

DERWA

REPORT OF OPERATIONS

JANUARY – DECEMBER 2011



Prepared by Dublin San Ramon Services District

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**REPORT OF OPERATIONS
DERWA RECYCLED WATER SYSTEM
December 2011**

1. OVERVIEW

1.1 Summary

The following report covers the operation of the recycled water facilities from January 1 through December 31, 2011, for the San Ramon Valley Recycled Water Program (SRVRWP). Operations of the DERWA joint use facilities began in 2006.

During the period a total of 2,512 acre-feet (818 million gallons) of recycled water were produced and distributed to DSRSD's and EBMUD's customers. Customer demands as measured for each pressure zone totaled 2,528 acre-feet (824 million gallons). Of this amount, DSRSD's customers used 1,981 acre-feet (645 million gallons), and EBMUD's customers used 547 acre-feet (178 million gallons). The difference between the quantity of recycled water produced and the customer demand is due to a combination of factors, including:

- The annual draining and flushing procedure, which is conducted in late spring and serves as a means of eliminating nitrified water from the distribution system. During this procedure the contents of the recycled water reservoirs are drained back to DSRSD's WWTP for treatment or discharge. The procedure is difficult to measure in terms of the gallons removed, and staff largely relies on estimates.
- Spills of recycled water. All significant spills are reported to the RWQCB on DSRSD's monthly self-monitoring reports.
- System losses and meter errors.

On August 10, 2011 the demand for recycled water set a new record with a maximum daily delivery of 5.98 MGD. This demand topped the previous record of 5.53 MGD, which was set on June 28, 2010. The total cost to operate the system during CY 2011 was \$1,190,301, averaging \$473 per acre-foot delivered. The budget for FYE 2011 anticipated recycled water deliveries totaling 2,830 acre-feet (922 million gallons) and a unit cost of \$544 per acre-foot. The budget for FYE 2012 anticipated recycled water deliveries totaling 2,490 acre-feet (811 million gallons) and a unit cost of \$618 per acre-

foot. The CY 2011 actual cost of \$473 per acre-foot therefore falls below the budgeted costs for either of the two fiscal years.

During the calendar year full Regional Water Quality Control Board permit compliance was maintained. Recycled water production and demand is summarized in Table 1.

TABLE 1
DERWA System: Actual 2011 Season Demand Totals

Month	Production		Actual Recycled Water Demand			
	SF-UV MG	MF-UV MG	Total MGD	Peak MGD	MG	AF
Jan-11	0.00	8.92	0.23	0.39	7.16	21.97
Feb-11	0.00	9.42	0.34	0.95	9.53	29.23
Mar-11	0.00	5.23	0.21	1.04	6.39	19.61
Apr-11	46.56	0.00	1.43	3.00	42.79	131.33
May-11	99.72	0.00	3.23	4.91	100.16	307.39
Jun-11	98.87	3.00	3.40	5.73	102.14	313.48
Jul-11	147.50	0.00	4.72	5.74	146.36	449.18
Aug-11	144.21	9.70	5.01	5.98	155.17	476.23
Sep-11	141.15	0.55	4.69	5.74	140.81	432.16
Oct-11	50.32	8.80	1.98	3.10	61.43	188.55
Nov-11	9.31	11.50	0.81	2.62	24.36	74.78
Dec-11	4.41	19.21	0.77	1.58	23.95	73.52
AVG	61.84	6.36	2.24			
TOTAL	742.05	76.33			823.6	2,527.6
MIN	0.00	0.00	0.21	0.39	6.4	19.6
MAX	147.50	19.21	5.01	5.98	155.2	476.2

1.2 Regulatory Approval and Permitting

The treatment and distribution system was operated under a General Water Reuse Permit (Board Order No. 96-011) issued by the San Francisco Bay Regional Water Quality Control Board. In 2005 a Title 22 Conformed Engineering Report and Notice of Intent (NOI) was approved by the California Department of Public Health (CDPH). The Conformed Engineering Report describes the treatment to be provided, as well as details concerning permitting, distribution, and reuse. In 2007 CDPH granted approval for the sand filter ultraviolet disinfection (SF-UV) system to operate up to the design capacity of 9.7 MGD.

The micro-filter ultraviolet disinfection (MF-UV) system was used during the winter months when the demand for recycled water ceased requiring daily production, and also when the daily demand dropped below about 2.0 MGD, which is the lower design parameter for operating the SF-UV system. The MF-UV system was used on occasion during the summer months to supplement SF-UV production during times when secondary process upsets and/or maintenance needs interrupted or reduced SF-UV production.

1.3 2011 Season Highlights

January 2011: Due to temperatures averaging 46.2°F with a maximum recorded temperature of 70.1°F and rainfall totaling 1.07 inches, recycled water production only occurred on eight days during the month and totaled only 8.92 MG, all produced using the MF-UV system. EBMUD reported that the Chevron campus had resolved their issues with recycled water pressures and they were once again using recycled water for irrigation. On January 7 JDH Corrosion released a report entitled "Failure Assessment: Air Release Valve Lateral, 16-inch Recycled Water Pipeline Failure, San Ramon, California". The report found that fatigue and not corrosion had led to a major leak on the DERWA backbone line that occurred in December, 2010, along the Iron Horse Trail.

February 2011: Due to temperatures averaging 47.4°F, with a maximum recorded temperature of 77.2°F and rainfall totaling 4.29 inches, recycled water production only occurred on seven days during the month and totaled only 9.42 MG, all produced using the MF-UV system. Authority Manager Jim Bewley began discussions with EBMUD staff to perform repairs to the air relief valves on the Iron Horse Trail.

March 2011: Due to temperatures averaging 49.6°F, with a maximum recorded temperature of 85.2°F and rainfall totaling 6.14 inches, recycled water production only occurred on six days during the month and totaled only 5.23 MG, all produced using the MF-UV system. DSRSD staff worked with a consultant to better understand how the SF-UV Wedeco system modulates power to the UV lamps, in an effort to brainstorm improvements to the control system as a means of reducing electrical consumption. The consultant determined that improvements to the control strategy could result in electrical savings of \$10,000 to \$20,000, although CDPH would need to approve the concepts before any significant changes could be made to the UV lamp control system.

April 2011: Due to increasing temperatures averaging 55.4°F, with a maximum recorded temperature of 84.4°F and rainfall totaling only 0.14 inches, recycled water production was

switched to the SF-UV system, and daily production began on April 14. Monthly recycled water production totaled 46.56 MG, all produced using the SF-UV system. During the first week of April a total of 3.44 MG of nitrified recycled water was drained from the DERWA distribution system back to DSRSD's treatment plant, and the treated water was discharged to San Francisco Bay. The distribution system was then refilled with fresh, highly chlorinated recycled water. The DERWA Managers met on April 22 to discuss the planned May Board meeting, the proposed DERWA O&M budget, and flow projections through 2030.

May 2011: Average temperatures increased to 57.1°F, with a maximum recorded temperature of 89.6°F and rainfall totaling only 0.72 inches, so recycled water production occurred daily and totaled 99.72 MG, all produced using the SF-UV system.

June 2011: Average temperatures increased to 64.0°F, with a maximum recorded temperature of 98.8°F and rainfall totaling only 1.71 inches, so recycled water production occurred on all but two days during the month and totaled 101.87 MG. Due to the rapidly increasing customer demands and problems with high secondary effluent turbidity, the MF-UV system was operated in tandem with SF-UV on two days during the month and produced 3.0 MG of recycled water to supplement SF-UV production. During June the peak daily customer demand of 5.73 MGD broke the all-time record set the previous year, which was 5.53 MGD.

