



## Technical Memorandum

<b>To:</b>	<b>Peter Kavounas</b>
<b>From:</b>	<b>Garrett Rapp, Mark Wildermuth</b>
<b>Date:</b>	<b>September 18, 2017</b>
<b>Subject:</b>	<b>Estimation of Evaporation Losses in Recharge Facilities in the Chino Basin</b>

### Background and Objective

The Chino Basin Watermaster (Watermaster), Chino Basin Water Conservation District (CBWCD), and Inland Empire Utilities Agency (IEUA) operate recharge facilities in the Chino Basin for storm, recycled, and imported waters (hereafter, recycled and imported waters are collectively referred to as supplemental water). Figure 1 shows the locations of these recharge facilities and the types of water recharged. Table 1 lists IEUA estimates of the annual recharge of storm and supplemental water at these facilities for the period of July 2011 through June 2016. These recharge estimates were made assuming that evaporative losses were negligible.

Watermaster is interested in determining the magnitude and significance of evaporative losses for storm and supplemental water diverted into the recharge facilities for recharge into the Chino Basin. If Watermaster were to determine that evaporative losses are significant, it would like to establish a method to estimate and apply evaporative losses to storm and supplemental water deliveries to more accurately estimate recharge. Specifically, Watermaster staff is interested in determining if a “postage stamp” evaporation loss rate could be developed that would enable it to assess evaporation losses on all water delivered to recharge facilities.

Watermaster directed WEI to: identify sources of data that could be used to estimate evaporative losses from water stored in recharge facilities in the Chino Basin, develop a methodology to estimate evaporation losses at the recharge facilities, and conduct a proof of concept of the methodology. WEI completed the research, developed and tested a methodology, and discussed it with Watermaster staff earlier this year. WEI was subsequently directed to apply the methodology to estimate evaporative losses for all of the recharge facilities. This technical memorandum summarizes the technical work done to date, preliminary findings, and recommendations for finalizing the work.

## Data and Methodology

There are two methods to compute evaporation from a free water surface: energy budget and empirical methods. Energy budget methods require detailed site-specific information measured at each recharge facility; this information does not exist in the Chino Basin area. Empirical methods are based on the direct measurement of evaporation in evaporation pans and converting those measurements to evaporation estimates. The latter method was adopted herein. The data required to estimate evaporation losses at recharge facilities using an evaporation pan are described below.

1. *Daily evaporation data* – WEI researched available evaporation data within and proximate to the Chino Basin and acquired evaporation data from two evaporation monitoring stations:
  - a. Puddingstone Reservoir (San Dimas): This evaporation pan is located at Puddingstone Reservoir. It is a screened land pan and is operated by the Los Angeles County Department of Public Works (LACDPW). The pan is at an elevation of 1030 feet above mean sea level (ft-amsl). LACDPW staff take daily evaporation measurements at this station.
  - b. Lake Mathews (Riverside): This evaporation pan is located at Lake Mathews. It is a Class A pan and is operated by the Metropolitan Water District of Southern California (MWDSC). The pan is at an elevation of 1470 ft-amsl. MWDSC staff take weekly measurements at this station.

Figure 1 shows the locations of these evaporation measurement stations in relation to the Chino Basin and the recharge facilities. Upon review of the data, WEI chose to use the Puddingstone Reservoir evaporation data because its evaporation pan is located closer to the Chino Basin recharge facilities and its elevation is more representative of the Chino Basin recharge facilities than the evaporation pan at Lake Mathews. The recharge facilities range in elevation between about 750 ft-amsl (Grove Basin) to about 1480 ft-amsl (San Sevaine Basin 1). Furthermore, the daily evaporation measurements from Puddingstone Reservoir enable more accurate evaporation estimates than could be achieved using the weekly evaporation measurements from Lake Matthews. Figure 2 shows the monthly evaporation time history measured at Puddingstone Reservoir for the period of July 2011 through June 2016.

2. *Elevation-Area-Storage tables* – The IEUA developed elevation-area-storage (EAS) tables for each recharge facility based on land and photogrammetric surveys. The EAS tables contain the relationship of elevation to water surface area and storage for each recharge facility. The IEUA uses stage time-history data measured at water level sensors and EAS tables for each recharge facility to develop estimates of stormwater capture and infiltration rates.

3. *Stage data* – The IEUA measures stage at recharge facilities with water level sensors and acquires the measurements through a Supervisory Control and Data Acquisition (SCADA) system. WEI collected stage time-history data for the recharge facilities for the period of July 1, 2011 through June 30, 2016.
4. *Historical stormwater capture and supplemental water deliveries to recharge facilities* – The IEUA tabulates the amount of stormwater capture and supplemental water deliveries to each facility in a Microsoft Excel workbook and uses this data to create monthly summaries of recharge. The tabulations also include notes that characterize the specific operations of each recharge facility. While the IEUA tabulation describes the monthly stormwater captured and supplemental water deliveries to each recharge facility, the recharge of this water may not occur during the period that the water enters the recharge facility. Storm and supplemental water can enter the recharge facilities at rates that exceed the infiltration rates and remain in storage for several months.

The steps used to estimate evaporative losses from water diverted into recharge facilities are described below.

1. *Selection of recharge facilities for the estimation of evaporative losses* – Based on the review of available data for estimating evaporation losses, all the recharge facilities listed in Table 1 except the College Heights and Etiwanda Debris Basins were selected for analysis. The College Heights Basins were excluded because the instrumentation is not sufficient to estimate evaporative losses. And, the Etiwanda Debris Basin was excluded because it does not have the instrumentation required to estimate stage.
2. *Investigation period* – The period July 1, 2011 through June 30, 2016 was selected for the investigation of evaporation losses. This period includes a uniquely large imported water delivery event of about 22,500 acre-feet (AF) to 14 recharge facilities over the period of July 2011 through October 2011 and consistent recycled water recharge at several facilities.
3. *Development of stage time series* – The stage time series data from the IEUA were compiled for each facility in a Microsoft Excel workbook. The beginning-of-day stage measurements for each facility were plotted and reviewed to assess completeness and reasonableness. Some data were adjusted to fill gaps or to adjust for obvious errors.
4. *Computation of average daily water surface area* – The average daily surface area for each recharge facility was estimated from stage data and the EAS tables.
5. *Computation of evaporation loss* – For each recharge facility, the daily evaporation loss, expressed volumetrically in AF, was computed by multiplying the average

daily water surface area by the daily evaporation measured at the Puddingstone Reservoir using the following equation:

$$L_e = \frac{SA_{avg} * E}{12}$$

Where  $L_e$  is the daily evaporative loss in AF,  $SA_{avg}$  is the average water surface area in acres, and  $E$  is the measured daily evaporation in inches.

6. *Computation of monthly and annual evaporation loss rates by recharge facility* – The evaporation loss rate, as referred to herein, is the evaporation expressed as a ratio of the volumetric evaporation loss divided by the sum of initial storage plus storm water captured plus supplemental water delivered, expressed as a percentage. The daily evaporation losses calculated in step 5 were aggregated by month and fiscal year to calculate the evaporation loss rate using the following equation:

$$l_e = - \left[ \frac{\sum L_e}{S_0 + \sum I} \right] * 100\%$$

Where  $l_e$  is the monthly/annual evaporative loss rate,  $\sum L_e$  is the sum of the daily evaporation losses for the month/year in AF,  $S_0$  is the storage in the recharge facility at the beginning of the month/year in AF, and  $\sum I$  is the sum of diverted water from all sources to the recharge facility in the month/year in AF.

## Results and Discussion

### Evaporative Losses

Table 2 shows the annual evaporation loss rates for each of the recharge facilities during the analysis period. The Brooks Street and Ely recharge facilities were the only recharge facilities to have enough data to compute evaporation loss and loss rate estimates for all five years in the investigation period. Comparing annual evaporation loss rate estimates for all recharge facilities in the investigation period indicates that the annual evaporation loss rate varies from a minimum of 0.2 percent for the Lower Day Basin in FY2015 to a maximum of 9.7 percent for Turner Basins 3 and 4 in FY2013. The annual volume-weighted evaporation loss rate ranges from 2.7 percent to 3.2 percent and averages about 3.0 percent. There are 80 potential evaporation loss rates that could have been computed in the investigation period (16 recharge facilities times five years) had the stage data been available and useful. 30 of the potential evaporation loss rates could not be estimated due to data challenges.

Tables 3a through 3n show the July 1 initial storage, the annual inflow volumes of stormwater capture and supplemental water deliveries, the estimated annual evaporation loss, and the annual evaporation loss rate for each recharge facility summarized in Table 2.

Tables 4a through 4n are similar to Tables 3a through 3n and show, on a monthly time step, the initial monthly storage, volumes of stormwater capture, supplemental water deliveries, and estimated monthly evaporation loss.

The wide variability in the evaporation rates among the recharge facilities and over time are attributed to the following:

1. Data challenges as previously described.
2. Infiltration rate – A higher infiltration rate will result in less water lost to evaporation. For example, consider the evaporation loss rates for RP3 Basins 1, 3, and 4, and Victoria Basin. Both facilities receive recharge throughout the year. The estimated evaporation loss rate in RP3 Basins 1, 3, and 4 is about 2.0-2.5 percent; these basins have typical infiltration rates exceeding one foot per day. Victoria Basin has infiltration rates typically below 0.5 feet per day and estimated evaporation loss rates of 6.0 percent or greater.
3. Timing and magnitude of stormwater capture and supplemental water deliveries – Water diverted into recharge facilities in the summer will experience greater evaporation losses than water diverted in the winter. This is due to higher evaporation rates in the summer months. For example, the sums of initial storage and water diverted into the Brooks Street Basin were 316 AF and 313 AF in July 2013 and February 2014, respectively (see Table 4c), and the volumes of evaporation losses in July 2013 and February 2014 for the Brooks Street Basin were 5.4 AF and 1.9 AF, respectively. The July evaporative losses were almost three times the February evaporation losses.

The importance of the timing of stormwater capture and supplemental water delivery on evaporation loss can be seen from the monthly evaporation losses shown in Tables 4a through 4n and Figures 3a through 3e. Figures 3a through 3e show the estimated volume-weighted monthly evaporation loss rates for the investigation period for the Brooks Street Basin, Ely Basins, Hickory Basin, RP3 Basins (1, 3, and 4), and Victoria Basin, respectively. Figure 3f shows the monthly volume-weighted average evaporation loss rate for these recharge facilities. The average monthly volume-weighted evaporative loss rates range from a minimum of 0.78 percent (January) to 3.75 percent (August), and the volume-weighted annual evaporative loss rate is about 3.0 percent.

### Seasonal Evaporation Losses

In addition to the annual evaporation loss rate estimates, Watermaster directed WEI to develop seasonal postage stamp evaporation loss rate estimates using the daily

evaporation losses that were used for the annual estimates. WEI reviewed the monthly data and divided the year into a wet season from November through March and a dry season for the rest of the year. WEI developed these seasonal evaporation loss rates for the recharge facilities for which average monthly evaporation loss rates were calculated and shown in Figures 3a through 3e: Brooks Street Basin, Ely Basins, Hickory Basin, RP3 Basins (1, 3, and 4), and Victoria Basin.

Table 5 shows that for the five basins analyzed, the average wet season evaporation loss rate ranges from 0.9 percent to 4.2 percent, and the volume-weighted average is about 1.5 percent. The dry season evaporation loss rate ranges from 2.7 percent to 5.9 percent, and the volume-weighted average is about 4.2 percent.

### Limitations

There are limitations to this work that create uncertainty in the results presented above. These limitations, described below, can be addressed in future work.

1. The stage time-series data for the recharge facilities are not always reliable, and in some cases, the level sensors are not vertically located to measure stage and evaporative losses. The challenges with the water level sensors also impact the IEUA's ability to accurately estimate stormwater capture and recharge. This limitation can be overcome through improvements in the deployment and maintenance of the water level sensors.
2. The five-year period of record analyzed is short and contains highly variable amounts of stormwater capture and supplemental water deliveries. The evaporation loss rates based on the data available during this period may not be statistically defensible. Note that the evaporation measurement record at Puddingstone Reservoir runs from the 1950s to present and that the Chino Basin Wasteload Allocation Model (WLAM) was calibrated in 2016 to match the stormwater capture and recharge estimates developed by the IEUA. As such, the limitation posed by the five-year investigation period and the uncertainty of the timing and magnitude of future diversions to recharge facilities could be eliminated by estimating evaporative losses for planning scenarios with the Chino Basin Wasteload Allocation Model.
3. The evaporation losses for the recharge facilities are based on evaporation estimates from Puddingstone Reservoir, which is located west and outside of the Chino Basin Watershed. More accurate estimates of evaporation losses would be assured if one or more evaporation stations were established in the Chino Basin.

### Conclusions

Evaporation losses vary significantly over time at each recharge facility. This variability is caused by seasonal variability in evaporation, temporal and spatial variability in the water diverted into recharge facilities, temporal and spatial variability of infiltration rates and

the availability of useable stage data at the recharge facilities. Across the entire watershed for all years analyzed, the average annual evaporation loss rate is about 3.0 percent, varying between a low of 2.7 percent in FY2012 to a high of 3.2 percent in FY2013. Although the timing, volume, and location of water capture and delivery in these recharge facilities fluctuate throughout the five-year analysis period, the total volume-weighted annual values are within a relatively narrow range, compared to fluctuations between years at each recharge facility.

The recharge facilities with the most consistent use throughout the year include the Brooks Street Basin, Ely Basins, Victoria Basin, Hickory Basin, and RP3 Basins (1, 3, and 4). The annual volume-weighted evaporative loss rate for these basins is also 3.0 percent. The volume-weighted average evaporation loss rates for these recharge facilities are 1.5 percent for the wet season of November through March and 4.2 percent for the rest of the year.

However, as discussed above, the variability of evaporation losses is controlled by the time of year in which the stormwater capture or supplemental water delivery occurs and the temporal variability in deliveries and infiltration rates. Variability is also caused by challenges in the availability of useful stage data at recharge facilities.

