

**Draft Section 208 Water Quality Management Plan Amendment  
CAG 208 ID # 2023-02**

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**Tri-City Regional Sanitary District  
Wastewater Collection and Treatment System  
Designated Management Agency  
Gila County, Arizona**

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**September 2023**

*Prepared For (Applicant):*



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This plan supersedes Tri-City Regional Sanitary Districts previous CAG 208 Plan Amendment (CAG 208 ID # 2017-02).

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# Abbreviations

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AAC	Arizona Administrative Code
ACC Title 18 EQ	Arizona Administrative Code Title 18 Environmental Quality
ADEQ	Arizona Department of Environmental Quality
ADWR	Arizona Department of Water Resources
APP	Aquifer Protection Permit
ARS	Arizona Revised Statutes
AZPDES	Arizona Pollutant Discharge Elimination System
BADCT	Best Available Demonstrated Control Technology
BMP	Best Management Practices
BHP	BHP Billiton
CAG	Central Arizona Governments
CDP	Census Designated Places
CFR	Code of Federal Regulations
CVCC	Cobre Valley Country Club
CVSD	Cobre Valley Sanitary District
CWA	Clean Water Act
DMA	Designated Management Area
EA	Environmental Assessment
EDU	Equivalent Dwelling Unit
EPA	Environmental Protection Agency
FMI	Freeport McMoRan Inc.
GCWD	Gila County Wastewater Division
Globe	City of Globe
IGA	Intergovernmental Agreement
IPR	Improvements on Possessory Rights
LF	Linear Feet
MBR	Membrane Bioreactors
MGD	Million Gallons per Day
MHI	Median Household Income
Miami	Town of Miami
MLSS	Mixed-Liquor Suspended Solids
NOV	Notice of Violation
NPV	Net Present Value
O&M	Operation and Maintenance
PACE	Pacific Advanced Civil Engineering, Inc.
PCWWTF	Pinal Creek Wastewater Treatment Facility
PER	Preliminary Engineering Report
PPM	Parts per Million



PSD	Pinal Sanitary District
RCAC	Rural Communities Assistance Corporation
RD	Rural Development
RFC	Reconstruction Finance Corporation
ROI	Resolution of Intention
ROW	Right-of-Way
RUS	Rural Utilities Service
RWAA	Rural Water Association of Arizona
SF	Square Feet
SWPPP	Stormwater Pollution Prevention Plan
TRSD	Tri-City Regional Sanitary District
USACE	United States Army Corp of Engineers
USCB	United States Census Bureau
USDA	United States Department of Agriculture
USPW	Uniform Series Present Worth
WIFA	Water Infrastructure Finance Authority of Arizona
WQARF	Pinal Creek Water Quality Assurance Revolving Fund
WQMP	Water Quality Management Plan
WRF	Water Reclamation Facility
WWTP	Wastewater Treatment Plant

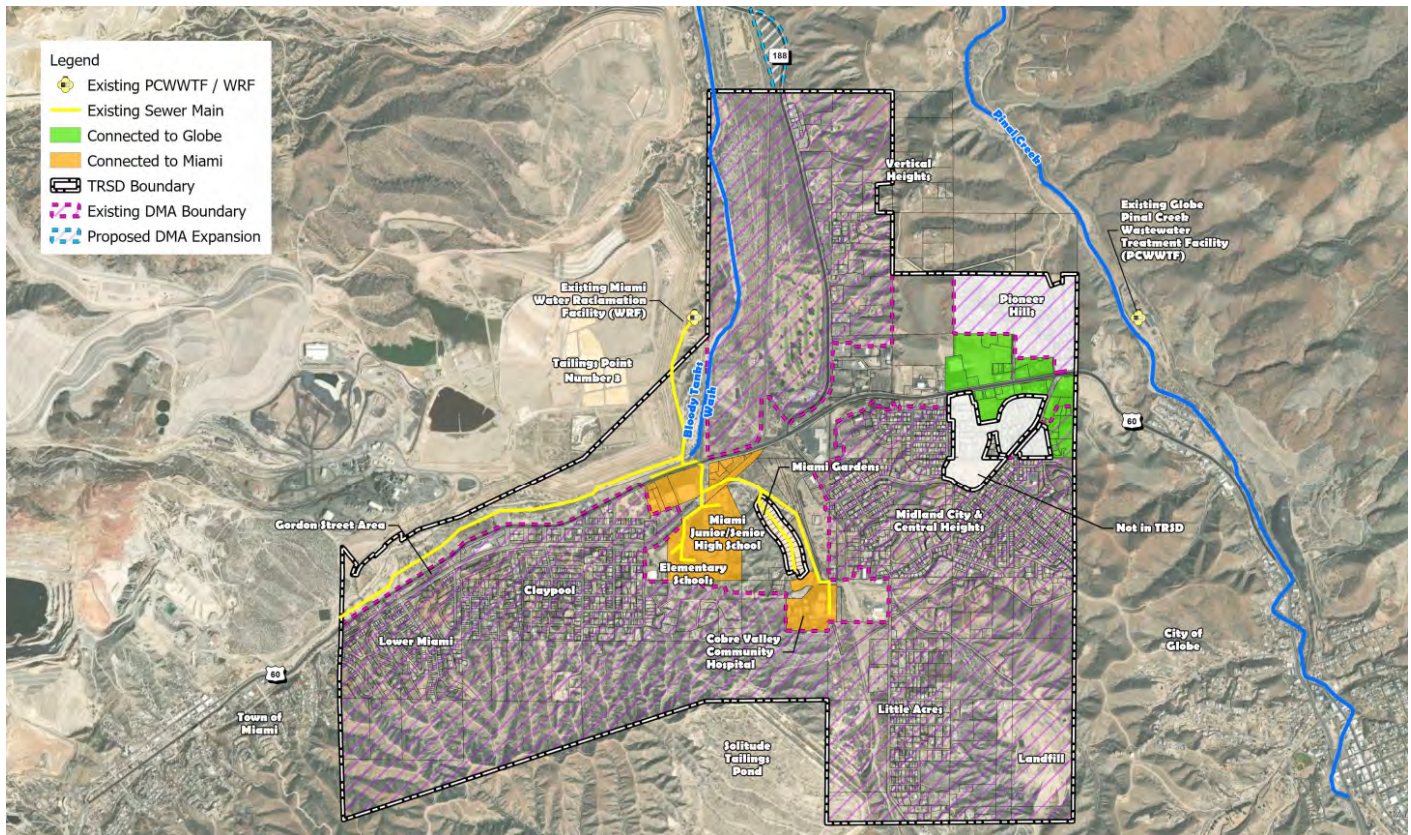
# 1 Introduction

The Tri-City Regional Sanitary District (TRSD) is seeking approval of an amendment to the Central Arizona Governments (CAG) Section 208 Water Quality Management Plan (WQMP). This plan supersedes Tri-City Regional Sanitary Districts previous CAG 208 Plan Amendment (CAG 208 ID # 2017-02). The purpose of this plan is to:

1. Identify a new location for the proposed wastewater treatment facility that was approved in the previous plan amendment;
2. Expand the current DMA Boundary to include the parcel of the new location site;
3. Approve the new discharge location point due to the new proposed location.

TRSD encompasses approximately 5.3 square miles located in Gila County, Arizona between the Town of Miami (Miami) and City of Globe (Globe). This area is located about 80 miles east of the City of Phoenix. TRSD, an Arizona Sanitary District established in 2011, was formed with a foundation and mission to improve quality of life for the Tri-City area of southern Gila County, Arizona by developing a plan to provide and manage a new wastewater collection and treatment system. Appendix includes formation documentation and the TRSD legal description. Figure 1 below and Exhibit 1 (Appendix G) illustrates the existing facilities.

Figure 1 – TRSD Existing Facilities



## 1.1 Abstract

TRSD was formed by the merger of two existing sanitary districts known as Cobre Valley Sanitary District (CVSD) and Pinal Sanitary District (PSD), established in 1969 and 1982, respectively. In 2011, the Gila County Board of Supervisors called for an election proposing the merger of these two sanitary districts for convenience and necessity to address the public health concerns in the area. This election resulted in the formal merger whereby CVSD and PSD became TRSD. TRSD had a surveyor formally prepare a legal description of the TRSD boundary in 2018, which is recorded with Gila County. Appendix D includes the following:

- 1969 Cobre Valley Sanitary District Formation Documents
- 1982 Pinal Sanitary District Formation Documents
- 2011 TRSD Formation Res 001 Merger of CVSD & PSD
- 2018 TRSD Boundary Legal Description & Recording

Due to the merger of CVSD and PSD, TRSD now administers both of the recognized designated management agencies (DMAs). Currently, the CAG Section 208 WQMP dated February 2016 identifies PSD and CVSD as DMAs of their respective existing boundaries. PSD's DMA designation was recognized in 1983 and CVSD's in 1985. The TRSD administration of these existing DMAs is supported by a clarification issued to CAG by Arizona Department of Environmental Quality (ADEQ) (Appendix F). It should be noted that historically, no official action was taken by TRSD to obtain approval of its DMA because the DMA of the newly formed sanitary district was simply the combination of the existing DMA's of CVSD and PSD. Therefore, at the time official action by CAG and the EPA was not pursued. Recently, TRSD has worked with neighboring communities of Globe and Miami to negotiate specific areas of the DMA boundaries (details discussed in Section 2.1.6). The certified and recorded TRSD legal description and DMA boundary map is included in Appendix D.

TRSD is seeking approval of an amendment to the Central Arizona Governments (CAG) Section 208 Water Quality Management Plan (WQMP). This plan supersedes Tri-City Regional Sanitary Districts previous CAG 208 Plan Amendment (CAG 208 ID #2017-02). The purpose of this plan is to:

1. Identify a new location for the proposed wastewater treatment facility that was approved in the previous plan amendment;
2. Expand the current DMA Boundary to include the parcel of the new location site;
3. Approve the new discharge location point due to the new proposed location.

TRSD and BHP were in conversations about the use of Gila County Assessor's parcel number 207-23-001C, the parcel previously identified in CAG 208 Plan Amendment ID #2017-02, as a potential site to locate the TRSD WRF, however, it has been determined that it would most likely conflict with the upcoming Solitude Tailings Pond Dam modifications that BHP needs to complete.

Since learning this parcel was no longer available, TRSD continued its search for a new site and has now identified and is in the process of acquiring a parcel from BHP, via donation, for the proposed new WRF. The property is Gila County Assessor's parcel number #205-03-010. The parcel has been split and recorded in Gila County. The legal description is for the site is included in Appendix D. TRSD is requesting to expand the DMA to include this parcel.

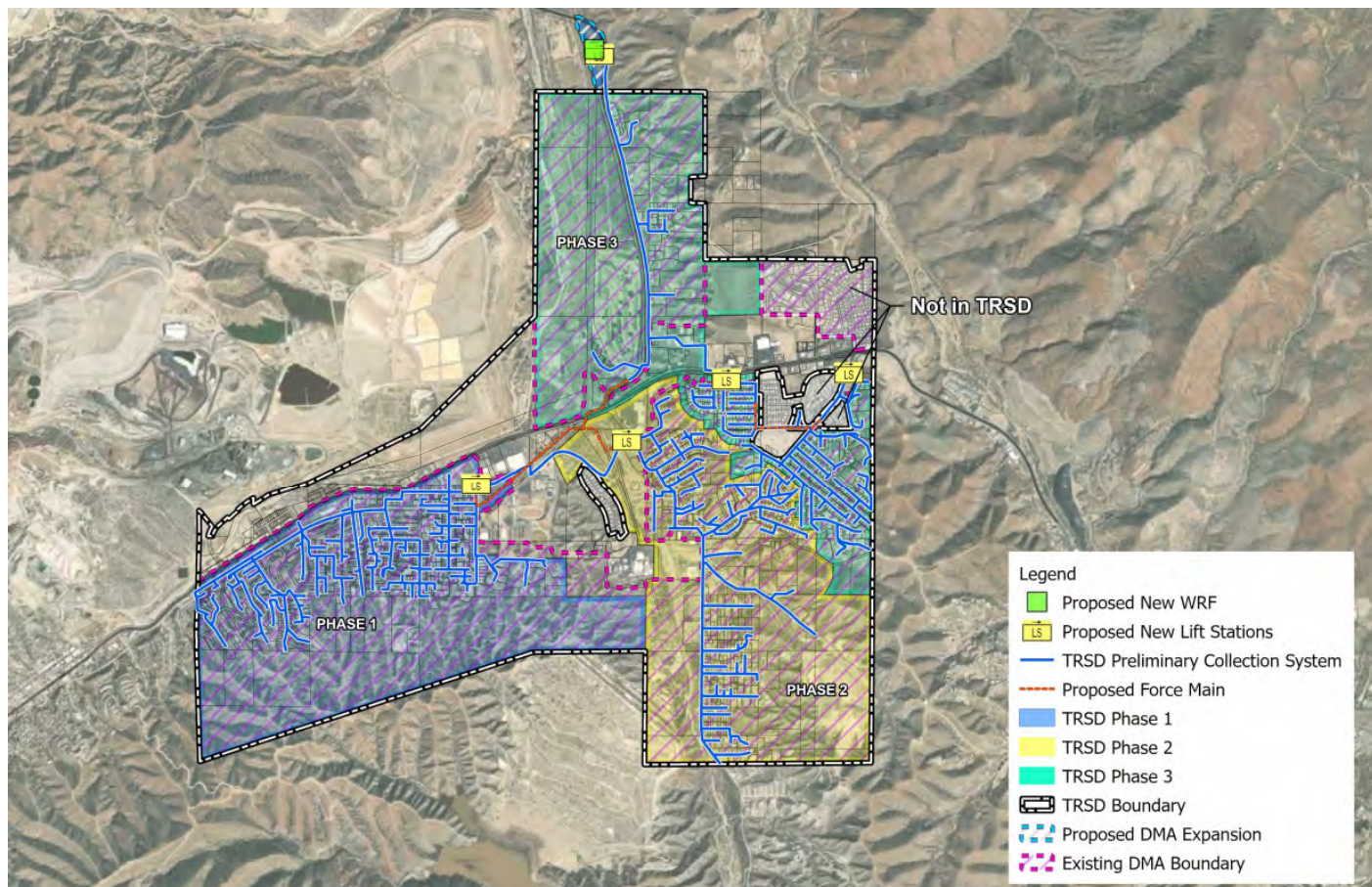
Additionally, with the site change, will be a new discharge location point. This is shown in Exhibit 3 Proposed Project WRF (Appendix G). TRSD is seeking the approval of this new discharge location point.

Section continued on next page.



In the pursuit of funding, due to the magnitude of the overall project, it will be implemented with a three-phase approach. See Figure 2 below and Exhibit 2 (Appendix G).

**Figure 2 – Preliminary Collection System**



Upon completion, approximately 4,200 residents will directly benefit from this new wastewater collection and treatment system and the entire community will begin to see some environmental and economical improvements in the area. This project consists of the installation of 159,276+/- linear feet (LF) of gravity main lines, 27,500+/- LF of force main, approximately 415 new manholes, about 2,159 new service connections, and a newly constructed 0.50 million gallons per day (MGD) membrane bioreactor (MBR) WRF. Exhibit 2 Preliminary Collection & Treatment System (Appendix G) illustrates the proposed project phasing and infrastructure.

All generated domestic wastewater flows will be conveyed to the new TRSD WRF, which will be designed to have treatment capacity of 0.50 MGD at full buildout. The WRF will be owned, operated and maintained by TRSD, and TRSD will be responsible for the effluent management. It is anticipated that the WRF will be a modular design using the MBR process with multiple phases to accommodate additional flows as the collection system phases are completed. The contemporary membrane filtration technology will provide extremely high quality treated wastewater (known as effluent).

## 1.2 Project History

Many of the existing septic systems and cesspools within TRSD are in poor and failing condition. Cesspools were prohibited in the 1970's because they were described as a health and safety risk to humans and the environment as stated in the Arizona Administrative Code (AAC) R18-9-A309.A.4. Based on recent discussions with Gila County, an analysis of residential properties within TRSD indicates 89% of the existing facilities are in violation of the Clean Water Act (CWA) and AAC. In addition, a study was conducted in 2012 by Gila County to assess sewage treatment within TRSD named "Sewage Treatment Study, Tri-City Regional Sanitary District" dated November 2012 (Appendix I). This study discusses the extensive use of cesspools or substandard septic systems for sewage disposal within TRSD.

Gila County has documented the development of residential homes including real property, Improvements on Possessory Rights (IPR), and motor homes since 1905. Most homes constructed from 1905 to 1970 used cesspools as

primary means of sewage disposal. In the 1970's, construction of cesspools was prohibited in the United States due to their inability to treat wastewater before discharge. Further regulations were established in 1990 to improve septic system processes and testing. Thus, two major assumptions are used in this report to determine the current conditions of the TRSD existing facilities. All residential homes built between 1905 and 1970 are assumed to use cesspools. All residential homes built between 1970 and 1990 are assumed to have substandard septic systems. Therefore, all existing homes constructed between 1905 and 1990 are assumed to violate current standards for sewage disposal. The status of residential treatment systems throughout TRSD is shown in the table below.

**Table 1 – Status of Residential Treatment Systems Throughout TRSD**

<b>Total Estimated Residential Properties</b>	<b>1,827</b>	
Residential Properties with Cesspools	1,188	65%
Residential Properties with Substandard Septic Systems	434	24%
Total Systems in Violation	1,622	89%
Total Adequate Systems	205	11%

ADEQ has delegated enforcement of the use of cesspools and independent septic systems to Gila County within its boundaries. Gila County has refrained from actively seeking out properties in violation as a large portion of the community would suffer the repercussions of these violations leading to increased number of abandoned homes and associated hardship. Discussions with Wastewater Division Manager of Gila County, has put estimates of abandoned homes at about 300-400 within TRSD. Once an onsite wastewater system is determined to be 1) an outlawed cesspool, 2) a failing/substandard system, or 3) a failed system, the homeowner is left with few options. If it were a failing/substandard system, the owner would need pay to have it repaired and updated to modern standards. If it is a cesspool or failed system, the system must be abandoned. Once abandoned, a new system would need to be installed on a new piece of land. If this option is not feasible due to lack of available budget or land, the only option is to abandon the property because water service will be discontinued.

The responsibility for maintaining or replacing the septic systems currently remains with the homeowners and the need for replace would be determined by the homeowner as well. If the existing system can be replaced, the cost to homeowners for replacement of a failing onsite system could range from about \$5,000 to \$12,000 depending on the type, size and complexity of the system (Gila County, Arizona, 2014; Gila County, Arizona - Wastewater Department, 2014; SepticTankGuide.com, 2018). In an instance where a new piece of land is required, installing a new system can range from \$8,000 to \$25,000 (Hurd, 2016).

Other costs incurred by the homeowner suggested by guidelines on septic system maintenance are to have a septic system professionally inspected and pumped every one to five years (depending on system and use) with cost estimates ranging anywhere from \$425 to \$500 (SepticTankGuide.com, 2018; Gila County, Arizona - Wastewater Department, 2014; Hurd, 2016). Unfortunately, with the Median Household Income (MHI) of only approximately \$26,000, many residents would not be able to handle the financial burden of the installation of such a system.

Furthermore, a majority of the homes within the TRSD do not have enough usable land on which to install a replacement septic system. It is estimated that the average lot size in the TRSD is 5,000 ft<sup>2</sup> while the mining subdivisions have lot sizes of 3,750 ft<sup>2</sup>, which equates to an average density of 8.72 to 11.63 homes per acre. Current regulations require any subdivisions with a density of greater than one (1) home per acre to reduce the nitrogen contribution to the ground in addition to removing the biological contaminants and viruses through advanced treatment systems or a wastewater collection and treatment system. Some small lots qualify to use the enhanced sewage treatment qualities of an alternative system to overcome the lot limitations. However, the system cost is normally more than the appraised value of the property. Some multiple lot properties have been able to replace failed cesspools with septic systems. Usually there are multiple cesspools replaced by one septic system.

Bechtel Tract, located within the Russell Road Area (southern portion of TRSD), is a 10-acre tract of land consisting of single-family homes. Bechtel Tract was constructed under financing from the Reconstruction Finance Corporation (RFC) with a small collection system and a centralized disposal system. The system is currently under the management of BHP Billiton (BHP), a local mining company, and is provided at no cost to the residents of Bechtel Tract. For years this collection system, septic tank, and leach field represented an above average sewer treatment process for the region. The system has since exhausted its useful life span. Efforts by BHP have been made to maintain the system serviceability over the years; these efforts include regular observation and maintenance as well as the installation of additional leach field lines in 1984. Upkeep costs will only continue to increase as the system continues to age. Due to

the deteriorating collection lines and substandard disposal, this system poses significant health and environmental concerns.

The majority of the TRSD area from a public health standpoint, without the installation of a wastewater collection and treatment system, will see the unsanitary conditions progressively worsen. As more and more cesspools and septic systems fail, homeowners of these small properties will allow wastewater to flow onto the ground until reported. As system failures become more frequent, the potential for waterborne illness increases. Children, the elderly, pets and wildlife are at higher risk as they are more vulnerable to contaminated areas that are exposed due to failing systems.

Without the installation of a regional wastewater collection and treatment system, economic hardship will continue. The smaller parcels will progressively be abandoned because these failing systems are not repairable/replaceable resulting in increased vacancy, declining property values, and property owners not being able to sell their properties.

### 1.3 Natural Environment

TRSD encompasses an area of approximately 5.45 square miles located in Gila County between the Town of Miami and City of Globe. TRSD lies within the Upper Pinal Creek watershed, Russell Gulch watershed, Bloody Tanks Wash watershed, and Miami Wash watershed at approximately 3,400 feet above mean sea level. The major stream drainages in the area are the Bloody Tanks wash (southwestern to northeastern flow) and the Miami wash watershed (flows north of the Bloody Tanks Wash and is east of Miami).

The Miami, Globe and TRSD areas were originally established due to the rich bodies of copper ore discovered within the surrounding Webster, Granite, and Pinal Mountains in the late 1800s. Globe was founded in 1876 and incorporated in 1907, while Miami was established in 1907 and incorporated in 1918. The main economy of the Globe-Miami area remains heavily involved in the mining industry with over 20 percent of its employment related to mining and copper production (Arizona Department of Commerce, 2014).

The most recent environmental reporting completed for the area was Environmental Assessment (EA) prepared by Logan Simpson in 2018. This report was prepared to accompany the Preliminary Engineering Report (PER) as required by the United States Department of Agriculture – Rural Development (USDA-RD) in order to apply for funding assistance. The size of the project caused the USDA-RD to encourage phasing the project. The project will be completed in three phases. Consequently, the PER (authored by Pacific Advanced Civil Engineering, Inc. dba PACE) and EA are focused on only Phase I of III. Both a PER and EA will be prepared for Phase II and Phase III individually. More details regarding the phasing is presented later in this report in Section 4.1 Construction Summary.

After review of other, more dated similar environmental planning, it is presumed that the other phases will be analogous to the Phase I area. The following discussions are from the Logan Simpson Environmental Assessment (2018) regarding Phase I.

#### 1.3.1 Geology

The Logan Simpson EA (2018) describes the area geological elements:

Uses and activities that dominate the visual setting of the area include open pit mining, commercial and industrial land uses, urban infrastructure (streets, overhead transmission lines, lighting, and signage) and residential development. The pattern of the existing infrastructure and residential and commercial development is strongly influenced by the numerous ephemeral drainages running generally in a north-south direction in between small, rounded ridges covered by [sparse], open vegetation. These ephemeral drainages expose light colored soils. Vegetation within the area is sparse and generally consists of low stature shrubs with isolated and dispersed trees. (p. 32-33)

#### 1.3.2 Groundwater Hydrology and Quality

Logan Simpson (2018) discusses the TRSD Phase I groundwater hydrology and quality:

In the Salt River Lakes sub-basin of the Salt River groundwater basin that occupies the portion of Gila County in the general vicinity of the project area, unconsolidated sands and gravels within the floodplains of streams and washes form an alluvial aquifer (Arizona Department of Water Resources...2010). In the Globe-Miami area, most of the area's municipal and industrial water supply comes from the Gila conglomerate that forms a local



aquifer (ADWR 2010). Groundwater in the area is located at a depth of 15 to 30 feet (ADWR 2010). Water is also supplied to the Globe-Miami area by a limestone aquifer and small basin-fill deposits forming isolated groundwater aquifers. Mining activities in the vicinity of the project area have impacted water quality in the alluvial aquifer along Miami Wash and Pinal Creek, consisting of elevated concentrations of metals and sulfate (ADWR 2010). (p. 43)

Groundwater contamination has been identified within the proposed project area associated with the Pinal Creek Water Quality Assurance Revolving Fund (WQARF) site. This WQARF site follows the floodplains of Bloody Tanks Wash and Russell Gulch, to their confluence with Pinal Creek. The ADEQ WQARF program investigates and cleans up contaminated soil sites and groundwater across the state. The primary pollutant concerns are waste rock from nearby mining activities and heavy metals from acid-metal runoff from tailings. Contamination is also found in the alluvial aquifer of Bloody Tanks Wash-Miami Wash-Pinal Creek, in the regional Gila conglomerate aquifer. Groundwater from the alluvial aquifer is generally not used because it is contaminated. Water provided by the [Arizona] Water Company or the City of Globe to the residents of Miami, Globe, and Claypool comes from the Gila conglomerate aquifer outside of the boundaries of the WQARF site and is tested to ensure it meets all state and federal drinking water standards. Cleanup of the Pinal Creek WQARF site resulting from decades of mining contamination is ongoing. (p. 43)

The existing residential treatment systems, consisting of cesspools and septic systems, currently used for wastewater disposal within the TRSD [boundary] have generated concerns about the quality of groundwater in the area. Many of the septic systems in use have been improperly maintained and/or were poorly located and improperly designed and installed, resulting in discharge of untreated wastewater and pollutants (e.g., nitrogen) into the environment, ultimately affecting groundwater.... (p. 43-44)

The majority of wastewater disposal within the TRSD [boundary] is facilitated through individual treatment systems for residences and some businesses. Although these systems can adequately treat wastewater, the lack of proper maintenance can result in the release of improperly treated or untreated wastewater into the environment. (p. 44)

Both Globe and Miami have municipal wastewater collection and treatment systems for the areas under their jurisdiction. FMI recently completed construction of a new WRF for the Town of Miami that nearly doubles the treatment capacity from the previous wastewater system. Treated wastewater from the Miami WRF meets all EPA and ADEQ standards, and treated effluent is used by FMI for mining operations and golf course irrigation, as well as to replenish the aquifers. The Pinal Creek Wastewater Treatment Facility [Globe treatment facility] receives domestic wastewater from residential and commercial sources in Globe. Treated wastewater from this facility is discharged into Pinal Creek and the Salt River Basin and meets all EPA and ADEQ standards. (p. 44)

### 1.3.3 Surface Water Hydrology

Logan Simpson (2018) discusses the TRSD Phase I surface water hydrology:

The Phase I area is within the Upper Salt River watershed. The two principal drainages in the Phase I area are Bloody Tanks Wash and Russell Gulch, which are ephemeral<sup>9</sup> drainages that flow northwest to Pinal Creek, a tributary of the Salt River (Figure 4). Several smaller ephemeral drainages occur within the Phase I area, draining into Bloody Tanks Wash. Ephemeral drainages receive flow from heavy precipitation and snowmelt and are not recharged by groundwater. The majority of precipitation occurs during the months of July and August. Some surface water may seep through to groundwater, but it is typically dissipated by runoff and evaporation. No perennial streams (continuously flowing) were identified in the Phase I area and no unique, impaired, or non-attaining waters are located in or near the project area.

Stormwater refers to water runoff from either pervious or impervious surfaces as the result of rain or snow. Stormwater can capture chemicals, sediment, and general debris and transport them to adjacent waterbodies. Stormwater pollution can originate from many sources including water runoff from parking lots, residential areas, industrial facilities, construction projects, streets, and various urban areas. In the project area, stormwater is conveyed by naturally occurring ephemeral drainages, some of which have been manipulated and paved with streets and curbs. (p. 43)

#### 1.3.4 *Habitat*

##### 1.3.4.1 *Vegetation*

Logan Simpson (2018) discusses the TRSD Phase I vegetation:

is typically characterized by the presence of perennial grasses in an otherwise scrub-dominated landscape. Stem and leaf succulents are also well represented. Vegetation in this area is transitional, with many plant species present that are more indicative of lower-elevation desertscrub communities and higher-elevation chaparral communities...