July 2011: Average temperatures increased to 68.1°F, with a maximum recorded temperature of 97.4°F and no rainfall, so recycled water production occurred daily during the month and totaled 147.50 MG. During July the peak daily customer demand of 5.74 MGD broke the new record set during the previous month of June.

August 2011: The average temperature was 66.9°F, with a maximum recorded temperature of 95.2°F and no rainfall, so recycled water production occurred daily during the month and totaled 153.91 MG. During August the peak daily customer demand set a new all-time record of 5.98 MGD, the first time any year's peak daily demand record was not set during June or July.

September 2011: The average temperature was 70.0°F, with a maximum recorded temperature of 98.6°F and no rainfall, so recycled water production occurred daily during the month and totaled 141.70 MG. The DERWA Managers met on September 29 to discuss supplementing water supplies, amending the sales agreement, IHT ARV improvements, PSR 200A landscaping, and WRDA projects.

October 2011: Average temperatures decreased to 62.5°F, with a maximum recorded temperature of 90.4°F and rainfall totaling 1.04 inches, so recycled water production began

occurring intermittently. The SF-UV and MF-UV systems were operated alternately during the month and produced a total of 59.12 MG. Of this amount, 8.80 MG was produced using the MF-UV system.

November 2011: Average temperatures decreased to 51.2°F, with a maximum recorded temperature of 75.2°F and rainfall totaling 1.30 inches, so recycled water production continued to occur intermittently. The SF-UV and MF-UV systems were operated alternately during the month and produced a total of 20.81 MG. Of this amount, over half of the amount or 11.50 MG was produced using the MF-UV system. During the month EBMUD staff asked for permission to empty a 10 MG potable reservoir into DERWA's R-100 so they could refurbish the potable reservoir.

December 2011: Average temperatures decreased to 47.5°F, with a maximum recorded temperature of 73.7°F, although rainfall totaling only 0.09 inches, so recycled water production continued to occur intermittently. The SF-UV and MF-UV systems were operated alternately during the month and produced a total of 23.63 MG. Of this amount, most of the amount or 19.21 MG was produced using the MF-UV system. During the month EBMUD staff began making preparations to empty a 10 MG potable reservoir into DERWA's R-100.

1.4 2012 Goals

During 2012 the goals for DSRSD as the operator of the DERWA system will include:

- Continue optimizing PACL dosage rates to minimize chemical costs without adversely recycled water quality and/or permit compliance.
- Test the operation of the anaerobic zone in the secondary treatment system to control the growth of filamentous bacteria, while measuring the effect on phosphorus removal and the corresponding formation of struvite. Filamentous bacteria can degrade secondary effluent turbidity and impede or sometimes prevent the production of recycled water.
- Once again perform the annual recycled reservoir drain and flush procedure to remove nitrified water from the reservoirs in preparation for the summer irrigation season, without adversely affecting recycled water customers. Staff will also attempt to measure and monitor the accumulation of silt and solids in the reservoirs, and one or both of the reservoirs may be cleaned if warranted.

1.5 Key Performance Measures

Performance measures serve as a mechanism to check and evaluate the DERWA system's efficiency and output.

Recycled water production during the 2011 season totaled 2,512 acre feet, or 818 million gallons, compared to 2,490 acre-feet that was estimated for the FY 2011/2012 O&M budget. In contrast, recycled water production during the CY 2010 season totaled only 2,174 acre-feet, or 708 million gallons. The cost to produce and deliver recycled water during CY 2011 averaged \$473 per acre-foot, compared to the FY 2010/2011 budgeted rate of \$544 per acre-foot and the FY 2011/2012 budgeted rate of \$618 per acre-foot.

The percentage of backwash waste averaged about 8.7% during the 2011 season, which more than met the target goal of 12% for FY 2011/2012. The SF-UV system utilizes a continuous backwash system that essentially discharges a fixed quantity of backwash waste regardless of the amount of recycled water produced, so the percentage of backwash will remain high until recycled water production increases. During the peak production months of July through September, the percentage of backwash waste fell well below 8.7%. However, with operating experience staff has determined that the SF-UV system can be successfully operated in a manner that produces less backwash waste than what was previously expected. Using this determination, the projections for backwash waste efficiency for 2012 incorporate a reduction in the minimum amount of backwash waste that the SF-UV system will produce.

Key performance measures for the DERWA system are summarized in Table 2.

TABLE 2
DERWA System: Performance Measures

Table 2: Key Performance Measures

Work Element	Performance Measure	FYE 2011 Actual	FYE 2012 YTD Actual	CY 2012 Target
Permit Compliance	Number of DHS permit violations associated with DERWA Facilities	0	0	0
Customer Satisfaction	Numbers of Verified Water Quality Complaints	0	0	0
	Number of Verified Water Pressure Complaints	0	0	0
	Maximum Response Time to Verified Complaints	Same Day	Same Day	Same Day
Treatment and Delivery Cost-Effectiveness	Total Combined Cost per acre-foot of Recycled Water Treated and Delivered	\$507	\$379	\$443
	Operations Cost per acre-foot of Recycled Water Treated and Delivered	\$348	\$268	\$308
	Distribution Cost per acre-foot of Recycled Water Treated and Delivered	\$148	\$111	\$129
	Chemical Cost per acre-foot of Recycled Water Treated (excluding delivery)	\$46	\$28	\$37
	Power Cost per acre-foot of Recycled Water Treated (excluding delivery)	\$168	\$154	\$161
Maintenance Practices	Percent of Scheduled Preventive Maintenance Tasks Completed	100%	95%	98%
Return Streams Handling Efficiency	Average Filter Backwash Percent of Total Volume of Water Treated	11.3%	8.7%	10.6%
System Reliability	Number of Unplanned Recycled Water Supply Outages	0	0	0
	Total Duration of Unplanned Recycled Water Supply Outages	0	0	0
	Number of Reportable Recycled Water Spills	2	0	0

1.6 Secondary Effluent Supply versus Recycled Water Demand During 2011

DERWA has a legal right to utilize all of the wastewater that originates from Dublin and South San Ramon for recycling and reuse. By an amendment to the Regional Agreement under which DSRSD serves the City of Pleasanton, the City agreed to allow DSRSD to also use up to 2.5 MGD of the wastewater that originates from Pleasanton for recycling. During 2011 this agreement was extended through March 31, 2012, and DERWA staff is currently negotiating with the City to further extend this agreement. On a total of nine (9) days during 2011 the production of recycled water exceeded the quantity of sewage generated by Dublin and South San Ramon, so on these days a small portion of the wastewater that originated as sewage from the residents of the City of Pleasanton was

utilized to meet DERWA's recycled water demands. On all of these nine days the amount of Pleasanton's water that was utilized for recycling was less than 2.5 MG.

Table 3 shows the flow of sewage that originated from Dublin and portions of South San Ramon (DSR flow), the flow that originated from the City of Pleasanton, and the combined total volume of DSRSD's secondary effluent. Table 3 also shows the volume of DSRSD's secondary effluent that is currently available for recycling, which is shown as the Dublin-San Ramon flow plus 2.5 MGD of Schedule B water (i.e. wastewater originating as sewage from the City of Pleasanton). Table 3 further shows the measured monthly average and peak daily recycled water demands during 2011, and the percentage of the available supply that was utilized. As stated above, the peak daily demand for recycled water utilized more than the DSR supply on a total of nine days during 2011.

Figure 1 shows plots comparing the 2011 *monthly average* demand for recycled water, the Dublin-San Ramon (DSR) flow, and the total secondary effluent flow that could be recycled (Dublin-San Ramon's flow plus the Schedule B water).

Figure 2 shows plots comparing the 2011 *peak daily* demand for recycled water, the Dublin-San Ramon (DSR) flow, and the total secondary effluent flow that could be recycled (Dublin-San Ramon's flow plus the Schedule B water).