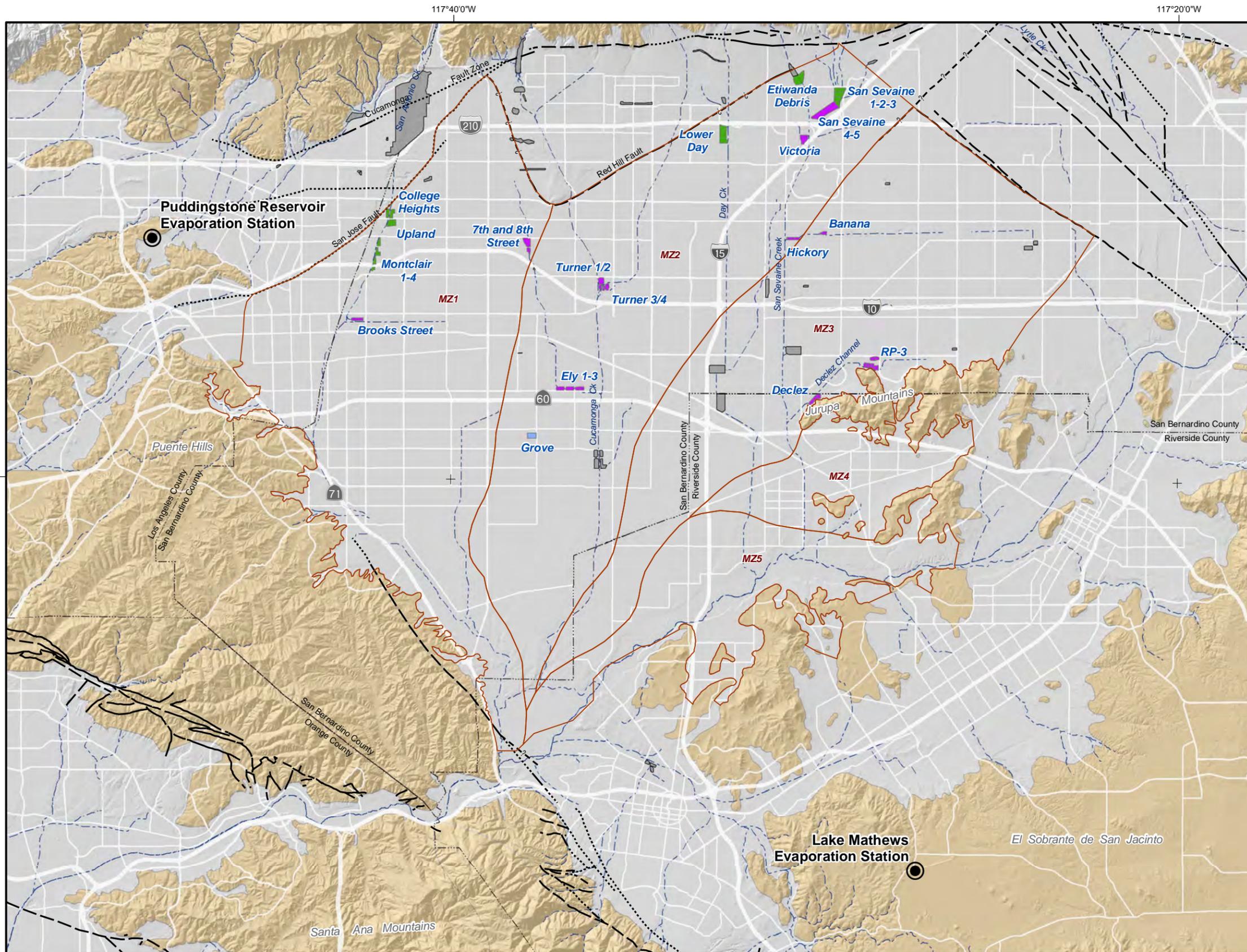
### Recommendations

The following recommendations are based on the work documented herein:

1. Based on the available data and usage pattern of the recharge facilities, Watermaster should consider the adoption of the seasonal evaporation loss rates of 1.5 and 4.2 percent for the wet and dry seasons, respectively. This bifurcation captures the seasonal effects on evaporation and will allow for a more accurate accounting of supplemental water recharge losses in the future.
2. Relocate and/or replace water level sensors where stage data are insufficient and or unreliable. Implementing a pro-active water level sensor replacement program will minimize data loss due to sensor failure and increase the availability of usable data for future evaporation loss evaluations and other investigations.

### Attachments

Tables 1, 2, 3a-3n, 4a-4n, and 5; Figures 1, 2, and 3a-3f



**Recharge Basins**  
(Symbolized by Recharged Water Type and Current Conditions)

- Storm, Imported, and Recycled Water
- Storm and Imported Water
- Stormwater
- Incidental Stormwater Only

Streams & Flood Control Channels

OBMP Management Zones

**Geology**

- Water-Bearing Sediments**
- Quaternary Alluvium
- Consolidated Bedrock**
- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks
- Faults**
- Location Certain
  - Location Concealed
  - Location Approximate
  - Location Uncertain
  - Approximate Location of Groundwater Barrier



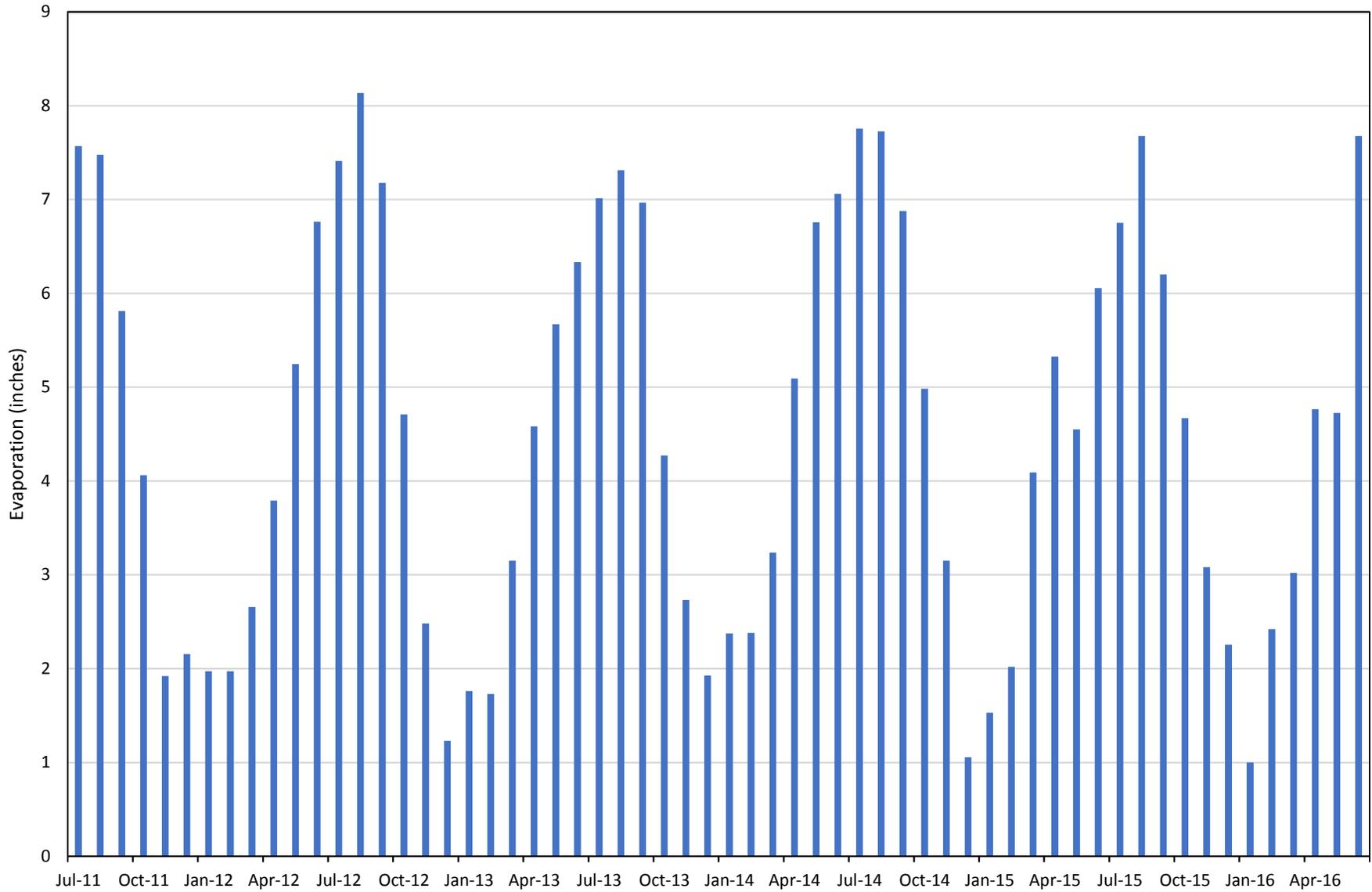
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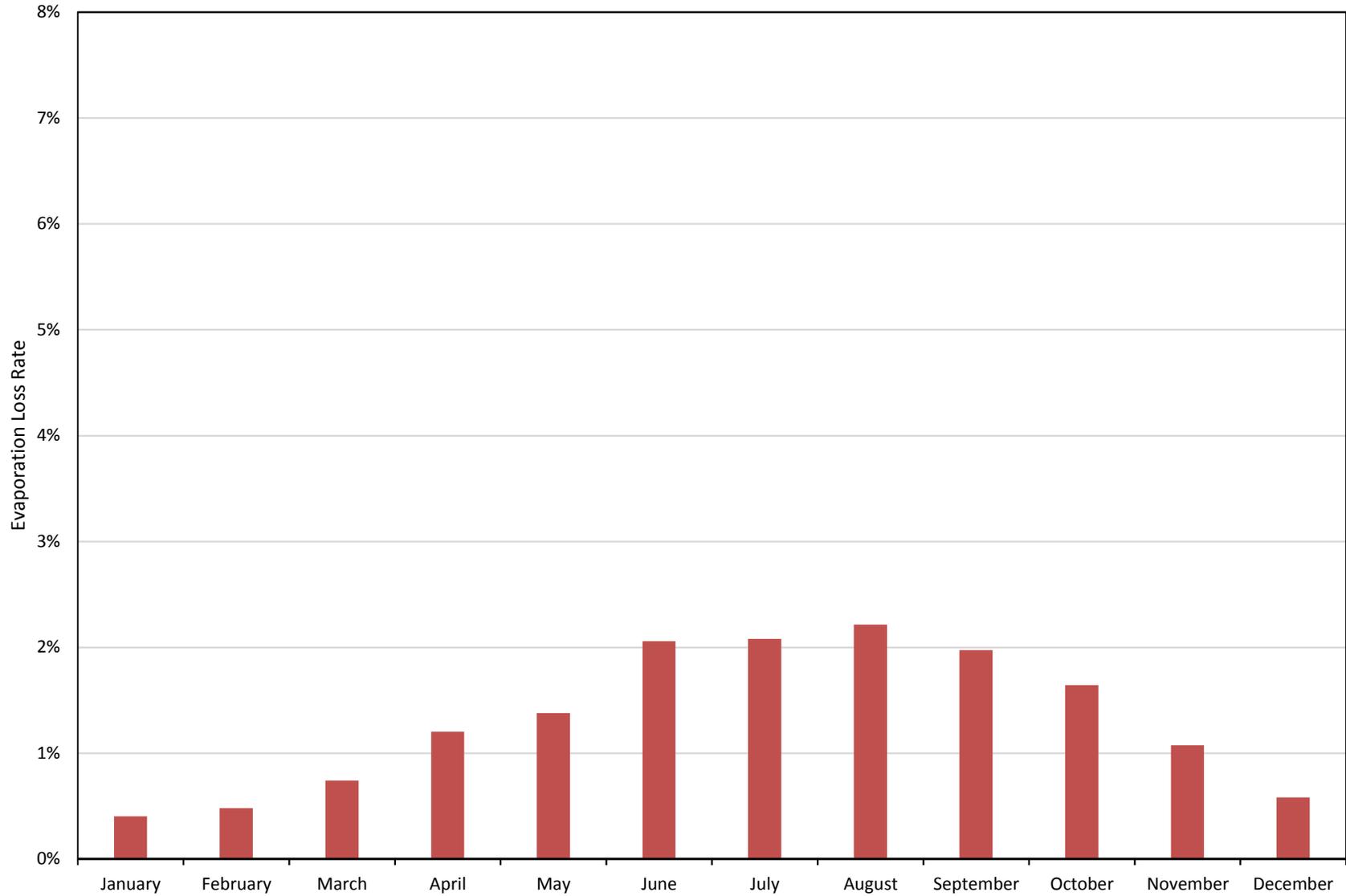
**Recharge Basins in the Chino Basin and Proximate Evaporation Stations**

**Figure 1**

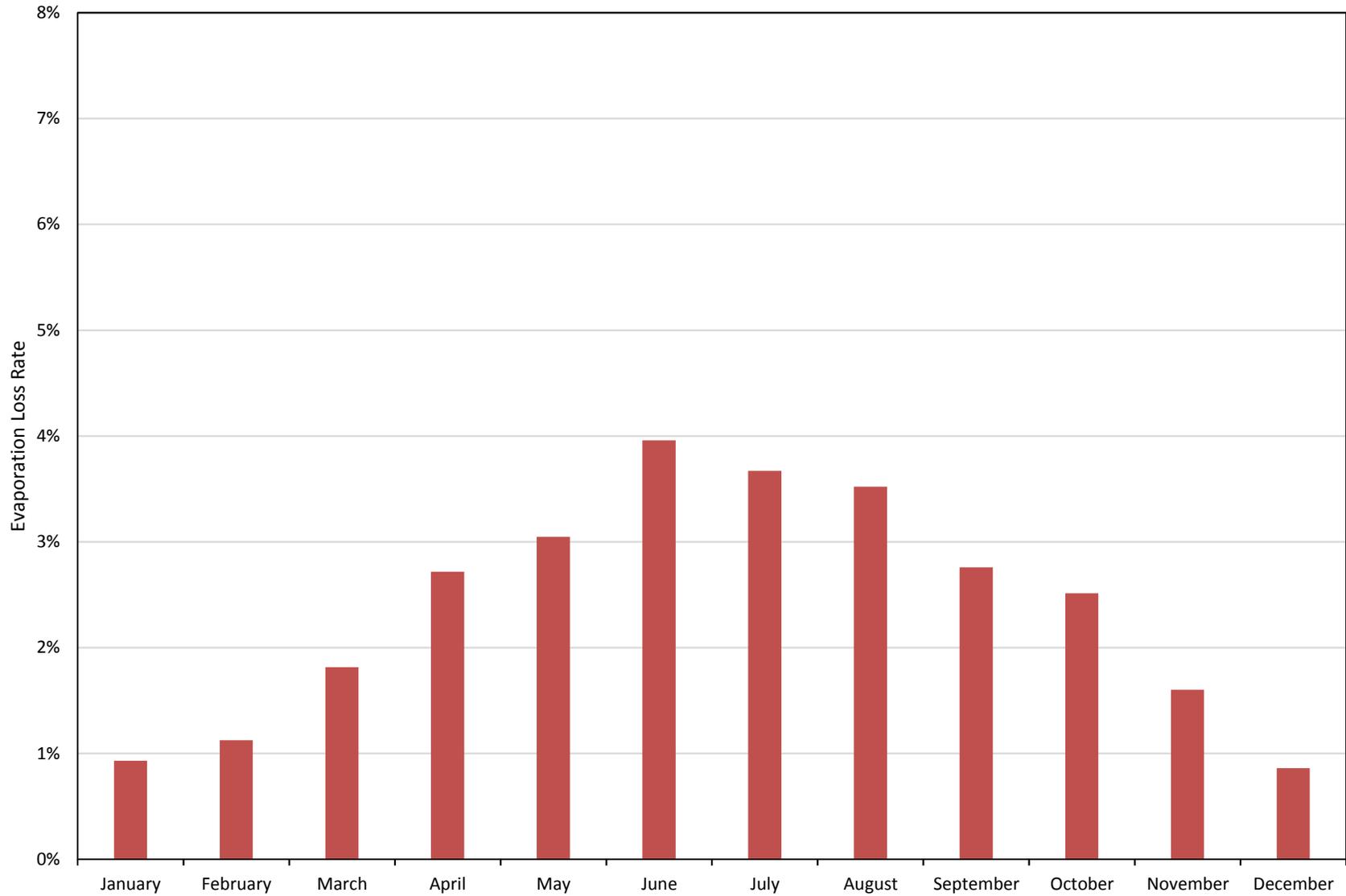
**Figure 2**  
**Monthly Evaporation Measured at Puddingstone Reservoir, FY2012-2016**