Vegetation within the area includes non-native landscaped plants in residential and commercial frontages, as well as non-native invasive species within the roadway rights-of-ways. Plant species observed throughout the project limits during a site reconnaissance visit include desert broom (*Baccharis sarothroides*), velvet mesquite (*Prosopis velutina*), oaks (*Quercus* spp.), junipers (*Juniperus* spp.), catclaw acacia (*Senegalia greggii*), desert spoon (*Dasyliirion wheeleri*), rabbitbrush (*Ericameria nauseosa*), foothills paloverde (*Parkinsonia microphylla*), blue paloverde (*Parkinsonia Florida*), tree-of-heaven (*Ailanthus altissima*), and Russian thistle (*Salsola tragus*). (p. 35)

##### 1.3.4.2 *General Fish and Wildlife Resources*

Logan Simpson (2018) discusses the TRSD Phase I general fish and wildlife resources:

Fauna typically occurring in the biotic community associated with the project area include black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus auduboni*), brush mouse (*Peromyscus boylii*), coyote (*Canis latrans*), mule deer (*Odocoileus hemionus*), common raven (*Corvus corax*), scaled quail (*Callipepla squamata*), roadrunner (*Geococcyx californianus*), mourning dove (*Zenaida macroura*), house finch (*Carpodacus mexicanus*), black-chinned sparrow (*Spizella atrogularis*), and lark sparrow (*Chondestes grammacus*). (p. 35)



## 2 Project Description

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### 2.1 Overview

#### 2.1.1 *DMA / Service Area*

TRSD's DMA designation was previously approved with CAG 208 Plan Amendment #2017-02. With this 208 amendment, TRSD is requesting that the WRF site, located just north of the northern portion of the TRSD boundary, be added to the TRSD DMA. The TRSD boundary with legal descriptions are included in Appendix D. Also included is the legal description for the new WRF site that will be added to the TRSD boundary. The following Figure 3 and Exhibit 7 (Appendix G) shows the current and proposed expanded DMA.

#### 2.1.2 *Facility Ownership*

The new WRF, lift station and wastewater collection systems will be owned, operated and maintained by TRSD. Land will need to be acquired for the installation of the new TRSD WRF and the construction of the regional lift stations and the neighborhood lift stations. The actual land requirements will be determined during the engineering design phase of the improvements. TRSD is in the process of acquiring a parcel from BHP, via donation, for the location of the proposed new WRF. Additional details are discussed in Section 3 Wastewater Treatment Facility. The new TRSD Lift Station in Phase I is located on a parcel owned by FMI which TRSD has obtained an easement for this infrastructure.

The project may require the acquisition of additional Right-of-Ways (ROWs) or easements along proposed collection piping alignments if there are no existing easements defined when they cross into private property. TRSD has identified potential collection line ROW issues where existing roads are not on public ROWs. TRSD and its consultants have formed a working relationship with Gila County through numerous communications with the Public Works Director and others. Through this relationship, TRSD has gained support of Gila County in assistance with efforts to resolve these issues.

#### 2.1.3 *Type of Facility*

Currently, there are no existing TRSD facilities. The project, at full buildout, will consist of the installation of the following new wastewater collection and treatment system infrastructure:

- 159,276+/- linear feet (LF) of gravity mains
- 27,500+/- LF of force main
- 415+/- new manholes
- 2,159+/- new service connections
- 0.50 MGD membrane bioreactor (MBR) water reclamation facility

The proposed new 0.50 MGD MBR WRF facility will consist of a headworks system, secondary activated sludge process with membrane filtration and disinfection (either chlorination or ultraviolet). The treatment facility will not include a septage receiving station. The treated wastewater (or effluent) from this type of WRF will meet Class A+ Reclaimed Water Standards which is the highest effluent quality classification for the State of Arizona detailed in Arizona Administrative Code Title 18 Environmental Quality (ACC Title 18 EQ). This effluent will be discharged into Miami Wash, a contributor to Pinal Creek. Exhibit 2 identifies the proposed WRF location, and Exhibit 3 is a closer look with both a conceptual layout of the WRF and an area for potential location of the discharge point within Miami Wash (Appendix G). Since the effluent will meet ACC Title 18 EQ standards, it will allow the potential for effluent to be reused for unrestricted irrigation of public landscape and common areas. The anticipated permitting required will be an ADEQ Aquifer Protection Permit (APP) and Arizona Pollutant Discharge Elimination System (AZPDES) permit.

Biosolids will be produced by the proposed WRF. At full buildout, the facility will produce approximately 1,200 lbs per day. Biosolids land application is a future possibility; however, this option is not being considered at this time. The biosolids will be dewatered for disposal in a landfill. All processes of treatment, handling and selection of disposal facility will be properly permitted under the ADEQ AZPDES program and carried out according to the associated regulations. These regulations include:

- Arizona Revised Statutes (ARS) Chapter 49 The Environment, Article 3.1 Arizona Pollutant Discharge Elimination System Program
- ACC Title 18 Environmental Quality
  - Chapter 09, Article 10: Arizona Pollutant Discharge Elimination System – Disposal, Use, and Transportation of Biosolids

- Clean Water Act as amended (33 U.S.C. §1251 et seq.)
- Code of Federal Regulations (CFR)
  - 40 CFR258: Criteria for Municipal Solid Waste Landfills

The treatment facility will include an Operations and Maintenance (O&M) building. The building will include areas for operations and maintenance duties, including storage and a maintenance/repair shop. It is estimated that this building will be between 2,500 and 3,000 square feet (SF) in floor space.

**2.1.4 Buildout Capacity**

The proposed new WRF be a 0.5 MGD at full buildout and will be built in three phases.

**Table 2 – TRSD Capacity Phasing**

Phase	Treatment Capacity
Phase I	0.25 MGD
Phase II	0.15 MGD
Phase III	0.10 MGD
<b>Totals at Full Buildout</b>	<b>0.50 MGD</b>

**2.1.5 Stakeholders and Neighboring Communities**

The major stakeholders are the residents, business, industries and other users within the TRSD boundary, especially those who will potentially be served by the project. As a sanitary district, TRSD has the authority, with formal support of its users, to incur debt and levy a tax for the purpose of providing a community service to those within its boundaries.

Other stakeholders and neighboring communities are listed below. It is intended that these agencies and service providers will be informed of any planned public meetings and will be encouraged to attend to be fully informed of the available project information.

- Gila County
- Town of Miami
- City of Globe
- San Carlos Apache Tribe
- Freeport McMoRan Inc. (FMI)
- BHP Billiton (BHP)
- Cobre Valley Regional Medical Center
- Arizona Eastern Railway
- Rural Communities Assistance Corporation (RCAC)
- Rural Water Association of Arizona (RWAA)
- Arizona Water Company
- Local realtors
- Arizona Public Service (APS)
- Southwest Gas
- Cable One (Sparklight)
- CenturyLink

Letters of support have been received from Globe and Miami (Appendix C). TRSD has reached out to the San Carlos Apache Tribe, but have not heard back at this time.

**2.1.6 DMA**

TRSD was formed by the merger of two existing sanitary districts, CVSD and PSD. Due to the merger of CVSD and PSD, TRSD now administers both of the recognized designated management agencies (DMAs). As the administrator of these documented existing DMAs, TRSD is only entity that has the authority to make any modifications. Appendix D includes all formation and merger documentation, and the recorded legal description and boundary map. Upon the approval of this amendment, TRSD is seeking EPA approval of the TRSD named designation as DMA of its boundary.

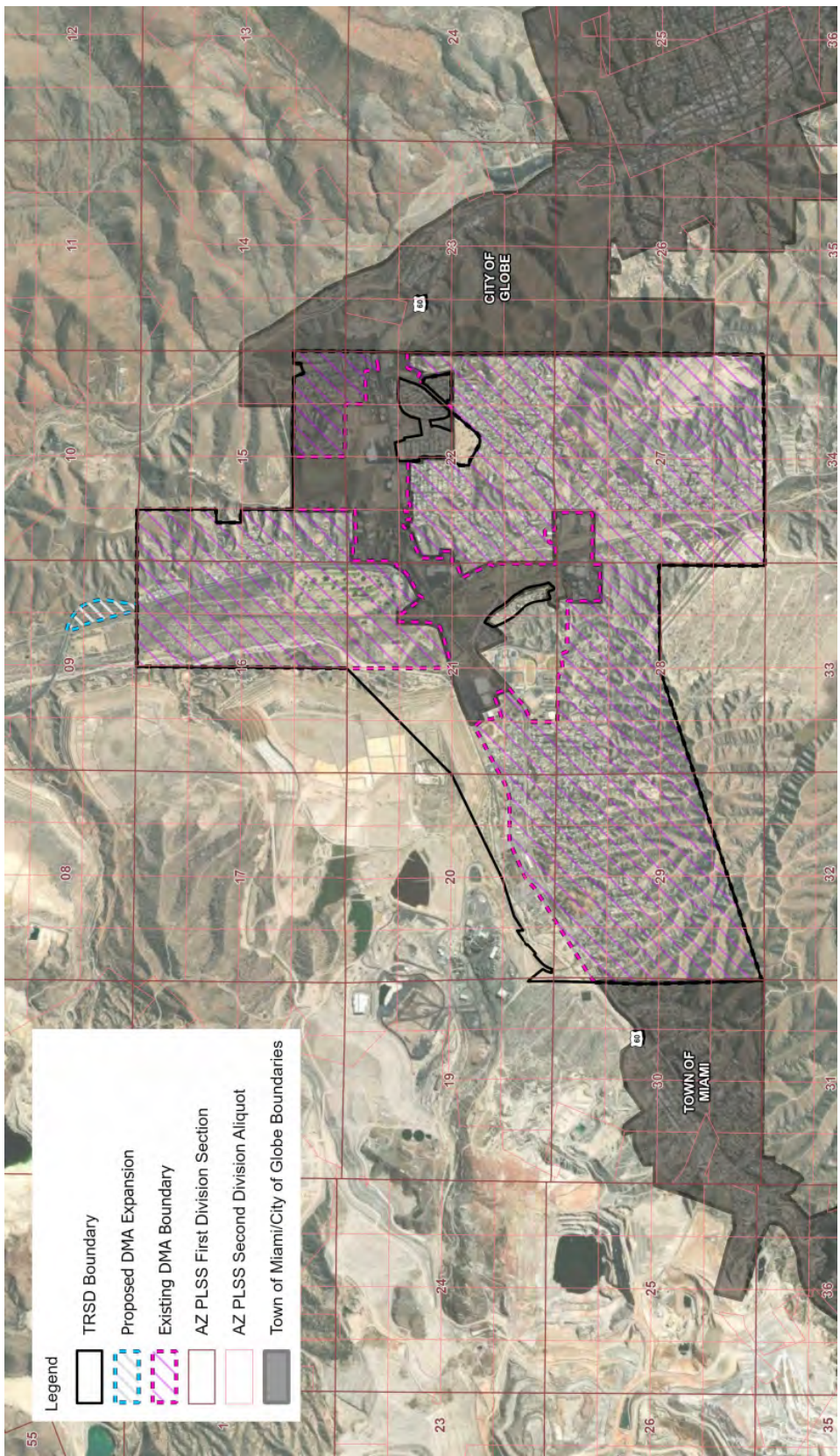
TRSD has worked with neighboring City of Globe (Globe) and Town of Miami (Miami) to negotiate specific areas of the DMA boundaries. TRSD Board has agreed to modify significant portions of its DMA to Globe that lie within its city boundaries and other portions to Miami because they are areas Miami is already servicing. Additional coordination is anticipated to take place to negotiate possible intergovernmental agreements (IGAs) to address any servicing overlap between all agencies.

TRSD's DMA designation was previously approved with CAG 208 Plan Amendment #2017-02. With this 208 amendment, TRSD is requesting that the WRF site, located just north of the northern portion of the TRSD boundary, be added to the TRSD DMA. TRSD is in the process of acquiring a parcel from BHP, via donation, for the location of the



proposed new WRF. Additional details are discussed in Section 3 Wastewater Treatment Facility. The new TRSD Lift Station in Phase I is located on a parcel owned by FMI which TRSD has obtained an easement for this infrastructure. See the following Figure 3 and Exhibit 7 (Appendix G).

**Figure 3 – TRSD DMA**





### 2.1.7 All Facility Locations

Currently, there are no existing TRSD facilities. All proposed new TRSD facility locations are illustrated on Exhibit 2 Preliminary Collection & Treatment System (Appendix G). At this time, there are no specific addresses to supply. As described in Section 2.1.2 Facility Ownership land acquisitions are in negotiation stages and will be determined during the engineering design phase of the improvements. TRSD is in the process of acquiring a parcel from BHP, via donation, for the location of the proposed new WRF. Additional details are discussed in Section 3 Wastewater Treatment Facility. The new TRSD Lift Station in Phase I is located on a parcel owned by FMI which TRSD has obtained an easement for this infrastructure.

### 2.1.8 Legal Descriptions

The complete existing DMA boundary is within Township 1 North, Range 15 East of the Gila and Salt River Meridian. The full, recorded legal description is included in Appendix D.

## **2.2 Current & Future Conditions**

### 2.2.1 Population

Precise population records for the TRSD are not available because the boundary encompasses a collection of unincorporated community areas that are not recognized by the United States Census Bureau (USCB). To develop reasonable estimates of the affected population, trends and growth within the TRSD, several methods were performed including examining USBC Census Block Groups (CBGs), USBC Census Designated Places (CDPs), and utilization of the Environmental Justice Screening and Mapping Tool (EJSCREEN) provided by the Environmental Protection Agency (EPA).

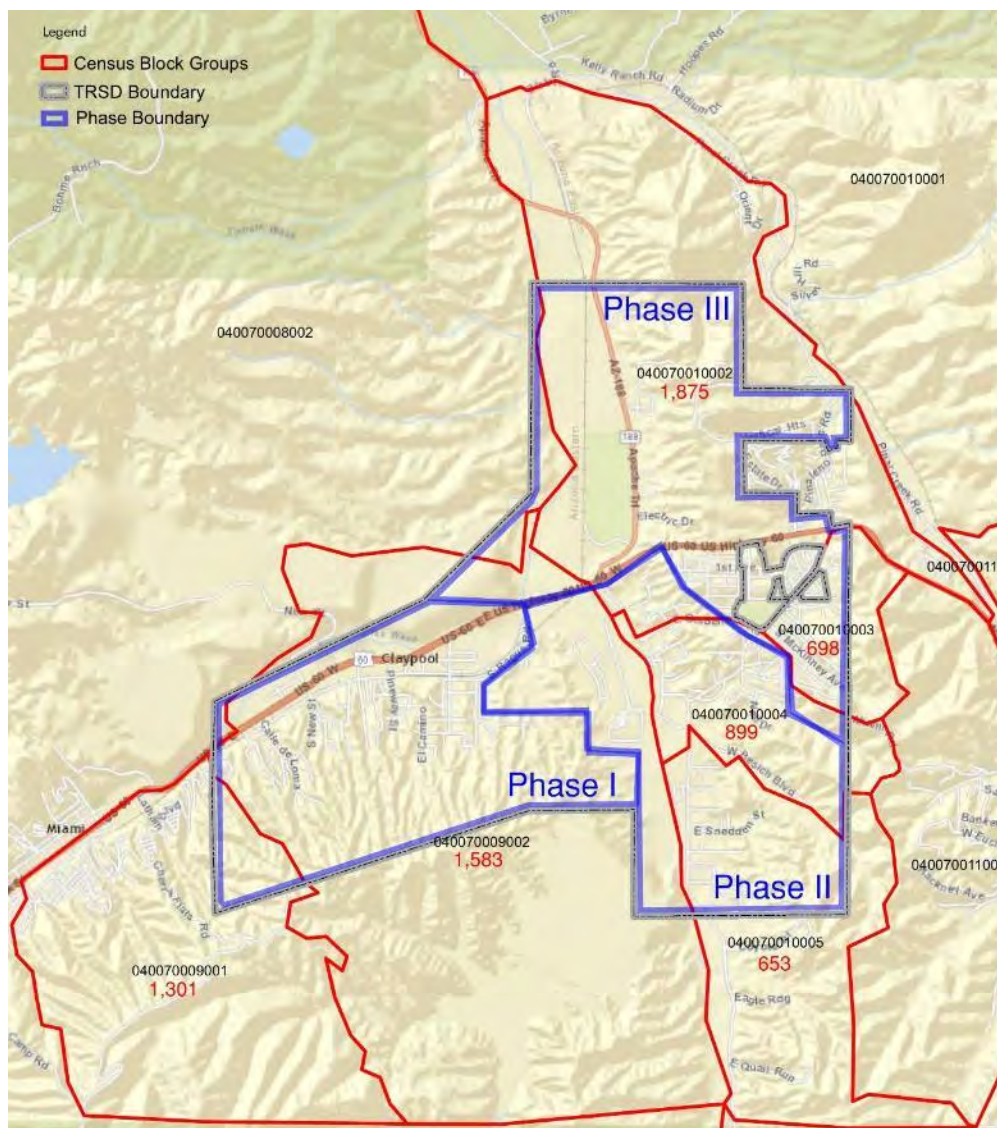
### 2.2.2 Census Block Groups Review for Existing Population

One information source reviewed to develop a population estimate was the 2010 Census Block Map Series, also referred to as the Geographic Unit (GU) block maps. This source is produced to support the 2010 Decennial Census data release. These maps display tabulation geography down to the census block level" (United States Census Bureau, 2013).

Figure 4 – Census Block Groups Map illustrates the CBGs that contribute to the TRSD area. With the TRSD boundary including just portions of numerous CBGs, this data would only provide very rough estimates of the population figures.

Figure 4 on next page.

**Figure 4 – Census Block Groups Map**



**2.2.2.1 Review of Surrounding Communities for Existing Population and Trends**

Another consideration for developing population estimates and trends was to look at the growth patterns of CDPs in the Globe-Miami area, see Table 3 below for population trends for surrounding communities.

**Table 3 – Surrounding Community Population Trends**

Community	1990	2000	2010	1990-2010
City of Globe	6,062	7,486	7,157	18%
Town of Miami	2,018	1,936	1,765	-13%
Claypool (CDP)	1,942	1,794	1,538	-21%
Central Heights-Midland (CDP)	2,969	2,694	2,534	-15%
Globe-Miami Region (CDPs)	12,991	13,910	12,994	0%

*Note: City of Globe decreased 4% in population from 2000-2010*

Miami, Claypool, and Central Heights-Midland have all experienced a consistent decline in population for the past 20 years. Globe did sharply increase in population between the 1990 and 2000 census, but has since declined in the most recent census. This indicates a regional trend of population decline. Some of the population decrease in these TRSD area communities may very likely be attributed to the diminishing conditions, amount of abandoned properties, and/or

properties that have had water supply disconnected due to violations of onsite wastewater management. Additionally, mining activity can affect population growth/loss within a region.

**2.2.2.2 TRSD Estimated Affected Population and Growth Projections**

Due to the lack of specific recorded population information, during the development of the PER, the USDA recommended using the Environmental Justice Screening and Mapping Tool (EJSCREEN) provided by the Environmental Protection Agency (EPA). This tool allows the user to draw a freestyle boundary to select a specific area. This action was completed independently for TRSD Phase I, Phase II and Phase III. Appendix H includes the reports of each boundary with detailed population estimates. The EJSCREEN data includes the 2010 Census to determine estimated existing population and US Census Bureau American Community Survey (ACS) information to estimate growth from 2011 to 2015.

Table 4 summarizes the figures obtained from EJSCREEN. Using the 2010 Census data, the overall TRSD population is approximately 4,200 (Line 1). The ACS 2011-2015 population estimates (Line 4) were then used to calculate the Growth Estimate (Line 7), Growth Estimate percentage (Line 8) and the Growth Estimate percentage annually (Line 9). When considering the result of an estimated 3% annual growth for the overall TRSD, it seems high compared to the documented trends of population decline shown for the surrounding communities.

**Table 4 – EJSCREEN Population Data**

Line	Data Description	TRSD Phase I	TRSD Phase II	TRSD Phase III	TRSD Total
1	Census 2010 Population	1,586	1,490	1,042	4,118
2	Census 2010 Housing Units	777	689	519	1,985
3	Census 2010 Persons/Housing Units	2.04	2.16	2.01	2.07
4	ACS 2011-2015 Population Estimate	1,922	1,780	1,032	4,734
5	ACS 2011-2015 Housing Units Estimate	863	824	571	2,258
6	ACS 2011-2015 Persons/Housing Units Estimate	2.23	2.16	1.81	2.10
7	Population Growth Estimate (Line 4 – Line 1)	336	290	-10	616
8	Population Growth Estimate % (Line 7 / Line 1)	21%	19%	-1%	15%
9	Population Growth Estimate % per Year (Line 8 / 5)	4.2%	3.9%	-0.2%	3.0%

Utilizing the EJSCREEN estimated population annual growth of 3%, the future population projections were calculated and are summarized in Table 5.

**Table 5 – TRSD Future Population Projections**

Population Year	Source / Estimate	Population
2010	US Census	4,118
2018	Present Estimate	5,217
2023	5-Year Estimate	6,047
2028	10-Year Estimate	7,011
2038	20-Year Estimate	9,422

**2.2.3 Land Use and Wastewater Flows**

Without documented historical information for the TRSD boundary such as the population estimates/growth projections or a wastewater master plan for land use information, an alternative method needed to be used. The only recorded information available is the parcel information managed by the Gila County Assessor’s Office. Through an evaluation of potential equivalent dwelling units (EDU), a methodology was developed to present land use data, estimate flow projections, and offer reasonable growth projections.

**2.2.3.1 Methodology**

The most updated parcel data was obtained from the Gila County Assessor’s office in mid-2018 (due to lag in the assessor’s updates, the information is as of December 2017). The parcel information included Assessor’s Parcel Numbers (APN), land use, lot size, parcel maps, owner information, and number of structures. Parcel data and aerial photography were used to understand the current conditions of the TRSD and locate occupied parcels. Parcels were evaluated to determine the feasibility of connection to the TRSD wastewater collection system. A preliminary design of



the collection system was then developed using this information (Exhibit 2 in Appendix G). To evaluate in more depth, the areas that will be receiving new service, aerial imagery was used in conjunction with geographic information system (GIS) software to review each parcel. After review of all parcels and properties within the TRSD area, some parcels were not included in the estimations for various reasons such as land considered undevelopable due to site constraints, etc.

### 2.2.3.2 Equivalent Dwelling Unit (EDU) Assessment

Each parcel was reviewed in conjunction with the preliminary layout of the new collection system and given a category description to help determine EDUs and the number of new service connections, (the EDU count does not always equal the number of new connections). The following guidelines were used in the calculations.

- Each occupied residential parcel accounted for one (1) EDU.
- Residential parcels with multiple units or structures were quantified with additional EDUs as required.
- Parcels classified as “mobile homes” are assumed (by the Gila County Assessor’s office) to have one (1) connection per parcel where the main line meets the property, however, for the purpose of estimating the EDU count and projecting wastewater flows, each individual mobile home was assessed 1 EDU.
- Improvements on Possessory Rights (IPR) parcels were considered to have separate connections for each leased lot within a parcel containing IPR.
- Commercial, industrial, and vacant property EDUs were estimated on gross acreage of the parcel.

Once the parcel guidelines were determined, the parcels were categorized for the purpose of 1) estimating potential wastewater flows and 2) calculating “frontage” for use in the assessment district process. The following Table 6 summarizes the categories, subcategory/descriptions and EDU calculation factors used.

**Table 6 – EDU Assessment**

Category	Subcategory / Descriptions	EDU Calculation Factor
Occupied	“Parcels With Frontage” (parcels that have at least one EDU and are adjacent to or within 300 ft of the proposed pipeline)	Residential 1 EDU
	“Parcels Without Frontage” (parcels that have at least one EDU and are adjacent to or within 300 ft of the proposed pipeline)	Commercial 7.5 EDU/acre
	“ROW Parcel” (Parcels that will be requested to grant ROW for other parcels without frontage to receive service)	Industrial 3.75 EDU/acre
	“Dependent on ROW Parcel” (parcels that require other parcels to grant ROW to receive service)	
Vacant	Uninhibited parcels within the area that are adjacent to or within 300 ft of the proposed collection line. May be a ROW parcel or Dependent on ROW Parcel.	Residential <0.33 acre = 1 EDU >0.33 acre = 3.75 EDU/acre



2.2.3.3 Land Use

Using the methodology described above, EDU estimates for all included parcels were summarized by land use type in the following Table 7.

**Table 7 – TRSD Total Estimated EDU Count by Land Use Type**

Land Use Type	Phase I EDU	Phase II EDU	Phase III EDU	Total EDU
Residential	648	434	546	1,628
Residential Mobile	84	212	46	342
Residential IPR	74	0	0	74
Commercial	174	147	138	460
Industrial	30	62	1	93
Vacant Mobile	1	3	0	4
Vacant IPR	0	0	0	0
Vacant	339	388	343	1,070
Other	24	5	9	38
<b>Totals</b>	<b>1,374</b>	<b>1,251</b>	<b>1,084</b>	<b>3,709</b>

2.2.3.4 Wastewater Flow Calculations

**2.2.3.4.1 Design Flow**

ADEQ requires a value of 80 gallons per capita per day per individual residing in a dwelling for a wastewater collection system under AAC R18-9-E301(D) and AAC R18-9-B301(K), excluding peaking factors. Using this value with the estimate of Census 2010 Persons/Housing Units of approximately 2.07 (Table 4, Line 3 of (Total TRSD) provides a calculation of about 165 gallons per day (GPD)/EDU. To account for any possible variance due to the nature of the methodology applied, a buffer is being applied. While the parcel research method accounts for Gila County data as well as aerial surveys, there is the possibility of variances when only working with conceptual planning information for the 3,000+ parcels. To estimate the projected wastewater flows for this new collection system, a design 175 GPD/EDU will be used.

**2.2.3.4.2 Future Wastewater Flow Projections (Reasonable Growth)**

Table 8 shows a summary of projected EDUs, flow projections and the estimated population that will be served for each phase of the TRSD wastewater collection and treatment system.

**Table 8 – TRSD Total EDUs and Wastewater Flow Projections by Phase**

Phase	EDU	Flow Capacity (GPD)	Estimated Population
Phase I	1,374	240,402	2,457
Phase II	1,251	218,925	2,535
Phase III	1,084	192,442	1,741
<b>Totals at Full Buildout</b>	<b>3,709</b>	<b>651,768</b>	<b>6,733</b>

The parcel research methodology used to estimate EDU and flow projections considers the status of the community. So when considering future flow projections and planning capacity, a significant factor is the vacant properties. Although there are various reasons that these are vacant and as discussed in Project History on page 1-3, many properties may be left vacant because of the lack of sewer service leading to deterioration of the community value by a large amount of abandoned homes. Table 7 – TRSD Total Estimated EDU Count by Land Use Type shows that 1,070 of the total estimated EDUs are vacant properties. Instead of using projected population for the preliminary/conceptual planning, these vacant properties are being considered reasonable growth. With the installation of a collection and treatment system, thereby having a positive impact on the community, will bring value to the area and potentially create an atmosphere supportive of property development.

Table 9 below shows the percentage of vacant properties which allows for approximately 25% capacity as reasonable growth.

**Table 9 – TRSD Reasonable Growth Estimates**

Flow Type	Flow Capacity (GPD)	EDU
Residential	141,050	806
Commercial / Industrial / Other	99,400	568
<b>Total</b>	<b>240,450<sup>1</sup></b>	<b>1,374</b>
Parcel Type	Flow Capacity (GPD)	EDU
Vacant With Frontage	36,750	210
Vacant Without Frontage	22,750	130
<b>Total</b>	<b>59,500<sup>1</sup></b>	<b>340</b>
Reasonable Growth		
Vacant Parcels Total Flow Estimate (GPD)		59,500
Total Flow Estimate (GPD)		240,450
<b>Estimated Growth</b>		<b>25%</b>

<sup>1</sup>Estimated based on 175 GPD per EDU

#### 2.2.4 Current & Future Conditions Summary

As discussed, the estimated population annual growth of 3% (estimated using the EJSscreen) is a high estimate based on the review of the documented population of the surrounding areas. Without precise population records for the TRSD, wastewater flows were estimated by the evaluation and calculation of EDUs. For the preliminary/conceptual planning, reasonable growth was then projected by the amount of existing vacant properties within the TRSD DMA that will have a centralized wastewater collection and treatment system available and are more likely to be built upon, sold, etc. to bring flows and population to the area.

## 3 Wastewater Treatment Facility

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### 3.1 Wastewater Treatment Facility

#### 3.1.1 Location

The New location of the TRSD WRF will require land acquisition of approximately 7.7 acres for the new infrastructure itself. This will not be enough land to satisfy the ADEQ setback requirements, therefore several waivers may be required from nearby landowners. TRSD is in the process of acquiring a parcel from BHP, via donation, for the proposed new WRF. The property is Gila County Assessor's parcel number #205-03-010. The parcel is located off of Highway 188 (just north of and adjacent to the northern portion of TRSD) and is proposed to be incorporated into the Existing TRSD DMA. Exhibits 2 and 3 show the proposed location and a conceptual layout of the new TRSD WRF (Appendix G).

#### 3.1.2 Type of Facility

The proposed new 0.50 MGD (at full buildout) facility will be a modular design using the membrane bioreactor (MBR) process and will consist of a headworks system, secondary activated sludge process with membrane filtration and disinfection (either chlorination or ultraviolet). The treatment facility will not include a septage receiving station.

The MBR treatment process is similar to traditional activated sludge processes where it uses natural occurring microorganisms for the biological oxidation of organic and nutrient load in the wastewater. However, instead of the traditional clarification process for liquid-solid separation, such as clarifiers, the MBR utilizes submerged in-tank microfiltration membranes to perform the liquid-solid separation. There are several main advantages of the microfiltration membranes. First, the membranes not only perform liquid-solid separation, they also filter the effluent, allowing the effluent to meet tertiary filtration requirements. Microfiltration is a more advanced filtration system than typical tertiary filters, such as sand or cloth. Microfiltration can remove particles down to less than 1 micron. This allows for the removal of inert and organic particulates, larger microorganisms (i.e., bacteria, crypto sporidium and giardia), turbidity and even some viruses. Typical tertiary filtration systems, on the other hand, can only remove down to 5 microns or larger. With the exception of final disinfection, effluent from an MBR meets the highest effluent quality standards for the State of Arizona detailed in ACC Title 18 EQ standards.