TABLE 3

DERWA System: 2011 Secondary Effluent Supply versus Recycled Water Demand during 2011

Month	Total Treatment Influent MGD	City of Pleasanton Flow MGD	Dublin San Ramon Flow MGD	DSR plus Sch B water available for Recycling MGD	DERWA Recycled Water Demand AVG MGD	DERWA Recycled Water Demand Peak MGD	Average Recycled Demand % of DSR Supply	Number of Days Recycled Production exceeded DSR Supply
Jan-11	12.08	5.07	7.01	9.51	0.23	0.39	3%	0
Feb-11	12.39	5.31	7.08	9.58	0.34	0.95	5%	0
Mar-11	12.88	6.26	6.62	9.12	0.21	1.04	3%	0
Apr-11	11.62	5.34	6.28	8.78	1.43	3.00	23%	0
May-11	11.84	5.15	6.69	9.19	3.23	4.91	48%	0
Jun-11	11.85	5.26	6.58	9.08	3.40	5.73	52%	0
Jul-11	12.24	5.20	7.04	9.54	4.72	5.74	67%	2
Aug-11	11.42	5.11	6.31	8.81	5.01	5.98	79%	2
Sep-11	11.89	5.10	6.79	9.29	4.69	5.74	69%	5
Oct-11	11.02	4.99	6.03	8.53	1.98	3.10	33%	0
Nov-11	10.62	4.78	5.84	8.34	0.81	2.62	14%	0
Dec-11	10.61	5.56	5.05	7.55	0.77	1.58	15%	0
AVG	11.70	5.26	6.44	8.94	2.26		34%	
TOTAL	4,271.14	1,920.68	2,350.46		823.57			9
MIN	10.61	4.78	5.05	7.55	0.21	0.39	3%	
MAX	12.88	6.26	7.08	9.58	5.01	5.98	79%	

Figure 1: 2011 Season Recycled Water Supply vs Average Monthly Demand

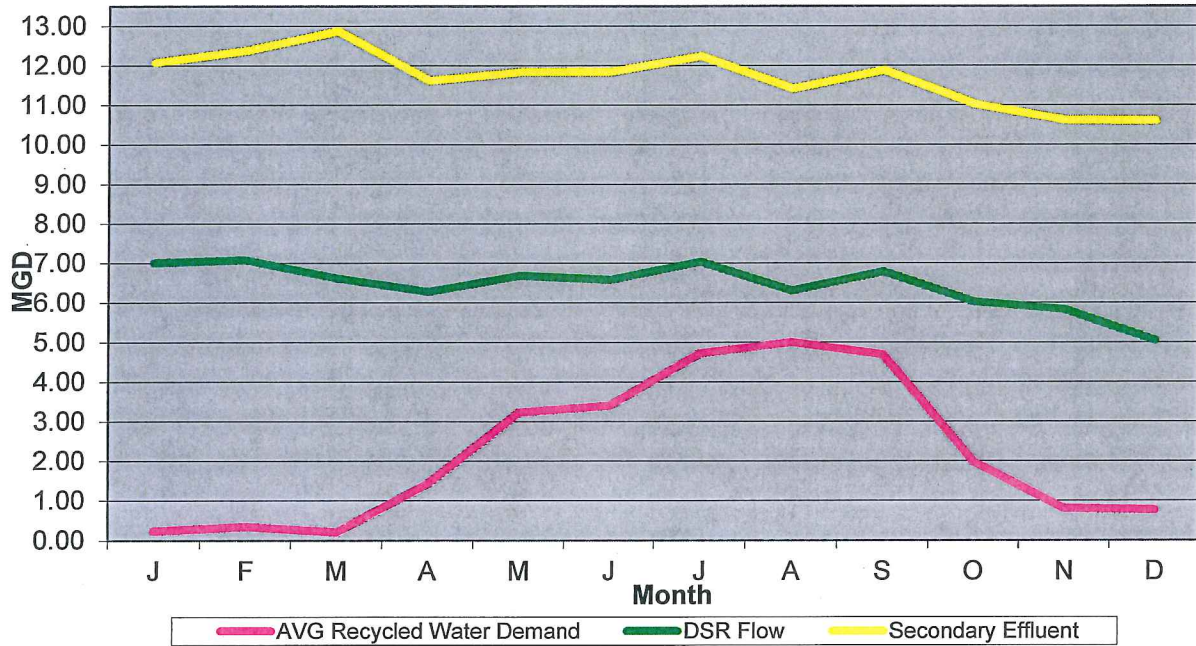
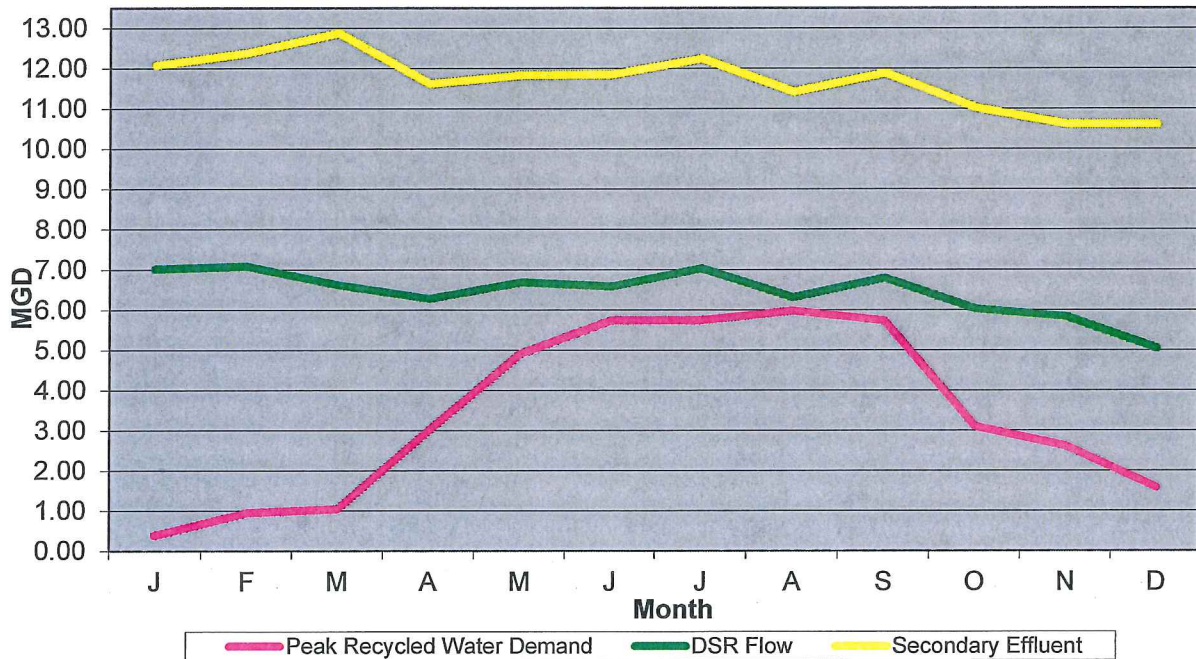


Figure 2: 2011 Season Recycled Water Supply vs Peak Daily Demand



1.7 2012 Projections of Supply and Demand

Table 4 shows the estimated or projected CY 2012 flows for the Dublin-San Ramon (DSR) flow, including anticipated growth. The 2012 projections are estimates prepared by the

DSRSD Engineering Department based on projected new recycled water customers that are expected to be added during 2011, including projected new EBMUD customer connections. Recycled water demands in 2012 are expected to increase by about 4.94% compared to 2011. Table 4 also shows the monthly average and peak daily recycled water demands that are expected during 2012, and the percentage of the supply that will be utilized. On peak demand days during 2012 the recycled water demand is again expected to exceed the amount of wastewater produced by Dublin and South San Ramon.