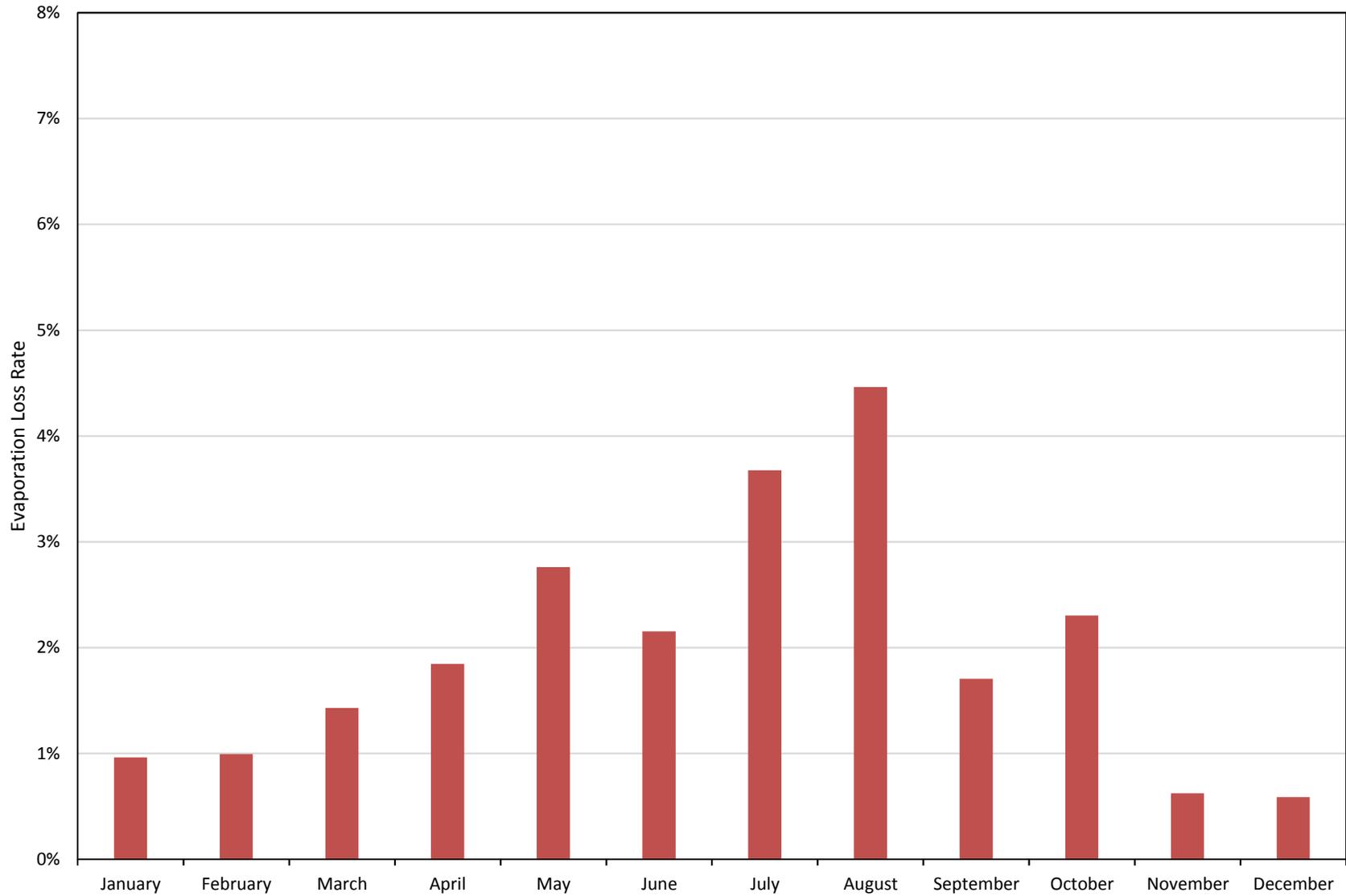
**Figure 3a**  
**Estimated Average Monthly Evaporation Loss Rates in Brooks Street Basin, FY2012-2016**



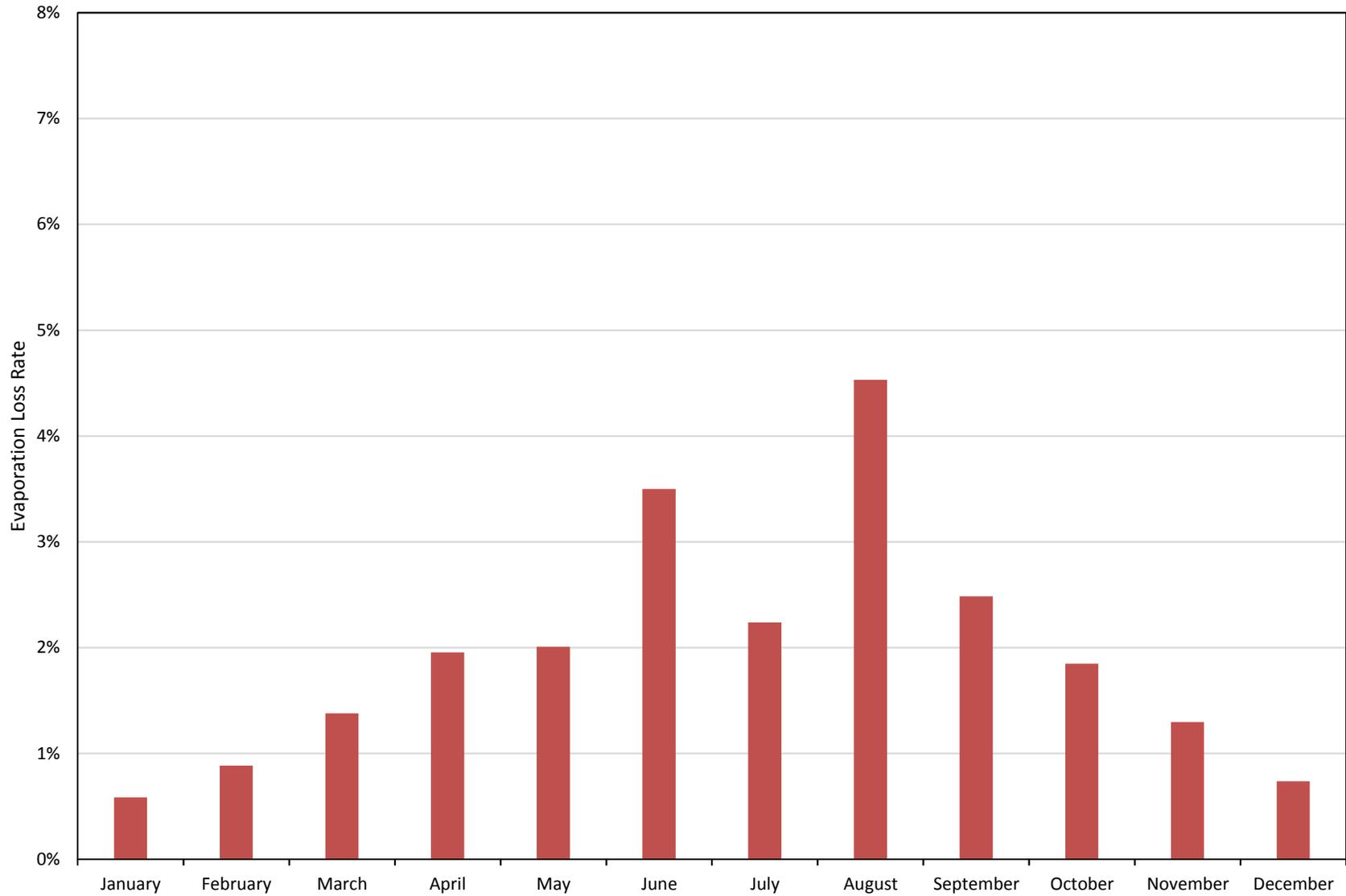
**Figure 3b**  
**Estimated Average Monthly Evaporation Loss Rates in Ely Basins 1-3, FY2012-2016**



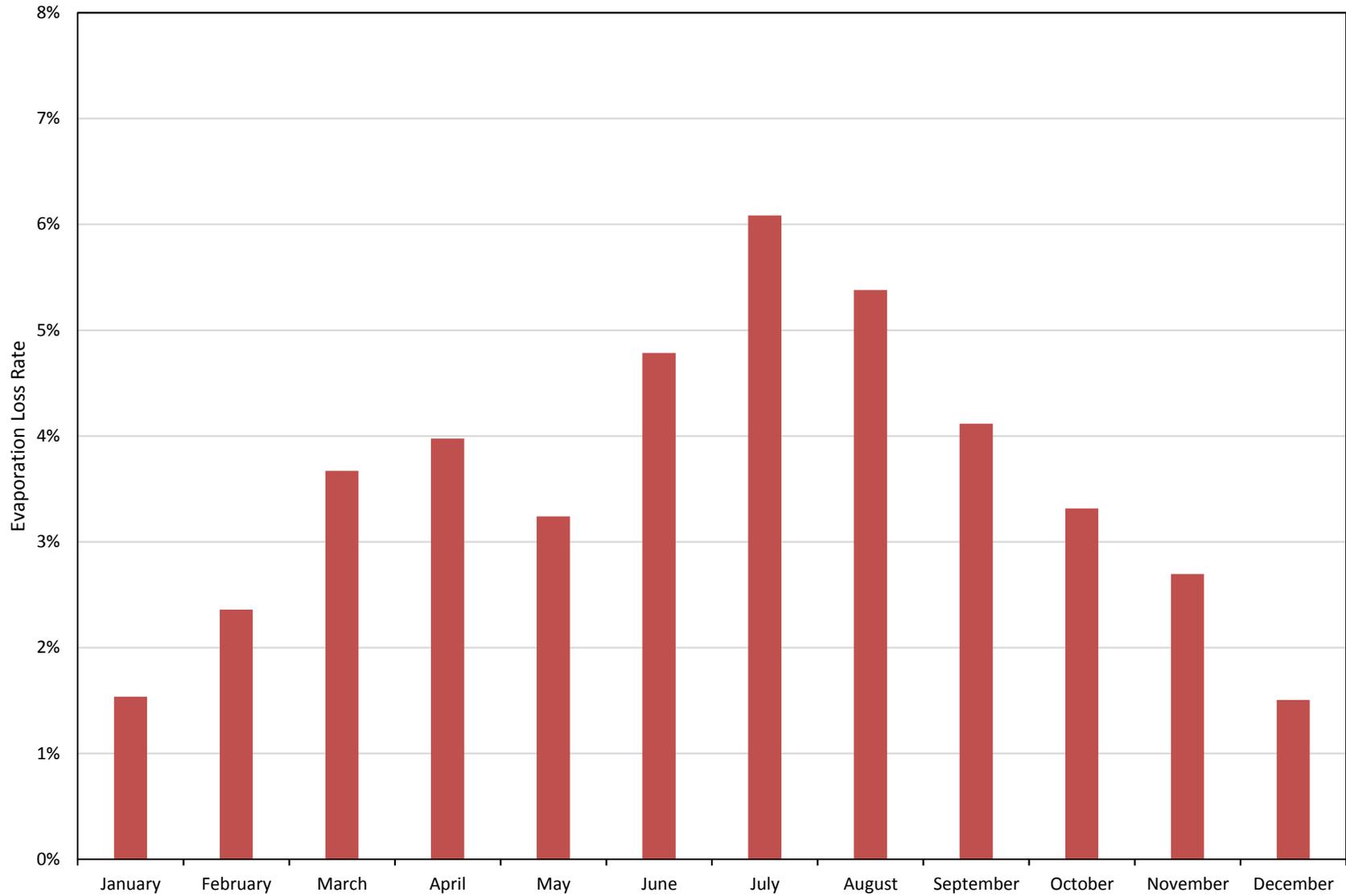
**Figure 3c**  
**Estimated Average Monthly Evaporation Loss Rates in Hickory Basin, FY2012-2016**



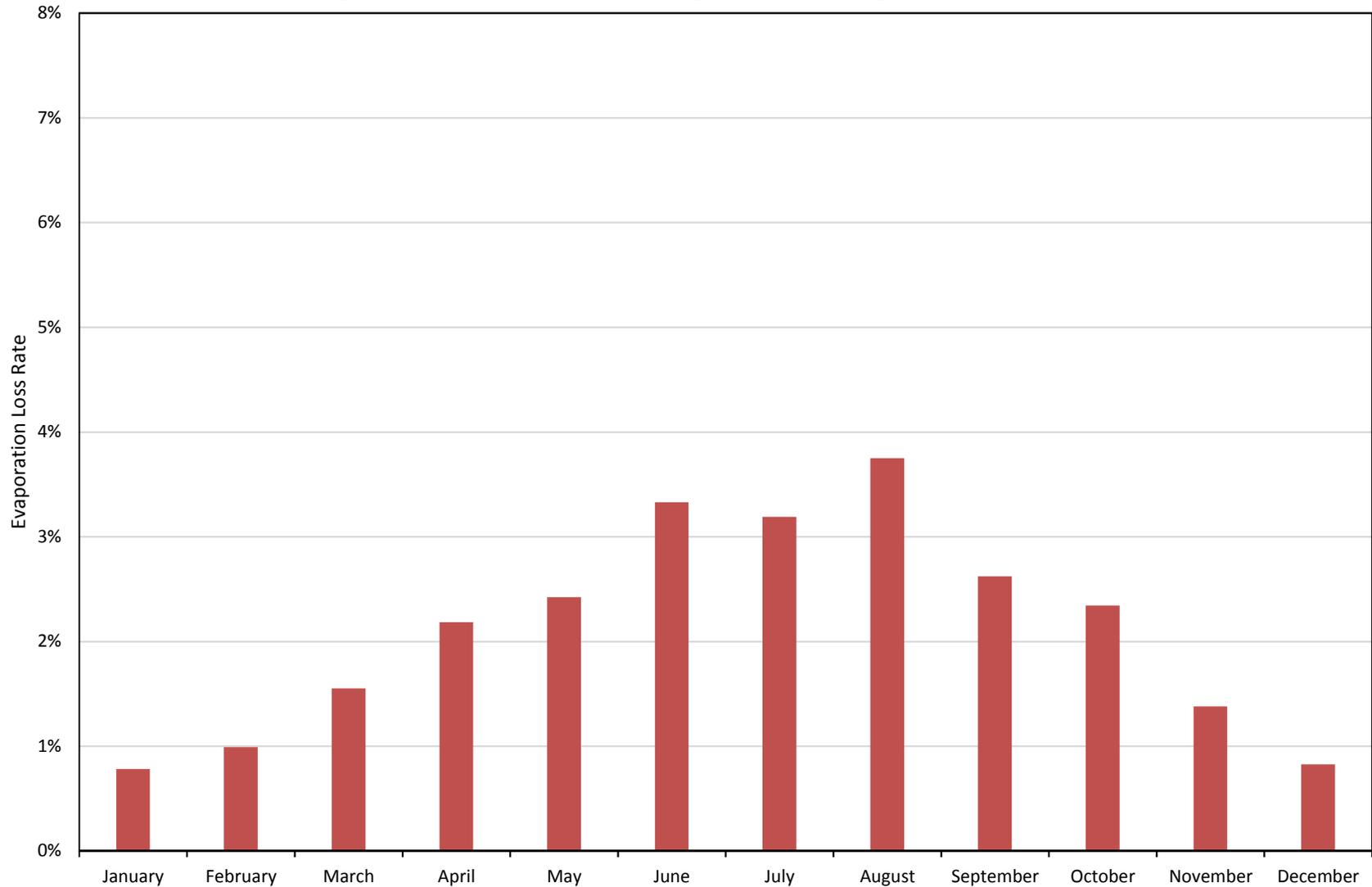
**Figure 3d**  
**Estimated Average Monthly Evaporation Loss Rates in RP3 Basins 1, 3, and 4, FY2012-2016**



