SECTION 5
WATER SUPPLY RELIABILITY

5.1 RELIABILITY OF DISTRICT WATER SUPPLIES

Reliability is a measure of a water service system's expected success in managing water shortages. In addition to climate, other factors that can cause water supply shortages are natural disaster, such as earthquakes, chemical spills, energy outages, and water quality issues.

The District and all southern California communities and water agencies are facing increasing challenges and opportunities in their role as stewards of our publicly owned water resources. The region faces a growing gap between its water requirements and its firm water supplies. Increased environmental regulations and the collaborative competition for water from outside the region have resulted in reduced supplies of imported water. Continued population and economic growth increase water demand within the region, putting an even larger burden on water supplies.

Fortunately, as described in Section 4, the District and other regional agencies have invested hundreds of millions of public dollars to develop, manage, and maintain a robust portfolio of reliable water supplies. These include the Chino Groundwater Basin—one of the largest groundwater basins in southern California which has been sustainably managed for nearly 40 years—as well as a regional recycled water program which provides highly treated non-potable water for both direct use and groundwater recharge, and other local surface and groundwater resources. Metropolitan Water District, our regional supplemental water provider, has invested billions of ratepayer dollars in local and imported water supply reliability, and as a result is able to provide reliable imported water supply even under severe drought conditions.

Due to ongoing investments in reliable supplies, the District and other regional agencies are able to reduce use of imported water during times of drought, as well as store significant amounts of surplus water during wet years for use in dry years. Over the decades, Chino Basin producers have saved nearly 400,000 acre-feet of water stored in the groundwater basin which can be safely accessed during periods of extended drought.

Finally, the District provided leadership in implementing demand management and water use efficiency programs, including turf replacements, landscape irrigation survey and retrofits, efficient appliance rebates, and innovative rate structures.

This section starts with a brief description of the reliability of the District's various water supplies, followed by discussions of the potential impacts on reliability due to water quality and climate. Finally, the section ends with an analysis of the District's overall water supply reliability during normal, single dry-year, and multiple dry-year periods through 2040.

5.1.1 Chino Groundwater Basin Supply Reliability

The total maximum daily production capacity of the District's groundwater wells from the Chino Groundwater Basin is approximately 28 mgd (Table 2-3). This production capacity is sufficient to supply significantly more than the total current and projected retail water demand within the District. The District's 2008 Water Master Plan, functioning as its Capital Improvement Program, has developed a schedule of groundwater well replacement and rehabilitation to maintain, if not enhance, this production capacity through 2038.

District groundwater pumping can be influenced by Chino Basin Watermaster policies, including optimizing the basin's safe yield, providing replenishment supplies to offset overproduction, levying and collecting administrative and replenishment assessments, and findings of material physical injury. Nevertheless, under the Judgment and management agreements, the District has the ability to pump sufficient groundwater to meet its water supply needs. For the purposes of reliability planning, in order to allow for equipment breakdown and other contingencies, the District estimates that its full groundwater production capacity will be available 90 percent of the time.

For potential water quality impacts to the District's available groundwater supply, see Section 5.2.1.

5.1.2 Water Facilities Authority Supply Reliability

As discussed in Section 4.3.3, the District is entitled to 24 percent of the WFA's Agua de Lejos Plant capacity, or up to 21,776 AFY. The District has never drawn its full contractual amount from WFA, having historically considered its imported water supply as supplemental to and providing redundancy for its local groundwater supply. However, even during dry years, the District may draw its full contractual amount of imported water supply through WFA; the only limitations on the District are higher Tier 2 rates during normal years and, during dry years, its DYY shift obligation and potential MWD penalty rates under allocation requirements.

WFA receives imported water from MWD via the SWP. In its 2015 UWMP, MWD demonstrates its ability to provide imported water supply to its member agencies 100 percent of the time through 2040 during normal, single dry, and multi-dry year scenarios.[20] Even under a simultaneous implementation of MWD's Water Surplus and Drought Management (WSDM) Plan and the regional DYY Program, imported water supply is 100 percent reliable, although potentially subject to penalty rates (see Section 5.3).