TABLE 4
DERWA System: 2012 Projected Secondary Effluent Supply and Recycled Water Demand

Month	Total Secondary Effluent MGD	City of Pleasanton Flow MGD	Dublin San Ramon Flow MGD	DSR plus Sch B water available for Recycling MGD	Projected		Average Recycled Demand % of DSR Supply	Daily Peak Recycled Demand % of DSR Supply
					DERWA Recycled Water Demand MGD	DERWA Recycled Water Demand Peak MGD		
Jan-12	11.70	5.26	6.44	8.94	0.24	0.41	4%	6%
Feb-12	11.70	5.26	6.44	8.94	0.36	1.00	6%	15%
Mar-12	11.70	5.26	6.44	8.94	0.22	1.09	3%	17%
Apr-12	11.70	5.26	6.44	8.94	1.50	3.14	23%	49%
May-12	11.70	5.26	6.44	8.94	3.39	5.16	53%	80%
Jun-12	11.70	5.26	6.44	8.94	3.57	6.02	55%	93%
Jul-12	11.70	5.26	6.44	8.94	4.95	6.02	77%	94%
Aug-12	11.70	5.26	6.44	8.94	5.25	6.28	82%	97%
Sep-12	11.70	5.26	6.44	8.94	4.93	6.02	76%	93%
Oct-12	11.70	5.26	6.44	8.94	2.08	3.26	32%	51%
Nov-12	11.70	5.26	6.44	8.94	0.85	2.75	13%	43%
Dec-12	11.70	5.26	6.44	8.94	0.81	1.66	13%	26%
AVG	11.70	5.26	6.44	8.94	2.35	3.57	36%	55%
TOTAL	4,271.14	1,920.68	2,350.46		861.10			
MIN	11.70	5.26	6.44	8.94	0.22	0.41	3%	6%
MAX	11.70	5.26	6.44	8.94	5.25	6.28	82%	97%

Figure 3 shows plots comparing the 2012 estimated *monthly average* demand for recycled water, the Dublin-San Ramon (DSR) flow, and the total secondary effluent flow (Dublin-San Ramon plus the Schedule B water).

Figure 4 shows plots comparing the 2012 estimated *peak daily* demand for recycled water, the Dublin-San Ramon (DSR) flow, and the total secondary effluent flow (Dublin-San Ramon plus the Schedule B water).

During 2012 the demand for recycled water will continue to occasionally exceed the daily quantity wastewater generated by the cities of Dublin and South San Ramon, although the agreement with Pleasanton to utilize a portion of the wastewater originating from the City should continue to meet recycled water demands during 2012.

Figure 3: 2012 Projections of Recycled Water Supply vs Average Monthly Demand

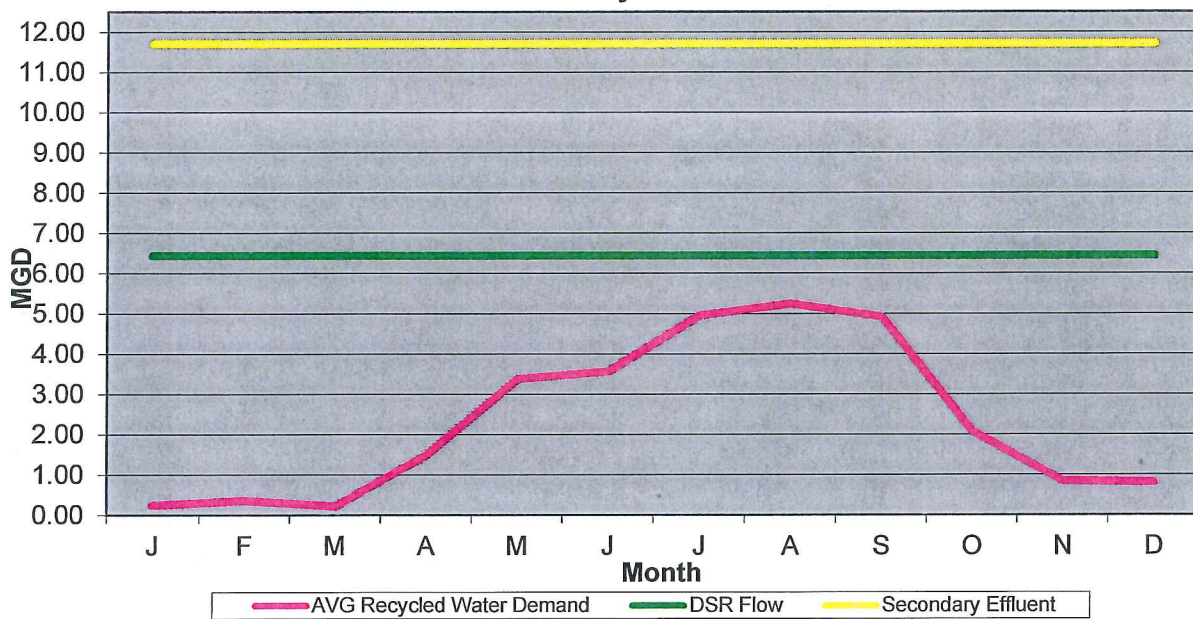


Figure 4: 2012 Projections of Recycled Water Supply vs Peak Daily Demand

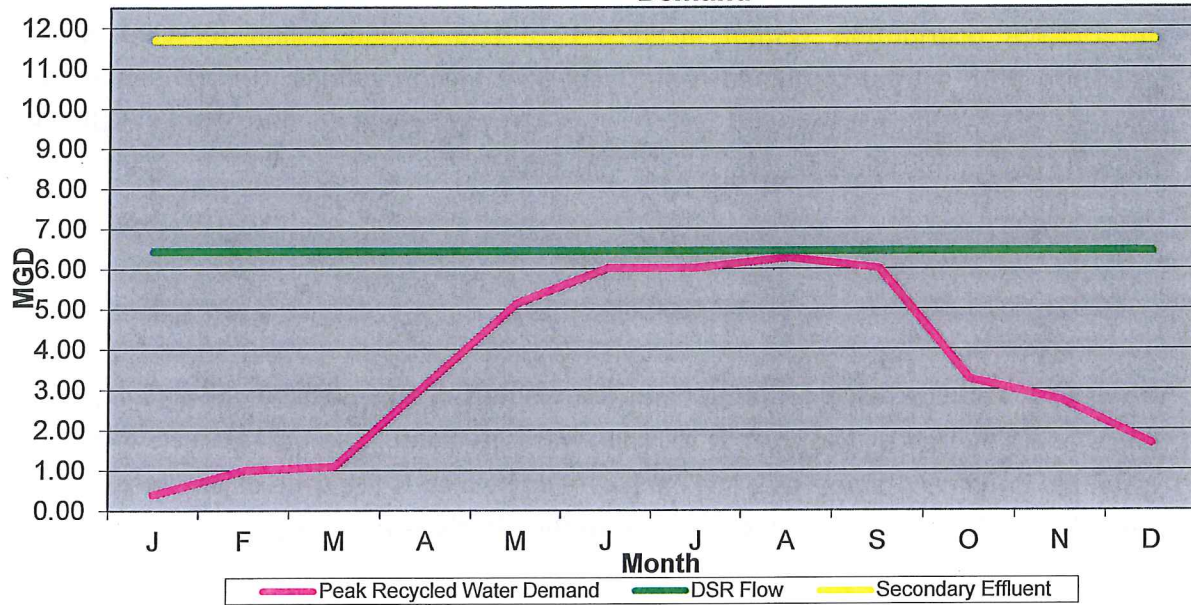


Table 5 summarized the 2012 projections for recycled water demands based on average daily demand, peak daily demand, total millions of gallons, and total acre-feet.