The new WRF will be designed with an open treatment process, process ventilation and some odor, noise and aesthetic controls. The design will include strategies to minimize the release of odors to avoid impact to any neighbors. With an ultimate build out of 0.50 MGD, the noise, odor and aesthetic setback requirement is 750 ft. This setback distance is required for facilities within a treatment capacity range of 0.5 MGD to less than 1.0 MGD.

An influent lift station will be required since the flows will be brought to the new WRF plant via gravity lines. The wastewater flow will first enter the facility at the headworks system that will consist of screening to remove trash and large inorganic materials. Grit removal and flow equalization may be required depending on treatment process selected; however, this can also be performed at the collection system lift stations.

Biosolids will be produced by the proposed WRF. At full buildout, the facility will produce approximately 1,200 lbs per day. Biosolids land application is a future possibility; however, this option is not being considered at this time. The biosolids will be dewatered for disposal in a landfill. All processes of treatment, handling and selection of disposal facility will be properly permitted under the ADEQ AZPDES program and carried out according to the associated regulations. These regulations include:

- Arizona Revised Statutes (ARS) Chapter 49 The Environment, Article 3.1 Arizona Pollutant Discharge Elimination System Program
- ACC Title 18 Environmental Quality
  - Chapter 09, Article 10: Arizona Pollutant Discharge Elimination System – Disposal, Use, and Transportation of Biosolids
- Clean Water Act as amended (33 U.S.C. §1251 et seq.)
- Code of Federal Regulations (CFR)
  - 40 CFR258: Criteria for Municipal Solid Waste Landfills

The treatment facility will include an operations and maintenance (O&M) building. The building will include areas for operations and maintenance duties, including storage and a maintenance/repair shop. It is estimated that this building will be between 2,500 and 3,000 square feet (SF) in floor space.

#### 3.1.3 Flow Rates

The current proposed WRF design capacity phasing is 0.25 MGD for Phase I, an addition of 0.15 MGD for Phase II, and 0.10 MGD for Phase III. The ultimate buildout for the facility with all three phases will be 0.65 MGD. All design capacities are based on Maximum Month Average Daily Flow.

### 3.1.4 Sewage Acceptance

This facility will be designed to accept 100% domestic wastewater flows for treatment. Industrial / commercial wastewater will not be accepted without pretreatment. Any future industrial / commercial wastewater acceptance will require TRSD Board action. At that time, the policies and procedures will be developed to ensure any discharge accepted will meet the ADEQ / EPA Pretreatment Standards.

The treatment facility will not include a septage receiving station. Currently within the area, two options for septage receiving are at the Town of Miami and the Superstition Mountain Community Facilities District in Apache Junction.

## 3.2 Sewage Collection System

Based on evaluations performed by Gila County, it is estimated that nearly 90% of the properties within TRSD are currently served by either substandard/failing septic systems or cesspools. A centralized collection system will be designed and constructed to facilitate the abandonment of the existing cesspools and septic systems.

The project, at full buildout, will consist of the installation of the following new wastewater collection system infrastructure:

- 159,276+/- linear feet (LF) of gravity mains
- 27,500+/- LF of force main
- 415+/- new manholes
- 2,159+/- new service connections

If terrain warrants, individual lift stations and pumps may be used for specific parcels within the area. It is the intent of TRSD that the collection system will be installed within existing road ROWs. In those areas where it is not feasible to install the collection mains in a ROW, it will be necessary to secure an easement from the property owner.

## 3.3 Effluent Management

### 3.3.1 Discharge

#### 3.3.1.1 Effluent Quality

Beyond meeting the regulatory requirements, TRSD prefers that the new WRF produce the best effluent feasible to demonstrate environmental stewardship in the region. At a minimum, ADEQ requires new facilities to produce effluent that will meet ACC Title 18 EQ classification called Best Available Demonstrated Control Technology (BADCT). The BADCT effluent requirements are as follows:

1. BOD5: <30 mg/l
2. TSS: <30 mg/l
3. PH: 6.0 – 9.0
4. TN: <10 mg/l
5. E. Coli: Non-detect in 4 out of 7 daily samples,  
single sample maximum not to exceed 23 cfu/100mL

The TRSD facility effluent will also meet ACC Title 18 EQ Class A+ Reclaimed Water Standard classification, which is similar to BADCT with the additional requirements of tertiary filtration and turbidity limits of less than 2 NTU (nephelometric turbidity units). The Class A+ classification will allow the potential for the effluent to be reused for unrestricted irrigation of public landscape and common areas.

Typically, the BADCT plus filtration will meet AZPDES permit requirements, however, ADEQ may impose additional effluent quality limits on a facility that discharges into washes or ephemeral streams. Any required additional limits will not be known until the ADEQ permitting pre-application meeting during the early design phase.

#### 3.3.1.2 Effluent Management

Due to the ongoing flushing process of Pinal Creek, FMI (a mining company and a TRSD project stakeholder), has expressed interest in the flows produced by the new TRSD WRF to be discharged into Miami Wash which is a contributor

to Pinal Creek. This would contribute to the overall environmental cleaning within the region. The proposed discharge location is shown on Exhibit 3 (Appendix G).

This WRF will have a constant discharge. Discharge volume from the WRF will be dependent on the number of connections. As homes are phased in, the flow will increase. The buildout flow will be 0.05 MGD, equating to an annual discharge volume of approximately 237 million gallons.

### 3.3.2 Reclamation/Reuse

Since the effluent will also meet ACC Title 18 EQ Class A+ Reclaimed Water Standards, it will allow the potential for the effluent to be reused for unrestricted irrigation of public landscape and common areas. Until a reuse option is implemented, the WRF will be discharging into Miami Wash. This discharge requires an ADEQ AZPDES permit. Based on the requirements; this may affect the disposal for excess effluent, requiring the use of other disposal options, such as percolation basins or injection wells.

Currently, there are several available options for potential effluent reuse for the new TRSD WRF; however, at this time TRSD is not pursuing these options. The options include:

- A number of the mining companies in the area have expressed interest in utilizing the facility's effluent within their operations. Any discussions of this usage would include the mining company providing pumps and piping to convey the effluent to the desired locations.
- The local golf course, Cobre Valley Country Club (CVCC) has expressed interest in obtaining the effluent for irrigation of the course. CVCC struggles to obtain enough water to keep the course green. Any discussions of this usage would include CVCC providing pumps and piping to convey the effluent to the golf course.
- Discussions have taken place regarding the utilization of the effluent to create a lake with a surrounding regional community park constructed for recreational use, providing an amenity for the area. The cost of the lake and park would not be bore wholly by TRSD, but would be a collaboration by a number of interested groups in the region including Gila County.

## 3.4 Service Connections

### 3.4.1 New Service Connection Infrastructure

New service connections will include a lateral from the main line to the existing connection at the residence or business, abandonment (in place) of the existing onsite wastewater treatment system (cesspool, septic tank, leach fields), and restoration of the yard. Exhibit 5 (Appendix G) illustrates a typical lateral connection. This work will include the following for each new connection:

- The abandonment in place of existing residential cesspools and septic systems
- Installation of laterals from existing homes to the new mains including 2-way building cleanout

### 3.4.2 Service Connection Permitting Process & Procedures

TRSD has been and will continue working closely with Gila County Wastewater Division (GCWD) to ensure all current residents and new customers are supported during the development/construction phases of this project and thereafter. All permitting will continue to be facilitated through Gila County. Procedures during and after the development of this wastewater collection and treatment project are summarized below.

#### 3.4.2.1 *Existing TRSD customers that have no immediate need for any changes to their property and have onsite treatment systems that are in working condition*

These customers will be contacted by TRSD to coordinate connection as the new system is developed.

#### 3.4.2.2 *Existing TRSD customers that experience issues with onsite systems prior to available connection to the new TRSD system*

These customers must contact GCWD for assistance for temporary solutions. GCWD is responsible for the area's environmental protection and receives its authority by delegation from ADEQ. GCWD is committed to find temporary solutions that benefit both the environment and the customer while continuing to meet ADEQ requirements. These solutions will vary based on the specific issue and the timing of connection to the TRSD system.

#### 3.4.2.3 *Existing and new customers seeking a building permit prior to available connection to the TRSD system*

These customers must follow Gila County's existing building permit process. TRSD will be collaborating with Gila County to revise its building permit checklist to include a requirement that during the permitting process, any customer that lies

within the TRSD DMA boundary will need to contact TRSD and obtain a TRSD Wastewater Treatment Service Acknowledgment Form. This form will be issued to address the customers' specific situation regarding wastewater treatment. This form will address situations such as:

- Acknowledgment by customer that a new wastewater collection and treatment system will be available and customer will be required to connect and will be receiving a TRSD bill. The anticipated timing of connection will be provided.
- Acknowledgment by customer that should they experience issues with an existing onsite system prior to connection that they must contact GCWD for assistance in compliance until the TRSD system is available.
- Acknowledgment by customer that should they install a new onsite treatment system that they will be required to connect to the TRSD systems once wastewater treatment is available at the customer location.
- Acknowledgment by customer that should they elect to refuse the initial service connection, they will still be responsible for the assessment that will finance the availability of service to the property. Then, if in the future they wish to connect, customer may be charged a tap/connection fee and will be responsible for the cost to run the lateral from their existing home to the main line, including the 2-way building cleanout.



## 4 Construction

### 4.1 Construction Summary

The main scheduling element that will drive the project schedule is the funding process, as TRSD will be pursuing United States Department of Agriculture Rural Development (USDA-RD) funding for all phases. Currently, TRSD has pursued funding through the USDA-RD for Phase I of III. In August of 2018, the USDA-RD issued a Letter of Conditions (LOC) offering TRSD funding for Phase I and consists of about 57% grant and about 43% loan. TRSD intends to immediately begin the process of pursuing funding for the remaining phases.

Phase I design has been broken up into two projects, the collection system and the WRF, respectively. The anticipated design completion of the collection system is third quarter of 2023 and the WRF is first quarter of 2024. Phase I construction is estimated at approximately 16-20 months to completion. Within the construction period, the WRF will be constructed, taking about 8-12 months, it is anticipated that both projects completion will be in the 3Q of 2025. Each additional phase will follow and have similar design and construction times. It is the intent of TRSD that these phases will overlap to bring completion of full buildout in late 2026 to mid-2027.

Service connections will be connected to the system as the infrastructure is constructed and the treatment facility is online and ready for influent flows. For example, in Phase I, after the WRF is completed and online, each individual property will have a lateral installed from the newly constructed main line to the connection at the residence or business. At this time, the system will be live and begin accepting these flows for treatment. Once connected, the onsite wastewater treatment system will be abandoned (in place) and then the yard will be restored. This process will be similarly executed in the other phases as well.

Some key design and constructability problems that will need to be addressed are as follows:

- Special care will need to be exercised with regard to excavation as some challenges may arise with old, abandoned and unrecorded existing utilities.
- Traffic control could pose some potential challenges to the construction schedule and maintaining access for homeowners who live adjacent to construction activities.
- Floodways:
  - Portions of the collection mains and the WRF may have to be installed within floodways. USACE Section 404 permit issues may have to be addressed during final design.
  - Per ADEQ in AAC R-18-9-E301.D.2.c, sewer lines crossing or constructed in floodways need to be installed 2' below the 100-year storm scour depth or scour protection shall be provided if the depth cannot be maintained.
- Narrow Streets: Pavement widths are less than 25 feet wide.
  - Many of the main lines are within narrow residential streets. This makes access to and from the homes difficult during construction operations.
  - Narrow streets create design and construction difficulties. Care must be taken during the main line design to ensure adequate separation is maintained from other utilities like gas, water and electricity that need to be avoided to keep relocation costs low.
  - Potential asphalt variation may create issues.
- Steep Terrain: Much of the TRSD area is constructed within steep, mountainous terrain. Care must be taken during the design to ensure that the collection line is installed at reasonable slopes.

### 4.2 Phasing

The construction of each phase will be strategized to ensure WRF capacity is operational prior to the completion of the associated phased collection system.

Table 10 – TRSD Phasing

Phase	Year Capacity Available	Flow Capacity (GPD)	EDUs	Estimated Population	Treatment Capacity
Phase I	2025	240,402	1,374	2,457	0.25 MGD
Phase II	2026	218,925	1,251	2,535	0.15 MGD
Phase III	2027	192,442	1,084	1,741	0.10 MGD
<b>Totals at Full Buildout</b>		<b>651,768</b>	<b>3,709</b>	<b>6,733</b>	<b>0.65 MGD</b>

### **4.3 Construction Agencies**

Following guidelines of the USDA-RD for construction procurement, TRSD will follow USDA-RD requirements for free and open competition. Each phase will be put out to public bid to obtain a licensed general contractor to facilitate and manage the construction of the awarded project phase.



## 5 Impact

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Overall, the impact to the community from the TRSD Wastewater Collection and Treatment Project will be beneficial. With the majority of the residential properties within TRSD utilizing onsite treatment systems and being in violation of the CWA, AAC, and or ADEQ regulations, the implementation of this project will improve environmental conditions. The public health conditions will improve because of the decommissioning of the failing and/or failed onsite wastewater systems thereby cleaning up the groundwater and stormwater runoff by reducing pollution risk.

With the installation of a collection and treatment system will bring value to the area and potentially create an atmosphere supportive of property development. Gila County Wastewater Division Manager agrees that the project will be economically beneficial to the residents and businesses because an increase in property values can encourage the refilling of abandoned homes and improve the overall improvement of the quality of life in the area.

Potential adverse impacts are associated with the results of conducting a large construction project. However, most of these potential adverse impacts can be minimized or avoided by employing Best Management Practices (BMPs). These include following proper regulatory agency guidelines and permitting process to ensure proper execution of the project to support environmental protection. During construction, there will be possible traffic interruption, but it is only a temporary inconvenience.

### 5.1 Surface Water

#### 5.1.1 Potential Adverse Impacts

The potential adverse impacts to the surface water in the area and the BMPs that will be employed to minimize these impacts are described below.

##### 5.1.1.1 *Jack and Bore Activities with Jurisdictional Waters of the United States*

**Adverse Impact:**

Potential crossings that will require jack and bore activities within jurisdictional waters of the United States

**BMP:**

Ensure construction activities comply with the requirements of the Section 404 Permit and Section 401 Water Quality Certification. Logan Simpson (2018) summarizes these practices:

To comply with the terms and conditions of these permits, discharges of fill or dredged material (including all earthwork activities, such as clearing, grading, filling, and excavating) into watercourses would be minimized or avoided to the maximum extent practicable. Fill or dredged material would not involve the use of unsuitable material or pollutants in toxic amounts. In addition, no excess concrete, curing agents, formwork, loose embankment materials, or fuel would be disposed of within the project area. Additionally, vegetation cover similar to present levels would be reestablished relatively quickly reducing the potential for soil erosion and increased sedimentation. (p. 44)

##### 5.1.1.2 *Stormwater Runoff*

**Adverse Impact:**

Potential increase in stormwater runoff

**BMP:**

Logan Simpson (2018) explains:

As part of the AZPDES permit, a Stormwater Pollution Prevention Plan (SWPPP) would be prepared and implemented, which would minimize potential sediment transport by requiring the use of stormwater and erosion control BMPs. (p. 45)

Gila County has developed a Grading and Drainage Ordinance (Number 08-01) to promote the public health, safety, and general welfare, and to minimize public and private losses by regulating grading and drainage of all

land within the unincorporated area of Gila County, Arizona. The [TRSD project] would require obtaining a grading permit from the Gila County Public Works Director or designee. In addition, construction impacts would be confined to the minimum area necessary to complete the project. (p. 45)

### 5.1.1.3 Floodplain

Portions of the collection system may have to be installed in the floodplain. The design will be coordinated with Gila County to obtain a floodplain use permit as necessary and with the U.S. Army Corps of Engineers (USACE) 404 permit issues during design.

WRF and influent lift station – The location of the proposed WRF is outside of the 100-year floodplain (Exhibit 6 in Appendix G), and pumps and other wastewater infrastructure would be constructed outside the floodplain limits, where possible. The WRF is located within Zone D (FEMA FIRM Panel No. 04007C2104D effective December 4, 2007), near the boundaries of a 500-year floodplain. Zone D is an area with undetermined flood hazard, likely due to a lack of flood hazard analysis. A 500-year floodplain analysis was performed and determined it is not expected that the WRF would alter the 500-year floodplain.

#### *Adverse Impact:*

Potential risk to the new infrastructure (specifically the new TRSD WRF and influent lift station) if located within a floodplain, and risk of impacting flood flows or elevations by changing landscape with new construction.

#### *BMP:*

USDA-RD considers these critical facilities and will require they are built above the 500-year floodplain. Additionally, a flood study will be performed to ensure any infill performed to build these facilities above the 500-year floodplain will not adversely affect the floodplain elevation. As long as all Gila County and USACE processes are followed when constructing in the floodplains, Logan Simpson (2018) concludes:

The [TRSD project] would result in temporary disruptions to floodplains where construction activities within the 100-year floodplain are unavoidable. The construction related activities are not anticipated to change the floodplain elevation to a point that would impact the floodplain, either temporarily or permanently. No impacts on flood flows or flood elevations are anticipated as a result of the [TRSD project], as the [TRSD Project] would not permanently impede or redirect flows. Therefore, the [TRSD project] is anticipated to have no impacts to floodplains, provided the applicable BMPs are implemented. (p. 18)

### 5.1.2 Potential Beneficial Impacts

Logan Simpson (2018) describes the potential beneficial impacts to the surface water.

#### *Beneficial Impact:*

As a result of the stormwater control measures, implementation of the SWPPP, and compliance with necessary permits required for the construction and operation of the new facilities, no short-term direct or indirect [adverse] impacts to surface water would occur as a result of the [project]. Providing existing septic users, and potential future development, with connection to a municipal sewer system would eliminate potential [adverse] impacts to surface waters from septic fields and the sewage lagoons.... Long-term direct beneficial impacts would occur to surface water as failing septic systems are abandoned, thereby eliminating the risk of system failures and untreated wastewater being discharged into the environment.

#### *Beneficial Impact:*

It is anticipated that the majority of the effluent will be going to local beneficial reuse. However, initially and on occasion once the reuse program has been developed, approximately 200,000 gpd of Class A+ effluent is proposed for discharge to Miami Wash; located approximately 1,200 feet west of the proposed TRSD WRF. Miami Wash is a tributary of Pinal Creek and it is anticipated that the 200,000 gpd discharge of reclaimed water to Miami Wash would contribute to surface flow, thereby improving the ongoing clean-up efforts of the Pinal Creek WQARF site. The additional daily flows may help move contaminants in the drainageway downstream towards the WQARF water treatment plant, contributing to the overall environmental clean-up of the region. Flow to Miami Wash may also result in the ponding of water and establishment of wetlands and/or wildlife habitat downstream of the TRSD WRF.

## 5.2 Groundwater

The adverse impacts to area groundwater, similarly to the surface water, can be minimized or avoided by applying best management practices to the execution of the project such as the closure of the onsite treatment systems being performed according to Title 18 Chapter 9 of the AAC (R18-9-A309) General Provisions for On-site Wastewater Treatment Facilities, Section D.

The TRSD project will have significant beneficial impact to the area ground water; Logan Simpson (2018) illustrates:

As described in Section 1.2, the installation of a municipal sewer system and WRF would provide a municipal collection and treatment system within TRSD's [boundary]. Providing existing septic users and potential future development with connection to a municipal sewer system would eliminate potential groundwater pollution from septic fields. Connecting current septic users to a municipal sewer system would also help to protect the health and safety of the community through the protection of groundwater quality in the area. The installation of municipal sewer lines and construction of a WRF would eliminate potential groundwater pollution from approximately 810 nitrogen-rich septic tanks, which could contaminate the upper aquifer....

With the implementation of BMPs, compliance with any/all permits required for the project (including appropriate measures for the removal and/or closure of septic systems), no short-term direct or indirect [adverse] impacts to groundwater would occur as a result of the [project]. Connecting current septic users, and potential future development, to a municipal sewer system would help to protect the health and safety of the community through the protection of groundwater in the area. Long-term, direct, beneficial, impacts would occur to groundwater as failing septic systems are abandoned, thereby eliminating the risk of system failures and untreated wastewater potentially reaching the groundwater. Additionally, long-term, indirect, beneficial impacts would occur with the removal of failing septic tanks and the potential expedited clean up the Pinal Creek WQARF site. (p. 48)

For any projects built within the TRSD DMA boundary prior to services being available, TRSD will be collaborating with Gila County to revise its procedure for the issuance of building permits by having the applicant indicate whether the property lies within the boundary. Then TRSD and the Gila County will work with the applicant to ensure the owner will have proper onsite treatment until the new collection and treatment system is made available.

## 5.3 Air Quality

Logan Simpson (2018) outlines the potential air quality impacts:

Air emissions resulting from the [TRSD project] would include fugitive dust (PM<sub>2.5</sub> and PM<sub>10</sub> emissions) associated with construction activities (such as trenching, grading, and installation of project elements), clearing of vegetation, and vehicles driving on unpaved surfaces. Exhaust from construction worker, material delivery vehicles, and other equipment during construction of the proposed site, such as portable electrical generators would result in localized, short-term increases in CO and NO<sub>x</sub> emissions. Estimated emissions associated with the installation of the proposed sewer collection system were calculated during the preparation of the 2011 [Draft] Environmental Report [by AMEC] and were found "to be well below the general conformity thresholds defined under 40 CFR 51.853" (AMEC 2011). The WRF is less than one acre. With the inclusion of the WRF, emissions are still expected to remain below the *de minimis* thresholds of 100 tons per year for PM<sub>10</sub> and SO<sub>2</sub>.

Potential air emissions from the operation of the proposed WRF would primarily occur at locations where liquid is turbulent, such as the aerated grit tanks, aerated channels, aeration basins, clarifier wells, or other areas that have high turbulence. Emissions would vary in relation to the flow received by the facility, maintenance, and odor control operations (e.g., prechlorination and chlorination to control algal growth). Use of the MBR process would reduce the footprint of the WRF and the need for secondary clarifiers and tertiary filtration process (The MBR Site 2017). In addition, the aeration basin volume may be able to be reduced. These improvements in technology would reduce the volume of air emissions from the facility. Infrequent use of a diesel-fueled emergency-power generator<sup>18</sup> would also contribute to air emissions; however, emergency-power generators

typically run less than 200 hours per year and have a very small impact on local air quality (PLC Enterprises 2013). (p. 58-59)

## 6 Permits

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### 6.1 Aquifer Protection Permit

An ADEQ Individual Aquifer Protection Permit (APP) will be obtained to allow the operation of the new TRSD WRF. A Type 4.01 General APP will also be obtained for new wastewater collection system.

### 6.2 AZPDES Permit

An Arizona Pollutant Discharge Elimination System (AZPDES) will be obtained to permit the domestic discharge of the effluent generated by the TRSD WRF. These flows will be discharged into Miami Wash, which is a contributor to Pinal Creek. Typically, the BADCT plus filtration will meet AZPDES permit requirements, however, ADEQ may impose additional effluent quality limits on a facility that discharges into washes or ephemeral streams. Any required additional limits will not be known until the ADEQ permitting pre-application meeting during the early design phase.

### 6.3 CAG 208 Water Quality Plan Amendment

A CAG 208 Water Quality Management Plan Amendment will be submitted for the statewide planning of this new collection and treatment system.

### 6.4 Construction Permits

It is anticipated that the following construction permits will be required:

- 4.01 General Permit Notice of Intent to Discharge
- Discharge Authorization
- Stormwater Pollution Prevention Permit (SWPPP)
- Dust Control Permit

### 6.5 Local Floodplain and Drainage Regulations

Portions of the collection system may have to be installed in the floodplain. As necessary, the Engineer will coordinate with Gila County concerning the floodplain use permit and the U.S. Army Corps of Engineers (USACE) 404 permit issues during design.

### 6.6 Sludge Management

The biosolids will be dewatered for disposal in a landfill. All processes of treatment, handling and selection of disposal facility will be properly permitted under the ADEQ AZPDES program and carried out according to the associated regulations. These regulations include:

- Arizona Revised Statutes (ARS) Chapter 49 The Environment, Article 3.1 Arizona Pollutant Discharge Elimination System Program
- Arizona Administrative Code (AAC) Title 18 Environmental Quality
  - Chapter 09, Article 10: Arizona Pollutant Discharge Elimination System – Disposal, Use, and Transportation of Biosolids
- Clean Water Act as amended (33 U.S.C. §1251 et seq.)
- Code of Federal Regulations (CFR)
  - 40 CFR258: Criteria for Municipal Solid Waste Landfills

## 7 Finance Information

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TRSD is an Arizona Sanitary District, established in 2011, formed with a foundation and mission to improve the quality of life for the Tri-City area of southern Gila County, Arizona by developing a plan to provide and manage a new wastewater collection and treatment system. As a sanitary district, TRSD has the authority, with formal support of its users, to incur debt and levy a tax for providing a community service to those within its boundaries. The TRSD legal counsel has included a self-certification statement and legal opinion (Appendix B) that upon the completion of this amendment, ADEQ certification of and official EPA approval of the TRSD designation as DMA, TRSD will have the authority to manage this existing DMA boundary and implement the plan for this project. Appendix B also includes a letter certifying the TRSD financial capability of executing and management of this project.

In the pursuit of funding, due to the magnitude of the overall project, it will be implemented with a three-phase approach. TRSD has pursued funding through the USDA-RD for Phase I of III. Through the funding application process, TRSD has procured a Preliminary Engineering Report (PER) and Environmental Assessment (EA) for Phase I of this project. The PER includes an engineer's estimate that considers all potential construction, non-construction and operation and maintenance (O&M) costs.

In August of 2018, the USDA-RD issued a Letter of Conditions (LOC) offering TRSD funding for Phase I and consists of about 57% grant and about 43% loan. Since the project is within a designated Colonia area with a Median Household Income (MHI) of approximately \$26,000, a portion of the USDA-RD grant is Colonia grant funding. These grant funds will be utilized for the following:

- The abandonment in place of existing residential cesspools and septic systems
- Installation of laterals from existing homes to the new mains including 2-way building cleanout

TRSD intends to immediately begin the process of pursuing funding for the remaining phases.

### 7.1 Project Financing

The project will be financed through three sources:

#### 1. Ad Valorem Tax

At this time, TRSD intends to continue its current taxing of all customers to cover administrative costs in order to avoid customers in any one phase to be overburdened. Administrative costs may include items such as management, insurance, safety training, bookkeeping, etc.

#### 2. Operation and Maintenance (O&M) Fee

The wastewater collection and treatment system O&M costs presented in the PER were estimated for TRSD based on similar rural communities throughout Arizona. These costs include a reserve fund for short-lived assets as required by USDA-RD. These reserves are established to assist TRSD with pump and motor replacement, non-routine maintenance, and small equipment replacement, etc. The TRSD O&M fee will be distributed between the residents being served based on the equivalent dwelling units (EDUs) of their property. Per ARS 48-2027(G)(5) an availability fee may be charged to vacant parcels and this fee is limited to 50% of the user fee.

#### 3. Debt Repayment

Primary funding for the project is through the USDA-RD Rural Utilities Service (RUS) program. Repayment for the loan portion of the USDA-RD funding will be repaid based on a per EDU amount. This loan repayment will be assessed and collected through the Gila County Assessor's Office. Homeowners will be offered a one-time cash buyout option or 40-year installment option.

### 7.2 Financial Status

The current annual expenditures of the TRSD are minimal, as it does not operate or maintain any wastewater infrastructure at this time. The revenues are currently obtained through Gila County Secondary Tax Assessments.

The TRSD annual revenues and expenditures are summarized in the following

Table 11 - TRSD Actual Annual Revenues and Expenditures.

The tax revenues are secured by Gila County on an annual basis. Since 2015, the State uses one type of property value for taxing purposes, known as the Limited Property Value (LPV).