**Figure 3e**  
**Estimated Average Monthly Evaporation Loss Rates in Victoria Basin, FY2012-2016**



**Figure 3f**  
**Volume-Weighted Average Monthly Evaporation Loss Rates in**  
**Recharge Facilities Referenced in Figures 3a through 3e, FY2012-2016**



**Table 1**  
**IEUA Estimated Recharge of Storm, Imported, and Recycled Water, FY2012-2016**  
**(AF)**

Basin Name	FY2012				FY2013				FY2014				FY2015				FY2016			
	SW/LR	IW	RW	Total	SW/LR	IW	RW	Total	SW/LR	IW	RW	Total	SW/LR	IW	RW	Total	SW/LR	IW	RW	Total
College Heights Basins	4	578	0	582	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0
Upland Basin	222	2,118	0	2,340	119	0	0	119	95	0	0	95	325	0	0	325	425	0	0	425
Montclair Basins	703	11,893	0	12,596	204	0	0	204	416	0	0	416	411	0	0	411	441	0	0	441
Brooks Street Basin	363	561	836	1,760	115	0	1,505	1,620	112	0	1,308	1,420	198	0	1,011	1,209	182	0	1,215	1,397
7 <sup>th</sup> and 8 <sup>th</sup> Street Basins	1,047	572	641	2,260	751	0	2,261	3,012	441	5	1,423	1,869	1,751	0	48	1,799	921	0	1,470	2,391
Ely Basins	1,096	885	393	2,374	568	0	1,378	1,946	548	0	3,298	3,846	1,087	0	1,751	2,838	1,506	0	1,012	2,518
Grove Basin	400	0	0	400	177	0	0	177	258	0	0	258	481	0	0	481	471	0	0	471
Turner Basins	1,879	199	1,034	3,112	1,120	0	176	1,296	596	0	1,565	2,161	1,289	0	948	2,237	1,616	0	1,958	3,574
Lower Day Basin	158	1,439	0	1,597	106	0	0	106	114	28	0	142	341	0	0	341	281	0	0	281
Etiwanda Debris Basins	100	567	0	667	33	0	0	33	45	0	0	45	27	0	0	27	83	0	0	83
Victoria Basin	221	281	665	1,167	94	0	842	936	192	0	1,379	1,571	306	0	931	1,237	343	0	635	978
San Sevaine	436	1,228	513	2,177	147	0	575	722	162	0	274	436	330	0	1	331	585	0	0	585
Hickory Basin	258	515	783	1,556	199	0	874	1,073	171	13	1,920	2,104	243	0	2,034	2,277	184	0	575	759
Banana Basin	247	0	1,915	2,162	114	0	670	784	87	24	1,071	1,182	197	0	1,148	1,345	365	0	2,106	2,471
RP-3 Basins	1,339	1,724	1,789	4,852	1,021	0	2,198	3,219	717	350	1,355	2,422	1,030	0	2,968	3,998	1,226	0	3,282	4,508
Declez Basin	798	0	65	863	530	0	0	530	341	374	0	715	895	0	0	895	607	0	969	1,576
<b>Totals:</b>	<b>9,271</b>	<b>22,560</b>	<b>8,634</b>	<b>40,465</b>	<b>5,298</b>	<b>0</b>	<b>10,479</b>	<b>15,777</b>	<b>4,299</b>	<b>795</b>	<b>13,593</b>	<b>18,687</b>	<b>8,911</b>	<b>0</b>	<b>10,840</b>	<b>19,751</b>	<b>9,236</b>	<b>0</b>	<b>13,222</b>	<b>22,458</b>

SW/LR - Stormwater and Local Runoff IW - Imported Water RW - Recycled Water FY - Fiscal Year



**Table 2**  
**Estimated Evaporation Loss Rate, FY2012-2016**

Recharge Facility	Evaporation Loss Rate				
	2012	2013	2014	2015	2016
7th/8th Street	insufficient data	1.5%	4.3%	insufficient data	insufficient data
Banana	insufficient data	4.0%	insufficient data	insufficient data	insufficient data
Brooks Street	2.1%	2.0%	2.7%	3.1%	2.2%
Declez	insufficient data	4.6%	3.2%	2.3%	2.2%
Ely 1-3	4.6%	1.9%	3.4%	3.6%	3.9%
Grove	4.2%	5.4%	4.9%	3.0%	4.3%
Hickory	2.0%	3.1%	1.5%	1.4%	insufficient data
Lower Day	1.9%	0.3%	0.8%	0.2%	insufficient data
Montclair 1-4	insufficient data	insufficient data	insufficient data	insufficient data	insufficient data
RP3 Cells 1, 3, and 4	2.0%	2.4%	insufficient data	insufficient data	2.2%
RP3 Cell 2	insufficient data	insufficient data	insufficient data	insufficient data	insufficient data
San Sevaine 1-5	2.7%	insufficient data	5.4%	1.1%	0.7%
Turner 1-2	4.3%	7.8%	insufficient data	3.8%	insufficient data
Turner 3-4	1.5%	9.7%	insufficient data	insufficient data	insufficient data
Upland	1.9%	insufficient data	3.9%	2.2%	2.0%
Victoria	6.0%	7.9%	insufficient data	6.2%	6.5%
Volume-Weighted Average	2.7%	3.2%	3.1%	3.1%	2.9%



**Table 3a**  
**Estimated Inflows and Evaporation Losses in 7th and 8th Street Basins, FY2013-2014**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b> <i>(1)</i>	<b>Imported Water Delivered to Basin</b> <i>(2)</i>	<b>Recycled Water Delivered to Basin</b> <i>(3)</i>	<b>Stormwater Capture</b> <i>(4)</i>	<b>Total Inflow plus Initial Storage</b> <i>(5)=(1)+(2)+(3)+(4)</i>	<b>Evaporation Loss</b> <i>(6)</i>	<b>Evaporation Loss Rate</b> <i>(7)=[(6)/(5)]*100%</i>
2013	4.9	0.0	2,261.0	751.0	3,016.9	(44.7)	1.5%
2014	12.2	5.4	1,423.0	441.0	1,881.6	(80.3)	4.3%



**Table 3b**  
**Estimated Inflows and Evaporation Losses in Banana Basin, FY2013**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b> <i>(1)</i>	<b>Imported Water Delivered to Basin</b> <i>(2)</i>	<b>Recycled Water Delivered to Basin</b> <i>(3)</i>	<b>Stormwater Capture</b> <i>(4)</i>	<b>Total Inflow plus Initial Storage</b> <i>(5)=(1)+(2)+(3)+(4)</i>	<b>Evaporation Loss</b> <i>(6)</i>	<b>Evaporation Loss Rate</b> <i>(7)=[(6)/(5)]*100%</i>
2013	40.4	0.0	670.0	114.0	824.4	(32.9)	4.0%



**Table 3c**  
**Estimated Inflows and Evaporation Losses in Brooks Street Basin, FY2012-2016**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b>	<b>Imported Water Delivered to Basin</b>	<b>Recycled Water Delivered to Basin</b>	<b>Stormwater Capture</b>	<b>Total Inflow plus Initial Storage</b>	<b>Evaporation Loss</b>	<b>Evaporation Loss Rate</b>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)=(1)+(2)+(3)+(4)</i>	<i>(6)</i>	<i>(7)=[(6)/(5)]*100%</i>
2012	178.6	560.5	836.0	363.0	1,938.1	(40.1)	2.1%
2013	157.3	0.0	1,505.0	115.0	1,777.3	(35.8)	2.0%
2014	146.1	0.0	1,308.0	112.0	1,566.1	(42.9)	2.7%
2015	101.3	0.0	1,011.0	198.0	1,310.3	(40.5)	3.1%
2016	151.8	0.0	1,215.0	182.0	1,548.8	(33.9)	2.2%



**Table 3d**  
**Estimated Inflows and Evaporation Losses in Declez Basin, FY2013-2016**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b>	<b>Imported Water Delivered to Basin</b>	<b>Recycled Water Delivered to Basin</b>	<b>Stormwater Capture</b>	<b>Total Inflow plus Initial Storage</b>	<b>Evaporation Loss</b>	<b>Evaporation Loss Rate</b>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)=(1)+(2)+(3)+(4)</i>	<i>(6)</i>	<i>(7)=[(6)/(5)]*100%</i>
2013	3.4	0.0	0.0	530.0	533.4	(24.7)	4.6%
2014	1.5	374.4	0.0	341.0	716.9	(23.3)	3.2%
2015	3.1	0.0	0.0	895.0	898.1	(20.7)	2.3%
2016	2.1	0.0	969.0	607.0	1,578.1	(34.8)	2.2%



**Table 3e**  
**Estimated Inflows and Evaporation Losses in Ely Basins 1-3, FY2012-2016**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b>	<b>Imported Water Delivered to Basin</b>	<b>Recycled Water Delivered to Basin</b>	<b>Stormwater Capture</b>	<b>Total Inflow plus Initial Storage</b>	<b>Evaporation Loss</b>	<b>Evaporation Loss Rate</b>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)=(1)+(2)+(3)+(4)</i>	<i>(6)</i>	<i>(7)=[(6)/(5)]*100%</i>
2012	190.5	884.9	393.0	1,096.0	2,564.4	(116.9)	4.6%
2013	0.0	0.0	1,378.0	568.0	1,946.0	(36.1)	1.9%
2014	30.1	0.0	3,298.0	548.0	3,876.1	(130.9)	3.4%
2015	141.9	0.0	1,751.0	1,087.0	2,979.9	(107.5)	3.6%
2016	153.9	0.0	1,012.0	1,506.0	2,671.9	(103.1)	3.9%



**Table 3f**  
**Estimated Inflows and Evaporation Losses in Grove Basin, FY2012-2016**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b>	<b>Imported Water Delivered to Basin</b>	<b>Recycled Water Delivered to Basin</b>	<b>Stormwater Capture</b>	<b>Total Inflow plus Initial Storage</b>	<b>Evaporation Loss</b>	<b>Evaporation Loss Rate</b>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)=(1)+(2)+(3)+(4)</i>	<i>(6)</i>	<i>(7)=[(6)/(5)]*100%</i>
2012	0.0	0.0	0.0	400.0	400.0	(16.9)	4.2%
2013	0.0	0.0	0.0	177.0	177.0	(9.5)	5.4%
2014	0.0	0.0	0.0	258.0	258.0	(12.5)	4.9%
2015	0.0	0.0	0.0	481.0	481.0	(14.3)	3.0%
2016	0.0	0.0	0.0	471.0	471.0	(20.3)	4.3%



**Table 3g**  
**Estimated Inflows and Evaporation Losses in Hickory Basin, FY2012-2015**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b>	<b>Imported Water Delivered to Basin</b>	<b>Recycled Water Delivered to Basin</b>	<b>Stormwater Capture</b>	<b>Total Inflow plus Initial Storage</b>	<b>Evaporation Loss</b>	<b>Evaporation Loss Rate</b>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)=(1)+(2)+(3)+(4)</i>	<i>(6)</i>	<i>(7)=[(6)/(5)]*100%</i>
2012	16.9	515.3	783.0	258.0	1,573.2	(32.1)	2.0%
2013	4.8	0.0	874.0	199.0	1,077.8	(33.0)	3.1%
2014	17.2	13.0	1,920.0	171.0	2,121.2	(30.9)	1.5%
2015	6.9	0.0	2,034.0	243.0	2,283.9	(31.7)	1.4%



**Table 3h**  
**Estimated Inflows and Evaporation Losses in Lower Day Basin, FY2012-2015**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b>	<b>Imported Water Delivered to Basin</b>	<b>Recycled Water Delivered to Basin</b>	<b>Stormwater Capture</b>	<b>Total Inflow plus Initial Storage</b>	<b>Evaporation Loss</b>	<b>Evaporation Loss Rate</b>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)=(1)+(2)+(3)+(4)</i>	<i>(6)</i>	<i>(7)=[(6)/(5)]*100%</i>
2012	33.9	1,439.1	0.0	158.0	1,631.0	(30.9)	1.9%
2013	0.0	0.0	0.0	106.0	106.0	(0.3)	0.3%
2014	0.0	28.3	0.0	114.0	142.3	(1.2)	0.8%
2015	0.0	0.0	0.0	341.0	341.0	(0.7)	0.2%



**Table 3i**  
**Estimated Inflows and Evaporation Losses in RP3 Basins 1, 3, and 4, FY2012-2016**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b>	<b>Imported Water Delivered to Basin</b>	<b>Recycled Water Delivered to Basin</b>	<b>Stormwater Capture</b>	<b>Total Inflow plus Initial Storage</b>	<b>Evaporation Loss</b>	<b>Evaporation Loss Rate</b>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)=(1)+(2)+(3)+(4)</i>	<i>(6)</i>	<i>(7)=[(6)/(5)]*100%</i>
2012	98.7	1,663.6	1,775.0	1,058.0	4,595.3	(92.2)	2.0%
2013	71.2	0.0	2,197.0	804.0	3,072.2	(72.4)	2.4%
2016	62.1	0.0	3,225.0	935.0	4,222.1	(93.5)	2.2%



**Table 3j**  
**Estimated Inflows and Evaporation Losses in San Sevaine Basins, FY2012-2016**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b>	<b>Imported Water Delivered to Basin</b>	<b>Recycled Water Delivered to Basin</b>	<b>Stormwater Capture</b>	<b>Total Inflow plus Initial Storage</b>	<b>Evaporation Loss</b>	<b>Evaporation Loss Rate</b>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)=(1)+(2)+(3)+(4)</i>	<i>(6)</i>	<i>(7)=[(6)/(5)]*100%</i>
2012	0.6	1,227.5	513.0	436.0	2,177.1	(58.8)	2.7%
2014	0.0	0.0	274.0	162.0	436.0	(23.5)	5.4%
2015	0.0	0.0	1.0	330.0	331.0	(3.5)	1.1%
2016	0.0	0.0	0.0	585.0	585.0	(4.0)	0.7%



**Table 3k**  
**Estimated Inflows and Evaporation Losses in Turner Basins 1 and 2, FY2012-2015**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b>	<b>Imported Water Delivered to Basin</b>	<b>Recycled Water Delivered to Basin</b>	<b>Stormwater Capture</b>	<b>Total Inflow plus Initial Storage</b>	<b>Evaporation Loss</b>	<b>Evaporation Loss Rate</b>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)=(1)+(2)+(3)+(4)</i>	<i>(6)</i>	<i>(7)=[(6)/(5)]*100%</i>
2012	17.5	0.0	130.0	1,163.0	1,310.5	(56.5)	4.3%
2013	23.7	0.0	47.0	875.0	945.7	(74.1)	7.8%
2015	6.7	0.0	659.0	749.0	1,414.7	(54.4)	3.8%



**Table 3I**  
**Estimated Inflows and Evaporation Losses in Turner Basins 3 and 4, FY2012-2016**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b>	<b>Imported Water Delivered to Basin</b>	<b>Recycled Water Delivered to Basin</b>	<b>Stormwater Capture</b>	<b>Total Inflow plus Initial Storage</b>	<b>Evaporation Loss</b>	<b>Evaporation Loss Rate</b>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)=(1)+(2)+(3)+(4)</i>	<i>(6)</i>	<i>(7)=[(6)/(5)]*100%</i>
2012	10.1	199.1	904.0	716.0	1,829.2	(27.1)	1.5%
2013	32.4	0.0	129.0	245.0	406.4	(39.3)	9.7%