[20] MWD 2015 UWMP (Draft March 2016).

MWD's Water Surplus and Drought Management Plan

In 1998, MWD's Board of Directors adopted the Water Surplus and Drought Management Plan (WSDM). The guiding principle of the WSDM Plan is to manage MWD's water resources and management programs to maximize management to wet year supplies and minimize adverse impacts of water shortages to retail customers. From this guiding principle come the following supporting principles:

- Encourage efficient water use and economical local resource programs;
- Coordinate operations with member agencies to make as much surplus water as possible available for use in dry years;
- Pursue innovative transfer and banking programs to secure more imported water for use in dry years; and,
- Increase public awareness about water supply issues.

In February of 2008, MWD's Board of Directors adopted the Water Supply Allocation Plan (WSAP). The WSAP was developed in consideration of the principles and guidelines described in the WSDM Plan, with the objective of creating an equitable needs-based allocation. The WSAP formula seeks to balance the impacts of a shortage at the retail level while maintaining equity on the wholesale level for shortages of MWD supplies of up to 50 percent. The WSAP was revised and readopted in 2014.

For an analysis of the impact of this program's implementation in conjunction with the DYY Program see Section 5.3.

5.1.3 Recycled Water Supply Reliability

Recycled water is an exceedingly reliable local water resource. According to IEUA, during a single dry year, it has been assumed that recycled water will be 100 percent reliable. During multiple dry years, reliability remains constant and continues to help reduce potable water demands as new recycled water users are added to the regional recycled water system. It has been assumed that during multiple dry years, the production of recycled water will gradually increase from 100 percent during the first dry year to 105 and 110 percent, respectively, during the next two subsequent dry years as more customers become connected to the recycled water system. Recycled water is a reliable resource not subject to droughts or imported water availability.

5.1.4 San Antonio Water Company Supply Reliability

SAWCo is responsible for providing water service to its domestic and irrigation shareholders. Water is currently delivered to shareholders based on monthly entitlement and available water supply. If SAWCo is able to produce more water, entitlement increases; if less, entitlement decreases.

The last three years have provided an example of SAWCo actions in the face of reductions to its water supply. In February 2014 and then again in March 2015, due to severe drought conditions, SAWCo reduced its per-share entitlement deliveries by 18 percent and 15 percent, respectively.

However, as SAWCo improves its water supply facilities and increases its ability to produce water over the next 20 years, total water supply and water supply reliability to the shareholders is expected to return to former levels and even increase. The increased water supply would also be driven by the company's shareholders looking to the water company for maximum deliveries of their entitlements. Water deliveries to these shareholders are provided by SAWCo based on the entitled shares and available water supply during different periods of the year. Maximizing the water company's deliveries to its shareholders requires making full use of the groundwater and surface water rights owned by SAWCo. The District will work with SAWCo to maximize its supply and potentially increase its per-share entitlement, thus increasing the District's total annual SAWCo entitlement.

5.2 WATER QUALITY IMPACTS ON RELIABILITY

Federal regulations require the U.S. Environmental Protection Agency (EPA) to safeguard drinking water by establishing standards that limit the amount of substances in drinking water. In California, the State Water Resources Control Board (State Board) also safeguards drinking water by establishing standards that are as stringent as the EPA's. These standards, also known as maximum contaminant levels (MCL), are established in two categories: 1) primary standard: to protect the public health; and 2) secondary standard: to preserve water's aesthetic qualities such as taste, odor, clarity, and color.