**TABLE 5
DERWA System: Projected 2012 Season Demand Totals**

Month	Projected Recycled Water Demand		Projected Recycled Water Production	
	MGD	Peak MGD	MG	AF
Jan-12	0.24	0.41	7.5	23.1
Feb-12	0.36	1.00	10.4	31.8
Mar-12	0.22	1.09	6.7	20.6
Apr-12	1.50	3.14	44.9	137.8
May-12	3.39	5.16	105.1	322.6
Jun-12	3.57	6.02	107.2	329.0
Jul-12	4.95	6.02	153.6	471.4
Aug-12	5.25	6.28	162.8	499.7
Sep-12	4.93	6.02	147.8	453.5
Oct-12	2.08	3.26	64.5	197.9
Nov-12	0.85	2.75	25.6	78.5
Dec-12	0.81	1.66	25.1	77.1
AVG	2.35	3.57		
TOTAL			861.1	2,642.8
MIN	0.22	0.41	6.7	20.6
MAX	5.25	6.28	162.8	499.7

Expected increase over 2011 Season: **4.94%**

1.8 Volume of Recycled Water in Reservoir/Storage

The DERWA distribution system includes two 4.36 million gallon recycled water reservoirs, with a total combined capacity of 8.72 million gallons. DSRSD separately operates two additional recycled water reservoirs connected to the system with the following design maximum usable storage capacities:

- R300 0.41 MG Dougherty Valley
- R20 1.38 MG Eastern Dublin

Tables 6, 7, and 8 provide estimations of the amount of the available storage capacity that is being utilized by the current recycled water demand. The data reflects the level contained in each reservoir at 9 PM each evening, which is the time of day most often when the level of water is the highest prior to the night's irrigation cycle.

Table 6 shows the average volume stored during each month, the maximum storage capacity, the monthly percent of storage utilized, the monthly average turnover, and the monthly average demand for DERWA Reservoir R100. The average turnover in R100 was 6.9 days during 2011.

TABLE 6
DERWA System: Utilization of Storage Capacity

Month	Reservoir R100				
	Average Volume Stored * MG	Maximum Storage Capacity MG	Storage Capacity Utilized %	Average Turnover DAYS	Average Demand MGD
Jan-11	2.10	4.36	48%	21.4	0.10
Feb-11	2.20	4.36	50%	16.4	0.13
Mar-11	1.74	4.36	40%	15.9	0.11
Apr-11	1.80	4.36	41%	3.9	0.46
May-11	2.81	4.36	65%	2.8	1.00
Jun-11	3.03	4.36	69%	3.2	0.96
Jul-11	2.97	4.36	68%	2.6	1.13
Aug-11	2.40	4.36	55%	1.5	1.56
Sep-11	2.99	4.36	69%	1.9	1.55
Oct-11	2.83	4.36	65%	3.8	0.74
Nov-11	1.70	4.36	39%	4.1	0.42
Dec-11	1.66	4.36	38%	5.1	0.33
AVG	2.35		54%	6.9	0.71
MIN	1.66		38%	1.5	0.10
MAX	3.03		69%	21.4	1.56

*Average volume in storage as of 9:00 PM each evening

Figure 5 shows a plot comparing the average volume of recycled water stored each month, average turnover in days, and the average monthly demand for Reservoir R100.

Figure 5: 2011 Season Reservoir R100 Storage Utilization

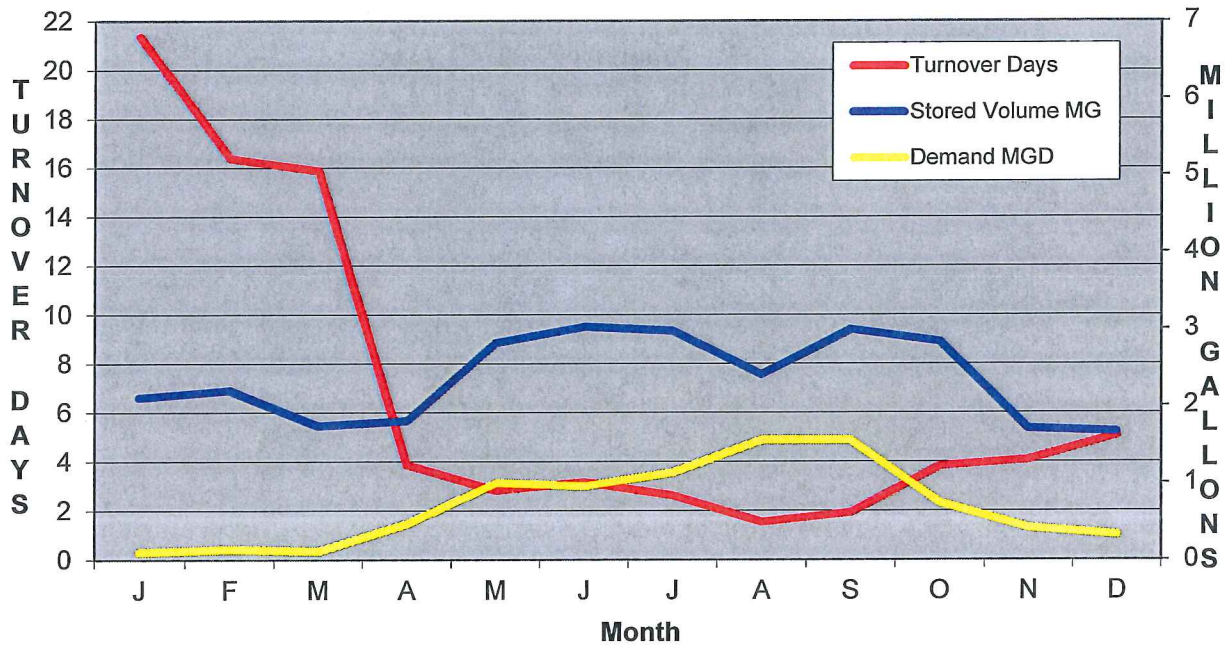


Table 7 shows the average volume stored per month, maximum storage capacity, monthly percent of storage utilized, monthly average turnover, and the monthly average demand for DERWA Reservoir R200. The average turnover in R200 was 5.2 days in 2011.

TABLE 7
DERWA System: Utilization of Storage Capacity

Month	Reservoir R200				
	Average Volume Stored * MG	Maximum Storage Capacity MG	Storage Capacity Utilized %	Average Turnover DAYS	Average Demand MGD
Jan-11	0.97	4.36	22%	11.7	0.08
Feb-11	0.95	4.36	22%	8.2	0.12
Mar-11	0.90	4.36	21%	19.5	0.05
Apr-11	1.03	4.36	24%	1.8	0.56
May-11	2.66	4.36	61%	2.2	1.24
Jun-11	3.03	4.36	70%	2.1	1.44
Jul-11	3.08	4.36	71%	1.5	2.10
Aug-11	3.33	4.36	76%	1.7	1.97
Sep-11	2.98	4.36	68%	1.7	1.78
Oct-11	2.26	4.36	52%	3.2	0.71
Nov-11	1.00	4.36	23%	4.8	0.21
Dec-11	0.91	4.36	21%	4.0	0.23
AVG	1.93		44%	5.2	0.87
MIN	0.90		21%	1.5	0.05
MAX	3.33		76%	19.5	2.10

* Average volume in storage as of 9:00 PM each evening

Figure 6 shows a plot comparing the average volume of recycled water stored each month, average turnover in days, and the average monthly demand for Reservoir R200.