**Table 3m**  
**Estimated Inflows and Evaporation Losses in Upland Basin, FY2012-2016**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b>	<b>Imported Water Delivered to Basin</b>	<b>Recycled Water Delivered to Basin</b>	<b>Stormwater Capture</b>	<b>Total Inflow plus Initial Storage</b>	<b>Evaporation Loss</b>	<b>Evaporation Loss Rate</b>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)=(1)+(2)+(3)+(4)</i>	<i>(6)</i>	<i>(7)=[(6)/(5)]*100%</i>
2012	344.5	2,118.3	0.0	222.0	2,684.8	(50.7)	1.9%
2014	0.0	0.0	0.0	95.0	95.0	(3.7)	3.9%
2015	0.0	0.0	0.0	325.0	325.0	(7.0)	2.2%
2016	0.0	92.8	0.0	425.0	517.8	(10.5)	2.0%



**Table 3n**  
**Estimated Inflows and Evaporation Losses in Victoria Basin, FY2012-2016**  
**(AF)**

<b>FY</b>	<b>Initial Storage</b>	<b>Imported Water Delivered to Basin</b>	<b>Recycled Water Delivered to Basin</b>	<b>Stormwater Capture</b>	<b>Total Inflow plus Initial Storage</b>	<b>Evaporation Loss</b>	<b>Evaporation Loss Rate</b>
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)=(1)+(2)+(3)+(4)</i>	<i>(6)</i>	<i>(7)=[(6)/(5)]*100%</i>
2012	69.9	281.0	665.0	221.0	1,236.9	(73.7)	6.0%
2013	89.9	0.0	842.0	94.0	1,025.9	(80.6)	7.9%
2015	81.4	0.0	931.0	306.0	1,318.4	(81.3)	6.2%
2016	60.8	0.0	635.0	343.0	1,038.8	(67.2)	6.5%



**Table 4a**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in 7th and 8th Street Basins, FY2013-2014**  
**(AF)**

	Initial Storage	Monthly Inflows			Evaporation Loss	Evaporation Loss Rate
		Imported Water Delivered to Basin	Recycled Water Delivered to Basin	Stormwater Capture		
	(1)	(2)	(3)	(4)	(5)	(6)=- (5)/[(1)+(2)+(3)+(4)]
Jul-12	4.9	0.0	137.0	20.0	(3.3)	2.1%
Aug-12	5.0	0.0	0.0	21.0	(2.3)	8.7%
Sep-12	2.7	0.0	124.0	33.0	(2.7)	1.7%
Oct-12	5.7	0.0	309.0	29.0	(3.6)	1.0%
Nov-12	3.0	0.0	248.0	66.0	(1.8)	0.6%
Dec-12	9.2	0.0	103.0	278.0	(1.5)	0.4%
Jan-13	9.1	0.0	230.0	70.0	(2.0)	0.7%
Feb-13	14.7	0.0	226.0	90.0	(2.6)	0.8%
Mar-13	14.7	0.0	240.0	65.0	(4.4)	1.4%
Apr-13	11.7	0.0	152.0	24.0	(5.4)	2.9%
May-13	12.3	0.0	221.0	43.0	(6.8)	2.5%
Jun-13	14.6	0.0	271.0	12.0	(8.3)	2.8%
Jul-13	12.2	0.0	186.0	13.0	(8.6)	4.1%
Aug-13	13.4	0.0	118.0	13.0	(8.8)	6.1%
Sep-13	11.8	0.0	150.0	11.0	(8.3)	4.8%
Oct-13	15.9	0.0	239.0	48.0	(6.3)	2.1%
Nov-13	16.2	0.0	249.0	49.0	(4.4)	1.4%
Dec-13	24.0	0.0	121.0	46.0	(3.3)	1.8%
Jan-14	22.2	0.0	108.0	27.0	(4.1)	2.6%
Feb-14	21.4	0.0	88.0	59.0	(4.1)	2.4%
Mar-14	22.8	5.4	26.0	46.0	(5.7)	5.7%
Apr-14	21.9	0.0	21.0	79.0	(8.3)	6.8%
May-14	18.4	0.0	65.0	26.0	(9.2)	8.4%
Jun-14	16.8	0.0	52.0	24.0	(9.2)	10.0%
Total	-	5.4	3,684.0	1,192.0	(125.0)	-
Average	13.5	0.2	153.5	49.7	(5.2)	3.4%
Median	14.0	0.0	143.5	38.0	(4.4)	2.4%
Maximum	24.0	5.4	309.0	278.0	(1.5)	10.0%
Minimum	2.7	0.0	0.0	11.0	(9.2)	0.4%



**Table 4b**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in Banana Basin, FY2013**  
**(AF)**

	Initial Storage <i>(1)</i>	Monthly Inflows			Evaporation Loss <i>(5)</i>	Evaporation Loss Rate <i>(6)=- (5)/[(1)+(2)+(3)+(4)]</i>
		Imported Water Delivered to Basin <i>(2)</i>	Recycled Water Delivered to Basin <i>(3)</i>	Stormwater Capture <i>(4)</i>		
Jul-12	40.4	0.0	41.0	0.0	(4.4)	5.42%
Aug-12	30.2	0.0	2.0	0.0	(4.6)	14.30%
Sep-12	26.1	0.0	188.0	0.0	(4.4)	2.03%
Oct-12	50.6	0.0	103.0	11.0	(2.9)	1.76%
Nov-12	50.8	0.0	120.0	5.0	(1.6)	0.89%
Dec-12	46.9	0.0	15.0	49.0	(0.8)	0.68%
Jan-13	46.0	0.0	28.0	18.0	(1.1)	1.18%
Feb-13	45.4	0.0	2.0	20.0	(1.0)	1.54%
Mar-13	44.0	0.0	42.0	8.0	(1.9)	2.06%
Apr-13	43.0	0.0	55.0	0.0	(2.8)	2.86%
May-13	50.1	0.0	39.0	3.0	(3.5)	3.83%
Jun-13	50.9	0.0	35.0	0.0	(3.9)	4.55%
Total	-	0.0	670.0	114.0	(32.9)	-
Average	43.7	0.0	55.8	9.5	(2.7)	3.4%
Median	45.7	0.0	40.0	4.0	(2.8)	2.0%
Maximum	50.9	0.0	188.0	49.0	(0.8)	14.3%
Minimum	26.1	0.0	2.0	0.0	(4.6)	0.7%



**Table 4c**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in Brooks Street Basin, FY2012-2016**  
**(AF)**

	Initial Storage <i>(1)</i>	Monthly Inflows			Evaporation Loss <i>(5)</i>	Evaporation Loss Rate <i>(6)=- (5)/[(1)+(2)+(3)+(4)]</i>
		Imported Water Delivered to Basin <i>(2)</i>	Recycled Water Delivered to Basin <i>(3)</i>	Stormwater Capture <i>(4)</i>		
Jul-11	178.6	235.6	0.0	2.0	(6.2)	1.49%
Aug-11	179.7	183.4	0.0	2.0	(6.1)	1.68%
Sep-11	185.8	141.5	0.0	12.0	(4.7)	1.39%
Oct-11	145.4	0.0	80.0	18.0	(2.9)	1.17%
Nov-11	115.0	0.0	36.0	50.0	(1.3)	0.65%
Dec-11	115.2	0.0	98.0	16.0	(1.5)	0.66%
Jan-12	120.0	0.0	142.0	45.0	(1.5)	0.47%
Feb-12	148.9	0.0	77.0	50.0	(1.5)	0.54%
Mar-12	152.7	0.0	85.0	103.0	(2.1)	0.62%
Apr-12	174.3	0.0	32.0	64.0	(3.0)	1.11%
May-12	156.9	0.0	125.0	1.0	(4.1)	1.44%
Jun-12	147.1	0.0	161.0	0.0	(5.3)	1.71%
Jul-12	157.3	0.0	33.0	1.0	(5.3)	2.78%
Aug-12	89.0	0.0	39.0	2.0	(4.8)	3.71%
Sep-12	66.6	0.0	51.0	2.0	(4.2)	3.52%
Oct-12	53.4	0.0	0.0	0.0	(2.3)	4.24%
Nov-12	31.7	0.0	0.0	0.0	(1.0)	3.21%
Dec-12	20.0	0.0	0.0	0.0	(0.5)	2.43%
Jan-13	21.7	0.0	342.0	35.0	(1.0)	0.25%
Feb-13	135.9	0.0	299.0	26.0	(1.3)	0.28%
Mar-13	157.4	0.0	238.0	32.0	(2.4)	0.57%
Apr-13	161.4	0.0	231.0	0.0	(3.6)	0.91%
May-13	171.3	0.0	152.0	17.0	(4.5)	1.32%
Jun-13	170.4	0.0	120.0	0.0	(5.0)	1.71%
Jul-13	146.1	0.0	169.0	1.0	(5.4)	1.71%
Aug-13	149.7	0.0	197.0	1.0	(5.6)	1.60%
Sep-13	164.5	0.0	182.0	0.0	(5.5)	1.57%
Oct-13	170.3	0.0	108.0	23.0	(3.4)	1.13%
Nov-13	168.6	0.0	94.0	4.0	(2.2)	0.81%
Dec-13	169.3	0.0	104.0	8.0	(1.5)	0.54%
Jan-14	161.6	0.0	109.0	3.0	(1.8)	0.67%
Feb-14	163.8	0.0	102.0	47.0	(1.9)	0.60%
Mar-14	189.4	0.0	130.0	11.0	(2.5)	0.77%
Apr-14	160.7	0.0	65.0	14.0	(3.9)	1.62%
May-14	136.2	0.0	0.0	0.0	(4.6)	3.38%
Jun-14	86.4	0.0	48.0	0.0	(4.7)	3.49%
Jul-14	101.3	0.0	72.0	0.0	(5.3)	3.03%
Aug-14	115.5	0.0	141.0	0.0	(5.6)	2.17%
Sep-14	138.7	0.0	157.0	1.0	(5.2)	1.75%
Oct-14	143.2	0.0	56.0	0.0	(3.6)	1.81%
Nov-14	142.1	0.0	37.0	28.0	(2.3)	1.11%
Dec-14	131.2	0.0	0.0	95.0	(0.8)	0.36%
Jan-15	137.6	0.0	10.0	10.0	(1.1)	0.71%
Feb-15	133.9	0.0	92.0	20.0	(1.5)	0.62%
Mar-15	157.6	0.0	69.0	13.0	(3.1)	1.29%
Apr-15	141.8	0.0	101.0	10.0	(4.0)	1.59%
May-15	147.8	0.0	120.0	21.0	(3.5)	1.20%
Jun-15	156.1	0.0	156.0	0.0	(4.6)	1.46%
Jul-15	151.8	0.0	63.0	0.0	(5.1)	2.39%
Aug-15	127.2	0.0	0.0	0.0	(5.1)	4.01%
Sep-15	81.6	0.0	0.0	0.0	(3.8)	4.63%
Oct-15	74.7	0.0	0.0	0.0	(2.2)	2.96%
Nov-15	6.4	0.0	0.0	1.0	(0.9)	12.01%
Dec-15	6.9	0.0	101.0	0.0	(0.7)	0.66%
Jan-16	36.4	0.0	254.0	54.0	(0.6)	0.17%
Feb-16	109.0	0.0	211.0	22.0	(1.7)	0.49%
Mar-16	115.5	0.0	116.0	91.0	(2.1)	0.66%
Apr-16	115.2	0.0	192.0	13.0	(3.3)	1.03%
May-16	118.8	0.0	278.0	1.0	(3.3)	0.84%
Jun-16	149.4	0.0	0.0	0.0	(5.1)	3.42%
Total	-	560.5	5,875.0	970.0	(193.3)	-
Average	127.7	9.3	97.9	16.2	(3.2)	1.8%
Median	142.6	0.0	93.0	2.5	(3.3)	1.4%
Maximum	189.4	235.6	342.0	103.0	(0.5)	12.0%
Minimum	6.4	0.0	0.0	0.0	(6.2)	0.2%



**Table 4d**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in Declez Basin, FY2013-2016**  
**(AF)**

	Initial Storage	Monthly Inflows			Evaporation Loss	Evaporation Loss Rate
		Imported Water Delivered to Basin	Recycled Water Delivered to Basin	Stormwater Capture		
	(1)	(2)	(3)	(4)	(5)	(6)=- (5)/[(1)+(2)+(3)+(4)]
Jul-12	3.4	0.0	0.0	1.0	(3.0)	69.7%
Aug-12	4.2	0.0	0.0	10.0	(3.6)	25.4%
Sep-12	5.6	0.0	0.0	15.0	(3.2)	15.7%
Oct-12	4.0	0.0	0.0	134.0	(3.8)	2.8%
Nov-12	11.8	0.0	0.0	21.0	(1.3)	4.0%
Dec-12	22.0	0.0	0.0	168.0	(1.1)	0.6%
Jan-13	28.6	0.0	0.0	48.0	(0.9)	1.2%
Feb-13	81.7	0.0	0.0	58.0	(1.9)	1.3%
Mar-13	20.3	0.0	0.0	61.0	(2.6)	3.2%
Apr-13	5.4	0.0	0.0	4.0	(1.3)	13.9%
May-13	1.6	0.0	0.0	6.0	(0.9)	11.2%
Jun-13	1.6	0.0	0.0	4.0	(1.0)	18.6%
Jul-13	1.5	0.0	0.0	6.0	(1.0)	13.7%
Aug-13	1.6	0.0	0.0	3.0	(1.0)	22.3%
Sep-13	1.4	0.0	0.0	2.0	(1.0)	29.5%
Oct-13	3.5	0.0	0.0	18.0	(1.2)	5.4%
Nov-13	3.2	0.0	0.0	52.0	(1.0)	1.9%
Dec-13	3.7	0.0	0.0	66.0	(0.7)	1.0%
Jan-14	1.7	98.6	0.0	3.0	(0.9)	0.8%
Feb-14	63.9	152.0	0.0	24.0	(2.9)	1.2%
Mar-14	67.3	116.6	0.0	56.0	(3.8)	1.6%
Apr-14	72.3	7.2	0.0	108.0	(3.9)	2.1%
May-14	43.4	0.0	0.0	1.0	(3.7)	8.3%
Jun-14	3.2	0.0	0.0	2.0	(2.1)	41.0%
Jul-14	3.1	0.0	0.0	2.0	(2.3)	45.5%
Aug-14	2.6	0.0	0.0	72.0	(3.2)	4.3%
Sep-14	3.3	0.0	0.0	30.0	(2.6)	7.9%
Oct-14	4.6	0.0	0.0	3.0	(1.9)	24.6%
Nov-14	4.1	0.0	0.0	100.0	(1.6)	1.5%
Dec-14	9.4	0.0	0.0	315.0	(1.3)	0.4%
Jan-15	35.9	0.0	0.0	109.0	(0.9)	0.6%
Feb-15	16.2	0.0	0.0	106.0	(1.0)	0.8%
Mar-15	50.6	0.0	0.0	15.0	(1.7)	2.6%
Apr-15	1.7	0.0	0.0	41.0	(1.3)	2.9%
May-15	6.1	0.0	0.0	99.0	(2.0)	1.9%
Jun-15	1.4	0.0	0.0	3.0	(1.0)	22.2%
Jul-15	2.1	0.0	0.0	49.0	(1.5)	2.9%
Aug-15	1.4	0.0	0.0	3.0	(1.3)	30.6%
Sep-15	1.5	0.0	0.0	147.0	(3.3)	2.2%
Oct-15	7.6	0.0	0.0	36.0	(1.3)	2.9%
Nov-15	1.9	0.0	0.0	4.0	(0.6)	10.9%
Dec-15	2.9	0.0	50.0	49.0	(0.9)	0.9%
Jan-16	29.9	0.0	78.0	158.0	(1.1)	0.4%
Feb-16	57.8	0.0	153.0	34.0	(2.9)	1.2%
Mar-16	59.9	0.0	126.0	92.0	(3.6)	1.3%
Apr-16	55.6	0.0	133.0	20.0	(4.5)	2.2%
May-16	33.0	0.0	228.0	12.0	(5.6)	2.0%
Jun-16	45.4	0.0	201.0	3.0	(8.1)	3.2%
Total	-	374.4	969.0	2,373.0	(103.5)	-
Average	18.6	7.8	20.2	49.4	(2.2)	9.8%
Median	4.4	0.0	0.0	27.0	(1.6)	2.9%
Maximum	81.7	152.0	228.0	315.0	(0.6)	69.7%
Minimum	1.4	0.0	0.0	1.0	(8.1)	0.4%



