questionnaire was completed: 05/06/13

Name of person completing Questionnaire: MARTIN LOPEZ

Address: 3190 W. EL CAMINO DEL CERRO  
TUCSON, AZ 85745

Contact Name: MARTIN LOPEZ

Address: SAME

Phone Number: 520 888-3345

A. Property Information

1. What is the current use of the property? Please include a detailed facility description.

CONTRACTORS YARD  
EQUIPMENT PARKING  
MAINTENANCE + REPAIR

2. What are the foreseeable plans for the property (extension of buildings, increased production, etc.) as far into the future as they are known and up to 100 years, if possible?

UNK

3. Is the property owned or leased?

OWNED

4. Who is the owner of the property?

Name: MARTIN LOPEZ

Address: 1609 W. SPEEDWAY BLVD.  
TUCSON, AZ 85745

Phone Number: 520 574-0422

5. If the property is leased, how long is the lease term?

YES, 1 YEAR

6. If the property is leased, are there plans to renew the lease and for how long?

AUTO RENEWAL ANNUALLY, INDEFINITELY

7. If the property is owned, do you plan on relocating and if so in what timeframe?

NO

B. Environmental Information

1. Are there any groundwater wells on the property? If so, what is the current use of water in those wells? (For example, drinking water, water supply, monitoring, irrigation, remediation)

YES (1) EQUIPMENT WATER SUPPLY

2. Are there any proposed changes to the current use of water in the wells from item #1 anticipated for the next 100 years?

NO

3. Please list the company's waste streams.

SEPTIC

4. Please list any spill of material or waste products that has occurred at the facility in the past 5 years.

CONCRETE WASH PIT

5. Is your company currently sampling any groundwater wells on the property? If so, how often is the sampling conducted? Are analytical results being submitted to ADEQ for the groundwater database?

NO, PIMA COUNTY DEQ IS  
SAMPLING QUARTERLY

6. If there are any groundwater wells on the property that supply drinking water, how many people are served and what is the Public Water Supply (PWS) number?

NO

7. Do you anticipate that any groundwater wells will be drilled in the next 100 years at this property? If yes, what will the water be used for?

NO

8. Does your facility have an environmental manager or is environmental management outsourced to an environmental consulting firm? If so, please list the person's information: NO

Name:

\_\_\_\_\_

Address:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone Number:

\_\_\_\_\_

Thank you for your time. The Senior Hydrologist, Robert Wallin, or a representative from ADEQ's consultant, URS Corporation, may follow-up on answers provided.



LAND AND WATER USE STUDY QUESTIONNAIRE  
FOR PROPERTY OWNERS WITHIN THE  
SHANNON ROAD/EL CAMINO DEL CERRO WQARF REGISTRY SITE

Please answer all questions. Mark "NA" for questions that are not applicable. Mark "UNK" if the answer is unknown to you at the time of completion. Please attach any additional pages as needed.

Facility Name: \_\_\_\_\_

Date Questionnaire was completed: 4/16/13

Name of person completing Questionnaire: Madhu Bansal

Address: 3059 W Sahara St  
Tucson, AZ 85705

Contact Name: Madhu Bansal

Address: Same as above

Phone Number: \_\_\_\_\_

A. Property Information

1. What is the current use of the property? Please include a detailed facility description.

Resident

2. What are the foreseeable plans for the property (extension of buildings, increased production, etc.) as far into the future as they are known and up to 100 years, if possible?

Resident

3. Is the property owned or leased? owned

4. Who is the owner of the property?

Name: Madhu Bansal

Address: 3059 W Sahara St  
TUCSON, AZ 85705

Phone Number: \_\_\_\_\_

5. If the property is leased, how long is the lease term?

N/A

6. If the property is leased, are there plans to renew the lease and for how long?

N/A

7. If the property is owned, do you plan on relocating and if so in what timeframe?

NO

B. Environmental Information

1. Are there any groundwater wells on the property? If so, what is the current use of water in those wells? (For example, drinking water, water supply, monitoring, irrigation, remediation)

NO

2. Are there any proposed changes to the current use of water in the wells from item #1 anticipated for the next 100 years?