**Table 11 - TRSD Actual Annual Revenues and Expenditures**

<b>Category</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Cash on Hand	\$ 207,737	\$ 250,209	\$ 179,690
<b>Revenues</b>			
Interest	\$ 1,205	\$ 2,109	\$ 4,218
Secured Taxes	\$ 96,668	\$ 102,963	\$ 152,407
Unsecured Taxes	\$ 1,211	\$ -	\$ 1,913
WIFA Planning Grant	\$ -	\$ -	\$ -
<b>Total Revenues</b>	<b>\$ 99,084</b>	<b>\$ 105,072</b>	<b>\$ 158,538</b>
<b>Expenses</b>			
Legal Fees	\$ 31,363	\$ 18,913	\$ 102,463
Board Expenses	\$ -	\$ -	\$ 7,201
Facilities and Equipment	\$ -	\$ -	\$ 340
Web page	\$ 725	\$ 683	\$ 770
Publishing / Printing	\$ 87	\$ 1,586	\$ 4,982
Office Supplies / Postage	\$ 110	\$ 116	\$ 2,824
Travel	\$ 427	\$ 193	\$ 454
Special Elections - Gila County	\$ -	\$ -	\$ -
Part Time District Manager	\$ -	\$ -	\$ -
Engineering	\$ -	\$ 36,147	\$ 100,853
WIFA Grant Match	\$ -	\$ -	\$ -
WIFA Grant (Assessment)	\$ -	\$ -	\$ -
Insurance - Liability	\$ 1,129	\$ 4,787	\$ 4,850
Legal / Land / Admin (WIFA soft Money Loan)	\$ -	\$ -	\$ -
Accounting / Bookkeeping	\$ 439	\$ 174	\$ 718
<b>Total Expenses</b>	<b>\$ 34,280</b>	<b>\$ 62,599</b>	<b>\$ 225,455</b>



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# ***Appendix A***

## ***Section 208 CWA Checklist***

**Section 208 Clean Water Act  
40 CFR Part 130.6**

<b>Requirement</b>	<b>Provide Brief Summary On How Requirements Are Addressed</b>	<b>Addressed On Page</b>
<p><b><u>AUTHORITY</u></b></p> <p>1) Proposed Designated Management Agency (DMA) shall self-certify that it has the authorities required by Section 208(c)(2) of the Clean Water Act to implement the plan for its proposed planning and service areas. Self-certification shall be in the form of a legal opinion by the DMA or entity attorney.</p>	<p>TRSD's DMA designation was previously approved with CAG 208 Plan Amendment #2017-02. A self-certification letter is enclosed in Appendix B.</p>	<p>2-2, Appendix B, Appendix D</p>
<p><b><u>20-YEAR NEEDS</u></b></p> <p>Clearly describe the existing wastewater treatment (WWT) facilities:</p> <p>2) Describe existing WWT facilities.</p>	<p>Currently, there are no physical TRSD facilities. All proposed TRSD facility locations are illustrated on Exhibit 2 Preliminary Collection &amp; Treatment System.</p>	<p>2-1, Appendix G (Exhibit 2)</p>
<p>3) Show WWT certified and service areas for private utilities and sanitary district boundaries if possible.</p>	<p>TRSD's DMA designation was previously approved with CAG 208 Plan Amendment #2017-02. With this 208 amendment, TRSD is requesting that the WRF site, located just north of the northern portion of the TRSD boundary, be added to the TRSD DMA. The TRSD boundary with legal descriptions are included in Appendix D. Also included is the legal description for the new WRF site that will be added to the TRSD boundary. Exhibit 7 (Appendix G) shows the current and proposed expanded DMA.</p>	<p>2-1, 2-2, 2-3, Appendix D, Appendix G</p>
<p>Clearly describe alternatives and the recommended WWT plan:</p> <p>4) Provide POPTAC population estimates (or COG-approved estimates only where POPTAC not available) over 20-year period.</p>	<p>To develop a reasonable estimate of the population trends and growth within the TRSD, the growth patterns in the surrounding Census Designated Places were considered. Precise population records for the TRSD are not available, however, information has been gathered from the Environmental Justice Screening and Mapping Tool (EJSCREEN) provided by the Environmental Protection Agency (EPA) to gain an understanding of the affected population for this project by drawing out the boundary to get a more accurate population. Based on the 2010 census data and the EPA average growth of 3%, over the 20-year</p>	<p>2-5 to 2-9, Appendix H</p>

Requirement	Provide Brief Summary On How Requirements Are Addressed	Addressed On Page
	planning period, the population could reach approximately 9,500. However, when considering the historical data for this area, 3% is a high estimate.	
5) Provide wastewater flow estimates over the 20-year planning period.	Without precise population estimates, the design capacity estimate of 0.65 MGD is based on a methodology was developed to estimate reasonable growth through an understanding of potential equivalent dwelling units (EDU) and projected wastewater flows. 175 GPD/EDU was used to estimate flow of this proposed new collection system.	2-7 to 2-9
6) Illustrate the WWT planning and service areas.	TRSD's DMA designation was previously approved with CAG 208 Plan Amendment #2017-02. With this 208 amendment, TRSD is requesting that the WRF site, located just north of the northern portion of the TRSD boundary, be added to the TRSD DMA. The TRSD boundary with legal descriptions are included in Appendix D. Also included is the legal description for the new WRF site that will be added to the TRSD boundary. Exhibit 7 (Appendix G) shows the current and proposed expanded DMA.	2-1, 2-2, 2-3, Appendix D, Appendix G
7) Describe the type and capacity of the recommended WWT Plant.	The proposed new 0.65 MGD MBR WRF facility will consist of a headworks system, secondary activated sludge process with membrane filtration and disinfection (either chlorination or ultraviolet).	2-1, 3-1
8) Identify water quality problems, consider alternative control measures, and recommend solution for implementation.	Nearly 90% of the residential properties within TRSD have onsite treatment systems (cesspools and substandard septic tanks) in violation of the CWA, Arizona Administrative Code (AAC), and/or ADEQ regulations. This poses risks of groundwater pollution. Connecting current septic users, and potential future development, to a municipal wastewater collection system would help to protect the health and safety of the community through the protection of groundwater in the area. Long-term, direct, beneficial, impacts would occur	1-3 to 1-4, 3-1 to 3-3, 5-1 to 5-4

Requirement	Provide Brief Summary On How Requirements Are Addressed	Addressed On Page
	to groundwater as failing septic systems are abandoned, thereby eliminating the risk of system failures and untreated wastewater potentially reaching the groundwater.	
9) If private WWT utilities with certificated areas are within the proposed regional service area, define who (municipal or private utility) serves what area and when. Identify whose sewer lines can be approved in what areas and when?	Not applicable.	
10) Describe method of effluent disposal and reuse sites (if appropriate).	Due to the ongoing flushing process of Pinal Creek, one mining company, FMI (mining company), has expressed interest in the flows being discharged into Miami Wash which is a contributor to Pinal Creek. This would contribute to the overall environmental cleaning within the region. A specific discharge point has not been determined, but an estimated area is indicated.	2-1, 3-2 to 3-3, 5-2, Appendix G (Exhibit 3)
11) If Sanitary Districts are within a proposed planning or service area, describe who serves the Sanitary Districts and when.	Tri-City Regional Sanitary District (merger of Cobre Valley Sanitary District and Pinal Sanitary District) is the only sanitary district within the boundary and does not currently serve any customers. The proposed project within this CAG WQMP 208 amendment will be the commencement of service by this sanitary district.	2-1
12) Describe ownership of land proposed for plant sites and reuse areas.	Land will need to be acquired for the installation of the new TRSD WRF and the construction of the regional lift stations and the neighborhood lift stations. The actual land requirements will be determined during the engineering design phase of the improvements. TRSD is in the process of acquiring a parcel from BHP, via donation, for the location of the proposed new WRF. Additional details are discussed in Section 3 Wastewater Treatment Facility. The new TRSD Lift Station in Phase I is located on a parcel owned by FMI	2-1, 2-4, 3-1, Appendix G (Exhibit 3 & Exhibit 4)

Requirement	Provide Brief Summary On How Requirements Are Addressed	Addressed On Page
	which TRSD has obtained an easement for this infrastructure.	
13) Address time frames in the development of the treatment works.	Phase I design has been broken up into two projects, the collection system and the WRF, respectively. The anticipated design completion of the collection system is 3Q of 2023 and the WRF is 1Q of 2024. Phase I construction is estimated at approximately 16-20 months to completion. Within the construction period, the WRF will be constructed, taking about 8-12 months, it is anticipated that both projects completion will be in the 3Q of 2025. Each additional phase will follow and have similar design and construction times. It is the intent of TRSD that these phases will overlap to bring completion of full buildout in late 2026 to mid-2027.	4-1 to 4-2
14) Address financial constraints in the development of the treatment works.	The major constraint is the median household income (MHI) of the area that creates a financial hurdle; however, TRSD has pursued funding through the USDA-RD for Phase I of III and intends to immediately begin the process of pursuing funding for the remaining phases. In August of 2018, the USDA-RD issued a Letter of Conditions (LOC) offering TRSD funding for Phase I and consists of about 57% grant and about 43% loan.	7-1
15) Describe how discharges will comply with EPA municipal and industrial stormwater discharge regulations (Section 405, CWA).	This facility will be designed to accept 100% domestic wastewater flows for treatment. Industrial / commercial wastewater will not be accepted without pretreatment. Any future industrial / commercial wastewater acceptance will require TRSD Board action. At that time, the policies and procedures will be developed to ensure any discharge accepted will meet the ADEQ / EPA Pretreatment Standards. The treatment facility will not include a septage receiving station. Currently within the area, two options for septage receiving are at the Town of Miami and the Superstition Mountain Community Facilities District in	3-2

Requirement	Provide Brief Summary On How Requirements Are Addressed	Addressed On Page
	Apache Junction.	
16) Describe how open areas and recreational opportunities will result from improved water quality and how those will be used.	Overall, with the reduction of groundwater contamination risks by implementing this centralized wastewater collection and treatment system the environmental quality in private yards and common areas throughout TRSD will be improved. Currently, there are a couple of available options for potential effluent reuse for open and recreational areas; however, at this time TRSD is not pursuing these options. 1) The local golf course, Cobre Valley County Club (CVCC) has expressed interest in obtaining the effluent for irrigation of the course. CVCC struggles to obtain enough water to keep the course green. 2) Discussions have taken place regarding the utilization of the effluent to create a lake with a surrounding regional community park constructed for recreational use, providing an amenity for the area.	3-2 to 3-3
17) Describe potential use of lands associated with treatment works and increased access to water-based recreation, if applicable.	The WRF and lift station land will be used solely for the facility structure. There has been discussions of future use of the effluent to create a lake whereby a regional park be constructed around the lake for use by all who live with in the area. It would provide an amenity for the region.	3-3
<b><u>REGULATIONS</u></b>	Anticipated permit requirements are as follow: <ul style="list-style-type: none"> <li>• Individual ADEQ Aquifer Protection Permit (APP)</li> <li>• Arizona Pollutant Discharge Elimination System (AZPDES)</li> <li>• Construction Permits <ul style="list-style-type: none"> <li>○ 4.01 General Permit Notice of Intent to Discharge</li> <li>○ Discharge Authorization</li> <li>○ Stormwater Pollution Prevention Permit (SWPP)</li> <li>○ Dust Control Permit</li> </ul> </li> <li>• U.S. Army Corps of Engineers (USACE) 404</li> </ul>	6-1
18) Describe types of permits needed, including AZPDES, APP and reuse.		
19) Describe restrictions on AZPDES permits, if needed, for discharge and sludge disposal.	The biosolids will be dewatered for disposal in a landfill. All processes of treatment, handling and selection of disposal facility will be properly permitted under the ADEQ AZPDES	3-1, 6-1



Requirement	Provide Brief Summary On How Requirements Are Addressed	Addressed On Page
	<p>program and carried out according to the associated regulations. These regulations include:</p> <ul style="list-style-type: none"> <li>• Arizona Revised Statutes (ARS) Chapter 49 The Environment, Article 3.1 Arizona Pollutant Discharge Elimination System Program</li> <li>• Arizona Administrative Code (AAC) Title 18 Environmental Quality <ul style="list-style-type: none"> <li>○ Chapter 09, Article 10: Arizona Pollutant Discharge Elimination System – Disposal, Use, and Transportation of Biosolids</li> </ul> </li> <li>• Clean Water Act as amended (33 U.S.C. §1251 et seq.)</li> <li>• Code of Federal Regulations (CFR) <ul style="list-style-type: none"> <li>○ 40 CFR258: Criteria for Municipal Solid Waste Landfills</li> </ul> </li> </ul>	
<p>20) Provide documentation of communication with ADEQ Permitting Section 30 to 60 days prior to public hearing regarding the need for specific permits.</p>	<p>Typically, an ADEQ pre-application meeting for permitting takes place during the design phase. At this time, the no communication with ADEQ has taken place regarding specific permit requirements. The pre-application meeting with ADEQ will be schedule in the near future.</p>	<p>3-3</p>
<p>21) Describe pretreatment requirements and method of adherence to requirements (Section 208 (b)(2)(D), CWA).</p>	<p>This facility will be designed to accept 100% domestic wastewater flows for treatment. Industrial / commercial wastewater will not be accepted without pretreatment. Any future industrial / commercial wastewater acceptance will require TRSD Board action. At that time, the policies and procedures will be developed to ensure any discharge accepted will meet the ADEQ / EPA Pretreatment Standards. The treatment facility will not include a septage receiving station. Currently within the area, two options for septage receiving are at the Town of Miami and the Superstition Mountain Community Facilities District in Apache Junction.</p>	<p>3-2</p>
<p>22) Identify, if appropriate, specific pollutants that will be produced from excavations and procedures that will protect</p>	<p>Best management practices will be applied during</p>	<p>5-1 to 5-4</p>

Requirement	Provide Brief Summary On How Requirements Are Addressed	Addressed On Page
ground and surface water quality (Section 208(b)(2)(K) and Section 304, CWA).	construction to protect surface water and groundwater.	
23) Describe alternatives and recommendation in the disposition of sludge generated. (Section 405 CWA)	Biosolids will be produced by the proposed WRF. At full buildout, the facility will produce approximately 1,200 lbs per day. Biosolids land application is a future possibility; however, this option is not being considered at this time. The biosolids will be dewatered for disposal in a landfill. All processes of treatment, handling and selection of disposal facility will be properly permitted under the ADEQ AZPDES program and carried out according to the associated regulations.	2-2, 3-1, 6-1
24) Define any nonpoint issues related to the proposed facility and outline procedures to control them.	<p>The construction of the wastewater facilities will not be a significant source of pollution. Anticipated pollution from construction activities includes fugitive dust, construction equipment exhaust emissions, and construction related solid waste. Erosion control measures during construction and grading will be implemented to prevent potential stormwater runoff to water bodies. The contractor shall comply with local and county regulatory requirements and provisions of construction permits issued including dust control permits. The proposed TRSD WRF will be creating a point source for the community and will alleviate any potential issues due to failing septic systems. Should any issue arise, TRSD will immediately notify ADEQ and work to perform any required mitigation.</p> <p>The construction of the wastewater reclamation facilities will not be a significant source of pollution. Anticipated pollution from construction activities includes fugitive dust, construction equipment exhaust emissions, and construction related solid waste. Erosion control measures during construction and grading will be implemented to prevent potential storm water runoff to water bodies. The developer</p>	5-1 to 5-4

Requirement	Provide Brief Summary On How Requirements Are Addressed	Addressed On Page
	and project contractor shall comply with local and county regulatory requirements and provisions of construction permits issued including dust control permits.	
25) Describe process to handle all mining runoff, orphan sites and underground pollutants, if applicable.	N/A	N/A
26) If mining related, define where collection of pollutants has occurred, and what procedures are going to be initiated to contain contaminated areas.	N/A	N/A
27) If mining related, define what specialized procedures will be initiated for orphan sites, if applicable.	N/A	N/A
<b><u>CONSTRUCTION</u></b>  28) Define construction priorities and time schedules for initiation and completion.	Phase I design has been broken up into two projects, the collection system and the WRF, respectively. The anticipated design completion of the collection system is 3Q of 2023 and the WRF is 1Q of 2024. Phase I construction is estimated at approximately 16-20 months to completion. Within the construction period, the WRF will be constructed, taking about 8-12 months, it is anticipated that both projects completion will be in the 3Q of 2025. Each additional phase will follow and have similar design and construction times. It is the intent of TRSD that these phases will overlap to bring completion of full buildout in late 2026 to mid-2027.	4-1
29) Identify agencies that will construct, operate and maintain the facilities and otherwise carry out the plan.	Following guidelines of the USDA-RD for construction procurement, TRSD will follow USDA-RD requirements for free and open competition. Each phase will be put out to public bid to obtain a licensed general contractor to facilitate and manage the construction of the awarded project phase. Once constructed, the facility will be owned and operated by TRSD.	N/A
30) Identify construction activity-related sources of pollution and set forth procedures and methods to control, to the extent	Anticipated pollutants during constructions may include dust,	5-1 to 5-4, 6-1

Requirement	Provide Brief Summary On How Requirements Are Addressed	Addressed On Page
feasible, such sources.	related solid waste, etc. Best management practices will be applied and outlined in the SWPPP.	
<b><u>FINANCING AND OTHER MEASURES NECESSARY TO CARRY OUT THE PLAN</u></b>	N/A	N/A
31) If plan proposes to take over certificated private utility, describe how, when and financing will be managed.		
32) Describe any significant measure necessary to carry out the plan, e.g., institutional, financial, economic, etc.	Securing adequate funding	7-1
33) Describe proposed method(s) of community financing.	Grants, loans, ad valorem tax, operation and maintenance fee, and debt repayment assessed and collected through the Gila County Assessor's Office	7-1
34) Provide financial information to assure DMA has financial capability to operate and maintain wastewater system over its useful life.	Financial capability letter is provided in Appendix C.	7-1, Appendix C
35) Provide a time line outlining period of time necessary for carrying out plan implementation.	Provided funding of all phases is obtained in a timely manner, the facility timeline for full buildout is as follows: Phase I 2025 Phase II 2026 Phase III 2027	4-1
36) Provide financial information indicating the method and measures necessary to achieve project financing. (Section 201 CWA or Section 604 may apply).	TRSD will be pursuing USDA-RD funding assistance for each phase of this project individually. This funding will be a combination of both grant and low-interest loans. The project will be financed through three sources:  1. Ad Valorem Tax 2. Operation and Maintenance (O&M) Fee 3. Debt Repayment	7-1

Requirement	Provide Brief Summary On How Requirements Are Addressed	Addressed On Page
<p><b><u>IMPLEMENTABILITY</u></b></p> <p>37) Describe impacts and implementability of Plan.</p>	<p>Overall, the impact to the community from the TRSD Wastewater Collection and Treatment Project will be beneficial. With the majority of the residential properties within TRSD utilizing onsite treatment systems and being in violation of the CWA, AAC, and or ADEQ regulations, the implementation of this project will improve environmental conditions. The public health conditions will improve by the decommissioning of the failing and/or failed onsite wastewater systems thereby cleaning up the groundwater and stormwater runoff by reducing pollution risks. The installation of a collection and treatment system will bring value to the area and potentially create an atmosphere supportive of property development. Potential adverse impacts are associated with the results of conducting a large construction project, most of which can be minimized or avoided by employing best management practices (BMPs). These include following proper regulatory agency guidelines and permitting process to ensure proper execution of the project to support environmental protection. During construction, there will be possible traffic interruption, but it is only a temporary inconvenience.</p>	<p>5-1 to 5-4</p>
<p>38) Describe impacts on existing wastewater (WW) facilities, e.g., Sanitary district, infrastructure/facilities and certificated areas.</p>	<p>There are two wastewater treatment facilities in the area of the TRSD boundary at the City of Globe and the Town of Miami. TRSD Phase I will not affect either facility. Connecting to these facilities and/or other collaborations (for example shared operations staff) will be explored for the future Phases II and III.</p>	<p>N/A</p>
<p>39) Describe how and when existing package plants will be connected to a regional system.</p>	<p>There are currently no plans for connecting a regional system during TRSD Phase I. Collaborating with other plants will be explored for the future Phases II and III.</p>	<p>N/A</p>
<p>40) Describe the impact on communities and businesses affected by the plan.</p>	<p>Overall, the impact to the community from the TRSD Wastewater Collection and Treatment Project will be</p>	<p>5-1 to 5-4</p>

Requirement	Provide Brief Summary On How Requirements Are Addressed	Addressed On Page
	<p>beneficial. With the majority of the residential properties within TRSD utilizing onsite treatment systems and being in violation of the CWA, AAC, and or ADEQ regulations, the implementation of this project will improve environmental conditions. The public health conditions will improve by the decommissioning of the failing and/or failed onsite wastewater systems thereby cleaning up the groundwater and stormwater runoff by reducing pollution risks. With the installation of a collection and treatment system will bring value to the area and potentially create an atmosphere supportive of property development. Potential adverse impacts are associated with the results of conducting a large construction project, most of which can be minimized or avoided by employing best management practices (BMPs). These include following proper regulatory agency guidelines and permitting process to ensure proper execution of the project to support environmental protection. During construction, there will be possible traffic interruption, but it is only a temporary inconvenience.</p>	
<p>41) If a municipal WWT system is proposed, describe how WWT service will be provided until the municipal system is completed: i.e., will package plants and septic systems be allowed and under what circumstances (Interim services).</p>	<p>TRSD has been and will continue working closely with Gila County Wastewater Division (GCWD) to ensure all current residents and new customers are supported during the development/construction phases of this project and thereafter. All permitting will continue to be facilitated through Gila County. Existing customers that have no immediate need for any changes to their property and have onsite treatment systems that are in working condition will be contacted to coordinate connection as the new system is developed. Existing customers that experience issues with onsite systems prior to available connection to the new TRSD system must contact GCWD for assistance for temporary solutions. GCWD is responsible for the area's environmental protection and receives its authority by delegation from ADEQ. GCWD is committed to find temporary solutions that benefit both the environment and the customer. These solutions will vary based on the specific issue and the timing of connection to the TRSD system. Existing and new customers seeking a building permit prior to available connection to the TRSD system must follow Gila County's existing building permit process. TRSD will be collaborating with Gila County to revise its</p>	<p>3-3</p>

Requirement	Provide Brief Summary On How Requirements Are Addressed	Addressed On Page
	building permit checklist to include a requirement that during the permitting process, any customer that lies within the TRSD DMA boundary will need to contact TRSD and obtain a TRSD Wastewater Treatment Service Acknowledgment Form. This form will be issued to address the customers' specific situation regarding wastewater treatment.	
<p><b><u>PUBLIC PARTICIPATION</u></b></p> <p>42) Submit copy of mailing list used to notify the public of the public hearing on the 208 Amendment. (40 CFR, Chapter 1, part 25.5)</p>	CAG Responsibility	
<p>43) List location where documents are available for review at least 30 days before public hearing.</p>	CAG Responsibility	
<p>44) Submit copy of the public notice of the public hearing as well as an official affidavit of publication from the area newspaper. Clearly show the announcement appeared in the newspaper at least 45 days before the hearing.</p>	CAG Responsibility	
<p>45) Submit affidavit of publication for official newspaper publication.</p>	CAG Responsibility	
<p>46) Submit responsiveness summary for public hearing.</p>	CAG Responsibility	



# ***Appendix B***

## ***Self-Certification Letter***



April 20, 2023

Andrea Robles, CAG Executive Director  
Central Arizona Governments  
2540 West Apache Trail – Suite 108  
Apache Junction, Arizona 85120-5292

Re: Self Certification Letter re Tri-City Regional Sanitary District

Dear Ms. Robles:

My office is general counsel to the Tri-City Regional Sanitary District (“TRSD”), an Arizona Sanitary District. In connection with the planned wastewater collection and treatment facilities that are planned to serve the residences, businesses, industries and other users within the District (which wastewater facilities are referred to in this letter as the Subject Facilities), I hereby certify as follows:

1. The TRSD was formed on June 20, 2011 by the merger of the Pinal Sanitary District and the Cobre Valley Sanitary District as set forth in A.R.S. § 48-2001.01.
2. Pursuant to the Clean Water Act Section 208(c)(2) [33 U.S.C. § 1288(c)(2)], TRSD is authorized by law to:
  - a. carry out appropriate portions of the Central Arizona Governments’ Section 208 Water Quality Management Plan (the “208 Plan”) developed under Clean Water Act Section 208, Subsection (b);
  - b. manage effectively the Subject Facilities and any other wastewater treatment works and related facilities serving such area in conformance with the 208 Plan;
  - c. directly or by contract, design and construct the Subject Facilities and any other new works, and to operate and maintain new and existing works as required by the 208 Plan;
  - d. accept and utilize grants, or other funds from any source, for wastewater treatment and management purposes;

**Mesa:**  
3514 North Power Road  
Building 1, Suite 103  
Mesa, AZ 85215

☎ 480.500.5700  
☎ 480.718.7728

**Payson:**  
111 West Cedar Lane  
Suite C  
Payson, AZ 85541

☎ 928.474.9230  
☎ 928.492.1888

**Online:**  
[www.harperazlaw.com](http://www.harperazlaw.com)  
[info@harperazlaw.com](mailto:info@harperazlaw.com)

Andrea Robles  
Central Arizona Governments  
April 20, 2023  
Page 2

- e. raise revenues, including the assessment of wastewater treatment charges;
- f. incur short- and long-term indebtedness;
- g. assure the implementation of the 208 Plan within the TRSD;
- h. refuse to receive any wastewater from any customer of TRSD which does not comply with any provisions of the 208 Plan applicable to TRSD; and
- i. accept industrial wastes for treatment.

Please let me know if you need any additional information in connection with this Self-Certification.

Very truly yours,

HARPER LAW OFFICES, PC



Michael J. Harper, Esq.

*/lac*  
*Enclosures as noted*

# ***Appendix C***

## ***Letters of Support***

# Gila County Health & Emergency Management



**5515 South Apache Ave., Suite 100, Globe, AZ 85501**  
**PHONE: (928) 402-8811 | FAX: (928) 425-8817**

**110 W. Main St., Suite A, Payson, AZ 85541**  
**PHONE: (928) 474-1210 | FAX: (928) 474-7069**



October 5, 2023

Central Arizona Governments  
Environmental Planning Committee  
Via E-mail

RE: TRSD Treatment Plant Location

Dear EPC Members,

I am writing in support of the TRSD's proposal to relocate the treatment plant from the location shown in their approved Section 208 Area Wide Water Quality Management Plan Amendment. The original location was negated due to its proximity to a retention dam and concerns raised about dam stability based on dam failures at other BHP properties worldwide. TRSD has scoured the area to locate a suitable property and have found a perfect replacement.

The selected property is located in a remote section of the lowest elevation land in the district and is not near any housing areas. It is adjacent to a cattle loading facility and a railroad spur in an area zoned for these types of activities. This location has been donated to TRSD. Furthermore, this location is preferred by both the PACE engineering team's project team and that of USDA-RD.

I would be remiss if I did not take this opportunity to express my wholehearted support for the TRSD Wastewater Collection and Water Reclamation Facility Project.

Respectfully,

*Jake Garrett, P.E.*  
*Environmental Engineer*  
*Gila County health and Emergency Management Department*  
*Environmental Health Division Manager*  
*608 E. Hwy 260*  
*Payson, AZ 85541*  
*Tel: 928-474-7177*  
*Fax: 928-474-0802*





## GILA COUNTY

**Tim Humphrey, District 2**

1400 E. Ash Street  
Globe, Arizona 85501

November 6, 2023

RE: Tri-City Regional Sanitary District – Gila County, Arizona

To Whom it May Concern:

As District 2 Supervisor for Gila County, I submit this letter of support for the Tri-City Regional Sanitary District.

- This project will address public health concerns by replacing leaking and problematic cesspools and failing septic systems in our community and will provide hygienic sewer collection and treatment improving the public health and wellbeing.
- This project will increase property values in the region. Over 90% of the residences in the district have noncompliant sewer service. This noncompliance makes it impossible for residents to obtain regular mortgages and financing for their homes and businesses. Implementation of the TRSD sewer improvements will improve access to financing and increase property values in an impoverished area.
- This project will attract new development and housing in the area. The TRSD has a critical workforce housing need. This project will make possible new multi and single-family housing options that will benefit the area employers and residents.
- Currently many of the area septic and cesspools are discharging sewage and greywater onto surrounding land in an untreated state. The completion of the TRSD Wastewater Project will improve the area from an environmental standpoint and will result in the elimination of untreated sewer discharge into the community.
- In addition to direct improvements within the boundaries of the District, this project will improve the surrounding communities including the Town of Miami, the City of Globe, and Gila County. By improving the quality of life and economy within the District, this project will directly and indirectly improve the quality of life for all of the residents of the surrounding area by improving the environment, creating new job opportunities, improving area housing, and spurring additional economic development.

Your time and consideration are greatly appreciated.

Sincerely,

Tim R. Humphrey

District 2 Gila County Supervisor



150 North Pine Street, Globe, Arizona, 85502

November 8, 2023

Robert B Jacques  
Board President  
Tri-City Regional Sanitary District  
PO Box 2198  
Claypool, AZ 85532

Dear Mr. Jacques

The purpose of this letter is to express our continued support for the Tri-City Regional Sanitary District's (TRSD) efforts to develop modern sewer infrastructure and deliver high quality, yet affordable sewer services to the unincorporated areas of southern Gila County.

Specifically, as Mayor of the City of Globe we wish to express our support for the newly acquired wastewater treatment plant site and have no objections to the requested revision of the current Central Arizona Governments (CAG) Section 208 Water Quality Management Plan (WQMP) to include the new location outside the City of Globe. The City of Globe also has no objections to amending the current Designated Management Area (DMA) boundary to include the new WRF-site.

In order to maintain due diligence i will add the City of Globe reserves the right to modify it's decision, if warranted later in the process should additional information becomes available that would cause such a change in position.

The City of Globe City Council looks forward to the development of our future partnerships as your USDA funded infrastructure project advances.

Sincerely,

A handwritten signature in black ink, appearing to read "Al Gameros". The signature is written in a cursive style with a large, sweeping initial letter.

Al Gameros  
Mayor



**TOWN COUNCIL**

Jose "Angel" Medina, Mayor  
Dan Moat, Vice-Mayor  
Michael Black  
Sammy Gonzales  
Robert Licano  
Don Reiman  
Michael Sosh Sr.