**Table 3e**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in Ely Basins 1-3, FY2012-2016**  
**(AF)**

	Initial Storage <i>(1)</i>	Monthly Inflows			Evaporation Loss <i>(5)</i>	Evaporation Loss Rate <i>(6)=- (5)/[(1)+(2)+(3)+(4)]</i>
		Imported Water Delivered to Basin <i>(2)</i>	Recycled Water Delivered to Basin <i>(3)</i>	Stormwater Capture <i>(4)</i>		
Jul-11	190.5	284.9	176.0	18.0	(19.3)	2.9%
Aug-11	261.5	274.9	141.0	16.0	(20.1)	2.9%
Sep-11	279.2	325.1	6.0	19.0	(15.4)	2.4%
Oct-11	280.8	0.0	0.0	215.0	(11.0)	2.2%
Nov-11	233.3	0.0	0.0	211.0	(5.2)	1.2%
Dec-11	339.7	0.0	0.0	36.0	(5.8)	1.6%
Jan-12	246.4	0.0	64.0	89.0	(5.1)	1.3%
Feb-12	269.3	0.0	6.0	95.0	(5.2)	1.4%
Mar-12	278.6	0.0	0.0	247.0	(7.0)	1.3%
Apr-12	328.5	0.0	0.0	135.0	(10.0)	2.2%
May-12	245.4	0.0	0.0	3.0	(10.8)	4.4%
Jun-12	30.8	0.0	0.0	12.0	(2.0)	4.7%
Jul-12	0.0	0.0	0.0	7.0	0.0	0.0%
Aug-12	0.0	0.0	0.0	7.0	0.0	0.0%
Sep-12	0.0	0.0	0.0	5.0	0.0	0.0%
Oct-12	0.0	0.0	0.0	5.0	0.0	0.0%
Nov-12	0.0	0.0	80.0	9.0	(0.7)	0.8%
Dec-12	0.0	0.0	67.0	335.0	(1.2)	0.3%
Jan-13	19.7	0.0	145.0	72.0	(1.6)	0.7%
Feb-13	51.8	0.0	225.0	37.0	(2.2)	0.7%
Mar-13	57.5	0.0	314.0	63.0	(6.2)	1.4%
Apr-13	41.9	0.0	79.0	1.0	(3.8)	3.1%
May-13	14.5	0.0	259.0	23.0	(9.4)	3.2%
Jun-13	99.5	0.0	209.0	4.0	(11.2)	3.6%
Jul-13	30.1	0.0	157.0	6.0	(11.8)	6.1%
Aug-13	91.8	0.0	334.0	4.0	(14.7)	3.4%
Sep-13	108.7	0.0	457.0	6.0	(16.1)	2.8%
Oct-13	196.1	0.0	358.0	15.0	(10.4)	1.8%
Nov-13	122.5	0.0	421.0	21.0	(6.3)	1.1%
Dec-13	156.6	0.0	413.0	24.0	(4.6)	0.8%
Jan-14	254.3	0.0	211.0	8.0	(6.4)	1.3%
Feb-14	242.1	0.0	194.0	294.0	(5.8)	0.8%
Mar-14	186.8	0.0	108.0	63.0	(8.3)	2.3%
Apr-14	174.7	0.0	218.0	83.0	(12.1)	2.6%
May-14	187.4	0.0	241.0	9.0	(17.0)	3.9%
Jun-14	226.6	0.0	186.0	15.0	(17.4)	4.1%
Jul-14	141.9	0.0	101.0	16.0	(15.1)	5.8%
Aug-14	14.3	0.0	8.0	16.0	(5.0)	13.1%
Sep-14	15.0	0.0	121.0	15.0	(6.5)	4.3%
Oct-14	111.5	0.0	286.0	16.0	(12.0)	2.9%
Nov-14	143.9	0.0	70.0	170.0	(7.9)	2.1%
Dec-14	195.5	0.0	5.0	392.0	(3.6)	0.6%
Jan-15	185.4	0.0	183.0	44.0	(3.6)	0.9%
Feb-15	144.4	0.0	222.0	72.0	(5.0)	1.1%
Mar-15	283.9	0.0	157.0	15.0	(10.7)	2.4%
Apr-15	179.9	0.0	165.0	100.0	(12.7)	2.8%
May-15	123.8	0.0	160.0	231.0	(10.6)	2.1%
Jun-15	159.4	0.0	273.0	0.0	(14.8)	3.4%
Jul-15	153.9	0.0	102.0	285.0	(15.1)	2.8%
Aug-15	76.2	0.0	1.0	3.0	(4.2)	5.2%
Sep-15	0.0	0.0	31.0	215.0	(6.2)	2.5%
Oct-15	92.8	0.0	76.0	75.0	(10.1)	4.1%
Nov-15	105.2	0.0	21.0	41.0	(6.4)	3.8%
Dec-15	49.8	0.0	128.0	92.0	(4.0)	1.5%
Jan-16	134.9	0.0	61.0	337.0	(2.4)	0.5%
Feb-16	143.3	0.0	89.0	59.0	(5.9)	2.0%
Mar-16	186.5	0.0	47.0	177.0	(7.4)	1.8%
Apr-16	154.1	0.0	127.0	24.0	(10.6)	3.5%
May-16	144.2	0.0	119.0	197.0	(11.9)	2.6%
Jun-16	199.0	0.0	210.0	1.0	(18.9)	4.6%
Total	-	884.9	7,832.0	4,805.0	(494.5)	-
Average	139.8	14.7	130.5	80.1	(8.2)	2.5%
Median	144.0	0.0	113.5	24.0	(6.7)	2.3%
Maximum	339.7	325.1	457.0	392.0	0.0	13.1%
Minimum	0.0	0.0	0.0	0.0	(20.1)	0.0%



**Table 4f**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in Grove Basin, FY2012-2016**  
**(AF)**

	Initial Storage	Monthly Inflows			Evaporation Loss	Evaporation Loss Rate
		Imported Water Delivered to Basin	Recycled Water Delivered to Basin	Stormwater Capture		
	(1)	(2)	(3)	(4)	(5)	(6)=- (5)/[(1)+(2)+(3)+(4)]
Jul-11	0.0	0.0	0.0	0.0	0.0	-
Aug-11	8.9	0.0	0.0	0.0	(0.6)	6.3%
Sep-11	0.0	0.0	0.0	0.0	0.0	-
Oct-11	0.0	0.0	0.0	55.0	(2.0)	3.6%
Nov-11	0.0	0.0	0.0	85.0	(1.3)	1.6%
Dec-11	27.1	0.0	0.0	23.0	(1.9)	3.7%
Jan-12	9.8	0.0	0.0	47.0	(0.7)	1.3%
Feb-12	25.2	0.0	0.0	36.0	(1.7)	2.8%
Mar-12	19.8	0.0	0.0	99.0	(1.7)	1.5%
Apr-12	64.8	0.0	0.0	46.0	(3.3)	3.0%
May-12	50.7	0.0	0.0	4.0	(3.6)	6.6%
Jun-12	0.0	0.0	0.0	5.0	0.0	0.0%
Jul-12	0.0	0.0	0.0	3.0	0.0	0.0%
Aug-12	0.0	0.0	0.0	3.0	0.0	0.0%
Sep-12	0.0	0.0	0.0	2.0	0.0	0.0%
Oct-12	0.0	0.0	0.0	3.0	0.0	0.0%
Nov-12	0.0	0.0	0.0	22.0	(0.7)	3.1%
Dec-12	12.1	0.0	0.0	58.0	(1.0)	1.4%
Jan-13	38.2	0.0	0.0	27.0	(1.5)	2.3%
Feb-13	29.8	0.0	0.0	24.0	(1.5)	2.8%
Mar-13	14.4	0.0	0.0	11.0	(2.7)	10.5%
Apr-13	5.8	0.0	0.0	0.0	(0.4)	6.2%
May-13	0.0	0.0	0.0	22.0	(1.8)	8.2%
Jun-13	0.0	0.0	0.0	2.0	0.0	0.0%
Jul-13	0.0	0.0	0.0	3.0	0.0	0.0%
Aug-13	0.0	0.0	0.0	4.0	0.0	0.0%
Sep-13	0.0	0.0	0.0	4.0	0.0	0.0%
Oct-13	0.0	0.0	0.0	20.0	(0.5)	2.3%
Nov-13	4.6	0.0	0.0	26.0	(0.5)	1.7%
Dec-13	8.7	0.0	0.0	28.0	(0.8)	2.3%
Jan-14	1.5	0.0	0.0	13.0	(0.1)	0.5%
Feb-14	8.4	0.0	0.0	107.0	(0.7)	0.6%
Mar-14	73.9	0.0	0.0	10.0	(2.8)	3.4%
Apr-14	12.8	0.0	0.0	39.0	(3.2)	6.2%
May-14	11.8	0.0	0.0	2.0	(2.6)	18.6%
Jun-14	0.0	0.0	0.0	2.0	(1.4)	67.7%
Jul-14	0.0	0.0	0.0	2.0	0.0	0.0%
Aug-14	0.0	0.0	0.0	4.0	(0.7)	17.9%
Sep-14	0.0	0.0	0.0	5.0	0.0	0.0%
Oct-14	0.0	0.0	0.0	9.0	0.0	0.0%
Nov-14	25.2	0.0	0.0	53.0	(0.7)	0.9%
Dec-14	18.3	0.0	0.0	202.0	(1.0)	0.5%
Jan-15	101.8	0.0	0.0	33.0	(1.4)	1.0%
Feb-15	64.7	0.0	0.0	29.0	(1.8)	1.9%
Mar-15	52.0	0.0	0.0	29.0	(3.6)	4.4%
Apr-15	9.3	0.0	0.0	68.0	(2.0)	2.6%
May-15	7.4	0.0	0.0	47.0	(3.0)	5.6%
Jun-15	2.2	0.0	0.0	0.0	(0.1)	3.9%
Jul-15	0.0	0.0	0.0	37.0	(1.5)	4.0%
Aug-15	0.0	0.0	0.0	0.0	0.0	-
Sep-15	0.0	0.0	0.0	82.0	(2.6)	3.2%
Oct-15	21.7	0.0	0.0	60.0	(3.7)	4.6%
Nov-15	0.0	0.0	0.0	20.0	(0.3)	1.7%
Dec-15	5.6	0.0	0.0	42.0	(1.4)	2.9%
Jan-16	8.5	0.0	0.0	100.0	(0.8)	0.8%
Feb-16	44.7	0.0	0.0	15.0	(2.1)	3.5%
Mar-16	15.8	0.0	0.0	53.0	(2.6)	3.8%
Apr-16	17.3	0.0	0.0	15.0	(2.0)	6.3%
May-16	1.8	0.0	0.0	47.0	(3.1)	6.4%
Jun-16	1.8	0.0	0.0	0.0	(0.0)	2.3%
Total	-	0.0	0.0	1,787.0	(73.6)	-
Average	13.8	0.0	0.0	29.8	(1.2)	4.3%
Median	5.1	0.0	0.0	21.0	(0.9)	2.3%
Maximum	101.8	0.0	0.0	202.0	0.0	67.7%
Minimum	0.0	0.0	0.0	0.0	(3.7)	0.0%



**Table 4g**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in Hickory Basin, FY2012-2015**  
**(AF)**

	Initial Storage	Monthly Inflows			Evaporation Loss	Evaporation Loss Rate
		Imported Water Delivered to Basin	Recycled Water Delivered to Basin	Stormwater Capture		
	(1)	(2)	(3)	(4)	(5)	(6)=- (5)/[(1)+(2)+(3)+(4)]
Jul-11	16.9	0.0	14.0	0.0	(6.3)	20.4%
Aug-11	7.2	68.1	0.0	4.0	(2.1)	2.6%
Sep-11	11.1	447.2	20.0	32.0	(5.2)	1.0%
Oct-11	17.7	0.0	35.0	17.0	(2.1)	3.1%
Nov-11	6.0	0.0	202.0	11.0	(1.4)	0.6%
Dec-11	11.5	0.0	226.0	1.0	(1.9)	0.8%
Jan-12	15.3	0.0	16.0	49.0	(1.4)	1.7%
Feb-12	15.8	0.0	83.0	59.0	(1.7)	1.1%
Mar-12	16.3	0.0	79.0	53.0	(2.3)	1.6%
Apr-12	14.7	0.0	66.0	30.0	(3.3)	3.0%
May-12	13.1	0.0	40.0	0.0	(2.9)	5.4%
Jun-12	7.0	0.0	2.0	2.0	(1.5)	13.6%
Jul-12	4.8	0.0	57.0	22.0	(1.6)	1.9%
Aug-12	11.8	0.0	44.0	50.0	(4.7)	4.5%
Sep-12	12.0	0.0	0.0	29.0	(4.2)	10.3%
Oct-12	11.9	0.0	0.0	51.0	(3.1)	4.9%
Nov-12	10.0	0.0	177.0	13.0	(1.9)	0.9%
Dec-12	16.9	0.0	144.0	6.0	(1.1)	0.7%
Jan-13	16.3	0.0	115.0	0.0	(1.6)	1.2%
Feb-13	14.6	0.0	3.0	8.0	(0.7)	2.7%
Mar-13	8.9	0.0	147.0	13.0	(2.6)	1.5%
Apr-13	18.9	0.0	71.0	0.0	(4.0)	4.5%
May-13	12.6	0.0	0.0	6.0	(4.2)	22.7%
Jun-13	9.4	0.0	116.0	1.0	(3.2)	2.6%
Jul-13	17.2	0.0	201.0	4.0	(6.5)	2.9%
Aug-13	18.7	0.0	11.0	0.0	(4.9)	16.4%
Sep-13	6.6	0.0	0.0	0.0	(1.8)	27.6%
Oct-13	2.3	0.0	1.0	1.0	(1.1)	25.9%
Nov-13	4.4	0.0	339.0	59.0	(1.4)	0.4%
Dec-13	10.7	0.0	108.0	8.0	(0.7)	0.6%
Jan-14	6.6	2.5	86.0	9.0	(0.9)	0.9%
Feb-14	9.5	1.0	67.0	19.0	(1.0)	1.0%
Mar-14	13.3	0.0	224.0	13.0	(2.0)	0.8%
Apr-14	8.1	9.5	379.0	23.0	(3.9)	0.9%
May-14	6.5	0.0	292.0	33.0	(4.5)	1.4%
Jun-14	8.7	0.0	212.0	2.0	(2.1)	1.0%
Jul-14	6.9	0.0	118.0	0.0	(2.6)	2.1%
Aug-14	3.5	0.0	82.0	0.0	(1.7)	2.0%
Sep-14	5.0	0.0	236.0	0.0	(2.4)	1.0%
Oct-14	4.9	0.0	226.0	0.0	(2.1)	0.9%
Nov-14	11.8	0.0	272.0	0.0	(2.2)	0.8%
Dec-14	12.7	0.0	46.0	185.0	(0.9)	0.4%
Jan-15	12.5	0.0	194.0	8.0	(1.2)	0.6%
Feb-15	13.9	0.0	180.0	47.0	(1.8)	0.7%
Mar-15	12.6	0.0	115.0	0.0	(3.0)	2.4%
Apr-15	7.2	0.0	229.0	0.0	(4.5)	1.9%
May-15	13.5	0.0	139.0	3.0	(3.9)	2.5%
Jun-15	12.7	0.0	197.0	0.0	(5.4)	2.6%
Total	-	528.3	5,611.0	871.0	(127.6)	-
Average	11.1	11.0	116.9	18.1	(2.7)	4.4%
Median	11.8	0.0	97.0	7.0	(2.1)	1.8%
Maximum	18.9	447.2	379.0	185.0	(0.7)	27.6%
Minimum	2.3	0.0	0.0	0.0	(6.5)	0.4%