N/A

3. Please list the company's waste streams.

N/A

4. Please list any spill of material or waste products that has occurred at the facility in the past 5 years.

N/A

5. Is your company currently sampling any groundwater wells on the property? If so, how often is the sampling conducted? Are analytical results being submitted to ADEQ for the groundwater database?

N/A

6. If there are any groundwater wells on the property that supply drinking water, how many people are served and what is the Public Water Supply (PWS) number?

NO

7. Do you anticipate that any groundwater wells will be drilled in the next 100 years at this property? If yes, what will the water be used for?

NO

8. Does your facility have an environmental manager or is environmental management outsourced to an environmental consulting firm? If so, please list the person's information:

Name:

UNK

Address:

Phone Number:

Thank you for your time. The Senior Hydrologist, Robert Wallin, or a representative from ADEQ's consultant, URS Corporation, may follow-up on answers provided.

LAND AND WATER USE STUDY QUESTIONNAIRE  
FOR PROPERTY OWNERS WITHIN THE  
SHANNON ROAD/EL CAMINO DEL CERRO WQARF REGISTRY SITE



Please answer all questions. Mark "NA" for questions that are not applicable. Mark "UNK" if the answer is unknown to you at the time of completion. Please attach any additional pages as needed.

Facility Name: Tru Cup Properties

Date Questionnaire was completed: \_\_\_\_\_

Name of person completing Questionnaire: JOHN LASHLEY

Address: \_\_\_\_\_  
\_\_\_\_\_  
**John and Dawn Lashley**  
6262 N. Camino Verde  
Tucson, AZ 85743

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

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

Phone Number: 850 2822

A. Property Information

1. What is the current use of the property? Please include a detailed facility description.

5150 N. Lago Grande Hwy -  
outside registry site  
& NO well



Janice K. Brewer  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007  
(602) 771-2300 • www.azdeq.gov



Henry R. Darwin  
Director



April 10, 2013

SPU 13.108

Tucson Care Group LLC  
12115 NE 99th St, Ste 1800  
Vancouver, WA 98682-2334

Re: Arizona Department of Environmental Quality Request for Information Regarding Land Use Related to the Shannon Road/El Camino del Cerro Water Quality Assurance Revolving Fund Site

Dear Sir or Madam,

Arizona Department of Environmental Quality (ADEC) records indicate that Tucson Care Group LLC owns land that is located in or near the Shannon Road/El Camino del Cerro Water Quality Assurance Revolving Fund site (Site) (see attached fact sheet). ADEC is in the process of developing a draft Remedial Investigation (RI) for the Site, pursuant to Arizona Administrative Code R18-16-406. The RI will describe the extent of known contamination at the site and also will present information regarding current and reasonably foreseeable uses of land impacted or threatened to be impacted by contamination.

As part of the RI process, information must be collected regarding current and reasonably feasible uses of land that may be affected by the release of contaminants. The constituents of concern are trichloroethene and tetrachloroethene (released from the former Camino del Cerro landfill north of El Camino del Cerro between the Santa Cruz River and Interstate 10. The attached map details the area that is considered the approximate Site boundary.

We ask that you provide information on current and future land uses for parcels that are owned by you within the approximate Site boundary shown on the attached map by completing the enclosed questionnaire. We would appreciate a response to this request by May 10, 2013, so that the RI process can proceed on schedule.

If you have any questions regarding this request, please contact me at (520) 628-6743.

Sincerely,

Robert Wallin, R.G.  
Senior Hydrologist  
Compliance Programs Unit  
Southern Regional Office

Attachments: Fact Sheet, Site Map, Questionnaire

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

Printed on recycled paper

LAND AND WATER USE STUDY QUESTIONNAIRE  
FOR PROPERTY OWNERS WITHIN THE  
SHANNON ROAD/EL CAMINO DEL CERRO WQARF REGISTRY SITE

Please answer all questions. Mark "NA" for questions that are not applicable. Mark "UNK" if the answer is unknown to you at the time of completion. Please attach any additional pages as needed.