**TOWN OF MIAMI**  
**"Copper Center of the World"**

500 W. Sullivan St.  
Miami, AZ 85539  
928-473-4403  
[www.miamiaz.gov](http://www.miamiaz.gov)

**ADMINISTRATION**

Alexis Rivera  
Town Manager

Karen Norris  
Town Clerk

February 9, 2024

**VIA E-MAIL**

Robert B. Jacques, Board President  
Tri City Regional Sanitary District  
P.O. Box 2198  
Claypool, Arizona 85532-2198  
[robertbjacques@gmail.com](mailto:robertbjacques@gmail.com)

**RE: TRSD CAG 208 Plan Amendment Revision**

Dear Mr. Jacques,

The Town of Miami's Council has, for many years, and will continue to supported the reasoned and economical transition of the region's septic and cesspool collection systems, both within and outside the Town's municipal boundaries, as the Town truly views its unincorporated neighbors as family and friends. The Town recognizes that the Tri City Regional Sanitary District ("TRSD"), which was formed by the combination of two previous sanitary districts, is an independent body charged with the wastewater service of many of those family and friends within the unincorporated parts of the southern Gila County region lying between the Town and City of Globe. It is clear, that both the Town and TRSD recognize the importance of the installation of new sewer collection lines within this unsupported region in order to facility the transition from the environmentally deficient septic and cesspool systems.

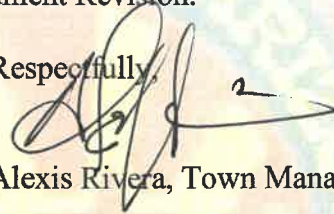
The Town of Miami's Council has met various times over the past few months to discuss and consider the Town's position regarding the TRSD CAG 208 Plan Amendment Revision. As has been discussed during the meetings between the Town and TRSD over the past couple of months, those discussions and deliberations have touched on the following issues and concerns:

1. The Town has concerns about the financial viability of the business plan outlined by TRSD and its effect on TRSD constituents. However, the Town recognizes and considers this to be an issue within the exclusive purview of TRSD and its constituents and, therefore, not an issue for objection by the Town.
2. The Town supports the concepts of the technical plan currently proposed for the construction of the collection system and processing plant based on information provided by TRSD.

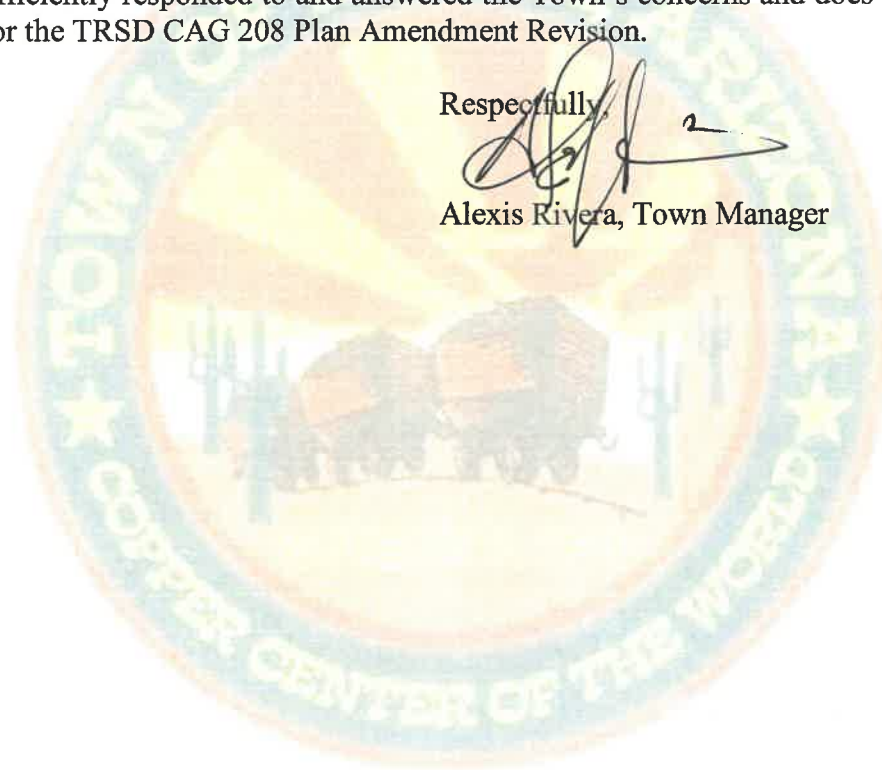
3. The Town has concerns regarding the issue of intersecting or crossing sewer lines. However, the Town recognizes this may be an issue that will need to be addressed in the future at the time of design and construction of the proposed collection system and would not be a basis for objection by the Town at this time. The Town remains optimistic that the Town and TRSD will be able to amicably work through any issues that may arise in the future concerning intersecting line.
4. The Town earnestly hopes TRSD can achieve its financial funding goals and proceed to the timely and efficient completion of the 208 Project Plan as amended. As previously stated, in the event this does not occur or issues arise during the construction of the proposed collection system, the Town again will continue to offer to support TRSD in whatever ways can be mutually beneficial to our constituents and organizations.

The Town appreciates the opportunities the parties have had over the past couple of months to meet and discuss these concerns and issues and focus on the needs of the parties' constituents. The Town believes that TRSD has sufficiently responded to and answered the Town's concerns and does hereby provide this letter of support for the TRSD CAG 208 Plan Amendment Revision.

Respectfully,



Alexis Rivera, Town Manager



# ***Appendix D***

## ***TRSD Formation & Legal Description***



315261

BOOKET 255 PAGE 76

STATE OF ARIZONA, County of Gila, ss:  
I do hereby certify that the within instrument was filed and recorded at request of Louise G. Rehengatter.

Date Feb. 25, 1969 Time 3:30 P. M. Docket 255 Official Record Page 76  
Records of Gila County, Arizona.

WITNESS my hand and official seal the day and year first above written.

DORIS MCKIN, County Recorder

By [Signature] Recorder.

FORMAL ORDER ESTABLISHING

COBRE VALLEY SANITARY DISTRICT

The petitions for the establishment of a Sanitary District in the Central Heights and Country Club Manor area came on regularly for hearing before the Board of Supervisors of Gila County, Arizona, in the Court House in Globe, Arizona, on the 3rd day of February, 1969, at the hour of 11:00 o'clock A. M. The Board, after due consideration of all objections made by certain residents of the area, now finds that the petition was duly signed by the required number of owners of real property of the proposed district; that the proposed work is necessary and that the public health, comfort, convenience, necessity and welfare will be promoted by establishment of the district set forth in the petition,

IT IS HEREBY ORDERED AND DECLARED:

That a Sanitary District, be, and the same is hereby formed and organized, and that the name of the district shall be known as COBRE VALLEY SANITARY DISTRICT; that the boundaries are as follows:

Beginning at the South  $\frac{1}{4}$ -corner of Sec. 22, T. 1 N., R. 15 E., G&SRM., said point also being the SW Cor. Central Heights, Map No. 52, Gila County Records; thence easterly 1,325.7 feet along the south boundary of Sec. 22 and of Central Heights to the SE Cor. Central Heights; thence northerly along the east boundary of Central Heights 609.44 feet to the south end of the west line of Central Heights Addition to Central Heights Townsite, Map No. 69, G. C. R.; thence following the boundary of said Central Heights Addition northeasterly 6.67 feet, southeasterly 150 feet; northeasterly 150 feet, southeasterly 450 feet, and northeasterly 100 feet to the east corner of Lot 11, Block 7, Central Heights Addition, said east corner also being the northwesterly end of the southwesterly sideline of Central Ave. of Doc. Butler Estates, Map No. 123, G. C. R.; thence following the

boundary of Doc Butler Estates southeasterly 400 feet, northeasterly 160 feet, and southeasterly 370.70 feet to the east line of Section 22, T. 1 N., R. 15 E., G&SRM., and the southernmost point on the east line of Doc Butler Estates; thence northerly along the east line of said Sec. 22 and the east line of Doc Butler Estates 501.71 feet to the north end of the east line of Block No. 3, Doc Butler Estates; thence following the boundary of Doc Butler Estates northwesterly 388.78 feet, northeasterly 150 feet, and northwesterly 850 feet to the northernmost corner of Lot 1, Block No. 1, Doc Butler Estates; thence N. 40°36' E. along the southeasterly boundary of Block 2 Central Heights Addition to Central Heights Townsite, Map No. 69, C. C. R., a distance of 135 feet; thence N. 49°24' W. along the northeasterly sideline of Apache Avenue of said Central Heights Addition a distance of 45 feet, more or less, to the intersection of said southeasterly sideline of Apache Avenue with the southward prolongation of the east boundary of Central Heights School property as described in Dkt. 82, Pg. 322, C. C. R.; thence northerly along said southward prolongation and along the east boundary of Central Heights School property a distance of 625 feet, more or less, to the NE corner of Central Heights School property; thence northerly parallel to the east line of Globe Heights, Map No. 81, C. C. R., 390 feet, more or less to a point 375 feet, measured at right angles, from the near right-of-way line of North Main Street; thence N. 49° E., more or less, parallel to said right-of-way line 285 feet; more or less, to a point on the southeasterly extension of the southwesterly right-of-way line of Hengehold Avenue of Anaheim Subdivision, Map No. 65; C. C. R.; thence northwesterly along said extension 375 feet to the near right-of-way line of North Main Street; thence northeasterly along said right-of-way line 150 feet, more or less, to a point on the northerly prolongation of the east line of the Central Heights School property previously referred to; thence northerly along said prolongation 960 feet, more or less, to the south right-of-way line of U. S. Highway 60-70; thence westerly along the south right-of-way line of U. S. Highway 60-70 a distance of 1250 feet, more or less, to a point 600 feet east of and measured at right angles to the west boundary of NE 1/4 Sec. 22; thence southerly parallel to said west boundary of NE 1/4 Sec. 22 a distance of 4275 feet, more or less, to a point 150 feet north of and measured at right angles to the south boundary of NE 1/4 Sec. 22; thence westerly parallel to the south boundary of NE 1/4 Sec. 22 a distance of 600 feet, more or less, to the west boundary of NE 1/4 Sec. 22 and the east boundary of Country Club Manor, Replatted, Map No. 89, C. C. R.; thence northerly along the west boundary of NE 1/4 Sec. 22 a distance of 1180 feet, more or less, to the south right-of-way line of U. S. Highway 60-70; thence



westerly along said south right-of-way line 1330 feet, more or less, to the west boundary E $\frac{1}{2}$  NW $\frac{1}{4}$  Sec. 22; thence southerly along said west boundary E $\frac{1}{2}$  NW $\frac{1}{4}$  Sec. 22 to the north right-of-way line of Paxton Avenue of Country Club Manor, Replatted, Map No. 89, G. C. R.; thence westerly, southwesterly, southerly, southeasterly, easterly, and southerly along the exterior boundary of Block 7, Country Club Manor, Replatted, to a point on the south boundary of Sec. 22, said point being the SW corner of Lot 1, Block 7, Country Club Manor, Replatted, and the NW Cor. of Country Club Manor Unit No. 2, Map No. 146, G. C. R.; thence southeasterly along the southwesterly boundary of Country Club Manor Unit No. 2 a distance of 525 feet, more or less, to the SW Cor. Lot 5, Block 16, Country Club Manor Unit No. 2; thence southerly to the northwest corner of that property described in Dkt. 134, Pg. 266, G. C. R.; thence south 451.5 feet; thence N. 73° 35' E. along the southeasterly boundary of said property described in Dkt. 134, Pg. 266, G. C. R., 576 feet; thence southerly parallel to the west boundary of Central Heights, Map No. 52, G. C. R., a distance of 525 feet; thence southwesterly parallel to English Ave. in SE $\frac{1}{4}$  SW $\frac{1}{4}$  Sec. 22 a distance of 530 feet; thence southerly parallel to the west boundary of Central Heights 400 feet, more or less; thence easterly parallel to the south boundary of SW $\frac{1}{4}$  Sec. 22 a distance of 580 feet to the east boundary of SW $\frac{1}{4}$  Sec. 22 and the west boundary of Central Heights, said point also being the NW Cor. Lot 19, Block 26, Central Heights; thence southerly along the west boundary of Central Heights 335.3 feet to the SW Cor. of Central Heights, which point is also the S.  $\frac{1}{2}$ -corner of Sec. 22 and the point of beginning.

Specifically excluded from the above-described Sanitary District is the Cemetery property, bounded on the north by the north boundary of the E $\frac{1}{2}$  Sec. 22; on the east and south by Central Heights, Map No. 52, G. C. R.; and on the west by Country Club Manor Unit No. 2, Map No. 146, G. C. R.

Dated this 3rd day of February, 1969.

BOARD OF SUPERVISORS OF GILA COUNTY,  
ARIZONA

James W. H. Kaudy  
Charlie Nichols  
William C. Perkins

## FORMAL ORDER ESTABLISHING

## PINAL SANITARY DISTRICT

The Gila County Board of Supervisors having been petitioned to initiate proceedings for formation of a Sanitary District and establishment of boundaries of said Sanitary District, by the Board's Order on November 2, 1982, an election was held within the proposed boundaries of the Sanitary District so petitioned.

At their Meeting of November 3, 1982, the Gila County Board of Supervisors canvassed the Votes cast as said Special Election held to determine the desire of the prospective residents of such Sanitary District; and found that 438 Votes were cast for the establishment thereof, and 261 Votes were cast against such establishment.

The Board finding said Election was properly held and that it carried successfully; that the proposed work is necessary; and that the public health, comfort, convenience, necessity, and welfare will be promoted by establishment of said Sanitary District;

## IT IS HEREBY ORDERED AND DECLARED:

That a Sanitary District be, and the same is hereby, formed and organized, and that the name of the Sanitary District shall be known as PINAL SANITARY DISTRICT; and the boundaries of said Pinal Sanitary District are as follows:

Beginning at the Southwest Corner of Section 29; thence along the west line of Section 29 to the Northwest Corner of Section 29; thence in a northwesterly direction to the East  $\frac{1}{4}$  Corner of Section 20; thence northwesterly to the North  $\frac{1}{4}$  Corner of Section 21; thence north along the  $\frac{1}{4}$  section line of Section 16 to the North  $\frac{1}{4}$  Corner of Section 16; thence east along north section line of Sections 16 and 15 to the North  $\frac{1}{4}$  Corner of Section 15; thence south along the  $\frac{1}{4}$  section line to the Center of Section 15; thence east along the  $\frac{1}{4}$  section line to the East  $\frac{1}{4}$  corner of Section 15; thence south along the section lines of Sections 15, 22, and 27 to the Southeast Corner of Section 27; thence west along the south line of Section 27 to the Southwest Corner of Section 27; thence north along the west line of Section 27 to the West  $\frac{1}{4}$  Corner of Section 27; thence westerly along the  $\frac{1}{4}$  section line to the Center of Section 28; thence southwesterly to the Southwest Corner of Section 29, and the true Point of Beginning. All above being in Township 1 North, Range 15 East.

Specifically excluded from the above described Sanitary District is that area comprising Cobre Valley Sanitary District as Recorded in Docket 255, pages 76, 77, and

Formal Order Establishing  
Pinal Sanitary District

78 in the Gila County Recorder's Office, and any subsequent annexations to said Cobre Valley Sanitary District; and

That area known as the Pioneer Hills Subdivision, as set forth in Maps Nos. 519, 195A, and 519C in the Gila County Recorder's Office.

DATED at Globe, Arizona, this 22nd Day of November, 1982.

GILA COUNTY BOARD OF SUPERVISORS

Robert P. Basillas  
Chairman

Adolph B. Suijillo  
Vice-Chairman

James H. Jone  
Member

ATTEST:

Rose Marie Phillips  
Clerk

The City  
of Globe  
C

490169

STATE OF ARIZONA, County of Gila, ss:  
I do hereby certify that the within instrument was filed and recorded at request of Gila County Board of Supervisors

Date Dec. 7, 1982 Time 2:30 P. M. Docket 576 Office's Records Page S. 275 & 276

Records of Gila County, Arizona.  
WITNESS my hand and official seal the day and year first above written.

INDEXED  
FILED

MARY V. DE PAOLI, County Recorder  
By Celia S. Campos Deputy.



315261

BOOKET 255 PAGE 76

STATE OF ARIZONA, County of Gila, ss:  
I do hereby certify that the within instrument was filed and recorded at request of Louise G. Hochengatter.

Date Feb. 25, 1969 Time 3:30 P. M. Docket 255 Official Record Page 76  
Records of Gila County, Arizona.

WITNESS my hand and official seal the day and year first above written.

DORIS MCKIN, County Recorder

By [Signature] Recorder.

FORMAL ORDER ESTABLISHING

COBRE VALLEY SANITARY DISTRICT

The petitions for the establishment of a Sanitary District in the Central Heights and Country Club Manor area came on regularly for hearing before the Board of Supervisors of Gila County, Arizona, in the Court House in Globe, Arizona, on the 3rd day of February, 1969, at the hour of 11:00 o'clock A. M. The Board, after due consideration of all objections made by certain residents of the area, now finds that the petition was duly signed by the required number of owners of real property of the proposed district; that the proposed work is necessary and that the public health, comfort, convenience, necessity and welfare will be promoted by establishment of the district set forth in the petition,

IT IS HEREBY ORDERED AND DECLARED:

That a Sanitary District, be, and the same is hereby formed and organized, and that the name of the district shall be known as COBRE VALLEY SANITARY DISTRICT; that the boundaries are as follows:

Beginning at the South  $\frac{1}{4}$ -corner of Sec. 22, T. 1 N., R. 15 E., G&SRM., said point also being the SW Cor. Central Heights, Map No. 52, Gila County Records; thence easterly 1,325.7 feet along the south boundary of Sec. 22 and of Central Heights to the SE Cor. Central Heights; thence northerly along the east boundary of Central Heights 609.44 feet to the south end of the west line of Central Heights Addition to Central Heights Townsite, Map No. 69, G. C. R.; thence following the boundary of said Central Heights Addition northeasterly 6.67 feet, southeasterly 150 feet; northeasterly 150 feet, southeasterly 450 feet, and northeasterly 100 feet to the east corner of Lot 11, Block 7, Central Heights Addition, said east corner also being the northwesterly end of the southwesterly sideline of Central Ave. of Doc. Butler Estates, Map No. 123, G. C. R.; thence following the



boundary of Doc Butler Estates southeasterly 400 feet, northeasterly 160 feet, and southeasterly 370.70 feet to the east line of Section 22, T. 1 N., R. 15 E., G&SRM., and the southernmost point on the east line of Doc Butler Estates; thence northerly along the east line of said Sec. 22 and the east line of Doc Butler Estates 501.71 feet to the north end of the east line of Block No. 3, Doc Butler Estates; thence following the boundary of Doc Butler Estates northwesterly 388.78 feet, northeasterly 150 feet, and northwesterly 850 feet to the northernmost corner of Lot 1, Block No. 1, Doc Butler Estates; thence N. 40°36' E. along the southeasterly boundary of Block 2 Central Heights Addition to Central Heights Townsite, Map No. 69, C. C. R., a distance of 135 feet; thence N. 49°24' W. along the northeasterly sideline of Apache Avenue of said Central Heights Addition a distance of 45 feet, more or less, to the intersection of said southeasterly sideline of Apache Avenue with the southward prolongation of the east boundary of Central Heights School property as described in Dkt. 82, Pg. 322, C. C. R.; thence northerly along said southward prolongation and along the east boundary of Central Heights School property a distance of 625 feet, more or less, to the NE corner of Central Heights School property; thence northerly parallel to the east line of Globe Heights, Map No. 81, C. C. R., 390 feet, more or less to a point 375 feet, measured at right angles, from the near right-of-way line of North Main Street; thence N. 49° E., more or less, parallel to said right-of-way line 285 feet; more or less, to a point on the southeasterly extension of the southwesterly right-of-way line of Hengehold Avenue of Anaheim Subdivision, Map No. 65; C. C. R.; thence northwesterly along said extension 375 feet to the near right-of-way line of North Main Street; thence northeasterly along said right-of-way line 150 feet, more or less, to a point on the northerly prolongation of the east line of the Central Heights School property previously referred to; thence northerly along said prolongation 960 feet, more or less, to the south right-of-way line of U. S. Highway 60-70; thence westerly along the south right-of-way line of U. S. Highway 60-70 a distance of 1250 feet, more or less, to a point 600 feet east of and measured at right angles to the west boundary of NE 1/4 Sec. 22; thence southerly parallel to said west boundary of NE 1/4 Sec. 22 a distance of 4275 feet, more or less, to a point 150 feet north of and measured at right angles to the south boundary of NE 1/4 Sec. 22; thence westerly parallel to the south boundary of NE 1/4 Sec. 22 a distance of 600 feet, more or less, to the west boundary of NE 1/4 Sec. 22 and the east boundary of Country Club Manor, Replatted, Map No. 89, C. C. R.; thence northerly along the west boundary of NE 1/4 Sec. 22 a distance of 1180 feet, more or less, to the south right-of-way line of U. S. Highway 60-70; thence

westerly along said south right-of-way line 1330 feet, more or less, to the west boundary E $\frac{1}{2}$  NW $\frac{1}{4}$  Sec. 22; thence southerly along said west boundary E $\frac{1}{2}$  NW $\frac{1}{4}$  Sec. 22 to the north right-of-way line of Paxton Avenue of Country Club Manor, Replatted, Map No. 89, G. C. R.; thence westerly, southwesterly, southerly, southeasterly, easterly, and southerly along the exterior boundary of Block 7, Country Club Manor, Replatted, to a point on the south boundary of Sec. 22, said point being the SW corner of Lot 1, Block 7, Country Club Manor, Replatted, and the NW Cor. of Country Club Manor Unit No. 2, Map No. 146, G. C. R.; thence southeasterly along the southwesterly boundary of Country Club Manor Unit No. 2 a distance of 525 feet, more or less, to the SW Cor. Lot 5, Block 16, Country Club Manor Unit No. 2; thence southerly to the northwest corner of that property described in Dkt. 134, Pg. 266, G. C. R.; thence south 451.5 feet; thence N. 73° 35' E. along the southeasterly boundary of said property described in Dkt. 134, Pg. 266, G. C. R., 576 feet; thence southerly parallel to the west boundary of Central Heights, Map No. 52, G. C. R., a distance of 525 feet; thence southwesterly parallel to English Ave. in SE $\frac{1}{4}$  SW $\frac{1}{4}$  Sec. 22 a distance of 530 feet; thence southerly parallel to the west boundary of Central Heights 400 feet, more or less; thence easterly parallel to the south boundary of SW $\frac{1}{4}$  Sec. 22 a distance of 580 feet to the east boundary of SW $\frac{1}{4}$  Sec. 22 and the west boundary of Central Heights, said point also being the NW Cor. Lot 19, Block 26, Central Heights; thence southerly along the west boundary of Central Heights 335.3 feet to the SW Cor. of Central Heights, which point is also the S.  $\frac{1}{2}$ -corner of Sec. 22 and the point of beginning.

Specifically excluded from the above-described Sanitary District is the Cemetery property, bounded on the north by the north boundary of the E $\frac{1}{2}$  Sec. 22; on the east and south by Central Heights, Map No. 52, G. C. R.; and on the west by Country Club Manor Unit No. 2, Map No. 146, G. C. R.

Dated this 3rd day of February, 1969.

BOARD OF SUPERVISORS OF GILA COUNTY,  
ARIZONA

James W. H. Kaudy  
Charlie Nichols  
William C. Perkins



**RESOLUTION NO. 001**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE TRI-CITY REGIONAL SANITARY DISTRICT DECLARING THAT THE PINAL SANITARY DISTRICT AND THE COBRE VALLEY SANITARY DISTRICT, GILA COUNTY, STATE OF ARIZONA ARE MERGED PURSUANT TO ARIZONA REVISED STATUTES §48-2001.01(G).**

**RECITALS:**

**WHEREAS**, the Pinal Sanitary District, Gila County, was an Arizona Sanitary District formed and operating under the laws of the State of Arizona as set forth in Arizona Revised Statutes ("ARS") §48-2001 et seq.; and,

**WHEREAS**, the Cobre Valley Sanitary District, Gila County, was an Arizona Sanitary District formed and operating under the laws of the State of Arizona as set forth in Arizona Revised Statutes ("ARS") §48-2001 et seq.; and,

**WHEREAS**, pursuant to ARS §48-2001.01(A)(2), the board of directors of each of the respective sanitary districts did by a two-thirds vote adopt a resolution requesting that the merger of the districts take place; and,

**WHEREAS**, pursuant to ARS §48-2001.01(D), the Gila County Board of Supervisors after a public hearing determined that the merger of the Pinal Sanitary District and the Cobre Valley Sanitary District would serve the public convenience, welfare or necessity and called for an election concerning the proposed merger of the districts on May 17, 2011; and,

**WHEREAS**, the majority of the votes cast in the merger election held on May 17, 2011 were in favor of the merger of the two districts; that pursuant to ARS §48-2001.01(F) the Gila County Board of Supervisors did meet and canvass the returns and determined that the majority of the votes cast at the election held on May 17, 2011 in each of the two districts was in favor of merging the sanitary districts; and that the Board of Supervisors entered that fact in the minutes; and,

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the Pinal Sanitary District as follows:

**THAT** pursuant to ARS §48-2001.01(G), the Pinal Sanitary District and the Cobre Valley Sanitary District are hereby merged to become a new Arizona Sanitary District, the Tri-City Regional Sanitary District, Gila County, State of Arizona, and each of the prior districts are hereby joined into the Tri-City Regional Sanitary District.

**THAT** pursuant to ARS §48-2001.01(G), the Tri-City Regional Sanitary District will be administered by the new Board consisting of five (5) members formed by appointment from the existing members of the boards of directors of the two districts, namely Robert J. Zache, Mary Anne Moreno, Kevin Kenney, Mitch Malkovich and Richard Dixon with Robert J. Zache serving as President and Mary Anne Moreno serving as Secretary.

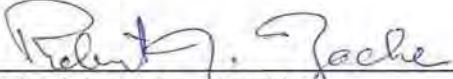
THAT the officers of Tri-City Regional Sanitary District are hereby authorized to establish a new bank account for the District and to execute such forms as are required by the banking institution and that the funds maintained in the bank accounts of the Pinal Sanitary District and the Cobre Valley Sanitary District are to be placed in said new account as soon as is practicable.

THAT the officers of the District and the attorney for the District are hereby authorized to take all necessary steps to complete the merger of the districts.


THAT pursuant to ARS §48-2001.01(G), this Resolution including the names of the members of the Board of Directors is to be sent to the Gila County Board of Supervisors.

THAT pursuant to ARS §48-2001.01(G), a certified copy of this Resolution and the legal description of the Tri-City Regional Sanitary District are to be recorded at the office of the Gila County Recorder.

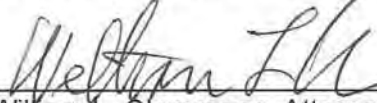
**PASSED AND ADOPTED** this 20<sup>th</sup> day of June, 2011 by a majority vote of the Board of Directors of the Tri-City Regional Sanitary District, Gila County, State of Arizona.

  
\_\_\_\_\_  
Robert J. Zache, President

ATTEST:

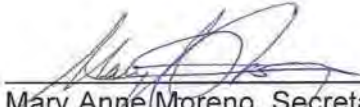
  
\_\_\_\_\_  
Mary Anne Moreno, Secretary

APPROVED AS TO FORM:

  
\_\_\_\_\_  
William L. Clemmens, Attorney

#### CERTIFICATION

I, Mary Anne Moreno, the duly appointed and acting Secretary of the Board of Directors of the Tri-City Regional Sanitary District of Gila County, Arizona, do hereby certify that the above and foregoing Resolution No. 001 was duly passed and adopted by the Board of Directors at a meeting held on June 20, 2011 and the vote was 05 aye's, 0 nay's, 0 abstained, 0 were absent and 05 Board Members were present at such meeting.

  
\_\_\_\_\_  
Mary Anne Moreno, Secretary

## **Boundary Description Tri-City Regional Sanitary District**

A tract of land being portions of Sections 15, 16, 20, 21, 22, 27, 28 and 29, in Township 1 North, Range 15 East of the Gila and Salt River Meridian, in Gila County, Arizona, more particularly described as follows:

Beginning at the Southwest Corner of said Section 29;  
Thence northerly along the west line of said Section 29 to the Northwest Corner of said Section 29;  
Thence northeasterly to the East Quarter Corner of said section 20;  
Thence northeasterly to the North Quarter Corner of said Section 21;  
Thence northerly along the north-south mid-section line of said Section 16 to the North Quarter Corner of said Section 16;  
Thence Easterly along the north lines of said Section 16 and Section 15 to the North Quarter Corner of said Section 15;  
Thence southerly along the north-south mid-section line of said Section 15 to the Center Quarter Corner of said Section 15;  
Thence easterly along the east-west mid-section line of said Section 15 to the East Quarter Corner of said Section 15;  
Thence southerly along the east lines of said Section 15, Section 22 and Section 27 to the Southeast Corner of said Section 27;  
Thence westerly along the south line of said Section 27 to the Southwest Corner of said Section 27;  
Thence northerly along the west line of said Section 27 to the West Quarter Corner of said Section 27;  
Thence westerly along the east-west mid-section line of said Section 28 to the Center Quarter Corner of said Section 28;  
Thence southwesterly to the Southwest Corner of said Section 29 and the Point of Beginning.