**Table 4h**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in Lower Day Basin, FY2012-2015**  
**(AF)**

	Initial Storage	Monthly Inflows			Evaporation Loss	Evaporation Loss Rate
		Imported Water Delivered to Basin	Recycled Water Delivered to Basin	Stormwater Capture		
	(1)	(2)	(3)	(4)	(5)	(6)=- (5)/[(1)+(2)+(3)+(4)]
Jul-11	33.9	350.7	0.0	2.0	(6.9)	1.8%
Aug-11	57.7	569.1	0.0	4.0	(9.0)	1.4%
Sep-11	142.5	519.3	0.0	1.0	(7.3)	1.1%
Oct-11	164.2	0.0	0.0	23.0	(4.3)	2.3%
Nov-11	21.5	0.0	0.0	15.0	(1.1)	3.0%
Dec-11	4.3	0.0	0.0	11.0	(0.8)	4.9%
Jan-12	4.1	0.0	0.0	15.0	(0.2)	0.9%
Feb-12	2.5	0.0	0.0	22.0	(0.3)	1.0%
Mar-12	6.9	0.0	0.0	26.0	(0.3)	0.9%
Apr-12	13.5	0.0	0.0	35.0	(0.7)	1.5%
May-12	4.9	0.0	0.0	2.0	(0.1)	1.4%
Jun-12	0.0	0.0	0.0	2.0	0.0	0.0%
Jul-12	0.0	0.0	0.0	1.0	(0.0)	0.4%
Aug-12	0.0	0.0	0.0	1.0	0.0	0.0%
Sep-12	0.0	0.0	0.0	1.0	0.0	0.0%
Oct-12	0.0	0.0	0.0	0.0	(0.0)	-
Nov-12	0.0	0.0	0.0	8.0	(0.0)	0.0%
Dec-12	3.4	0.0	0.0	61.0	(0.2)	0.2%
Jan-13	2.4	0.0	0.0	15.0	(0.0)	0.1%
Feb-13	0.0	0.0	0.0	13.0	(0.1)	0.6%
Mar-13	0.0	0.0	0.0	5.0	(0.0)	0.8%
Apr-13	0.0	0.0	0.0	0.0	0.0	-
May-13	0.0	0.0	0.0	0.0	0.0	-
Jun-13	0.0	0.0	0.0	1.0	0.0	0.0%
Jul-13	0.0	0.0	0.0	1.0	0.0	0.0%
Aug-13	0.0	0.0	0.0	3.0	0.0	0.0%
Sep-13	0.0	0.0	0.0	5.0	0.0	0.0%
Oct-13	0.0	0.0	0.0	7.0	0.0	0.0%
Nov-13	0.0	0.0	0.0	2.0	0.0	0.0%
Dec-13	0.0	0.0	0.0	5.0	0.0	0.0%
Jan-14	0.0	0.0	0.0	5.0	0.0	0.0%
Feb-14	0.0	0.0	0.0	34.0	0.0	0.0%
Mar-14	18.7	0.0	0.0	41.0	(0.4)	0.6%
Apr-14	0.0	17.5	0.0	10.0	(0.3)	1.2%
May-14	18.7	10.8	0.0	1.0	(0.5)	1.6%
Jun-14	0.0	0.0	0.0	0.0	0.0	-
Jul-14	0.0	0.0	0.0	0.0	0.0	-
Aug-14	0.0	0.0	0.0	4.0	(0.0)	0.3%
Sep-14	0.0	0.0	0.0	1.0	(0.0)	0.5%
Oct-14	0.0	0.0	0.0	0.0	0.0	-
Nov-14	0.0	0.0	0.0	25.0	(0.1)	0.4%
Dec-14	2.0	0.0	0.0	241.0	(0.2)	0.1%
Jan-15	17.8	0.0	0.0	40.0	(0.1)	0.2%
Feb-15	0.0	0.0	0.0	17.0	(0.1)	0.4%
Mar-15	5.9	0.0	0.0	0.0	(0.1)	2.5%
Apr-15	0.0	0.0	0.0	3.0	0.0	0.0%
May-15	0.0	0.0	0.0	10.0	0.0	0.0%
Jun-15	0.0	0.0	0.0	0.0	0.0	-
Total	-	1467.4	0.0	719.0	(33.1)	-
Average	10.9	30.6	0.0	15.0	(0.7)	0.7%
Median	0.0	0.0	0.0	4.5	(0.0)	0.4%
Maximum	164.2	569.1	0.0	241.0	0.0	4.9%
Minimum	0.0	0.0	0.0	0.0	(9.0)	0.0%



**Table 4i**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in RP3 Basins 1, 3, and 4, FY2012-2016**  
**(AF)**

	Initial Storage	Monthly Inflows			Evaporation Loss	Evaporation Loss Rate
		Imported Water Delivered to Basin	Recycled Water Delivered to Basin	Stormwater Capture		
	(1)	(2)	(3)	(4)	(5)	(6)=- (5)/[(1)+(2)+(3)+(4)]
Jul-11	98.7	727.0	239.0	64.0	(12.9)	1.1%
Aug-11	138.5	286.6	15.0	13.0	(11.9)	2.6%
Sep-11	84.0	567.2	30.0	35.0	(11.3)	1.6%
Oct-11	55.4	82.8	182.0	116.0	(6.8)	1.6%
Nov-11	109.1	0.0	97.0	97.0	(3.6)	1.2%
Dec-11	99.5	0.0	164.0	67.0	(4.8)	1.4%
Jan-12	75.8	0.0	91.0	63.0	(3.8)	1.6%
Feb-12	53.2	0.0	160.0	155.0	(3.8)	1.0%
Mar-12	87.3	0.0	94.0	169.0	(5.0)	1.4%
Apr-12	97.8	0.0	147.0	177.0	(7.2)	1.7%
May-12	100.3	0.0	375.0	56.0	(9.2)	1.7%
Jun-12	50.8	0.0	181.0	46.0	(12.0)	4.3%
Jul-12	71.2	0.0	12.0	36.0	(12.7)	10.7%
Aug-12	67.0	0.0	0.0	0.0	(10.8)	16.2%
Sep-12	33.6	0.0	0.0	0.0	(5.8)	17.3%
Oct-12	13.8	0.0	0.0	10.0	(2.8)	11.8%
Nov-12	10.1	0.0	154.0	69.0	(2.3)	1.0%
Dec-12	74.7	0.0	220.0	310.0	(1.6)	0.3%
Jan-13	65.0	0.0	353.0	131.0	(2.9)	0.5%
Feb-13	43.4	0.0	297.0	102.0	(2.7)	0.6%
Mar-13	89.0	0.0	275.0	60.0	(5.0)	1.2%
Apr-13	37.6	0.0	386.0	35.0	(8.0)	1.7%
May-13	68.4	0.0	262.0	35.0	(8.5)	2.3%
Jun-13	82.2	0.0	238.0	16.0	(9.4)	2.8%
Jul-15	62.1	0.0	268.0	105.0	(12.1)	2.8%
Aug-15	73.8	0.0	141.0	9.0	(10.9)	4.9%
Sep-15	46.8	0.0	219.0	75.0	(10.0)	2.9%
Oct-15	69.8	0.0	363.0	67.0	(8.1)	1.6%
Nov-15	58.0	0.0	228.0	40.0	(5.3)	1.6%
Dec-15	85.9	0.0	274.0	148.0	(4.3)	0.8%
Jan-16	103.2	0.0	390.0	205.0	(2.0)	0.3%
Feb-16	67.6	0.0	358.0	53.0	(4.9)	1.0%
Mar-16	114.5	0.0	134.0	155.0	(6.3)	1.6%
Apr-16	109.6	0.0	247.0	36.0	(9.7)	2.5%
May-16	52.6	0.0	358.0	33.0	(9.2)	2.1%
Jun-16	48.2	0.0	245.0	9.0	(10.7)	3.5%
Total	-	1663.6	7,197.0	2,797.0	(258.1)	-
Average	72.2	46.2	199.9	77.7	(7.2)	3.1%
Median	70.5	0.0	219.5	61.5	(7.0)	1.6%
Maximum	138.5	727.0	390.0	310.0	(1.6)	17.3%
Minimum	10.1	0.0	0.0	0.0	(12.9)	0.3%



**Table 4j**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in San Sevaine Basins 1-5, FY2012-2016**  
**(AF)**

	Initial Storage	Monthly Inflows			Evaporation Loss	Evaporation Loss Rate
		Imported Water Delivered to Basin	Recycled Water Delivered to Basin	Stormwater Capture		
	(1)	(2)	(3)	(4)	(5)	(6)=- (5)/[(1)+(2)+(3)+(4)]
Jul-11	0.6	1010.7	113.0	0.0	(7.8)	0.7%
Aug-11	64.6	11.2	90.0	0.0	(17.5)	10.6%
Sep-11	46.4	205.6	0.0	0.0	(2.0)	0.8%
Oct-11	0.5	0.0	0.0	39.0	(0.9)	2.4%
Nov-11	0.0	0.0	0.0	32.0	(0.1)	0.2%
Dec-11	0.1	0.0	0.0	20.0	(0.0)	0.1%
Jan-12	0.0	0.0	159.0	55.0	(2.9)	1.4%
Feb-12	74.4	0.0	74.0	54.0	(5.3)	2.6%
Mar-12	75.5	0.0	16.0	160.0	(6.9)	2.7%
Apr-12	74.8	0.0	4.0	76.0	(9.0)	5.8%
May-12	41.1	0.0	3.0	0.0	(2.8)	6.4%
Jun-12	0.0	0.0	54.0	0.0	(3.5)	6.4%
Jul-13	0.0	0.0	0.0	0.0	(0.0)	-
Aug-13	0.1	0.0	0.0	0.0	(0.0)	-
Sep-13	0.0	0.0	154.0	0.0	(0.3)	0.2%
Oct-13	0.0	0.0	69.0	11.0	(11.4)	14.2%
Nov-13	75.3	0.0	9.0	39.0	(6.1)	4.9%
Dec-13	0.0	0.0	0.0	6.0	(0.0)	0.5%
Jan-14	0.1	0.0	12.0	0.0	(0.1)	0.5%
Feb-14	0.7	0.0	16.0	69.0	(2.9)	3.4%
Mar-14	103.9	0.0	0.0	20.0	(0.9)	0.7%
Apr-14	0.1	0.0	2.0	17.0	(0.3)	1.6%
May-14	8.8	0.0	12.0	0.0	(1.4)	6.8%
Jun-14	0.0	0.0	0.0	0.0	(0.0)	-
Jul-14	0.0	0.0	0.0	0.0	0.0	-
Aug-14	0.0	0.0	0.0	6.0	(0.2)	2.7%
Sep-14	0.0	0.0	1.0	1.0	(0.0)	1.2%
Oct-14	0.0	0.0	0.0	0.0	0.0	-
Nov-14	0.0	0.0	0.0	18.0	(0.1)	0.5%
Dec-14	8.4	0.0	0.0	247.0	(1.3)	0.5%
Jan-15	43.7	0.0	0.0	0.0	(0.8)	1.9%
Feb-15	3.7	0.0	0.0	39.0	(0.3)	0.8%
Mar-15	16.5	0.0	0.0	2.0	(0.4)	2.0%
Apr-15	0.0	0.0	0.0	0.0	(0.1)	-
May-15	0.0	0.0	0.0	17.0	(0.3)	2.0%
Jun-15	1.3	0.0	0.0	0.0	(0.1)	4.1%
Jul-15	0.0	0.0	0.0	9.0	(0.0)	0.5%
Aug-15	0.0	0.0	0.0	0.0	(0.0)	-
Sep-15	0.1	0.0	0.0	53.0	(0.1)	0.2%
Oct-15	0.1	0.0	0.0	47.0	(0.1)	0.3%
Nov-15	0.1	0.0	0.0	1.0	(0.0)	2.8%
Dec-15	0.0	0.0	0.0	80.0	(0.1)	0.1%
Jan-16	0.1	0.0	0.0	244.0	(0.0)	0.0%
Feb-16	8.6	0.0	0.0	33.0	(1.1)	2.6%
Mar-16	9.4	0.0	0.0	88.0	(1.8)	1.9%
Apr-16	6.2	0.0	0.0	29.0	(0.5)	1.3%
May-16	0.5	0.0	0.0	1.0	(0.2)	10.9%
Jun-16	0.0	0.0	0.0	0.0	(0.0)	-
Total	-	1227.5	788.0	1,513.0	(89.9)	-
Average	13.9	25.6	16.4	31.5	(1.9)	2.7%
Median	0.1	0.0	0.0	7.5	(0.3)	1.7%
Maximum	103.9	1010.7	159.0	247.0	0.0	14.2%
Minimum	0.0	0.0	0.0	0.0	(17.5)	0.0%