The District safeguards its water supply by exceeding the monitoring requirements set by the EPA and State Board. In addition to the 165 contaminants for which it regularly monitors and reports in its Annual Water Quality Report, the District safeguards the distribution system by monitoring for coliform bacteria in the distribution system and at each active well. Coliform bacteria are not necessarily harmful, but indicate the possible presence of disease-causing organisms. The District samples 16 State Board-approved locations within the distribution system weekly, and samples each active well monthly. The District also completed two source water assessment in 2002 and 2008 for its active wells to evaluate the vulnerability of water sources to contamination.[21]

5.2.1 Chino Groundwater Basin Water Quality

The Chino Groundwater Basin is a critical resource to the District. From a regulatory perspective, the use of basin groundwater to serve potable demands is limited by drinking water standards, groundwater basin water quality objectives, and Santa Ana River water quality objectives.

[21] 2015 Annual Water Quality Report, www.report.mvwd.org.

The groundwater quality in basin is generally very good, with better groundwater quality found in the northern portions of the basin where recharge occurs and where District groundwater wells are primarily located. Salinity and nitrate concentrations increase in the southern portion of the basin resulting from past and continuing agricultural uses.

Other constituents that have the potential to impact groundwater quality from a regulatory standpoint are certain volatile organic compounds, arsenic, and perchlorate. There are a number of point source releases of VOCs in the basin that are in various stages of investigation or cleanup. There are also known point source releases of perchlorate (Milliken Valley Sanitary Landfill, Stringfellow, etc.), and non-point source related perchlorate contamination appears to have resulted from natural and artificial sources. Arsenic at levels above the water quality standard appears to be limited to the deeper aquifer zone near the City of Chino Hills.

The principal groundwater quality issues facing the District involve nitrate dibromochloropropane, total dissolved solids, and perchlorate.

Nitrates

Areas of the basin with significant irrigated land use or dairy waste disposal histories overlie groundwater with elevated nitrate concentrations. The primary areas of nitrate degradation are the areas formerly or currently overlain by citrus in the northern parts of management zones (MZs) 1, 2 and 3, and dairy areas in the southern parts of MZs 1, 2 and 3 and all of MZ 5.

Nitrate in drinking water at levels above 10 ppm can interfere with the capacity of the infant's blood to carry oxygen, causing shortness of breath and blueness of the skin. High nitrate levels may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies.

In 2015, average nitrate concentration in the District wells was 10.7 ppm, while the concentrations ranged from 2.9 to 18.7 ppm. The State Board requires the District to provide a finished blended product that has a nitrate (N) MCL of no more than 8 ppm, or 80 percent of the MCL of 10 ppm. Water from several District wells with higher levels of nitrates is combined with water from other wells with lower levels or with imported water to create a blended supply that is below the MCL. One of the District's wells is equipped with an ion exchange treatment facility that removes salts, in particular nitrates, from the pumped groundwater.

The District's Aquifer Storage and Recovery (ASR) Program, which consists of recharging the groundwater basin through direct injection of treated imported water and subsequent extraction during summer months and dry years, is expected to enhance water quality over time. ASR wells inject higher quality water into an aquifer of lesser quality; the wells operate to create a zone or "bubble" of better quality water to be recovered at a later time. Four ASR wells are now operational.

Dibromochloropropane

Dibromochloropropane (DBCP), an organic chemical, is a banned nematocide (pesticide) that remains in the soils due to run-off or leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit. In 1977, 831,000 pounds of DBCP was used in California, mainly on grapes and tomatoes. In 1979, all registrations of end use products were canceled except for use as soil fumigant for pineapple horticulture in Hawaii. The use was completely canceled in 1985. Some people who drink water containing DBCP in excess of the MCL of 0.0002 million gallons per liter (mg/L) or 200 parts per trillion (ppt) over many years may experience reproductive difficulties and may have an increased risk of developing cancer.

In 2015, average DBCP concentration in the District wells was 0.06 ppt, while the concentrations ranged from non-detect to 0.23 ppt. The State Board requires the District to blend the water so that the concentration is below 0.16 ppt, or 80 percent of the MCL.