Except any portion of the above-described tract of land within the plat of Pioneer Hills Subdivision, recorded in Map Numbers 519, 519A and 519B, in the records of Gila County, Arizona.

Also except any portion of the above-described tract of land within the plat of Chaparral Estates, recorded as Map Number 455, in the records of Gila County, Arizona.

Also except and portion of the above-described tract of land within the plat of Country Club Annex, recorded as Map Numbers 615 and 615A in the records of Gila County, Arizona.

Also except any portion of the above-described tract of land within the plat of County Club Annex Unit 1, recorded as Map Numbers 688, 688A, 695 and 695A in the records of Gila County, Arizona.

Also except any portion of the above-described tract of land within Parcel No. 1 and also except any portion of the above-described tract of land within Parcel No. 2 as described in Document Number 2006-010079 in the records of Gila County, Arizona.

Also except any portion of the above-described property within the cemetery tract, more particularly described as follows: bounded on the north by the north line of the south half of said Section 22; bounded on the east and south by the plat of Central Heights, recorded as Map Number 52 in the records of Gila County, Arizona; bounded on the west by the plat of Country Club Manor Unit 2, recorded as Map Number 146 in the records of Gila County, Arizona.



NOTES  
 1) PROBABILITIES ARE NOTED FROM RECORDS LAND RECORDS  
 2) CALCULATED AREAS INCLUDING CD TO PART TWO RECORDS  
 3) PERCENTAGE



**LEGEND**

	TRICITY REGIONAL SANITARY DISTRICT
	SECTION BOUNDARY
	TRACT BOUNDARY
	TRACT BOUNDARY
	TRACT BOUNDARY
	TRACT BOUNDARY

**MAP OF BOUNDARY**  
 OF THE  
 TRICITY REGIONAL SANITARY DISTRICT  
 IN T1N, R15E, G4S3R.M  
 GILA COUNTY, ARIZONA

SCALE: 100' = 1" DATE: 4/30/2018







When Recorded, Mail to:

William L. Clemmens

Law Offices of William L. Clemmens

416 W Sullivan St

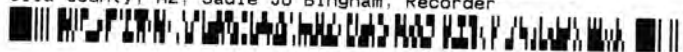
Miami AZ 85539-1212



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**Caption Heading/Title:** Resolution 18-001

**Do Not Remove This Sheet, It Is Part Of The Recorded Document**



**RESOLUTION NO. 18-001**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE TRI-CITY REGIONAL SANITARY DISTRICT, GILA COUNTY, STATE OF ARIZONA ADOPTING AND APPROVING THE OFFICIAL BOUNDARY FOR THE TRI-CITY REGIONAL SANITARY DISTRICT OF GILA COUNTY, ARIZONA.**

**RECITALS:**

**WHEREAS**, the Tri-City Regional Sanitary District ("TRSD"), Gila County, is an Arizona Sanitary District formed and operating under the laws of the State of Arizona as set forth in Arizona Revised Statutes ("ARS") §48-2001 et seq. and formed by the merger of the Pinal Sanitary District and the Cobre Valley Sanitary District by an election held on May 17, 2011; and approval by the Gila County Board of Supervisors; and,

**WHEREAS**, the legal description for the boundary of the TRSD and map were prepared at the time of the merger; and,

**WHEREAS**, Staff of Gila County have raised questions about the legal boundary of TRSD because the legal description of the boundary was never recorded with the Gila County Recorder; and,

**WHEREAS**, it is the desire of the Board of Directors of TRSD to resolve all issues regarding the TRSD boundary.

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the TRSD as follows:

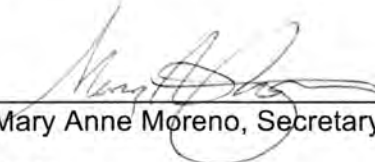
**THAT**, the legal description and map attached hereto are hereby adopted as the official description of the TRSD boundary; and,

**THAT**, TRSD staff is directed to record the legal description of the boundary with the Gila County Recorder.

**PASSED AND ADOPTED** this 30<sup>th</sup> day of April, 2018 by the Board of Directors of the Tri-City Regional Sanitary District, Gila County, State of Arizona.

**ATTEST:**

  
\_\_\_\_\_  
Robert J. Zache, President

  
\_\_\_\_\_  
Mary Anne Moreno, Secretary

**CERTIFICATION**

I, Mary Anne Moreno, the duly appointed Secretary of the Board of Directors of the Tri-City Regional Sanitary District of Gila County, Arizona, do hereby certify that the above and foregoing Resolution No. 18-001 was duly passed and adopted by the Board of Directors at a meeting held on April 30, 2018 and the vote was 3 aye's, 0 nay's 0 abstained, 2 were absent, and 3 Board Members were present at such meeting.

  
\_\_\_\_\_  
Mary Anne Moreno, Secretary



## Boundary Description Tri-City Regional Sanitary District

A tract of land being portions of Sections 15, 16, 20, 21, 22, 27, 28 and 29, in Township 1 North, Range 15 East of the Gila and Salt River Meridian, in Gila County, Arizona, more particularly described as follows:

Beginning at the Southwest Corner of said Section 29;  
Thence northerly along the west line of said Section 29 to the Northwest Corner of said Section 29;  
Thence northeasterly to the East Quarter Corner of said section 20;  
Thence northeasterly to the North Quarter Corner of said Section 21;  
Thence northerly along the north-south mid-section line of said Section 16 to the North Quarter Corner of said Section 16;  
Thence Easterly along the north lines of said Section 16 and Section 15 to the North Quarter Corner of said Section 15;  
Thence southerly along the north-south mid-section line of said Section 15 to the Center Quarter Corner of said Section 15;  
Thence easterly along the east-west mid-section line of said Section 15 to the East Quarter Corner of said Section 15;  
Thence southerly along the east lines of said Section 15, Section 22 and Section 27 to the Southeast Corner of said Section 27;  
Thence westerly along the south line of said Section 27 to the Southwest Corner of said Section 27;  
Thence northerly along the west line of said Section 27 to the West Quarter Corner of said Section 27;  
Thence westerly along the east-west mid-section line of said Section 28 to the Center Quarter Corner of said Section 28;  
Thence southwesterly to the Southwest Corner of said Section 29 and the Point of Beginning.

Except any portion of the above-described tract of land within the plat of Pioneer Hills Subdivision, recorded in Map Numbers 519, 519A and 519B, in the records of Gila County, Arizona.

Also except any portion of the above-described tract of land within the plat of Chaparral Estates, recorded as Map Number 455, in the records of Gila County, Arizona.

Also except and portion of the above-described tract of land within the plat of Country Club Annex, recorded as Map Numbers 615 and 615A in the records of Gila County, Arizona.

Also except any portion of the above-described tract of land within the plat of County Club Annex Unit 1, recorded as Map Numbers 688, 688A, 695 and 695A in the records of Gila County, Arizona.

Also except any portion of the above-described tract of land within Parcel No. 1 and also except any portion of the above-described tract of land within Parcel No. 2 as described in Document Number 2006-010079 in the records of Gila County, Arizona.

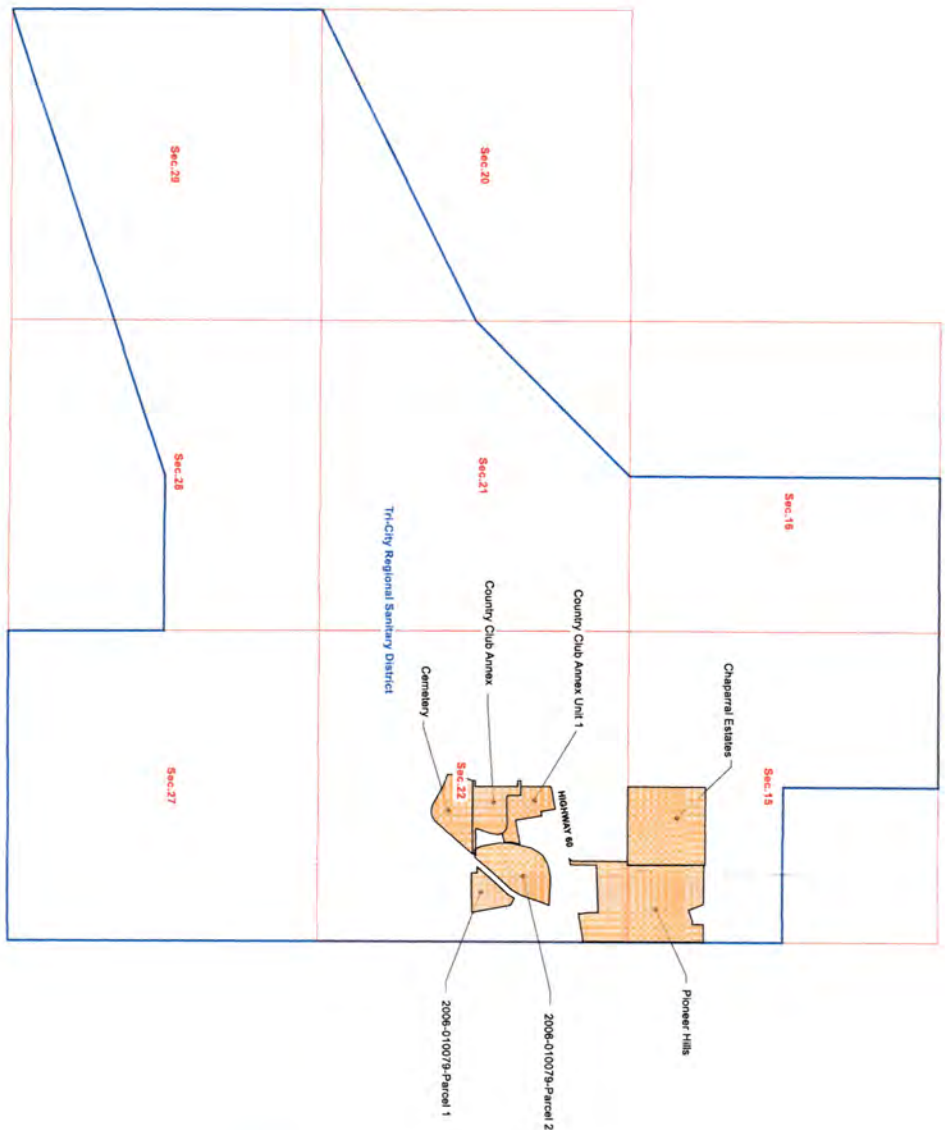


Also except any portion of the above-described property within the cemetery tract, more particularly described as follows: bounded on the north by the north line of the south half of said Section 22; bounded on the east and south by the plat of Central Heights, recorded as Map Number 52 in the records of Gila County, Arizona; bounded on the west by the plat of Country Club Manor Unit 2, recorded as Map Number 146 in the records of Gila County, Arizona.





BOUNDARY LINES AND EXCLUDED AREAS SHOWN ON THIS MAP ARE BASED ON RECORDS ON FILE IN THE RECORDER'S OFFICE. FIELD SURVEY DATA IS NOT SHOWN.



LEGEND	
[Blue line]	TRI-CITY REGIONAL SANITARY DISTRICT BOUNDARY
[Red line]	PARCEL BOUNDARY
[Orange hatched area]	EXCLUDED AREAS



**MAP OF BOUNDARY**  
 OF THE  
 TRI-CITY REGIONAL SANITARY DISTRICT  
 IN T1N, R15E, Q4S, R1M  
 GILA COUNTY, ARIZONA

SCALE: 1:5000 DATE: 4/30/2018



AVAX, LLC  
 1000 N. 10th Ave  
 Suite 100  
 Phoenix, AZ 85003  
 (602) 425-8000



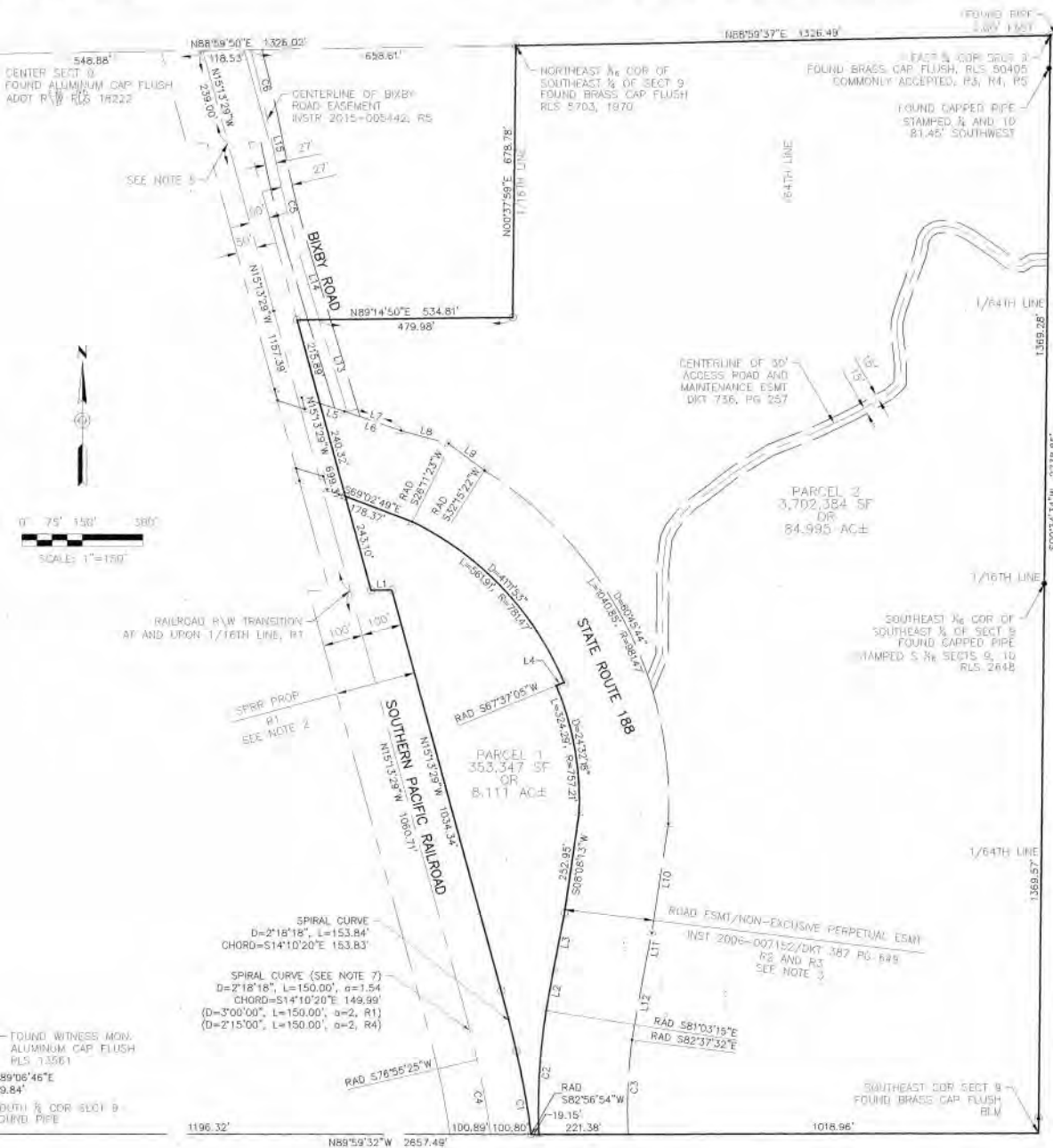
# RECORD OF SURVEY - MINOR LAND DIVISION

A PART OF THAT PROPERTY DESCRIBED IN BOOK 17, PAGE 162 AND BOOK 17, PAGE 219 OF REAL ESTATE DEEDS, BEING PART OF THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 1 NORTH, RANGE 15 EAST, OF THE GILA AND SALT RIVER MERIDIAN, GILA COUNTY, ARIZONA.



State of Arizona, County of Gila  
I hereby certify that the within instrument was filed and recorded at the request of  
**BHP Copper, Inc**  
Date **4/25/23** Time **10:26** Map No. **5730**  
Official Records of Gila County, AZ  
Witness my hand and official seal  
the day and year written above  
Sadie Bingham  
Gila County Recorder  
Fee # **2023-063550**

APPROVED TO RECORD  
The Public Land Commission has approved this Survey Minor Land Division  
MLD 2023-04-11-2023  
S. L. Kress  
Surveyor Registered in the State of Arizona



### DESCRIPTION

THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 1 NORTH, RANGE 15 EAST, GILA AND SALT RIVER MERIDIAN, GILA COUNTY, ARIZONA.  
EXCEPT THE NORTH HALF OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 1 NORTH, RANGE 15 EAST, GILA AND SALT RIVER BASE AND MERIDIAN, GILA COUNTY, ARIZONA.  
AND EXCEPT THAT PARCEL LYING WEST OF THE SOUTHERN PACIFIC RAILROAD LYING WITHIN THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 1 NORTH, RANGE 15 EAST, GILA AND SALT RIVER BASE AND MERIDIAN, GILA COUNTY, ARIZONA.  
AND EXCEPT ANY PORTION OF THE SOUTHERN PACIFIC RAILROAD LYING WITHIN THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 1 NORTH, RANGE 15 EAST, GILA AND SALT RIVER BASE AND MERIDIAN, GILA COUNTY, ARIZONA.  
AND EXCEPT ALL THE ORE THEREFROM AS RESERVED IN PATENT TO THE UNITED STATES OF AMERICA, REFORMED BOOK 2, PAGE 292 AND BOOK 17, PAGE 245, RECORDS OF GILA COUNTY, ARIZONA.

### PARCEL INFORMATION

APR 11/2023 10:26 AM  
BHP COPPER, INC  
4,055,731 SF OR 93.107 AC±  
CONTACT  
JON BRYANT-BAKER  
BHP COPPER LAND DEPARTMENT  
318-470-8978  
JON.BAKER@BHP.COM

### REFERENCES

- R1-SOUTHERN PACIFIC RAILROAD MAP 704-4-12
- R2-ADOT SR 188 R/W MAP 3-214-703
- R3-ADOT SR 188 R/W MAP 3-188-A-BDD
- R4-RECORD OF SURVEY MINOR LAND DIVISION, PDS 3531, US 39196
- R5-RECORD OF SURVEY SHOWING BIXBY ROAD, ROS 4526, LS 33916

### LEGEND

- SET NEBAR AND CAP, RLS #7537
- FOUND ALUMINUM CAP FLUSH, UNLESS OTHERWISE NOTED
- FOUND PIPE, UNLESS OTHERWISE NOTED
- FOUND ALUMINUM CAP FLUSH, ADOT R/W RLS 18222
- SECTION LINE
- MID-SECTION LINE
- 1/4 OR 1/8 SECTION LINE
- BOUNDARY LINE
- CENTERLINE
- EASEMENT

### SURVEYOR'S NOTES

- SURVEYED DURING THE MONTH OF MARCH 2023 AND COORDINATES WERE VERIFIED IN THE FIELD USING REAL TIME KINEMATIC GPS OBSERVATIONS RELATIVE TO PUBLISHED CONTROL POINTS.
- LEGAL DESCRIPTION PROVIDED IN PIONEER TITLE AGENCY REPORT OF TITLE #R040472, DATED FEBRUARY 15, 2023.
- STATE ROUTE 188 IN PLACE PER AN NON-EXCLUSIVE PERPETUAL EASEMENT (ADOT/ET 587 PAGE 645) FOR A 1974 REALIGNMENT AT MIAMI WASH AND ROADWAY EASEMENT (INSTRUMENT 2006-007692) FOR 2006 WIDENING AND GULCHET INSTALLATIONS. ADOT RIGHT OF WAY PLANS (R2 AND R3) ARE PICTORIAL REPRESENTATIONS OF NOTED DOCUMENTS AND SHOW THAT THE ROADWAY EASEMENT ACROSS THIS PROPERTY IS INDEPENDENT OF ROADWAY AND CONSTRUCTION CENTERLINES.
- RAILROAD RIGHT OF WAY LIMITS DETERMINED BY OBSERVATION OF RAILROAD CENTERLINE AS VERIFIED BY INTERPRETATION OF RAILROAD MAP (R1), RECORD OF SURVEY 3531 (R4) AND RECORD OF SURVEY 4526 (R5).
- INFERRED FROM RAILROAD MAP (R1) THAT RAILROAD RIGHT OF WAY TRANSITION IS PARALLEL TO, AND 239.00' SOUTHEAST OF, THE NORTH LINE OF THE SOUTHEAST QUARTER OF SECTION 9, ALONG THE CENTERLINE OF RAILROAD.
- PARCEL IS ZONED TR-02T, EXCEPT BETWEEN THE EAST LINE OF SR 188 EASEMENT AND A LINE 400 FEET EAST OF, AND OFFSET FROM, THE EAST STATE ROUTE 188 EASEMENT LINE, WHERE THE ZONING CHANGES TO C3.
- RAILROAD MAP (R1) SPIRAL CURVE HAS A CALCULATED  $a=2$ , AND R/O 3531 (R4) STATES THAT  $a=2$  BUT IF THE CALCULATED DELTA AND SPIRAL LENGTH ON ROS 3531 ARE HELD,  $a$  WOULD CALCULATE TO 1.5. SPIRAL CURVE LENGTH FROM R1 AND R4 WAS HELD.
- PROPERTY IS VACANT.
- BOTH PARCEL 1 AND PARCEL 2 CAN BE ACCESSED FROM STATE ROUTE 188, WHICH IS TRAVERSABLE BY A 2-WHEEL DRIVE PASSENGER MOTOR VEHICLE.
- SURVEY REQUESTED BY MIKE KRESS OF PACE ENGINEERING ON BEHALF OF TRI CITY REGIONAL SANITARY DISTRICT
- MONUMENTS TO BE SET UPON APPROVAL.

CURVE DATA TABLE			LINE DATA TABLE		LINE DATA TABLE		LINE DATA TABLE		
CURVE	LENGTH	RADIUS	DELTA	LINE BEARING	DISTANCE	LINE BEARING	DISTANCE	LINE BEARING	DISTANCE
C1	211.33'	2069.66'	6°01'28"	L1	N89°29'56"E	51.70'	L8	S74°41'11"E	122.07'
C2	308.53'	1580.09'	11°10'53"	L2	S10°14'40"W	106.52'	L9	S53°07'18"E	111.28'
C3	335.48'	1332.88'	10°07'21"	L3	S10°56'57"W	139.61'	L10	S08°37'43"W	274.39'
C4	188.43'	1909.89'	5°30'10"	L4	S67°45'34"W	20.92'	L11	S11°22'29"W	77.53'
C5	211.81'	2294.50'	5°16'21"	L5	S72°18'00"E	64.07'	L12	S10°04'02"W	193.28'
C6	389.05'	2899.37'	3°44'34"	L6	S71°01'22"E	149.11'	L13	S16°49'12"E	241.76'
				L7	S70°59'24"E	111.61'	L14	S16°49'12"E	183.67'

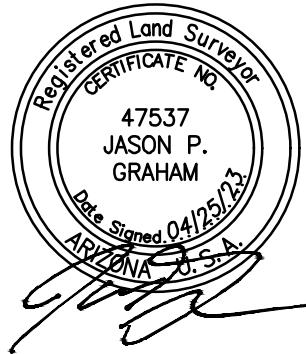
7878 N. 16th Street  
Suite 300  
DIBBLE  
MINOR LAND DIVISION  
PROJECT NO. 121133 DATE: APR 2023 SCALE: AS SHOWN REVIEWED: JPK  
SURVEYED: MAR 2023 DRAWN: ADC REVIEWED: JPK  
FIELD WORK: ABC/JEN  
SHEET



EXHIBIT "A"  
LEGAL DESCRIPTION  
FOR  
PARCEL 1

A PARCEL OF LAND SITUATED IN A PART OF THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 1 NORTH, RANGE 15 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PARCEL 1, MINOR LAND DIVISION, RECORD OF SURVEY NUMBER 5730, RECORDS OF GILA COUNTY, ARIZONA.





# ***Appendix E***

## ***Record of Public Participation***

## **Appendix E Record of Public Participation**

----- Will be provided by CAG Staff upon CAG Regional Council Approval -----

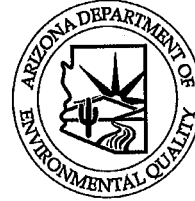
# ***Appendix F***

## ***Communications***



Douglas A. Ducey  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera  
Director

June 3, 2016

Mr. Alan Urban  
Central Arizona Governments  
Community Development Manager  
1075 S. Idaho Road, Suite 300  
Apache Junction, AZ 85119

Re: DMA Status of Sanitary Districts in Gila County

Dear Mr. Urban:

The letter is in response to your February 12, 2016 request for clarification as to the current status of the Pinal Sanitary, Cobre Valley Sanitary and Tri-City Regional Sanitary Districts as designated management agencies under Section 208 of the Clean Water Act.

The *Central Arizona Association of Governments 208 Areawide Water Quality Management Plan Update, September, 1994* identifies both the Pinal Sanitary District and Cobre Valley Sanitary District as designated management agencies (DMA). Pinal and Cobre Valley received their DMA designations in 1983 and 1985, respectively, in order to address serious water quality issues in their areas including failing septic systems and use of cesspools.

In 2011, the Tri-City Regional Sanitary District (TRSD) was formed through the merger of the Pinal and Cobre Valley Sanitary Districts. In the next 12-18 months, TRSD will be preparing a 208 Water Quality Management Plan amendment to the *2016 CAG Areawide Water Quality Management Plan* requesting approval to be the DMA for the areas currently assigned to the Pinal Sanitary and Cobre Valley Sanitary Districts and to identify TRSD's plan to address the water quality issues within the District. Until such time as an amendment is processed through CAG and ADEQ and approved by the EPA, Pinal and Cobre Valley remain the recognized DMAs but are being administered by TRSD.

ADEQ apologizes for the delayed response to your request. This particular situation has no precedent that we are aware of, so it has taken some additional time for both historical and legal review. If you have any additional questions, please contact me directly at 602.771.2321.