Facility Name: ACACIA GARDENS MOBILE HOME PARK

Date Questionnaire was completed: 05/07/2013

Name of person completing Questionnaire: NEAL T HANEY

Address: 827 N. COUNTRY CLUB DR. #3  
MESA AZ 85201

Contact Name: SAME

Address: SAME

Phone Number: 4806943531

A. Property Information

1. What is the current use of the property? Please include a detailed facility description.

LAND LEASE COMMUNITY (MOBILE HOME PARK)

2. What are the foreseeable plans for the property (extension of buildings, increased production, etc.) as far into the future as they are known and up to 100 years, if possible?

NO CHANGES FORESEEABLE IN NEAR FUTURE

3. Is the property owned or leased?

OWNED

4. Who is the owner of the property?

Name:

SIERRA SHOPPING CENTER LLC

Address:

70 NTH PROPERTY MANAGEMENT LLC

827 N. COUNTRY CLUB DR. #3

MESA AZ 85201

Phone Number:

4806493531

5. If the property is leased, how long is the lease term?

N/A

6. If the property is leased, are there plans to renew the lease and for how long?

N/A

7. If the property is owned, do you plan on relocating and if so in what timeframe?

NO

B. Environmental Information

1. Are there any groundwater wells on the property? If so, what is the current use of water in those wells? (For example, drinking water, water supply, monitoring, irrigation, remediation)

NONE IN USE

2. Are there any proposed changes to the current use of water in the wells from item #1 anticipated for the next 100 years?

NO

3. Please list the company's waste streams.

HOUSEHOLD TO PIMA WASTEWATER SYSTEM

4. Please list any spill of material or waste products that has occurred at the facility in the past 5 years.

NONE

5. Is your company currently sampling any groundwater wells on the property? If so, how often is the sampling conducted? Are analytical results being submitted to ADEQ for the groundwater database?

NO

6. If there are any groundwater wells on the property that supply drinking water, how many people are served and what is the Public Water Supply (PWS) number? **NO**

7. Do you anticipate that any groundwater wells will be drilled in the next 100 years at this property? If yes, what will the water be used for?  
**NO**

8. Does your facility have an environmental manager or is environmental management outsourced to an environmental consulting firm? If so, please list the person's information: **NO**

Name: \_\_\_\_\_

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

\_\_\_\_\_

\_\_\_\_\_

Phone Number: \_\_\_\_\_

Thank you for your time. The Senior Hydrologist, Robert Wallin, or a representative from ADEQ's consultant, URS Corporation, may follow-up on answers provided.

LAND AND WATER USE STUDY QUESTIONNAIRE  
FOR PROPERTY OWNERS WITHIN THE  
SHANNON ROAD/EL CAMINO DEL CERRO WQARF REGISTRY SITE



Please answer all questions. Mark "NA" for questions that are not applicable. Mark "UNK" if the answer is unknown to you at the time of completion. Please attach any additional pages as needed.

Facility Name: M. WHITE STABLES

Date Questionnaire was completed: 4/17/13

Name of person completing Questionnaire: Petunia White

Address: 5455 N. SAN JOAQUIN  
TUCSON, AZ 85741

Contact Name: same

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

Phone Number: 520 887 4386

A. Property Information

1. What is the current use of the property? Please include a detailed facility description.

Residential & Horse Stable

2. What are the foreseeable plans for the property (extension of buildings, increased production, etc.) as far into the future as they are known and up to 100 years, if possible?

UNK

3. Is the property owned or leased? *owned*

4. Who is the owner of the property?

Name: *Mark D + Patricia White*

Address: *White Family Trust*

*5455 N. SAN JOAQUIN*

*TULSON, AZ 85741*

Phone Number: *520 887 4386*

5. If the property is leased, how long is the lease term?

*NA*

6. If the property is leased, are there plans to renew the lease and for how long?

*NA*

7. If the property is owned, do you plan on relocating and if so in what timeframe?

UNK

**B. Environmental Information**

1. Are there any groundwater wells on the property? If so, what is the current use of water in those wells? (For example, drinking water, water supply, monitoring, irrigation, remediation)

*1 well*

2. Are there any proposed changes to the current use of water in the wells from item #1 anticipated for the next 100 years?