Total Dissolved Solids

Total Dissolved Solids (TDS) concentrations in the northeast part of the basin range from about 170 to about 300 mg/L, with typical concentrations in the mid- to low 200s. TDS concentrations in excess of 200 mg/L indicate degradation from overlying land use. With few exceptions, areas with significant irrigated land use or dairy waste disposal histories overlie groundwater with elevated TDS concentrations. Most of these degraded areas are located south of the Interstate 10 Freeway. The impact of agriculture on TDS in groundwater primarily is caused by fertilizer use on crops, consumptive use, and dairy waste disposal.

TDS concentrations in groundwater have increased slightly or remained relatively constant in northern parts of the MZs 1, 2, and 3. TDS concentrations are significantly higher in the southern parts of these zones and in all of MZ 5, where they typically exceed the 500 mg/L recommended secondary MCL and frequently exceed the upper limit secondary MCL of 1,000 mg/L. In 2015, the average TDS concentration in District wells was 250 mg/L.

Perchlorate

The State Board has indicated that perchlorate in groundwater in California likely reflects its use in the aerospace industry as a solid rocket propellant (in the form of ammonium perchlorate). Perchlorate is a regulated drinking water contaminant in California, with an MCL of 6 ppb. Perchlorate is believed to inhibit the thyroid's ability to process iodide. Normal body metabolism requires thyroid hormones, as do normal prenatal and postnatal development and growth.

In 2015, average perchlorate concentration in the District wells was 1.9 ppb, while the concentrations ranged from non-detect to 6.6 ppb. The State Board requires the District to blend the water so that the concentrations are below the MCL of 6 ppb.

5.2.2 Water Facilities Authority Water Quality

The District receives imported water through IEUA from MWD, which receives raw water from northern California through the SWP. The SWP water is delivered to the WFA Agua de Lejos Water Treatment Plant through the MWD Rialto Reach of the Foothill Feeder. The WFA receives and treats SWP raw water. The quality of water from the WFA is generally and consistently quite good, although it can vary depending on hydrologic conditions in both northern and southern California.

State Water Project Water Quality

The key water quality issues on the SWP are disinfection byproduct precursors, in particular total organic carbon and bromide. MWD is working to protect the water quality of this source, but it has needed to upgrade its water treatment plants to deal adequately with disinfection byproducts. Disinfection byproducts result from total organic carbon and bromide in the source water reacting with disinfectants at the water treatment plant, and they may place some near term restrictions on MWD's ability to use SWP water. MWD expects these treatment restrictions to be overcome through the addition of ozone disinfection at its treatment plants. Arsenic is also of concern in some groundwater storage programs.

Groundwater inflows into the California Aqueduct are managed to comply with regulations and protect downstream water quality while meeting supply targets. Additionally, nutrient levels are significantly higher in the SWP system than within the Colorado River, leading to the potential for algal related concerns that can affect water management strategies. MWD is engaged in efforts to protect the quality of SWP water from potential increases in nutrient loading from wastewater treatment plants. Also, as in the Colorado River watershed, MWD is active in studies on the occurrence, sources, and fate and transport of constituents of emerging concern.

5.2.3 San Antonio Water Company Water Quality

Surface water from local sources that originate in the San Antonio Canyon, Cucamonga Canyon, Day Creek, Deer Creek, Lytle Creek and several other smaller surface streams is generally of high quality, as these creeks are fed by snowmelt and other precipitation in the San Gabriel Mountains. Nevertheless, surface water sources are treated prior to introduction to the potable water supply in order to insure bacteriological quality and compliance with state and federal drinking water quality standards.

5.2.4 Recycled Water Quality

The State Water Resources Control Board has established regulations and guidelines for the use of recycled water under the California Code of Regulations, Title 22. In addition, IEUA sets requirements on recycled water retailers, including the District, that are incorporated in its agreements with retailers and in IEUA Ordinance No. 69, which regulates the availability and use of recycled water.