Sincerely,

  
Trevor Baggione, Director  
Water Quality Division

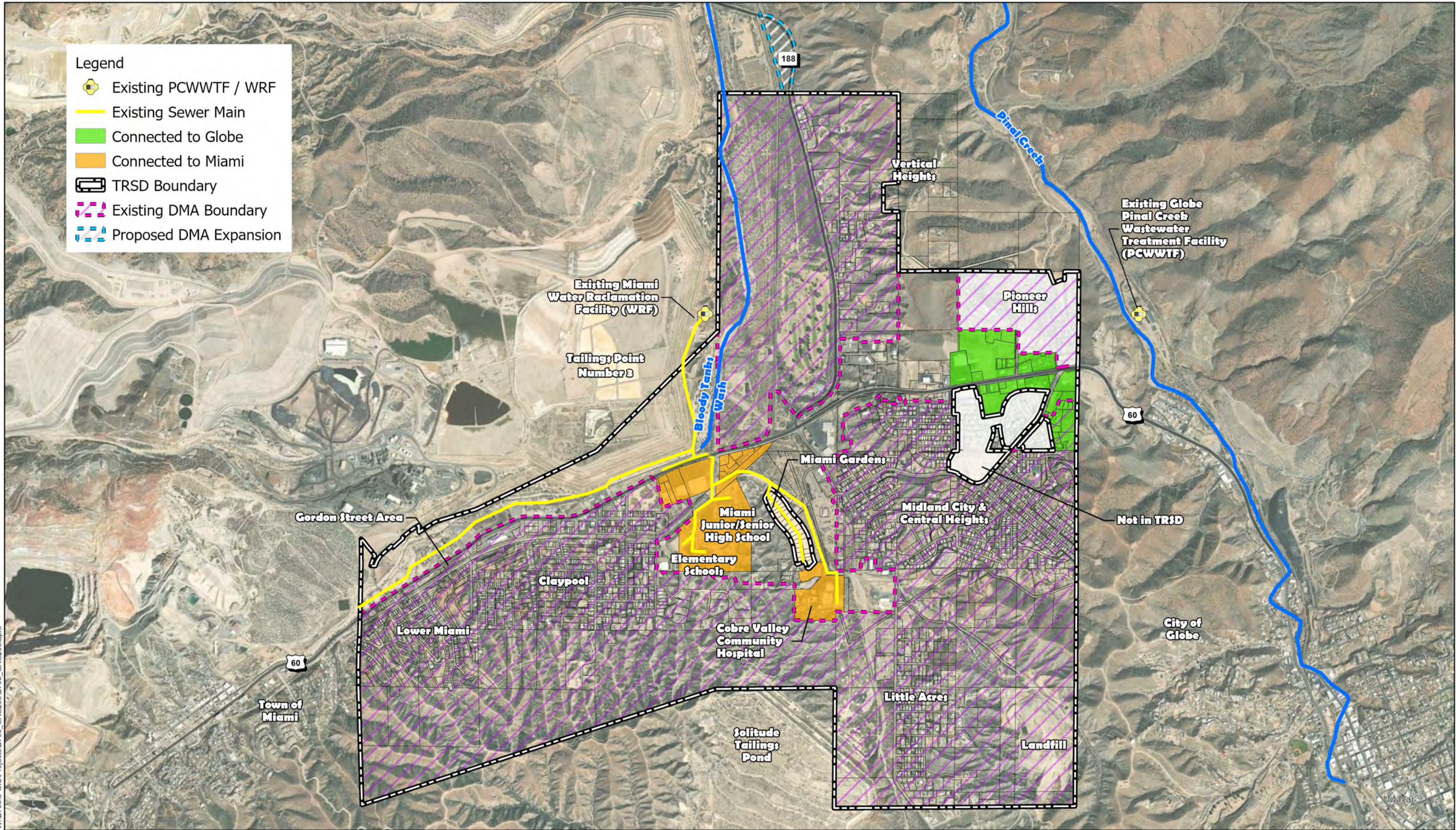
cc: Jared Vollmer, U.S. Environmental Protection Agency, Region 9  
Bob Zache, President, Tri-City Regional Sanitary District

COPY

# ***Appendix G***

## ***Maps***



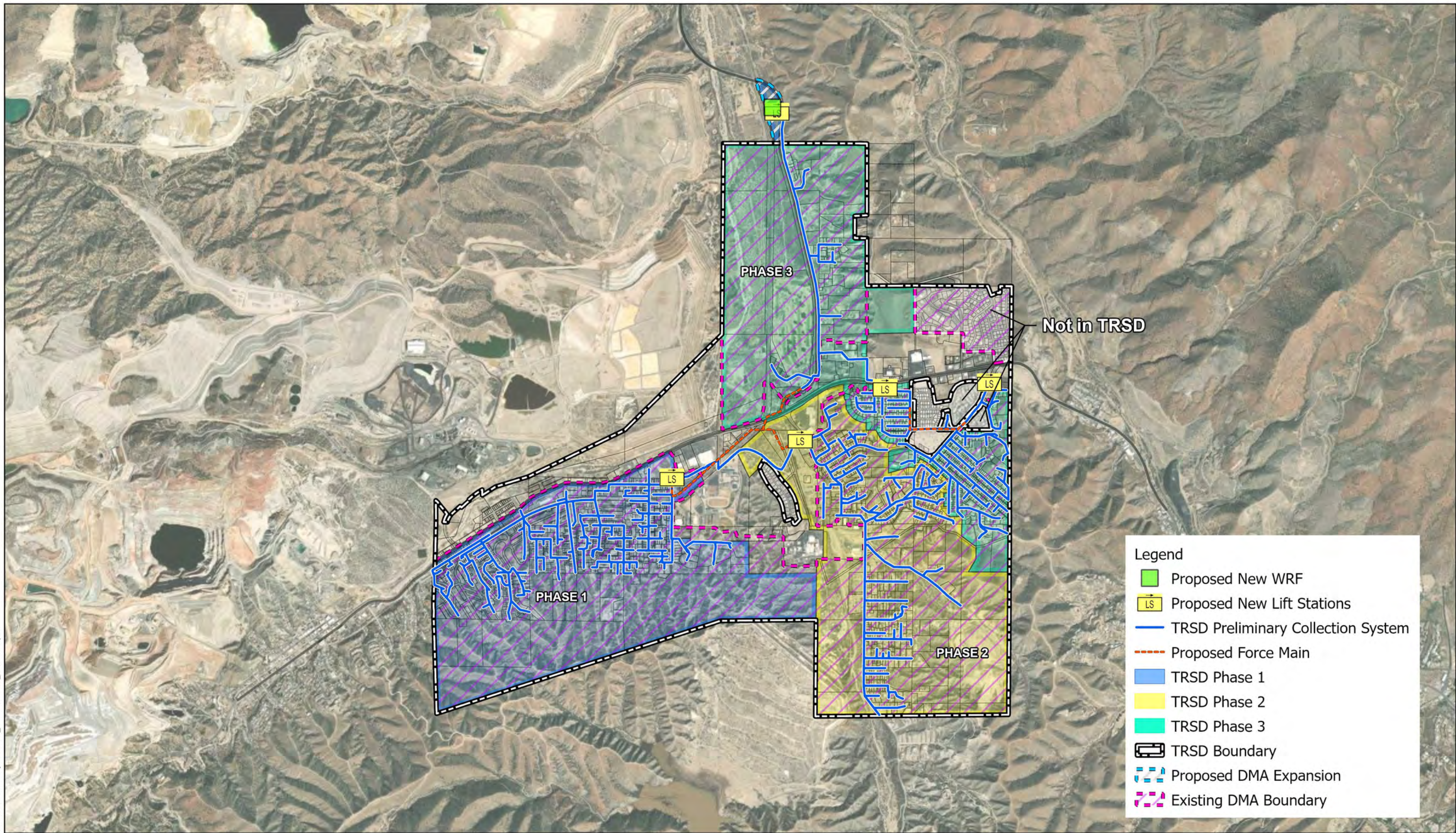


# TRI-CITY REGIONAL SANITARY DISTRICT

# EXISTING FACILITIES



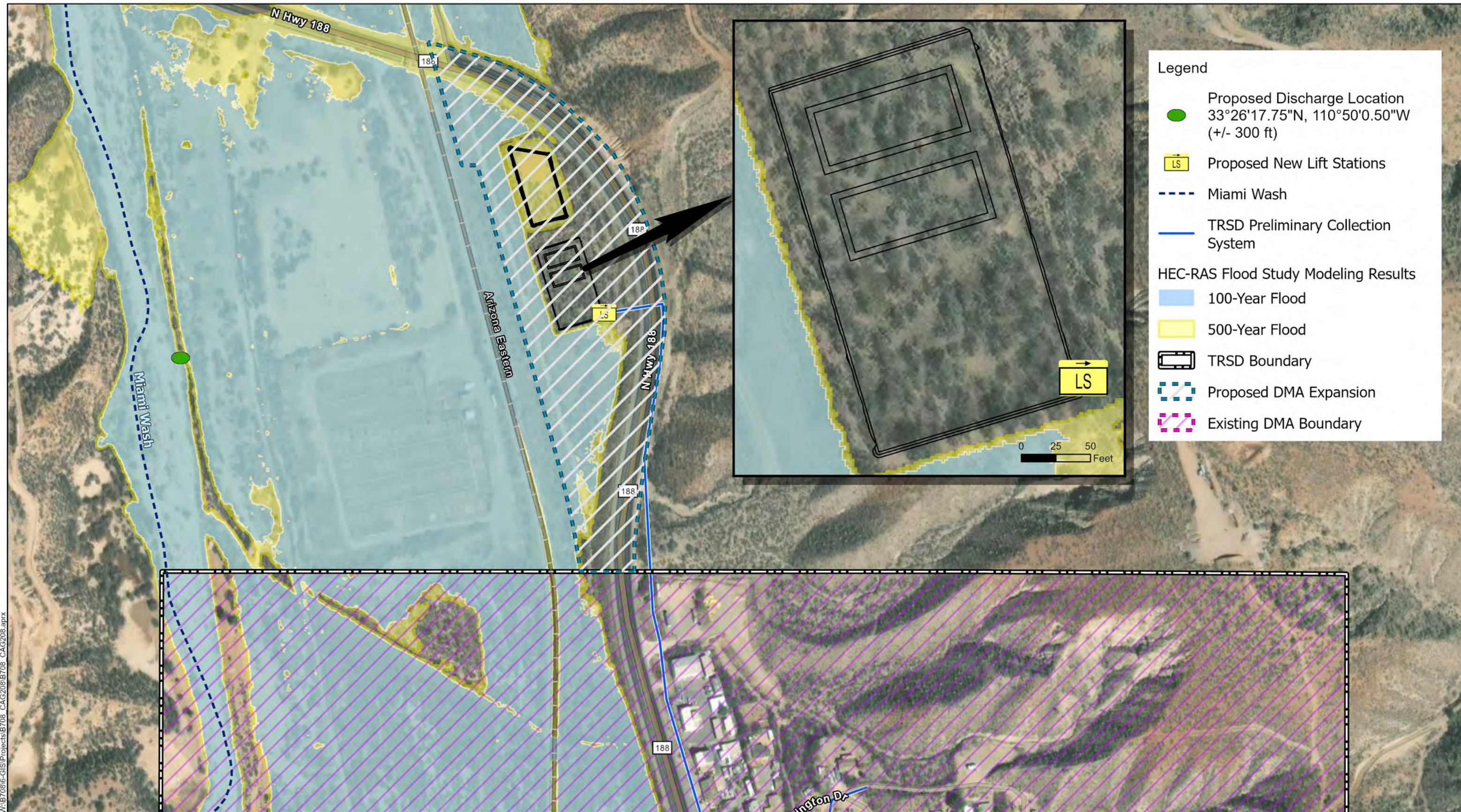
W:\B708\GIS\Projects\B708\_CAG208\B708\_CAG208.aprx



# TRI-CITY REGIONAL SANITARY DISTRICT

# PRELIMINARY COLLECTION SYSTEM



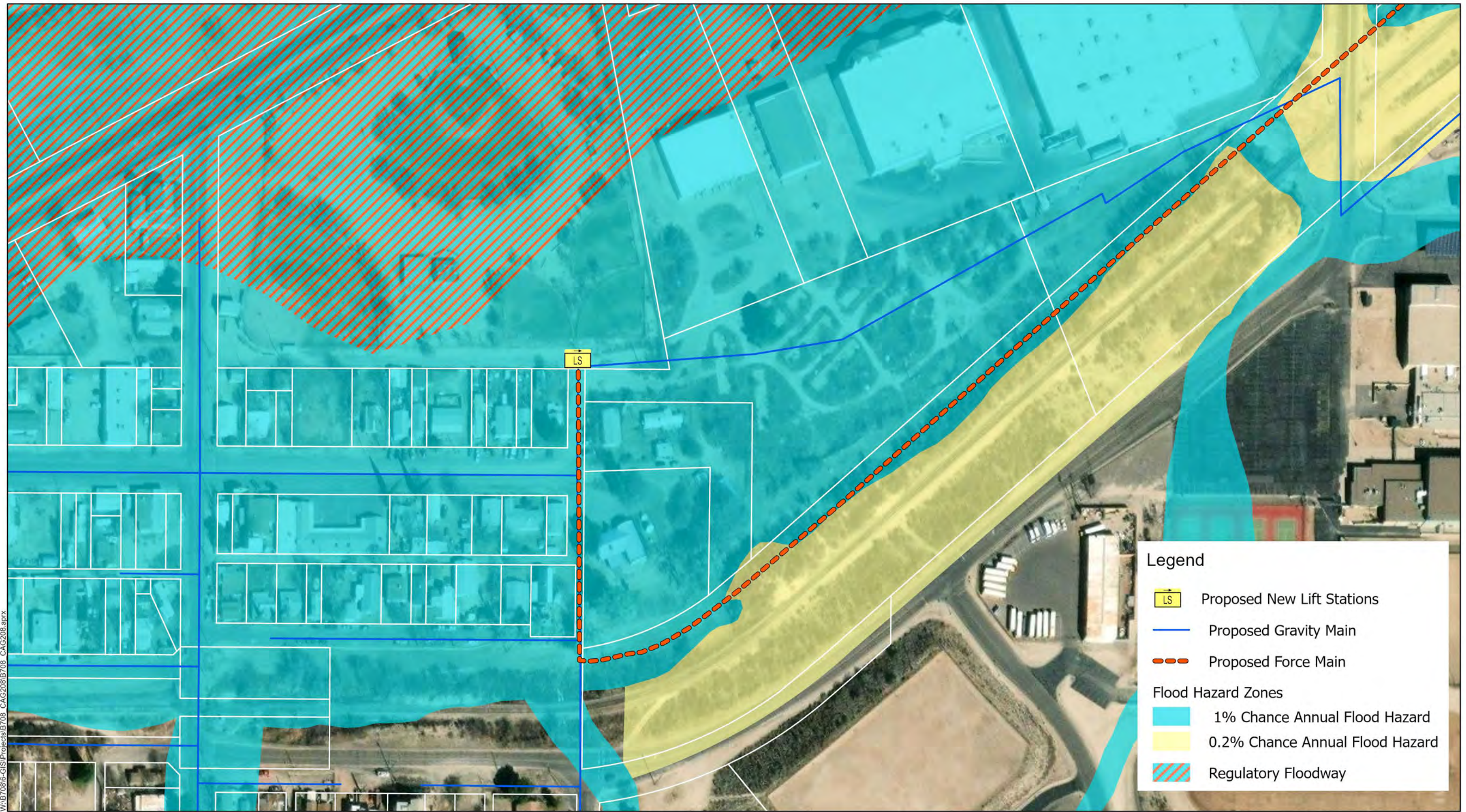


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# TRI-CITY REGIONAL SANITARY DISTRICT

# PROPOSED PROJECT WRF





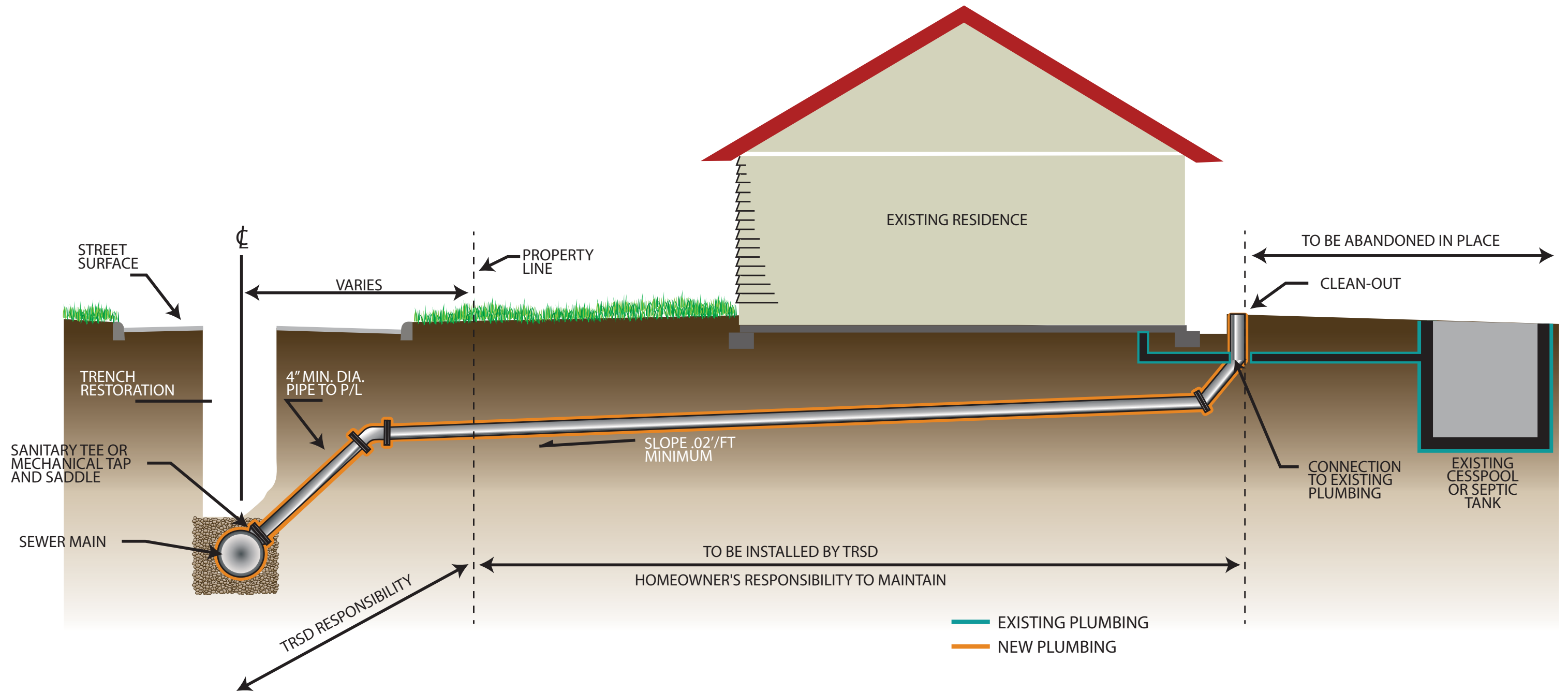
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# TRI-CITY REGIONAL SANITARY DISTRICT

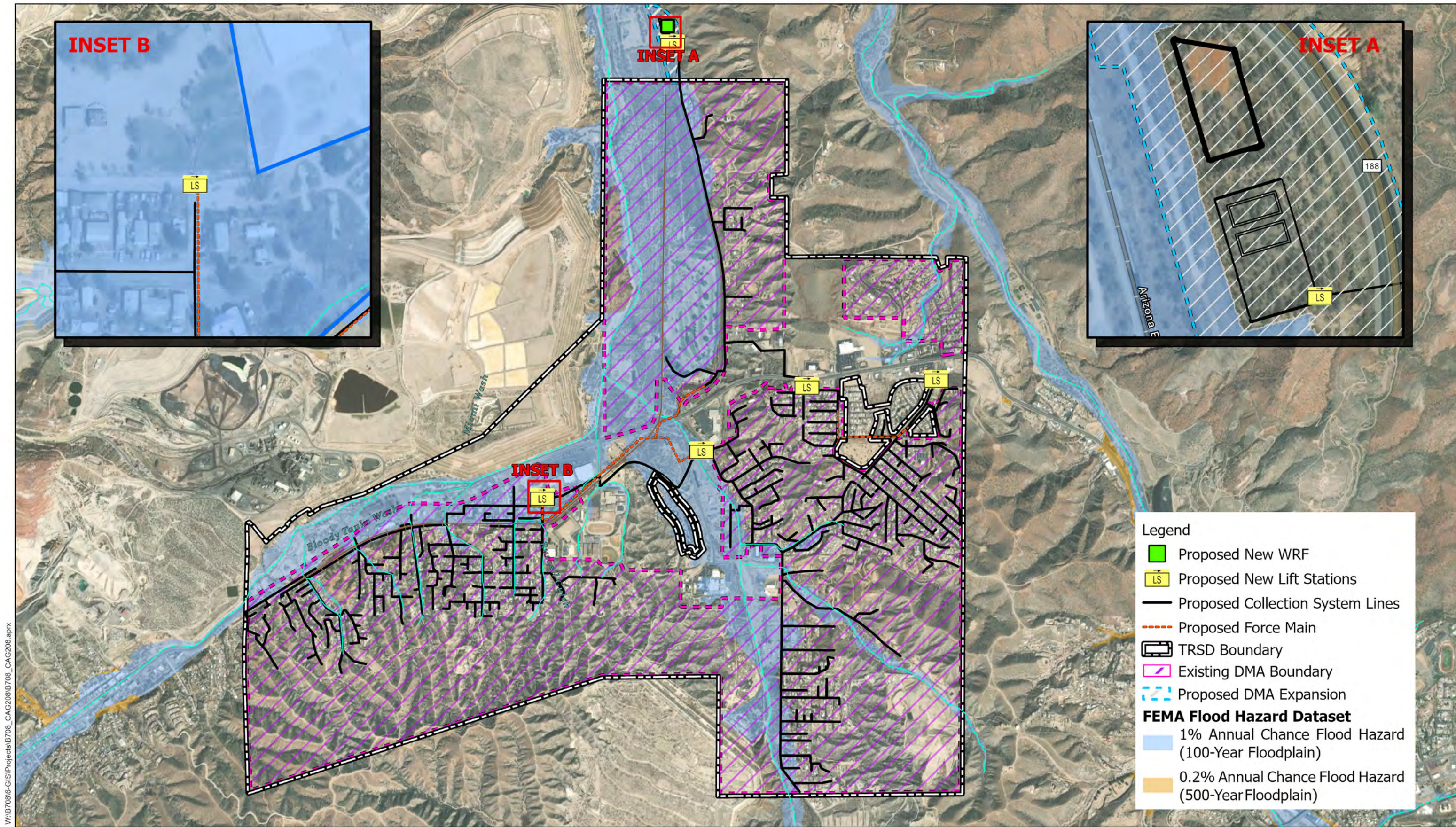
# NEW TRSD LIFT STATION



# EXHIBIT 5 - TYPICAL LATERAL CONNECTION





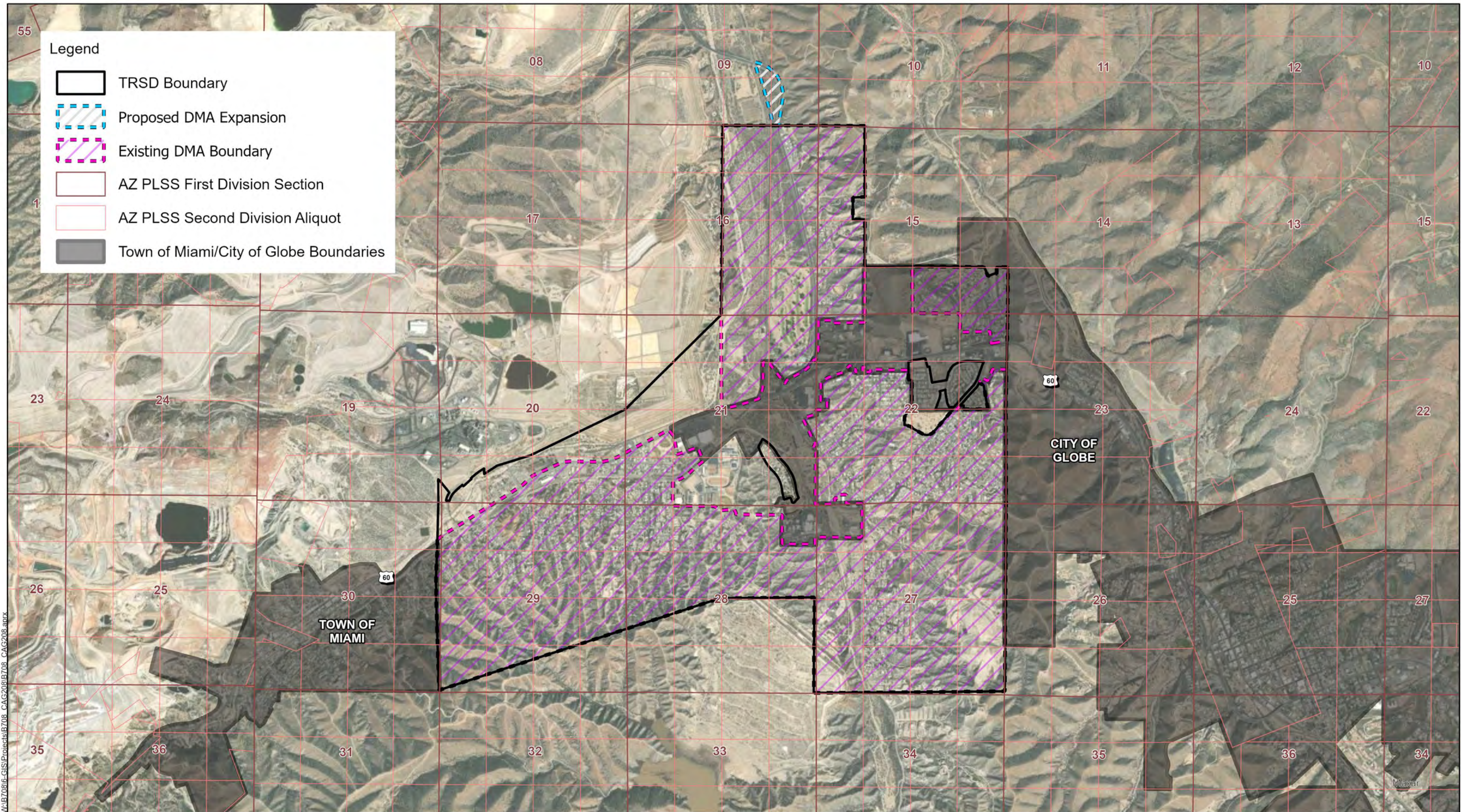


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# TRI-CITY REGIONAL SANITARY DISTRICT

# FLOODPLAIN





# TRI-CITY REGIONAL SANITARY DISTRICT

# TRSD DMA



# ***Appendix H***

## ***Affected Population***



Location: User-specified polygonal location  
 Ring (buffer): 0-mile radius  
 Description: TRSD Phase I

Summary	Census 2010
Population	1,586
Population Density (per sq. mile)	980
Minority Population	659
% Minority	42%
Households	644
Housing Units	777
Land Area (sq. miles)	1.62
% Land Area	99%
Water Area (sq. miles)	0.01
% Water Area	1%

Population by Race	Number	Percent
Total	1,586	-----
Population Reporting One Race	1,552	98%
White	1,315	83%
Black	14	1%
American Indian	32	2%
Asian	6	0%
Pacific Islander	0	0%
Some Other Race	186	12%
Population Reporting Two or More Races	34	2%
Total Hispanic Population	599	38%
Total Non-Hispanic Population	987	62%
White Alone	927	58%
Black Alone	14	1%
American Indian Alone	28	2%
Non-Hispanic Asian Alone	6	0%
Pacific Islander Alone	0	0%
Other Race Alone	2	0%
Two or More Races Alone	11	1%

Population by Sex	Number	Percent
Male	752	47%
Female	834	53%

Population by Age	Number	Percent
Age 0-4	93	6%
Age 0-17	387	24%
Age 18+	1,199	76%
Age 65+	303	19%

Households by Tenure	Number	Percent
Total	644	
Owner Occupied	507	79%
Renter Occupied	137	21%

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race.

**Source:** U.S. Census Bureau, Census 2010 Summary File 1.

Location: User-specified polygonal location  
 Ring (buffer): 0-mile radius  
 Description: TRSD Phase I

Summary of ACS Estimates		2011 - 2015
Population		1,922
Population Density (per sq. mile)		1,188
Minority Population		660
% Minority		34%
Households		696
Housing Units		863
Housing Units Built Before 1950		356
Per Capita Income		17,719
Land Area (sq. miles) (Source: SF1)		1.62
% Land Area		99%
Water Area (sq. miles) (Source: SF1)		0.01
% Water Area		1%

	2011 - 2015 ACS Estimates	Percent	MOE (±)
<b>Population by Race</b>			
Total	1,922	100%	507
Population Reporting One Race	1,895	99%	738
White	1,795	93%	508
Black	0	0%	12
American Indian	0	0%	20
Asian	0	0%	42
Pacific Islander	0	0%	12
Some Other Race	100	5%	144
Population Reporting Two or More Races	28	1%	30
Total Hispanic Population	660	34%	252
Total Non-Hispanic Population	1,262		
White Alone	1,262	66%	450
Black Alone	0	0%	12
American Indian Alone	0	0%	12
Non-Hispanic Asian Alone	0	0%	42
Pacific Islander Alone	0	0%	12
Other Race Alone	0	0%	12
Two or More Races Alone	0	0%	12
<b>Population by Sex</b>			
Male	987	51%	300
Female	936	49%	246
<b>Population by Age</b>			
Age 0-4	160	8%	95
Age 0-17	491	26%	162
Age 18+	1,432	74%	293
Age 65+	449	23%	128

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available.  
**Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.



Location: User-specified polygonal location  
 Ring (buffer): 0-mile radius  
 Description: TRSD Phase I

	2011 - 2015 ACS Estimates	Percent	MOE (±)
<b>Population 25+ by Educational Attainment</b>			
Total	1,262	100%	300
Less than 9th Grade	88	7%	80
9th - 12th Grade, No Diploma	201	16%	154
High School Graduate	354	28%	110
Some College, No Degree	508	40%	155
Associate Degree	134	11%	87
Bachelor's Degree or more	111	9%	74
<b>Population Age 5+ Years by Ability to Speak English</b>			
Total	1,762	100%	509
Speak only English	1,411	80%	410
Non-English at Home <sup>1+2+3+4</sup>	351	20%	176
<sup>1</sup> Speak English "very well"	286	16%	146
<sup>2</sup> Speak English "well"	22	1%	36
<sup>3</sup> Speak English "not well"	0	0%	17
<sup>4</sup> Speak English "not at all"	44	2%	73
<sup>3+4</sup> Speak English "less than well"	44	2%	73
<sup>2+3+4</sup> Speak English "less than very well"	65	4%	78
<b>Linguistically Isolated Households*</b>			
Total	7	100%	22
Speak Spanish	7	100%	19
Speak Other Indo-European Languages	0	0%	12
Speak Asian-Pacific Island Languages	0	0%	12
Speak Other Languages	0	0%	12
<b>Households by Household Income</b>			
Household Income Base	696	100%	175
< \$15,000	106	15%	87
\$15,000 - \$25,000	135	19%	72
\$25,000 - \$50,000	211	30%	84
\$50,000 - \$75,000	173	25%	117
\$75,000 +	71	10%	104
<b>Occupied Housing Units by Tenure</b>			
Total	696	100%	175
Owner Occupied	523	75%	177
Renter Occupied	173	25%	85
<b>Employed Population Age 16+ Years</b>			
Total	1,459	100%	394
In Labor Force	772	53%	283
Civilian Unemployed in Labor Force	114	8%	84
Not In Labor Force	687	47%	243

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.

\*Households in which no one 14 and over speaks English "very well" or speaks English only.

Location: User-specified polygonal location

Ring (buffer): 0-mile radius

Description: TRSD Phase I

	2011 - 2015 ACS Estimates	Percent	MOE (±)
<b>Population by Language Spoken at Home*</b>			
Total (persons age 5 and above)	1,762	100%	509
English	N/A	N/A	N/A
Spanish	N/A	N/A	N/A
French	N/A	N/A	N/A
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	N/A	N/A	N/A
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	N/A	N/A	N/A
Chinese	N/A	N/A	N/A
Japanese	N/A	N/A	N/A
Korean	N/A	N/A	N/A
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	N/A	N/A	N/A
Other Asian	N/A	N/A	N/A
Tagalog	N/A	N/A	N/A
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	N/A	N/A	N/A
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	N/A	N/A	N/A
Total Non-English	N/A	N/A	N/A

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.