Figure 6: 2011 Season Reservoir R200 Storage Utilization

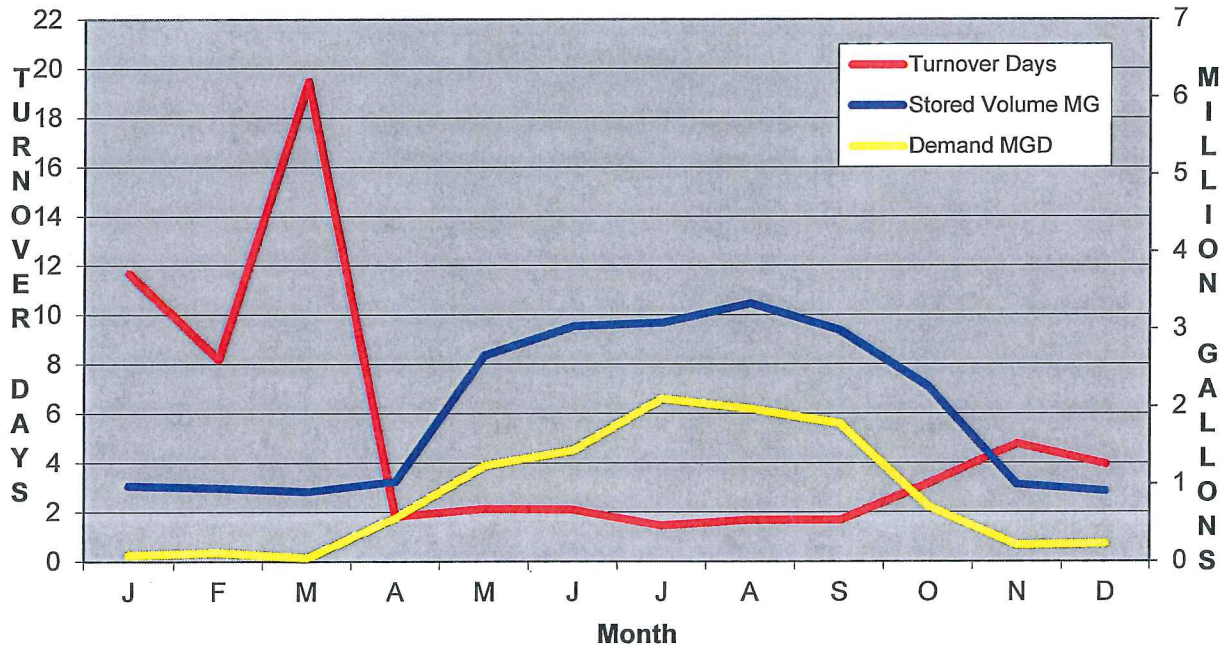


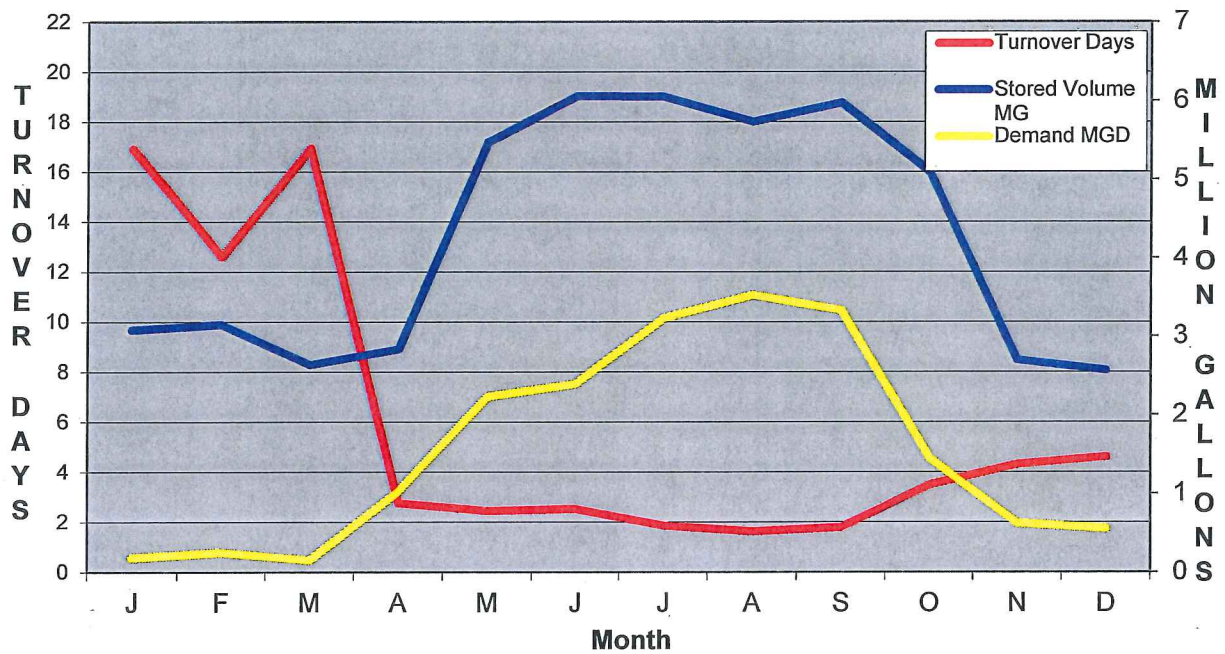
Table 8 shows the average volume stored per month, maximum storage capacity, monthly percent of storage utilized, monthly average turnover, and the monthly average demand for the two DERWA reservoirs combined. The average turnover in the combined reservoirs was 6 days during 2011.

TABLE 8
DERWA System: Utilization of Storage Capacity

Combined Reservoirs R100 & R200					
Month	Average Volume Stored MG	Maximum Storage Capacity MG	Storage Capacity Utilized %	Average Turnover DAYS	Average Demand MGD
Jan-11	3.08	8.72	35%	16.9	0.18
Feb-11	3.15	8.72	36%	12.6	0.25
Mar-11	2.64	8.72	30%	17.0	0.16
Apr-11	2.84	8.72	33%	2.8	1.03
May-11	5.48	8.72	63%	2.5	2.23
Jun-11	6.06	8.72	69%	2.5	2.39
Jul-11	6.05	8.72	69%	1.9	3.23
Aug-11	5.73	8.72	66%	1.6	3.52
Sep-11	5.98	8.72	69%	1.8	3.33
Oct-11	5.09	8.72	58%	3.5	1.45
Nov-11	2.70	8.72	31%	4.3	0.63
Dec-11	2.57	8.72	29%	4.6	0.56
AVG	4.28		49%	6.0	1.58
MIN	2.57		29%	1.6	0.16
MAX	6.06		69%	17.0	3.52

Figure 7 shows a plot comparing the average volume of recycled water stored each month, average turnover in days, and the average monthly demand for the combined reservoirs. The tabular data and figures demonstrate that storage facilities are being effectively managed and are sufficient to meet peak demand requirements at current delivery rates and schedules.

Figure 7: 2011 Season Combined Reservoir Storage Utilization



1.9 Potential Budgetary Impacts

During 2012 staff expects to incur operations and maintenance costs that are reasonably consistent with the actual expenses logged during 2012.

2. OPERATIONS

2.1 Operational Strategies

Strategies that will be tested and/or used in 2012 include:

- Holding Basin No. 4 will continue to be used to store secondary effluent to meet peak daily recycled water demands and to reduce DSRSD’s electrical cost for pumping and disposal. The growth of algae in the stored water does not appear to significantly impact recycled water production.
- The testing of varying dosages of PACL will continue in an effort to reduce chemical cost without adversely affecting recycled water quality. PACL dosages may also be reduced if the use of the anaerobic zone in the aeration system results in much better filamentous bacteria control and correspondingly lower secondary effluent turbidities.