All of IEUA water recycling treatment plants produce recycled water suitable for full body contact recreation and generally meet the more stringent aquatic habitat criteria. Due to salinity management and the exclusive use of the SWP supply for imported water, TDS concentrations in recycled water remain relatively low for recycled water (typically 500 mg/L). Since recycled water is regulated and monitored carefully, water quality is expected to remain high.

5.2.5 Impact on Water Management Strategies and Supply Reliability

While the Chino Groundwater Basin water quality is very good, the District will continue with its blending program for groundwater high in nitrates. Imported water that is treated and delivered through the WFA is consistently of good quality. MWD has identified those water quality issues that are of concern and has implemented necessary water management strategies to minimize the impact on water supplies. SAWCo water is consistently of high quality, as is IEUA's recycled water supply.

If water quality does impact the water supply to the District in the future, the District will continue to implement its Water Master Plan and Capital Improvement Program, which provides for system redundancy and supply. For example, if groundwater becomes unusable due to water quality concerns, more imported water will be required. If imported water becomes limited due to diminished water quality, then more treatment is necessary, and more groundwater may be used.

5.3 CLIMATIC IMPACTS ON RELIABILITY

The reliability of Chino Basin's groundwater supply is based on long-term hydrology due to its ability to store groundwater, and therefore it is not directly impacted by single year or multi-year drought events. In contrast, San Antonio Water Company's local surface water supplies can be impacted by short-term drought events, as is currently being experienced (see Section 4.4). The climate of northern California can impact the reliability of the District's imported surface water supply; however, MWD has mitigated these impacts through supply and storage development.[22] Finally, recycled water is considered "drought proof" because it originates from the wastewater resulting from indoor uses which are not impacted by changes in the climate.

Table 5-1 summarizes the projected supply reliability impacts of single and multiple dry-year scenarios for each of the District's water supply sources. The historical bases for the supply reliability data is presented in Table 5-2.

[22] MWD 2015 UWMP (Draft March 2016).

Table 5-1:
Supply Reliability as Percentage of Normal Water Year Supply

			Multiple Dry Years		
Supply Source	**Normal Year**	**Single Dry Year**	**Year 1**	**Year 2**	**Year 3**
Chino Groundwater Basin	100%	100%	100%	100%	100%
Water Facilities Authority	100%	100%	100%	100%	100%
San Antonio Water Company[1]	100%	82%	82%	70%	70%
Recycled Water	100%	100%	100%	100%	100%

Aligns with data in DWR Standardized Tables 7-1 R (multiple versions).
[1] Based on aggregated per-share allocation percentage reductions (Section 4.4).

Table 5-2:
Bases of Water Year Data

Supply Source	**Normal Year**	**Single Dry Year**	**Multiple Dry Years**
Chino Groundwater Basin[1]	1893-2015	2013	2013-2015
Water Facilities Authority[2]	1922-2012	1977	1990-1992
San Antonio Water Company[1]	1893-2015	2013	2013-2015

Aligns with data in DWR Standardized Tables 7-1 R (multiple versions).
[1] Western Regional Climate Center, Pomona Fairplex (047050), Monthly Sum of Precipitation, Period of Record: 11/1/1893 to 12/31/2015, accessed May 19, 2016. http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7050.
[2] MWD 2015 Urban Water Management Plan (Draft March 2016), Table 7-1 W.

Dry Year Yield Program and Water Supply Allocation Plan

On May 1, 2010, MWD implemented a third consecutive year of the Dry Year Yield (DYY) Program (Section 4.2.2), reducing the amount of direct imported water deliveries IEUA retail agencies could purchase by 31,000 AF. Two months later, on July 1, 2010, MWD implemented a Level 2 regional shortage under WSAP (Section 5.1.2).

The overlap of these two programs brought significant challenges to IEUA's member agencies and changed in how each retailer used its individual water supply. The District responded by reducing its reliance on imported water from MWD by 40 percent during this period through implementation of water use restrictions, public information campaigns, and prudent management and diversification of its water supply portfolio.