UNK

3. Please list the company's waste streams.

NONE

4. Please list any spill of material or waste products that has occurred at the facility in the past 5 years.

NONE

5. Is your company currently sampling any groundwater wells on the property? If so, how often is the sampling conducted? Are analytical results being submitted to ADEQ for the groundwater database?

ADEQ sampled water 2013

6. If there are any groundwater wells on the property that supply drinking water, how many people are served and what is the Public Water Supply (PWS) number?

*Drinking water supplied to  
17 people*

7. Do you anticipate that any groundwater wells will be drilled in the next 100 years at this property? If yes, what will the water be used for?

*No*

8. Does your facility have an environmental manager or is environmental management outsourced to an environmental consulting firm? If so, please list the person's information:

Name:

*No*

Address:

Phone Number:

Thank you for your time. The Senior Hydrologist, Robert Wallin, or a representative from ADEQ's consultant, URS Corporation, may follow-up on answers provided.

LAND AND WATER USE STUDY QUESTIONNAIRE  
FOR PROPERTY OWNERS WITHIN THE  
SHANNON ROAD/EL CAMINO DEL CERRO WQARF REGISTRY SITE



Please answer all questions. Mark "NA" for questions that are not applicable. Mark "UNK" if the answer is unknown to you at the time of completion. Please attach any additional pages as needed.

Facility Name: See attached As-Builts

Date Questionnaire was completed: May 7, 2013

Name of person completing Questionnaire: Michael Block

Address: Metropolitan Domestic Water Improvement District  
P.O. Box 36870  
Tucson, AZ 85740

Contact Name: Same as above

Address: Same as above

Phone Number: (520) 575-8100

A. Property Information

1. What is the current use of the property? Please include a detailed facility description.

Attached As-Builts depict ifaa hydropneuamtic tank and/or reservoir exist at the well site. The Shannon Treatment System (GAC) resides at the South Shannon Well Facility. There is no As-Built for the Moore Facility. The facility has a well, a 130,400 gallon reservoir and a hydropneumatic tank.

2. What are the foreseeable plans for the property (extension of buildings, increased production, etc.) as far into the future as they are known and up to 100 years, if possible?

All of well sites will remain active over the next 100 years. Production could increase at all of the sites depending on which District wells are retired or replaced. South Shannon well production could increase depending on the final remedy decided by ADEQ. The Estes well will remain as a monitor well due to the limited size of the well lot to drill a replacement well.

3. Is the property owned or leased?

Owned by MDWID

4. Who is the owner of the property?

Name: Metropolitan Domestic Water Improvement District

Address: P.O. Box 36870  
Tucson, AZ 85740

Phone Number: (520) 575-8100

5. If the property is leased, how long is the lease term?
6. If the property is leased, are there plans to renew the lease and for how long?
7. If the property is owned, do you plan on relocating and if so in what timeframe?
- No relocations planned

B. Environmental Information

1. Are there any groundwater wells on the property? If so, what is the current use of water in those wells? (For example, drinking water, water supply, monitoring, irrigation, remediation)

Yes, see Table 1 for identifier and use

2. Are there any proposed changes to the current use of water in the wells from item #1 anticipated for the next 100 years?

No, as stated in B.2., the District has no plans to alter use of the wells in the next 100 years as approved in our Designation of Assured Water Supply with ADWR.

3. Please list the company's waste streams.

No wastes are disposed of on-site because facilities are for drinking water.

4. Please list any spill of material or waste products that has occurred at the facility in the past 5 years.

None

5. Is your company currently sampling any groundwater wells on the property? If so, how often is the sampling conducted? Are analytical results being submitted to ADEQ for the groundwater database?