- Staff will experiment with operating PSR 200A and PSR 200B alone or in tandem to determine how the two pump stations affect recycled water pressures and the quality of the water delivered to customers. Operating PSR 200A during times when Bridges Golf Course is using a lot of water may increase the pressure available to the golf course's pumping system.

2.2 Filter Backwash

The percentage of backwash waste averaged about 8.7% during the 2011 season. The SF-UV system utilizes a continuous backwash system that essentially discharges a fixed quantity of backwash waste regardless of the amount of recycled water produced, so the percentage of backwash will not decrease significantly until recycled water production increases.

Table 9 shows the average monthly volume of recycled water produced, the average monthly volume of backwash waste, and the percent of backwash to recycled water production for each month. The average percentage of the backwash waste to recycled water produced was 8.7% during 2011, which more than met the target goal of 12% (also referenced in Table 2, Performance Measures).

TABLE 9
DERWA System: Backwash Waste Efficiency

Month	Recycled Produced SF-UV MG	Backwash SF-UV MG	Backwash % of Recycled
Jan-11			
Feb-11			
Mar-11			
Apr-11	46.56	6.00	12.9%
May-11	99.72	10.70	10.7%
Jun-11	98.87	10.40	10.5%
Jul-11	147.50	13.10	8.9%
Aug-11	144.21	13.60	9.4%
Sep-11	141.15	8.10	5.7%
Oct-11	50.32	2.67	5.3%
Nov-11	9.31	0.42	4.5%
Dec-11	4.41	0.47	10.7%
TOTAL	742.05	65.46	
AVG	82.45	7.27	8.7%
2012 TARGET GOAL:			10.6%
2011 TARGET GOAL:			12.0%

Figure 8 shows a plot comparing the quantity of recycled water produced versus the quantity of the backwash waste flow in million gallons per day.

Figure 8: 2011 Season Backwash Waste Flow vs Recycled Water Produced

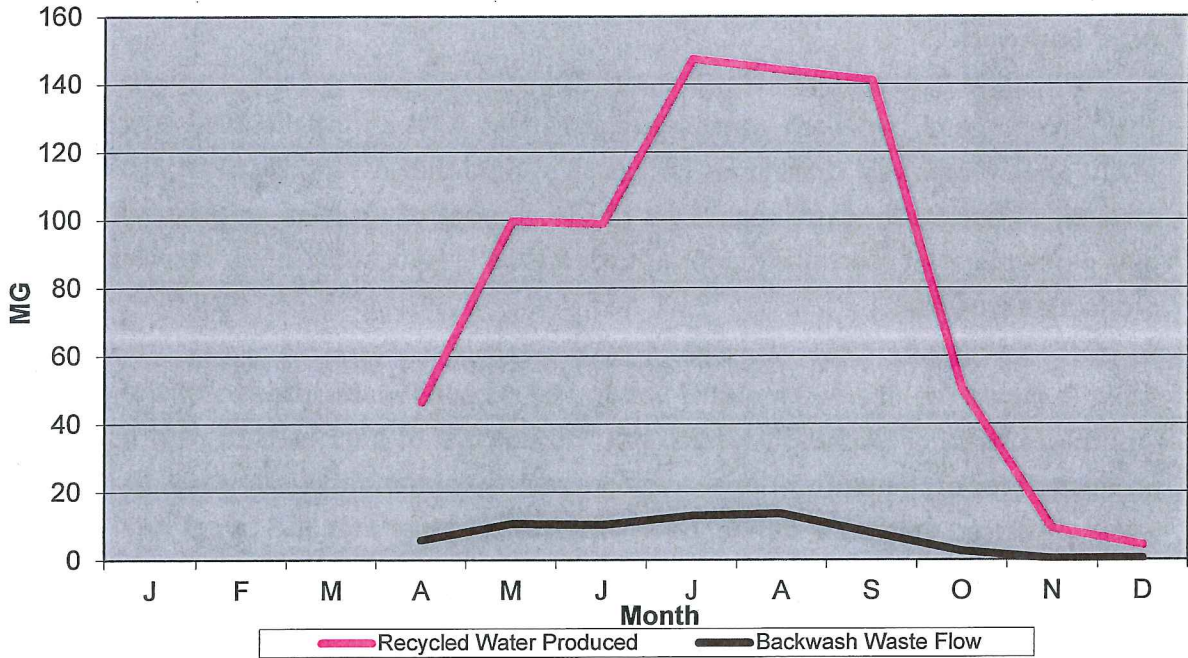
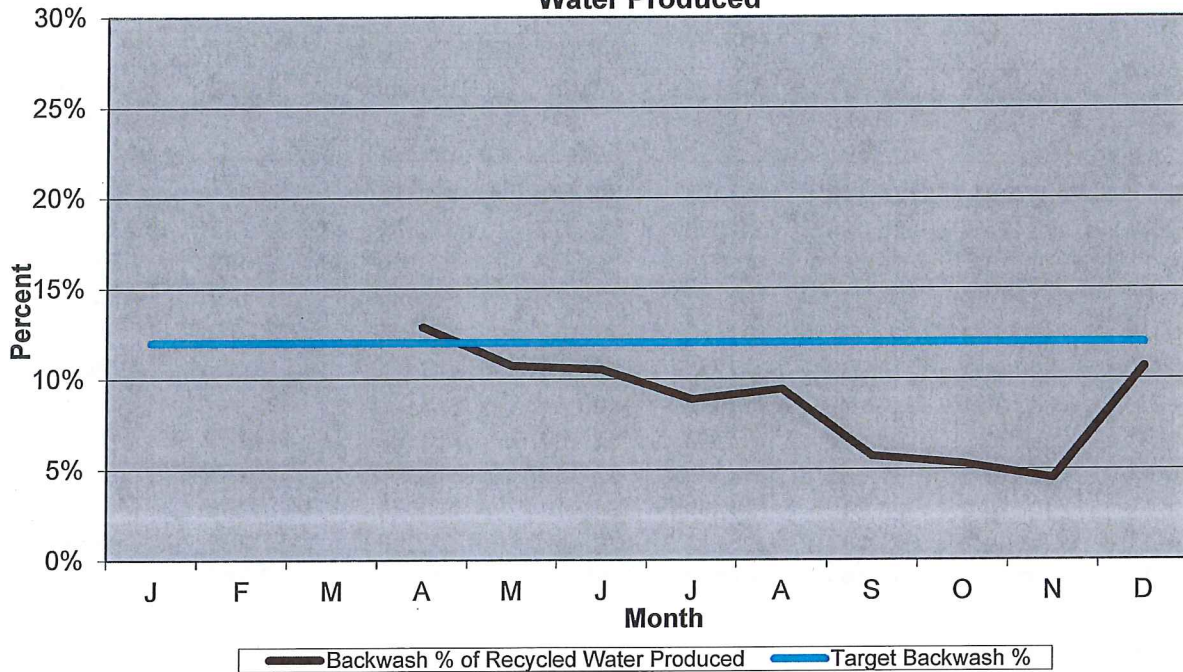


Figure 9: 2011 Season Backwash Waste as a Percentage of Recycled Water Produced



2.3 Consumables

Power usage for DERWA includes the operation of the treatment system as well as pumping for distribution. The chemicals used in the production of recycled water for DERWA include PACL (a coagulant) and 12.5% sodium hypochlorite for disinfection.

2.4 Power

Table 10 shows the electrical usage for the DERWA treatment system. Usage is separately monitored by the Powernet system using kilowatt transmitters installed on key motor control centers and recorded for:

- MF-UV: Micro Filter treatment including UV disinfection.
- SF-UV: Sand Filter treatment including coagulation, flocculation, filtration, UV disinfection, and the tertiary influent pumps (TIPS).
- Total: Combined usage including MF-UV and SF-UV.