As discussed in Section 5.1.2, during normal and dry years MWD will have available supply to meet 100 percent of the District's imported water demands. However, the District can expect to be called upon by MWD to reduce its imported water demand through its DYY Program shift obligation. Simultaneously, the District can expect to have its Tier 1- and Tier 2-priced imported water supplies reduced by 10-40 percent, depending on the level of implementation of MWD's WSAP. Nevertheless, the overlap of these two programs, while creating challenges, does not in any way impact the reliability of the District's water supplies.

5.3.1 Demand Modifications during Dry Years

Demands on the District's water system can be impacted by changes in climate conditions. This is mostly due to shifts in outdoor water use patterns that result from wet or dry weather conditions. Demands can also be impacted by increased drought-messaging and calls for conservation, as has been experienced over the past two years during the Governor's emergency conservation regulations.

The District's 2005 UWMP established water demand patterns for single and multiple dry–year periods based on the most recent five years of production and rainfall data. It found that District customers increased their water use during dry years on average about 5 percent over normal years' usage levels. The District's 2010 UWMP, written at the end of a three-year drought, found that customers responded to significantly expanded customer communications and implementation of water waste restrictions with sizeable reductions in water use during these dry years.

The District is again writing its UWMP at (hopefully) the end of a three-year drought, and has found customers once again responsive to local, regional, and statewide calls for conservation by reducing their water use to historically low levels (see Section 4). Therefore, the District confirms that the minimal demand increases experienced in the past during dry years will be more than be offset by the increased awareness and responsiveness of District customers to the need to conserve, as experienced in the most recent dry-year period. For conservative planning purposes, the District's 2015 UWMP will not adjust customers' demands on its water supply for its dry-year reliability analyses.

5.3.2 Climate Change Impacts on Water Supply Reliability

Water resource managers have long strived to meet their goals of system reliability and environmental protection in the face of many uncertainties, including demographic and economic forecasts and intrinsic weather variability. Now water managers also face a new uncertainty—the potential for climate change, which in coming years may significantly affect patterns of water demand and the availability of supplies. However, information about the future impacts of climate change is deeply uncertain and likely to remain so for the foreseeable future.

In March 2016, IEUA published a draft regional Integrated Water Resources Plan (IRP), developed in partnership with its member agencies, which incorporates a comprehensive assessment of regional water supply vulnerabilities to climate change. The IRP identifies general climate change trends for California of increasing temperatures and shifts of precipitation from snow to rain. These trends will impact water supplies in two ways: higher temperatures will cause increased water demands; however, infrastructure to capture rain runoff is limited as water infrastructure in California was designed to capture slow melting snowpack, not rapid stormwater. In addition, droughts are expected to occur more frequently, more intensely, and last longer.

A set of 106 climate scenarios for the IEUA region were derived from downscaled general circulation model results used for the Intergovernmental Panel on Climate Change Assessment Reports 3 & 5. These data suggest that regional temperatures would likely increase between 0.5-3.5 degrees Fahrenheit by 2040. Precipitation was highly variable and showed no clear trend across the scenarios. Using this information, the IRP "stress tested" existing and potential regional water supplies and used the resulting analysis to identify future regional water supply needs and opportunities.

It should be noted that the IRP's analysis is regional and does not apply to individual member agencies such as the District. As stated earlier, the District's past investments in a diverse water supply portfolio provides it with a very reliable water supply. In the coming year, IEUA plans to conduct a "Phase 2" IRP analysis which disaggregates member agencies' water demands and future supply needs due to climate change and other factors.

5.4 RELIABILITY ANALYSES – NORMAL, SINGLE, MULTIPLE DRY YEARS

The following tables compare the District's current and projected water supplies and demands in normal, single dry-year and multiple dry-year scenarios for the District.

Projections presented in Table 5-3 through Table 5-5 indicate the District can expect its available supplies to significantly exceed anticipated demands over the 25-year planning period. As a result of these surplus supplies, the District should not experience any problems in meetings its demands during normal, single, or multiple dry-year scenarios during the next 25 years.