\*Population by Language Spoken at Home is available at the census tract summary level and up.



Location: User-specified polygonal location  
 Ring (buffer): 0-mile radius  
 Description: TRSD Phase II

Summary	Census 2010
Population	1,490
Population Density (per sq. mile)	1,397
Minority Population	515
% Minority	35%
Households	597
Housing Units	689
Land Area (sq. miles)	1.07
% Land Area	100%
Water Area (sq. miles)	0.00
% Water Area	0%

Population by Race	Number	Percent
Total	1,490	-----
Population Reporting One Race	1,439	97%
White	1,218	82%
Black	14	1%
American Indian	35	2%
Asian	5	0%
Pacific Islander	1	0%
Some Other Race	166	11%
Population Reporting Two or More Races	51	3%
Total Hispanic Population	453	30%
Total Non-Hispanic Population	1,037	70%
White Alone	975	65%
Black Alone	12	1%
American Indian Alone	32	2%
Non-Hispanic Asian Alone	5	0%
Pacific Islander Alone	1	0%
Other Race Alone	1	0%
Two or More Races Alone	12	1%

Population by Sex	Number	Percent
Male	727	49%
Female	763	51%

Population by Age	Number	Percent
Age 0-4	102	7%
Age 0-17	395	27%
Age 18+	1,095	73%
Age 65+	256	17%

Households by Tenure	Number	Percent
Total	597	
Owner Occupied	458	77%
Renter Occupied	138	23%

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race.  
**Source:** U.S. Census Bureau, Census 2010 Summary File 1.



Location: User-specified polygonal location  
 Ring (buffer): 0-mile radius  
 Description: TRSD Phase II

Summary of ACS Estimates		2011 - 2015
Population		1,780
Population Density (per sq. mile)		1,669
Minority Population		487
% Minority		27%
Households		689
Housing Units		824
Housing Units Built Before 1950		146
Per Capita Income		17,752
Land Area (sq. miles) (Source: SF1)		1.07
% Land Area		100%
Water Area (sq. miles) (Source: SF1)		0.00
% Water Area		0%

	2011 - 2015 ACS Estimates	Percent	MOE (±)
<b>Population by Race</b>			
Total	1,780	100%	507
Population Reporting One Race	1,764	99%	700
White	1,723	97%	508
Black	0	0%	12
American Indian	0	0%	12
Asian	0	0%	12
Pacific Islander	0	0%	12
Some Other Race	41	2%	144
Population Reporting Two or More Races	16	1%	95
Total Hispanic Population	481	27%	302
Total Non-Hispanic Population	1,299		
White Alone	1,293	73%	450
Black Alone	0	0%	12
American Indian Alone	0	0%	12
Non-Hispanic Asian Alone	0	0%	12
Pacific Islander Alone	0	0%	12
Other Race Alone	0	0%	12
Two or More Races Alone	6	0%	86
<b>Population by Sex</b>			
Male	801	45%	300
Female	980	55%	263
<b>Population by Age</b>			
Age 0-4	106	6%	118
Age 0-17	356	20%	169
Age 18+	1,424	80%	313
Age 65+	313	18%	173

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available.  
**Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.



Location: User-specified polygonal location  
 Ring (buffer): 0-mile radius  
 Description: TRSD Phase II

	2011 - 2015 ACS Estimates	Percent	MOE (±)
<b>Population 25+ by Educational Attainment</b>			
Total	1,170	100%	335
Less than 9th Grade	79	7%	99
9th - 12th Grade, No Diploma	320	27%	154
High School Graduate	298	25%	200
Some College, No Degree	226	19%	205
Associate Degree	30	3%	87
Bachelor's Degree or more	247	21%	162
<b>Population Age 5+ Years by Ability to Speak English</b>			
Total	1,674	100%	509
Speak only English	1,426	85%	410
Non-English at Home <sup>1+2+3+4</sup>	248	15%	176
<sup>1</sup> Speak English "very well"	160	10%	146
<sup>2</sup> Speak English "well"	71	4%	114
<sup>3</sup> Speak English "not well"	12	1%	94
<sup>4</sup> Speak English "not at all"	4	0%	73
<sup>3+4</sup> Speak English "less than well"	16	1%	94
<sup>2+3+4</sup> Speak English "less than very well"	87	5%	114
<b>Linguistically Isolated Households*</b>			
Total	35	100%	59
Speak Spanish	35	100%	58
Speak Other Indo-European Languages	0	0%	12
Speak Asian-Pacific Island Languages	0	0%	12
Speak Other Languages	0	0%	12
<b>Households by Household Income</b>			
Household Income Base	689	100%	180
< \$15,000	158	23%	106
\$15,000 - \$25,000	110	16%	102
\$25,000 - \$50,000	179	26%	95
\$50,000 - \$75,000	102	15%	117
\$75,000 +	139	20%	104
<b>Occupied Housing Units by Tenure</b>			
Total	689	100%	180
Owner Occupied	498	72%	177
Renter Occupied	191	28%	117
<b>Employed Population Age 16+ Years</b>			
Total	1,474	100%	394
In Labor Force	741	50%	298
Civilian Unemployed in Labor Force	26	2%	125
Not In Labor Force	733	50%	312

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.

\*Households in which no one 14 and over speaks English "very well" or speaks English only.

Location: User-specified polygonal location

Ring (buffer): 0-mile radius

Description: TRSD Phase II

	2011 - 2015 ACS Estimates	Percent	MOE (±)
<b>Population by Language Spoken at Home*</b>			
Total (persons age 5 and above)	1,674	100%	509
English	N/A	N/A	N/A
Spanish	N/A	N/A	N/A
French	N/A	N/A	N/A
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	N/A	N/A	N/A
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	N/A	N/A	N/A
Chinese	N/A	N/A	N/A
Japanese	N/A	N/A	N/A
Korean	N/A	N/A	N/A
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	N/A	N/A	N/A
Other Asian	N/A	N/A	N/A
Tagalog	N/A	N/A	N/A
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	N/A	N/A	N/A
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	N/A	N/A	N/A
Total Non-English	N/A	N/A	N/A

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.

\*Population by Language Spoken at Home is available at the census tract summary level and up.





Location: User-specified polygonal location  
 Ring (buffer): 0-mile radius  
 Description: TRSD Phase III

Summary	Census 2010
Population	1,042
Population Density (per sq. mile)	734
Minority Population	355
% Minority	34%
Households	455
Housing Units	519
Land Area (sq. miles)	1.42
% Land Area	100%
Water Area (sq. miles)	0.00
% Water Area	0%

Population by Race	Number	Percent
Total	1,042	-----
Population Reporting One Race	1,015	97%
White	850	82%
Black	12	1%
American Indian	17	2%
Asian	6	1%
Pacific Islander	4	0%
Some Other Race	126	12%
Population Reporting Two or More Races	27	3%
Total Hispanic Population	311	30%
Total Non-Hispanic Population	731	70%
White Alone	687	66%
Black Alone	11	1%
American Indian Alone	16	2%
Non-Hispanic Asian Alone	6	1%
Pacific Islander Alone	2	0%
Other Race Alone	1	0%
Two or More Races Alone	8	1%

Population by Sex	Number	Percent
Male	502	48%
Female	540	52%

Population by Age	Number	Percent
Age 0-4	56	5%
Age 0-17	252	24%
Age 18+	790	76%
Age 65+	198	19%

Households by Tenure	Number	Percent
Total	455	
Owner Occupied	349	77%
Renter Occupied	106	23%

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race.  
**Source:** U.S. Census Bureau, Census 2010 Summary File 1.

Location: User-specified polygonal location  
 Ring (buffer): 0-mile radius  
 Description: TRSD Phase III

Summary of ACS Estimates		2011 - 2015
Population		1,032
Population Density (per sq. mile)		727
Minority Population		461
% Minority		45%
Households		509
Housing Units		571
Housing Units Built Before 1950		35
Per Capita Income		17,722
Land Area (sq. miles) (Source: SF1)		1.42
% Land Area		100%
Water Area (sq. miles) (Source: SF1)		0.00
% Water Area		0%

	2011 - 2015 ACS Estimates	Percent	MOE (±)
<b>Population by Race</b>			
Total	1,032	100%	428
Population Reporting One Race	973	94%	607
White	973	94%	415
Black	0	0%	12
American Indian	0	0%	12
Asian	0	0%	12
Pacific Islander	0	0%	12
Some Other Race	0	0%	144
Population Reporting Two or More Races	59	6%	95
Total Hispanic Population	446	43%	302
Total Non-Hispanic Population	586		
White Alone	571	55%	385
Black Alone	0	0%	12
American Indian Alone	0	0%	12
Non-Hispanic Asian Alone	0	0%	12
Pacific Islander Alone	0	0%	12
Other Race Alone	0	0%	12
Two or More Races Alone	15	1%	86
<b>Population by Sex</b>			
Male	555	54%	284
Female	477	46%	263
<b>Population by Age</b>			
Age 0-4	14	1%	118
Age 0-17	246	24%	169
Age 18+	786	76%	313
Age 65+	206	20%	173

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available.  
**Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.



Location: User-specified polygonal location  
 Ring (buffer): 0-mile radius  
 Description: TRSD Phase III

	2011 - 2015 ACS Estimates	Percent	MOE (±)
<b>Population 25+ by Educational Attainment</b>			
Total	728	100%	335
Less than 9th Grade	127	17%	99
9th - 12th Grade, No Diploma	40	6%	136
High School Graduate	264	36%	200
Some College, No Degree	247	34%	205
Associate Degree	14	2%	87
Bachelor's Degree or more	50	7%	162
<b>Population Age 5+ Years by Ability to Speak English</b>			
Total	1,019	100%	417
Speak only English	761	75%	398
Non-English at Home <sup>1+2+3+4</sup>	258	25%	176
<sup>1</sup> Speak English "very well"	153	15%	146
<sup>2</sup> Speak English "well"	0	0%	114
<sup>3</sup> Speak English "not well"	106	10%	94
<sup>4</sup> Speak English "not at all"	0	0%	73
<sup>3+4</sup> Speak English "less than well"	106	10%	94
<sup>2+3+4</sup> Speak English "less than very well"	106	10%	114
<b>Linguistically Isolated Households*</b>			
Total	0	0%	59
Speak Spanish	0	0%	58
Speak Other Indo-European Languages	0	0%	12
Speak Asian-Pacific Island Languages	0	0%	12
Speak Other Languages	0	0%	12
<b>Households by Household Income</b>			
Household Income Base	509	100%	180
< \$15,000	166	33%	106
\$15,000 - \$25,000	117	23%	102
\$25,000 - \$50,000	121	24%	95
\$50,000 - \$75,000	33	7%	97
\$75,000 +	71	14%	94
<b>Occupied Housing Units by Tenure</b>			
Total	509	100%	180
Owner Occupied	282	55%	135
Renter Occupied	227	45%	117
<b>Employed Population Age 16+ Years</b>			
Total	859	100%	341
In Labor Force	577	67%	298
Civilian Unemployed in Labor Force	94	11%	125
Not In Labor Force	283	33%	312

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.

\*Households in which no one 14 and over speaks English "very well" or speaks English only.

Location: User-specified polygonal location

Ring (buffer): 0-mile radius

Description: TRSD Phase III

	2011 - 2015 ACS Estimates	Percent	MOE (±)
<b>Population by Language Spoken at Home*</b>			
Total (persons age 5 and above)	1,019	100%	417
English	N/A	N/A	N/A
Spanish	N/A	N/A	N/A
French	N/A	N/A	N/A
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	N/A	N/A	N/A
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	N/A	N/A	N/A
Chinese	N/A	N/A	N/A
Japanese	N/A	N/A	N/A
Korean	N/A	N/A	N/A
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	N/A	N/A	N/A
Other Asian	N/A	N/A	N/A
Tagalog	N/A	N/A	N/A
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	N/A	N/A	N/A
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	N/A	N/A	N/A
Total Non-English	N/A	N/A	N/A

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2011 - 2015.

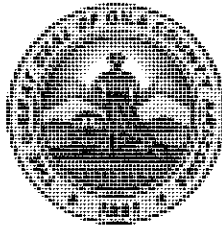
\*Population by Language Spoken at Home is available at the census tract summary level and up.



# ***Appendix I***

## ***2012 Sewage Treatment Study***

745 N Rose Mofford Way  
(Mail to: 1400 E Ash St)  
Globe Arizona 85501  
(928)425-3231 Ext. 4224  
FAX (928)425-0829



608 E. Hwy 260  
Payson, Arizona 85541  
(928)474-9276  
FAX (928)474-0802

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## GILA COUNTY COMMUNITY DEVELOPMENT

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Robert Gould, Director

Joe Mendoza, Deputy Director

### SEWAGE TREATMENT STUDY TRI-CITY REGIONAL SANITARY DISTRICT NOVEMBER 2012

by

Jake Garrett, PE,  
Gila County Wastewater Department Manager  
Jim Berry

Gila County Wastewater Department Engineering Technician

**Why the Maps:** The project originally started as a visual method of identifying areas of concern for catastrophic failure of sewage handling and major public health concerns. It now demonstrates the predominance of cesspool use within Tri-City Regional Sanitary District (TRSD).

**The Data for the Maps:** Every property file in the possession of the Gila County Wastewater Department was examined to find sewage system permits of any type and citizen complaints for surfacing sewage or gray water leaving the property. A former Health Department Director told us that the earliest Gila County records for septic system permits are dated in 1979, that by 1984 Gila County had become "good" at seeing that septic systems were permitted, that permit requests were made by mail and that data provided was minimal and accuracy was lacking. As a result, by policy, Gila County does not recognize any percolation test results for tests conducted prior to 1990 due to the crude percolation test methods used.

*Only 5 years of complaint data is available beginning in mid-2007.* Prior to that time the Arizona Department of Environmental Quality (ADEQ) required that all complaint data be filed by street address rather than parcel number for auditing purposes. Consequently that information was not part of the property file and was discarded when ADEQ's audit directions changed in 2007.

A complaint is resolved and the public health hazard corrected when the property owner stops sewage from surfacing and/or gray water from ponding on or leaving his property and the contaminated area is properly cleaned and disinfected. If the property owner does not respond in 24 hours an escalating, 3-step, 3-day written violation process is begun which culminates in a Notice of Violation and Demand for Compliance. Should the owner not comply with the Demand for Compliance water service to the home is discontinued per Arizona Statute.

**The Area:** Tri-City Regional Sanitary District encompasses the unincorporated area between the Town of Miami and the City of Globe in southern Gila County, Arizona. The majority of this area was developed for housing during the first ½ of the 20<sup>th</sup> century mining boom. Subdivisions featured lots 25' x 150' (3750 ft<sup>2</sup>) with a small area in the

bottom of the canyon that was suitable for home and cesspool construction with the rear portion of the lot rising very steeply uphill. In addition the ground transitioned from runoff deposited loose material to a very hard and nonporous Gila Conglomerate as the building site approached the foot of the slope. Today most of these homes have nowhere close to enough usable land in which a replacement septic system can be installed. A few of these properties might qualify to use the enhanced sewage treatment qualities of an alternative system to overcome the lot limitations. In those cases the system cost is normally more than the appraised value of the property.

**Cesspool Facts:** Interviews with Gila County Health Department personnel and local septic system contractors with personal knowledge about the construction practices, public attitudes and permitting during the time period from late 1950's through the early 2000's produced the following recollections:

- In 1976 the USE of cesspools was prohibited by Engineering Bulletin 12, the Arizona Department of Health Service guidance document for the design and installation of septic and alternative systems.
- Homes served by cesspools were constructed beginning in 1907 or earlier. These cesspools are now 105 years old ... or new cesspools were constructed to replace those that filled or failed (probably multiple times) until the mid to late 1980's when permitting became expected by a majority of citizens.
- As of this date no action has been taken by the State of Arizona to enforce the prohibition on the use of cesspools in areas where pollution of ground or surface waters cannot be proven. Absent statewide enforcement the use of cesspools by an individual home in these areas has been allowed to continue until it fails either structurally or hydraulically.
- By policy Gila County does not allow expansion or remodeling of any home served by a cesspool.
- A former Gila County Health Department Director told us that:
  - Public attitudes shifted toward installing septic systems rather than cesspools in 1979
  - At that time most permits were mailed to the Globe Health Department offices.
- A local contractor stated that his business got busy installing septic systems in early 1970.
- No permits were ever issued for cesspools however they are referenced in the building files upon occasion. Those mentioned are shown on the maps.
- Banks throughout Arizona are now and have been for 3-5 years declining to lend on homes served by a cesspool.
- It is estimated that the average lot size within the TRSD boundary is 5,000 ft<sup>2</sup> while the mining subdivisions had lot sizes of 3,750 ft<sup>2</sup>. These lot sizes equate to an average density of 8.72 to 11.63 homes per acre. Current regulations would require any subdivision with a density of greater than one (1) home per acre to reduce the Nitrogen contribution to the ground in addition to removing the biological contaminants and viruses through advanced treatment systems or a sewer collection and treatment system.

**Conclusions that can be drawn from the maps:**

- There are very few permitted septic systems within the TRSD boundary.
- Very few unpermitted septic systems have been found in the building files.
- Cesspools are likely used for sewage disposal on all lots that do not have either a permitted or unpermitted system. This represents vast majority of homes within TRSD.
- Some multiple lot properties have been able to replace failed cesspools with septic systems. Usually there are multiple cesspools replaced by one septic system.
- Some functioning cesspools have been identified in the last 5 years.
- Several cesspools have failed and the properties have become unusable.
- Gray water complaints represent properties that are experiencing cesspool problems. Homeowners usually remove their gray water from the cesspool in an effort to extend its life. Many of these properties have a history of multiple complaints in the last 5 years indicating that their cesspool is nearing failure. .

- All lots that do not show a permitted system (since 2001 rule) are in danger of failure as is evidenced by the number of surfacing sewage complaints and Notices of Violation (NOV's)
- Based on the sewage and gray water complaint and NOV properties it is estimated that between 5% and 10% of the homes within TRSD have experienced cesspool problems within the last 5 years

**Estimate of homes within TRSD using cesspools and sub-standard septic systems:**

This estimate is presented in support of the maps and conclusions that are presented above. An estimate of the number of homes served by cesspools and substandard septic systems within the TRSD boundary was made from the 2000 U.S. Census Bureau data for Gila County by logical reasoning and the following assumptions:

- Percentages of homes constructed in southern Gila County is represented by the sum of Globe and Miami home construction and those in northern Gila County is represented by Payson home construction.
- Cesspool use stopped in 1969.
- Substandard septic systems were installed through 1989 when an updated Bulletin 12 was introduced by the Arizona Department of Environmental Quality.

From these rough calculations it is reasonable to assume that there are at least 1342 operating cesspools and 266 operating substandard septic systems within the TRSD boundary. **This estimate would then say that there are 1608 homes within TRSD that are served by cesspools or substandard septic systems.**

Jake Garrett  
Wastewater Department Manager  
November 14, 2012





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## GILA COUNTY COMMUNITY DEVELOPMENT

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Robert Gould, Director

# Cesspools: Water Quality and Your Property Value

### **The Hard, Cold Facts about Cesspools:**

A cesspool is an outhouse with running water. Cesspools discharge untreated waste into the soil that will ultimately contaminate the ground water. ***Cesspools have not been approved for use in Arizona since 1976 because they are a major source of ground water contamination.*** No permits for the construction of new cesspools have been issued since that time.

Cesspools may not be repaired in any way. When a cesspool fails it must be replaced by an approved Onsite Wastewater Treatment and Disposal System or the property must cease to be occupied. Replacement is very difficult or impossible due to small lot size, poor soils, proximity to streams and other severe lot constraints.

In current ADEQ regulations cesspools are not a permitted method of wastewater disposal and are prohibited expressly under R18-9-A309(A)(4) and R18-5-408(D). Because of this fact many financial institutions are not lending on properties serviced by a cesspool.

### **Cesspool Definition:**

Underground pit into which raw household wastewater is discharged and from which the liquid seeps into the surrounding soil; may or may not be partially lined.

### **How a cesspool functions:**

A cesspool is a covered hole or pit for receiving sewage from a house. Another way of thinking about a cesspool is that it is an outhouse with running water. Usually the walls are constructed out of concrete, brick or concrete blocks and the top cover is usually a poured concrete slab or timbers. The constructions of the sidewalls are loose to allow the effluent water to penetrate through the holes, allowing the water to pass into the native soil while the solids build up in the pit.

This solid waste, very similar to what you see in outhouse pits, may partially crumble into smaller pieces over time and be partially carried into the environment in a totally untreated state by the new liquids entering the cesspool. This material is a host for many disease-causing viruses, bacteria, and parasites. Unlike septic systems, cesspools provide no treatment of the raw sewage and thus discharge untreated human waste into the soil and ultimately contaminate the ground water.

By contrast, septic systems remove 100% of the disease-causing viruses, bacteria, and parasites. In a properly designed and installed septic system the tank retains 60 to

70% of the solids, oil, and grease that pass into the system and provides some treatment. The partially treated wastewater is then discharged into the leach lines, where the surrounding soil provides final treatment of the sewage prior to its discharge into the environment.

### **Cesspools in Gila County:**

Cesspools were the preferred method of waste disposal in Gila County through the late 1960's. At that time, a transition to installation of septic systems started and by 1984 all permitted installations were septic systems. Based on US Census 2000 information, it is estimated that there are nearly 3,000 cesspools still in operation in Gila County. Most properties utilizing cesspools for human waste disposal are located in dense unincorporated areas in southern Gila County and the forest subdivisions of northern Gila County, Tonto Basin and Young. Dense from an on-site sewage system point of view means greater than 2 homes per acre. Most of these densely populated areas have 8-10 homes per acre. Many of these areas are along and very close to flowing streams and are major contributors to stream pollution.

### **Cesspool Failure:**

When a cesspool's lid, sides or structural members deteriorate or collapse and sewage comes to the surface or backs up into the home, it is determined to have failed and must be corrected immediately. Possible corrective actions include:

- Ceasing use of the home or
- Install an appropriate wastewater treatment system.

Most cesspools are located on extremely small lots. In addition, these lots usually have very poor soil conditions and steep slopes and/or large retaining walls and may be very near running streams. *These conditions will almost always preclude installation of a conventional septic system.* In many cases installation of a more costly alternative sewage treatment system that treats sewage to a much higher degree, requires less disposal area and overcomes many site specific obstacles will not be possible.

### **Arizona Department of Environmental Quality (ADEQ) Cesspool Statement:**

"ADEQ recognizes that a number of residential cesspools remain in operation in Gila County and across the state. However, since their operation is generally prohibited and .... They unacceptably endanger water quality and the public health and safety ... their continued operation should not be encouraged. ADEQ believes that home inspectors and on-site transfer inspections that may occur should encourage potential buyers to require the installation of a permitted facility."

### **Gila County Policy Statement**

The current Gila County Wastewater Department policy regarding **waste systems installed prior to 1976** is stated in the Gila County Health Department letter dated 12/9/1996 and partially quoted here:

**"Any** system that was installed prior to 1976 including but not limited to cesspools, homemade septic tanks, or other sewage disposal hybrid devices would be grandfathered in until these "systems" fail or the residence plumbing is modified."

In support of this policy the following practices were implemented:

**Nuisance Complaint Investigation:**

Should failure be discovered through the complaint process, while investigating a possible Environmental Nuisance or during any normal business activity undertaken by Gila County, the failure must be immediately corrected. Possible corrective actions include:

- Ceasing use of the home or
  - Install an appropriate wastewater treatment system.
- (Failure** means any structural or hydraulic failure and is evidenced by such things as collapsed lids, deterioration of sidewall structural components, back-up of sewage into the home, groundwater contamination or surfacing of sewage.)

**Building Clearance:**

The Wastewater Department will not approve the submittal of building plans for any property served by a cesspool if those plans expand the footprint of buildings or structures on the property or alter the wastewater flow characteristics (bedrooms or plumbing fixtures) of the property.

**Conclusion:**

Don't let your dependence on a cesspool get you into a hole that you can't dig yourself out of!

1400 East Ash Street  
Globe Arizona 85501  
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## GILA COUNTY COMMUNITY DEVELOPMENT

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Robert Gould, Director

August 8, 2008

Wastewater Department Policy Statement  
Re: Cesspool Replacement Policy

### Policy Statement

The current Gila County Wastewater Department policy regarding *waste systems installed prior to 1976* is stated in the Gila County Health Department letter dated 12/9/1996 and partially quoted here:  
“**Any** system that was installed prior to 1976 including but not limited to cesspools, homemade septic tanks, or other sewage disposal hybrid devices would be grandfathered in until these “systems” fail or the residence plumbing is modified.”

In support of this policy the following practices were implemented:

#### **Nuisance Complaint Investigation:**

- Should failure be discovered through the complaint process, while investigating a possible Environmental Nuisance or during any normal business activity undertaken by Gila County, the failure must be immediately corrected. Possible corrective actions include:
  - o Ceasing use of the home or
  - o Install an appropriate wastewater treatment system.**(Failure means any structural or hydraulic failure and is evidenced by such things as collapsed lids, deterioration of sidewall structural components, back-up of sewage into the home, groundwater contamination or surfacing of sewage.)**

#### **Building Clearance:**

- The Wastewater Department will not approve the submittal of building plans for any property served by a cesspool if those plans alter the wastewater flow characteristics (increase number of bedrooms or plumbing fixtures) on the property.

Respectfully,

Jake Garrett, P.E.  
Wastewater Department Manager



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## **GILA COUNTY COMMUNITY DEVELOPMENT**

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Robert Gould, Director

### **USE OF CESSPOOLS IS PROHIBITED BY LAW**

**If you have a cesspool ... you are**

***BREAKING THE LAW***

***Every Time You Flush***

#### **Arizona Administrative Code (AAC)**

##### **R18-9-A309. General Provisions for On-site Wastewater Treatment Facilities**

- A. General requirements and prohibitions.
1. No person shall discharge sewage or wastewater that contains sewage from an on-site wastewater treatment facility except under an Aquifer Protection Permit issued by the Director.
  2. A person shall not install, allow to be installed, or maintain a connection between any part of an on-site wastewater treatment facility and a drinking water system or supply so that sewage or wastewater contaminates the drinking water.
  3. A person shall not bypass or release sewage or partially treated sewage that has not completed the treatment process from an on-site wastewater treatment facility.
  4. **A person shall not use a cesspool for sewage disposal.**

...

##### **R18-5-408. Individual sewage disposal systems**

- A. Recommendations are found in the engineering bulletins of the Department and such additional requirements as may be provided by local health departments to assist in approval regarding the design, installation and operation of individual sewage disposal systems. Copies of these bulletins may be obtained from the Department.
- B. Where soil conditions and terrain features or other conditions are such that individual sewage disposal systems cannot be expected to function satisfactorily or where groundwater or soil conditions are such that individual sewage disposal systems may cause pollution of groundwater, they are prohibited.
- C. Where such installations may create an unsanitary condition or public health nuisance, individual sewage disposal systems are prohibited.
- D. The use of cesspools is prohibited.**

...



Janet Napolitano  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

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



Stephen A. Owens  
Director

April 7, 2008

Jake Garrett, P.E.  
Gila County Community Development Division  
Wastewater Department Manager  
714 S. Beeline Hwy, Ste 200  
Payson, AZ 85541

Dear Mr. Garrett:

We have received your letter dated March 18, 2008 regarding cesspools. First, any information provided to you by our Department suggesting that cesspools are to be inspected or transferred under A.A.C. Title 18 is incorrect. Cesspools are not a permitted method of wastewater disposal and are prohibited expressly under R18-9-A309(A)(4) and R18-5-408(D). Accordingly, they are not subject to the notice of transfer requirements of R18-9-A304, the presale inspection rules of R18-9-A316, or the repair provisions of R18-9-A309(A)(9).

In addition to being prohibited under the "General Provisions for On-site Wastewater Treatment Facilities" section of the rule, cesspools do not meet the requirement of the R18-9-B301(I)(1)(b). That provision refers specifically to "[a]n on-site wastewater treatment facility with flows less than 20,000 gallons per day operating before January 1, 2001." The definition of "on-site wastewater treatment facility" is provided in rule (R18-9-101(27));

"On-site wastewater treatment facility" means a conventional septic tank system or alternative system installed at a site to treat and dispose of wastewater, predominantly of human origin, generated at that site. ...

ADEQ recognizes that a number of residential cesspools remain in operation in Gila County and across the state. However, since their operation is generally prohibited and, as your letter effectively conveys, they unacceptably endanger water quality and the public health and safety, their continued operation should not be encouraged. ADEQ believes that home inspectors and on-site transfer inspections that may occur should encourage potential buyers to require the installation of a permitted facility. Also, we would like to explore with you ways to educate current and potential homeowners of the prohibition against cesspool operation and appropriate methodologies to phase out their use in Gila County.

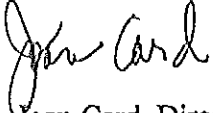
Northern Regional Office  
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(928) 779-0313

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

Jake Garrett  
April 2, 2008  
Page 2

Please feel free to call me at (602) 771-2306 or David Lelsz at (602) 771-4447.

Sincerely,

A handwritten signature in cursive script, appearing to read "Joan Card".

Joan Card, Director  
Water Quality Division