Yes, the District is required under the Safe Drinking Water Act to complete required monitoring for coliform, IOCs, VOCs, SOCs, and radiochemicals at Entry Points to the Distribution System. The EPDS will often be a reservoir if two or more wells feed a reservoir. In those cases, the EPDS will be blended. The District does sample the South Shannon well monthly. All samples are reported directly to ADEQ Drinking Water as per federal regulations. Monthly data from South Shannon is reported monthly to SRO WQARF.

6. If there are any groundwater wells on the property that supply drinking water, how many people are served and what is the Public Water Supply (PWS) number?

The District does not track population by service area, but does have from ADWR the total population for the total service area. Assuming uniform water use by customer, then one can estimate the population in each well service area by each well's pumpage. See Table 2.

7. Do you anticipate that any groundwater wells will be drilled in the next 100 years at this property? If yes, what will the water be used for?

Yes, because of the well ages, the District will likely drill replacements in the next 100 years. See Table 1 for well ages. Typically, a production well in the SW will last on the average 40 years.

8. Does your facility have an environmental manager or is environmental management outsourced to an environmental consulting firm? If so, please list the person's information:

Name: No environmental manager at District or consulting firm

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

Phone Number: \_\_\_\_\_

Thank you for your time. The Senior Hydrologist, Robert Wallin, or a representative from ADEQ's consultant, URS Corporation, may follow-up on answers provided.

TABLE 1. METRO WELLS WITHIN OR ADJACENT TO SHANNON-EL CAMINO DEL CERRO WQARF SITE

LEGAL DESCRIPTION	ADWR REGIST. #	WELL NAME	STATUS	USE	WELL AGE (years)	CASING DIAMETER (inches)	PERFORATED INTERVAL (1) (feet to feet)	CASING DEPTH (feet)	PUMPING RATE (2) (gpm)	PUMP TYPE	PUMP DEPTH (feet)
D-13-13-08ada	55-626758	Wildwood	Active	Potable	35	16	250-428 450-500	529	573	Submersible	272
D-13-13-08bdc1	55-626738	Latamore North	Active	Non-Potable	62	18	24-280	280	374	Turbine	215
D-13-13-08bdc2	55-626762	Latamore South	Active	Potable	40	16	88-488	507	580	Turbine	160
D-13-13-08dda	55-626757	South Shannon	Active	Potable	35	16	90-501	505	577	Submersible	340
D-13-13-09bcc	55-626739	DeConcini	Active	Potable	38	12	36-460	NA	424	Turbine	280
D-13-13-09cad	55-801842	Estes	Active	Monitor	65	15 12	69-214 214-?	0-214 214-410	-	Turbine	210
D-13-13-09cdd	55-620988	Moore	Active	Potable	60	16 12 (3)	85-192 192-?	0-192 192-485	257	Turbine	205

Footnotes:

- 1 - Video log used to correct drillers log or if no drillers log exists
- 2 - Average monthly flow rates for 2012
- 3 - Video log notes there may be a liner

TABLE 2. POPULATION SERVED IN AND ADJACENT TO SHANNON-EL CAMINO DEL CERRO WQARF SITE

LEGAL DESCRIPTION	ADWR REGIST. #	WELL NAME	STATUS	USE	2012 PUMPAGE (AF)	2012 POPULATION SERVED	PERCENT SERVED COMPARED TO TOTAL DISTRICT
D-13-13-08ada	55-626758	Wildwood	Active	Potable	464.17	2,627	6.0
D-13-13-08bdc1	55-626738	Latamore North	Active	Non-Potable	39.80	NA	NA
D-13-13-08bdc2	55-626762	Latamore South	Active	Potable	127.86	724	1.6
D-13-13-08dda	55-626757	South Shannon	Active	Potable	667.71	3,779	8.6
D-13-13-09bcc	55-626739	DeConcini	Active	Potable	387.67	2,194	5.0
D-13-13-09cad	55-801842	Estes	Active	Monitor	0.00	NA	NA
D-13-13-09cdd	55-620988	Moore	Active	Potable	26.69	151	0.3
				Total Potable	1674.10	9,475	21.5
				Total District Water Use	7786.86	9,475	

Footnotes:

1 - 2012 District population is 44,073