Table 5-3:
Supply and Demand Comparison – Normal Year (AFY)

	2020	2025	2030	2035	2040
Chino Groundwater Basin	29,841	29,841	29,841	29,841	29,841
Water Facilities Authority	21,776	21,776	21,776	21,776	21,776
San Antonio Water Company	800	800	800	800	800
Recycled Water	1,031	990	1,019	1,069	1,069
Total Supply[1]	**51,790**	**51,749**	**51,778**	**51,828**	**51,828**
Total Demand[2]	**35,200**	**35,396**	**35,730**	**36,081**	**36,364**
Difference	**16,590**	**16,353**	**16,048**	**15,748**	**15,464**

Aligns with data in DWR Standardized Tables 7-2 R and 7-2 W.
[1] Table 4-1: Total available water supply capacity.
[2] Table 3-2.

Table 5-4:
Supply and Demand Comparison – Single Dry Year (AFY)

	2020	2025	2030	2035	2040
Chino Groundwater Basin	29,841	29,841	29,841	29,841	29,841
Water Facilities Authority	21,776	21,776	21,776	21,776	21,776
San Antonio Water Company	656	656	656	656	656
Recycled Water	1,031	990	1,019	1,069	1,069
Total Supply[1]	**51,646**	**51,605**	**51,634**	**51,684**	**51,684**
Total Demand[2]	**35,200**	**35,396**	**35,730**	**36,081**	**36,364**
Difference	**16,446**	**16,209**	**15,904**	**15,604**	**15,320**

Aligns with data in DWR Standardized Tables 7-3 R and 7-3 W.
[1]Total available water supply capacity (Table 4-1) x single dry-year adjustment (Table 5-1)
[2] Table 3-2.

Table 5-5:
Supply and Demand Comparison – Multiple Dry Years (AFY)

		2020	2025	2030	2035	2040
Year 1	Chino Groundwater Basin	29,841	29,841	29,841	29,841	29,841
	Water Facilities Authority	21,776	21,776	21,776	21,776	21,776
	San Antonio Water Company	656	656	656	656	656
	Recycled Water	1,031	990	1,019	1,069	1,069
	Total Supply[1]	**51,646**	**51,605**	**51,634**	**51,684**	**51,684**
	Total Demand[2]	**35,200**	**35,396**	**35,730**	**36,081**	**36,364**
	Difference	**16,446**	**16,209**	**15,904**	**15,604**	**15,320**
Year 2	Chino Groundwater Basin	29,841	29,841	29,841	29,841	29,841
	Water Facilities Authority	21,776	21,776	21,776	21,776	21,776
	San Antonio Water Company	558	558	558	558	558
	Recycled Water	1,031	990	1,019	1,069	1,069
	Total Supply[1]	**51,547**	**51,507**	**51,536**	**51,586**	**51,586**
	Total Demand[2]	**35,200**	**35,396**	**35,730**	**36,081**	**36,364**
	Difference	**16,347**	**16,111**	**15,806**	**15,505**	**15,221**
Year 3	Chino Groundwater Basin	29,841	29,841	29,841	29,841	29,841
	Water Facilities Authority	21,776	21,776	21,776	21,776	21,776
	San Antonio Water Company	558	558	558	558	558
	Recycled Water	1,031	990	1,019	1,069	1,069
	Total Supply[1]	**51,547**	**51,507**	**51,536**	**51,586**	**51,586**
	Total Demand[2]	**35,200**	**35,396**	**35,730**	**36,081**	**36,364**
	Difference	**16,347**	**16,111**	**15,806**	**15,505**	**15,221**

Aligns with data in DWR Standardized Tables 7-4 R and 7-4 W.
[1]Total available water supply capacity (Table 4-1) x multiple dry-year adjustment (Table 5-1)
[2] Table 3-2.