**Table 4k**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in Turner Basins 1 and 2, FY2012-2015**  
**(AF)**

	Initial Storage	Monthly Inflows			Evaporation Loss	Evaporation Loss Rate
		Imported Water Delivered to Basin	Recycled Water Delivered to Basin	Stormwater Capture		
	(1)	(2)	(3)	(4)	(5)	(6)=- (5)/[(1)+(2)+(3)+(4)]
Jul-11	17.5	0.0	0.0	16.0	(8.7)	26.1%
Aug-11	6.1	0.0	0.0	22.0	(5.5)	19.7%
Sep-11	5.3	0.0	0.0	2.0	(3.8)	51.7%
Oct-11	0.7	0.0	0.0	0.0	(2.6)	-
Nov-11	0.7	0.0	41.0	81.0	(1.5)	1.2%
Dec-11	6.6	0.0	60.0	88.0	(2.5)	1.6%
Jan-12	16.8	0.0	29.0	146.0	(2.6)	1.3%
Feb-12	28.9	0.0	0.0	221.0	(2.8)	1.1%
Mar-12	35.3	0.0	0.0	295.0	(4.0)	1.2%
Apr-12	42.4	0.0	0.0	258.0	(6.1)	2.0%
May-12	40.4	0.0	0.0	14.0	(7.5)	13.7%
Jun-12	28.4	0.0	0.0	20.0	(8.9)	18.4%
Jul-12	23.7	0.0	0.0	83.0	(10.0)	9.4%
Aug-12	25.6	0.0	0.0	36.0	(10.8)	17.5%
Sep-12	21.5	0.0	0.0	31.0	(9.4)	17.8%
Oct-12	22.8	0.0	0.0	61.0	(6.4)	7.6%
Nov-12	26.1	0.0	0.0	61.0	(3.4)	3.9%
Dec-12	28.7	0.0	0.0	290.0	(1.9)	0.6%
Jan-13	38.2	0.0	0.0	149.0	(2.7)	1.5%
Feb-13	44.1	0.0	26.0	116.0	(2.8)	1.5%
Mar-13	45.5	0.0	21.0	48.0	(5.0)	4.4%
Apr-13	42.2	0.0	0.0	0.0	(6.6)	15.6%
May-13	33.2	0.0	0.0	0.0	(7.4)	22.2%
Jun-13	19.1	0.0	0.0	0.0	(7.7)	40.3%
Jul-14	6.7	0.0	0.0	0.0	(1.3)	19.9%
Aug-14	0.0	0.0	205.0	46.0	(7.6)	3.0%
Sep-14	21.6	0.0	128.0	54.0	(8.8)	4.3%
Oct-14	22.1	0.0	63.0	31.0	(6.4)	5.5%
Nov-14	21.9	0.0	58.0	108.0	(4.1)	2.2%
Dec-14	29.6	0.0	2.0	253.0	(1.5)	0.5%
Jan-15	23.3	0.0	0.0	117.0	(2.0)	1.4%
Feb-15	24.2	0.0	60.0	93.0	(2.6)	1.5%
Mar-15	30.2	0.0	143.0	47.0	(5.5)	2.5%
Apr-15	28.0	0.0	0.0	0.0	(6.7)	23.8%
May-15	12.6	0.0	0.0	0.0	(4.6)	37.0%
Jun-15	5.2	0.0	0.0	0.0	(3.3)	64.0%
Total	-	0.0	836.0	2,787.0	(184.9)	-
Average	22.9	0.0	23.2	77.4	(5.1)	12.7%
Median	23.5	0.0	0.0	47.5	(4.8)	4.4%
Maximum	45.5	0.0	205.0	295.0	(1.3)	64.0%
Minimum	0.0	0.0	0.0	0.0	(10.8)	0.5%



**Table 4I**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in Turner Basins 3 and 4, FY2012-2013**  
**(AF)**

	Initial Storage	Monthly Inflows			Evaporation Loss	Evaporation Loss Rate
		Imported Water Delivered to Basin	Recycled Water Delivered to Basin	Stormwater Capture		
	(1)	(2)	(3)	(4)	(5)	(6)=- (5)/[(1)+(2)+(3)+(4)]
Jul-11	10.1	0.0	0.0	0.0	(0.6)	6.3%
Aug-11	0.0	54.6	7.0	3.0	(0.1)	0.1%
Sep-11	4.2	144.5	186.0	41.0	(3.2)	0.8%
Oct-11	16.0	0.0	223.0	63.0	(2.5)	0.8%
Nov-11	25.5	0.0	96.0	66.0	(1.3)	0.7%
Dec-11	19.1	0.0	52.0	69.0	(1.4)	1.0%
Jan-12	27.3	0.0	72.0	86.0	(1.5)	0.8%
Feb-12	27.5	0.0	97.0	109.0	(1.6)	0.7%
Mar-12	32.0	0.0	35.0	126.0	(2.1)	1.1%
Apr-12	33.1	0.0	15.0	88.0	(3.1)	2.3%
May-12	32.7	0.0	56.0	40.0	(4.3)	3.3%
Jun-12	31.9	0.0	65.0	25.0	(5.5)	4.5%
Jul-12	32.4	0.0	51.0	25.0	(6.1)	5.6%
Aug-12	33.2	0.0	35.0	36.0	(6.7)	6.4%
Sep-12	33.3	0.0	24.0	31.0	(5.9)	6.7%
Oct-12	34.1	0.0	9.0	22.0	(3.9)	6.0%
Nov-12	34.4	0.0	5.0	30.0	(2.1)	3.0%
Dec-12	34.9	0.0	5.0	47.0	(1.0)	1.2%
Jan-13	36.4	0.0	0.0	15.0	(1.5)	2.9%
Feb-13	35.5	0.0	0.0	25.0	(1.5)	2.4%
Mar-13	34.8	0.0	0.0	14.0	(2.6)	5.4%
Apr-13	33.6	0.0	0.0	0.0	(3.7)	10.9%
May-13	31.4	0.0	0.0	0.0	(3.1)	9.9%
Jun-13	20.7	0.0	0.0	0.0	(1.2)	5.9%
Total	-	199.1	1,033.0	961.0	(66.4)	-
Average	27.2	8.3	43.0	40.0	(2.8)	3.7%
Median	32.2	0.0	19.5	30.5	(2.3)	2.9%
Maximum	36.4	144.5	223.0	126.0	(0.1)	10.9%
Minimum	0.0	0.0	0.0	0.0	(6.7)	0.1%



**Table 4m**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in Upland Basin, FY2012-2016**  
**(AF)**

	Initial Storage	Monthly Inflows			Evaporation Loss	Evaporation Loss Rate
		Imported Water Delivered to Basin	Recycled Water Delivered to Basin	Stormwater Capture		
	(1)	(2)	(3)	(4)	(5)	(6)=- (5)/[(1)+(2)+(3)+(4)]
Jul-11	344.5	558.0	0.0	0.0	(8.8)	1.0%
Aug-11	512.9	746.7	0.0	0.0	(10.8)	0.9%
Sep-11	694.2	813.6	0.0	0.0	(10.1)	0.7%
Oct-11	776.2	0.0	0.0	29.0	(5.8)	0.7%
Nov-11	338.9	0.0	0.0	31.0	(1.9)	0.5%
Dec-11	175.5	0.0	0.0	8.0	(1.7)	0.9%
Jan-12	133.1	0.0	0.0	20.0	(1.3)	0.8%
Feb-12	77.8	0.0	0.0	27.0	(1.1)	1.1%
Mar-12	55.3	0.0	0.0	60.0	(1.5)	1.3%
Apr-12	65.0	0.0	0.0	47.0	(2.2)	2.0%
May-12	62.6	0.0	0.0	0.0	(2.8)	4.5%
Jun-12	33.3	0.0	0.0	0.0	(2.7)	8.2%
Jul-13	0.0	0.0	0.0	0.0	0.0	-
Aug-13	0.0	0.0	0.0	0.0	0.0	-
Sep-13	0.0	0.0	0.0	0.0	0.0	-
Oct-13	0.0	0.0	0.0	7.0	(0.0)	0.6%
Nov-13	0.0	0.0	0.0	9.0	(0.1)	1.4%
Dec-13	0.0	0.0	0.0	8.0	(0.3)	4.0%
Jan-14	0.0	0.0	0.0	1.0	(0.0)	4.0%
Feb-14	0.0	0.0	0.0	49.0	(0.2)	0.4%
Mar-14	57.7	0.0	0.0	12.0	(1.7)	2.4%
Apr-14	13.0	0.0	0.0	9.0	(1.3)	6.0%
May-14	0.0	0.0	0.0	0.0	0.0	-
Jun-14	0.0	0.0	0.0	0.0	0.0	-
Jul-14	0.0	0.0	0.0	0.0	0.0	-
Aug-14	0.0	0.0	0.0	0.0	0.0	-
Sep-14	0.0	0.0	0.0	0.0	0.0	-
Oct-14	0.0	0.0	0.0	0.0	0.0	-
Nov-14	13.7	0.0	0.0	48.0	(0.9)	1.5%
Dec-14	16.8	0.0	0.0	186.0	(0.7)	0.3%
Jan-15	76.8	0.0	0.0	28.0	(0.9)	0.8%
Feb-15	36.4	0.0	0.0	29.0	(1.0)	1.6%
Mar-15	47.2	0.0	0.0	14.0	(2.1)	3.4%
Apr-15	0.0	0.0	0.0	0.0	(0.0)	-
May-15	0.0	0.0	0.0	20.0	(1.2)	6.0%
Jun-15	0.0	0.0	0.0	0.0	(0.2)	-
Jul-15	0.0	0.0	0.0	17.0	(0.3)	1.7%
Aug-15	0.0	0.0	0.0	0.0	0.0	-
Sep-15	0.0	0.0	0.0	29.0	(0.9)	3.3%
Oct-15	0.0	0.0	0.0	19.0	(0.9)	4.6%
Nov-15	0.0	0.0	0.0	12.0	(0.3)	2.3%
Dec-15	0.0	0.0	0.0	28.0	(0.5)	2.0%
Jan-16	8.2	0.0	0.0	154.0	(0.6)	0.3%
Feb-16	63.9	0.0	0.0	19.0	(1.3)	1.6%
Mar-16	27.2	92.8	0.0	134.0	(2.0)	0.8%
Apr-16	86.7	0.0	0.0	10.0	(2.6)	2.7%
May-16	22.3	0.0	0.0	3.0	(1.1)	4.2%
Jun-16	33.3	0.0	0.0	0.0	0.0	0.0%
Total	-	2,211.1	0.0	1,067.0	(71.9)	-
Average	78.6	46.1	0.0	22.2	(1.5)	2.2%
Median	10.6	0.0	0.0	9.0	(0.9)	1.5%
Maximum	776.2	813.6	0.0	186.0	0.0	8.2%
Minimum	0.0	0.0	0.0	0.0	(10.8)	0.0%



**Table 4n**  
**Estimated Monthly Initial Storage, Inflows, and Evaporation Losses in Victoria Basin, FY2012-2016**  
**(AF)**

	Initial Storage	Monthly Inflows			Evaporation Loss	Evaporation Loss Rate
		Imported Water Delivered to Basin	Recycled Water Delivered to Basin	Stormwater Capture		
	(1)	(2)	(3)	(4)	(5)	(6)=- (5)/[(1)+(2)+(3)+(4)]
Jul-11	69.9	0.0	62.0	4.0	(10.8)	8.0%
Aug-11	52.3	122.7	52.0	1.0	(11.1)	4.8%
Sep-11	117.8	158.3	0.0	0.0	(9.2)	3.3%
Oct-11	175.7	0.0	0.0	30.0	(6.2)	3.0%
Nov-11	46.2	0.0	15.0	25.0	(2.7)	3.1%
Dec-11	51.1	0.0	25.0	9.0	(3.1)	3.7%
Jan-12	48.9	0.0	0.0	11.0	(2.7)	4.6%
Feb-12	57.8	0.0	0.0	4.0	(2.6)	4.2%
Mar-12	29.0	0.0	0.0	18.0	(3.4)	7.3%
Apr-12	21.0	0.0	18.0	96.0	(4.4)	3.3%
May-12	14.2	0.0	271.0	20.0	(7.4)	2.4%
Jun-12	95.2	0.0	222.0	3.0	(10.0)	3.1%
Jul-12	89.9	0.0	94.0	3.0	(10.9)	5.8%
Aug-12	60.3	0.0	118.0	5.0	(11.8)	6.5%
Sep-12	93.8	0.0	55.0	1.0	(10.6)	7.1%
Oct-12	77.7	0.0	131.0	1.0	(7.0)	3.3%
Nov-12	114.9	0.0	71.0	6.0	(3.7)	1.9%
Dec-12	95.0	0.0	21.0	19.0	(1.8)	1.4%
Jan-13	95.2	0.0	12.0	35.0	(2.6)	1.8%
Feb-13	99.4	0.0	10.0	10.0	(2.5)	2.1%
Mar-13	63.0	0.0	57.0	7.0	(4.7)	3.7%
Apr-13	86.4	0.0	98.0	1.0	(6.9)	3.7%
May-13	109.4	0.0	93.0	5.0	(8.6)	4.1%
Jun-13	111.8	0.0	82.0	1.0	(9.5)	4.9%
Jul-14	81.4	0.0	91.0	2.0	(11.2)	6.4%
Aug-14	59.5	0.0	107.0	5.0	(11.2)	6.5%
Sep-14	82.6	0.0	155.0	2.0	(10.4)	4.3%
Oct-14	79.1	0.0	75.0	3.0	(7.2)	4.6%
Nov-14	77.2	0.0	4.0	57.0	(4.6)	3.3%
Dec-14	60.0	0.0	0.0	153.0	(1.6)	0.8%
Jan-15	83.2	0.0	63.0	18.0	(2.2)	1.4%
Feb-15	76.9	0.0	57.0	40.0	(3.0)	1.7%
Mar-15	92.8	0.0	79.0	12.0	(6.1)	3.3%
Apr-15	104.4	0.0	127.0	0.0	(8.0)	3.5%
May-15	102.7	0.0	141.0	13.0	(6.9)	2.7%
Jun-15	121.6	0.0	32.0	1.0	(9.0)	5.8%
Jul-15	60.8	0.0	139.0	4.0	(9.8)	4.8%
Aug-15	98.8	0.0	165.0	1.0	(11.5)	4.3%
Sep-15	123.5	0.0	136.0	37.0	(9.5)	3.2%
Oct-15	124.1	0.0	101.0	35.0	(7.2)	2.8%
Nov-15	128.0	0.0	34.0	0.0	(4.7)	2.9%
Dec-15	87.1	0.0	60.0	86.0	(3.4)	1.5%
Jan-16	138.5	0.0	0.0	87.0	(1.5)	0.7%
Feb-16	134.1	0.0	0.0	10.0	(3.6)	2.5%
Mar-16	64.1	0.0	0.0	79.0	(4.2)	2.9%
Apr-16	40.7	0.0	0.0	1.0	(4.3)	10.3%
May-16	23.0	0.0	0.0	2.0	(2.9)	11.4%
Jun-16	24.2	0.0	0.0	1.0	(4.7)	18.6%
Total	-	281.0	3,073.0	964.0	(302.9)	-
Average	82.2	5.9	64.0	20.1	(6.3)	4.3%
Median	82.9	0.0	57.0	5.5	(6.1)	3.4%
Maximum	175.7	158.3	271.0	153.0	(1.5)	18.6%
Minimum	14.2	0.0	0.0	0.0	(11.8)	0.7%



**Table 5**  
**Seasonal Evaporation Loss Rate Calculation**  
**(AF)**

Recharge Facility	Wet Season (November through March)			Dry Season (April through October)		
	Total Inflow Plus Initial Storage <i>(1)</i>	Evaporation Losses <i>(2)</i>	Evaporation Loss Rate <i>(3)=[(2)/(1)]</i>	Total Inflow Plus Initial Storage <i>(4)</i>	Evaporation Losses <i>(5)</i>	Evaporation Loss Rate <i>(6)=[(5)/(4)]</i>
Brooks Street	3,974	(38.9)	1.0%	3,375	(122.8)	3.6%
Ely 1-3	6,839	(128.4)	1.9%	5,859	(259.0)	4.4%
Hickory	3,420	(31.7)	0.9%	2,459	(66.5)	2.7%
RP3 Cells 1, 3, and 4	5,290	(58.1)	1.1%	1,138	(60.5)	5.3%
Victoria	1,560	(64.9)	4.2%	2,095	(123.9)	5.9%
Volume-Weighted Evaporation Loss Rate		1.5%			4.2%	