TABLE 10
DERWA System: Treatment Electric Usage and Costs

Month	TREATMENT SYSTEM							
	SFUV kWh	MF-UV kWh	Total kWh	kWh \$	Demand \$	Total \$	Total kWh/AF	Total \$/AF
Jan-11	7,938	24,146	32,083	\$2,558	\$2,613	\$5,171	1,460	\$235
Feb-11	6,262	25,094	31,356	\$2,473	\$2,679	\$5,152	1,073	\$176
Mar-11	15,322	25,356	40,678	\$3,349	\$3,080	\$6,429	2,074	\$328
Apr-11	112,627	67,730	180,357	\$14,675	\$8,085	\$22,760	1,373	\$173
May-11	172,109	9,410	181,519	\$17,223	\$3,355	\$20,578	591	\$67
Jun-11	294,967	12,838	307,805	\$29,744	\$16,579	\$46,323	982	\$148
Jul-11	242,634	8,418	251,052	\$23,413	\$15,034	\$38,447	559	\$86
Aug-11	24,910	30,134	55,044	\$27,697	\$13,588	\$41,285	116	\$87
Sep-11	229,965	11,903	241,868	\$22,697	\$13,975	\$36,672	560	\$85
Oct-11	104,612	22,732	127,344	\$12,124	\$3,378	\$15,502	675	\$82
Nov-11	30,561	31,234	61,795	\$5,093	\$2,295	\$7,388	826	\$99
Dec-11	35,324	45,193	80,517	\$6,629	\$1,614	\$8,243	1,095	\$112
Average	106,436	26,182	132,618	\$13,973	\$7,190	\$21,162	949	\$100
Total	1,277,231	314,188	1,591,418	\$167,674	\$86,276	\$253,950		
Minimum	6,262	8,418	31,356	\$2,473	\$1,614	\$5,152	116	\$67
Maximum	294,967	67,730	307,805	\$29,744	\$16,579	\$46,323	2,074	\$328

Table 11 shows the electrical usage for the DERWA distribution system. Usage for PSR1 is measured by Powernet, and usage for rest of the distribution system is measured by PG&E and recorded for:

- PSR 1: Recycled water pumping from the treatment systems into the distribution system (R100).
- Recycled Water Pump Station PS R200B (100 Old Dougherty Road)
- Recycled Water Pump Station PS R200A (Bollinger Canyon Road at Iron Horse Trail)
- Reservoir R100 (off Alcosta Blvd, north of Pine Valley Road)
- Reservoir R200 (off Gale Ridge Road)

TABLE 11
DERWA System: Distribution Electric Usage and Costs

Month	Pump Stations			Reservoirs		DISTRIBUTION SYSTEM			
	PSR 1 kWh	PSR 200B kWh	PSR 200A kWh	R100 kWh	R200 kWh	Total kWh	Total \$	Total kWh/AF	Total \$/AF
Jan-11	15,419	2,720	3,840	97	37	22,113	\$2,293	1,006	\$104
Feb-11	19,217	2,080	5,520	89	31	26,937	\$2,714	921	\$93
Mar-11	11,059	1,760	3,840	74	31	16,764	\$1,796	855	\$92
Apr-11	69,512	4,640	13,440	66	32	87,690	\$8,492	668	\$65
May-11	144,981	8,320	26,760	61	29	180,151	\$25,906	586	\$84
Jun-11	12,279	56,160	9,840	43	31	78,353	\$14,118	250	\$45
Jul-11	171,604	63,680	3,840	46	31	239,201	\$29,217	533	\$65
Aug-11	177,437	55,200	4,560	44	28	237,269	\$28,778	498	\$60
Sep-11	196,247	47,680	5,760	45	30	249,762	\$28,726	578	\$66
Oct-11	88,349	5,280	11,040	51	31	104,751	\$15,285	556	\$81
Nov-11	36,817	6,400	11,040	81	29	54,367	\$5,835	727	\$78
Dec-11	41,139	4,160	7,320	92	30	52,741	\$5,676	717	\$77
Average	82,005	21,507	8,900	66	31	112,508	\$14,070	658	\$67
Total	984,059	258,080	106,800	789	370	1,350,098	\$168,837		
Minimum	11,059	1,760	3,840	43	28	16,764	\$1,796	250	\$45
Maximum	196,247	63,680	26,760	97	37	249,762	\$29,217	1,006	\$104

Chemicals

Sodium hypochlorite is purchased in bulk under a bid that the District awarded in July of 2011, following a very successful joint bidding effort as a participant in the Bay Area Chemical Consortium (BACC). Sodium hypochlorite is added to the finished recycled water prior to distribution, in order to maintain a concentration of chlorine as the recycled water is pumped into the distribution system. During most of the irrigation season the desired chlorine residual is set at 5 mg/l. In addition, sodium hypochlorite is added to the recycled water leaving PS R200B using a temporary chemical feed system that was added in 2008. Also, staff can add sodium hypochlorite directly to the reservoirs if needed to maintain sufficient chlorine residuals, although this practice is relatively labor intensive so it is not usually employed during the winter months. Chlorine dosages via sodium hypochlorite addition help prevent any re-growth of pathogens, including coliform, and it also serves to prevent nitrification and the growth of algae and slime in pumps, piping, and reservoirs.

During 2011, a total of 48,534 gallons of 12.5% bulk sodium hypochlorite solution were purchased for recycled water treatment and delivery. Sodium hypochlorite deliveries were accepted on the following schedule:

- April 15, 2011 3,990 gallons
- May 11, 2011 4,155 gallons
- June 3, 2011 4,793 gallons
- June 24, 2011 4,427 gallons
- July 14, 2011 4,564 gallons
- July 29, 2011 4,294 gallons
- August 15, 2011 4,399 gallons
- August 26, 2011 3,987 gallons
- September 13, 2011 4,592 gallons
- September 27, 2011 4,550 gallons
- November 3, 2011 4,783 gallons

During 2011 a total of 23,289 gallons of PACL was purchased for use with the SF-UV treatment. PACL deliveries were accepted on the following schedule:

- April 12, 2011 4,133 gallons
- May 12, 2011 3,910 gallons
- June 30, 2011 4,122 gallons
- August 10, 2011 4,434 gallons
- September 9, 2011 4,454 gallons
- September 27, 2011 2,235 gallons

3. MAINTENANCE

3.1 Overhauls and Replacements

During 2011 DSRSD staff replaced the air receiver tank used for the MF-UV treatment system. Due to corrosion the pressure rating for the existing tank had been reduced from 200 PSI to 175 PSI by CNA Insurance, a contractor working for the California DOSH Pressure Vessel Unit. The cost of the new tank was \$18,810, not including the labor necessary to install it or the cost to rent a crane to lift the air receiver in place. In addition, a contractor was hired to apply an epoxy coating to the tank after it was installed.

3.2 Preventative Maintenance

During 2011 a total of 551 Preventative Maintenance (PM) work orders were generated, of which a total of 531 were completed. The remaining PM's were either cancelled (i.e. deemed no longer necessary due to related work recently completed), deferred to a later date, or rewritten into a new work order. Table 12 itemizes the PM's by classification related to job skills.

Table 12: Routine Maintenance Work Completed									
Class	PREVENTATIVE MAINTENANCE WORK ORDERS								
	Generated	Completed		Deferred		New W.O.		Cancelled	
DERWA System									
ELECTRICIAN	55	50	89%	0	0%	1	2%	0	0%
INSTRUMENT TECHNICIAN	379	371	96%	0	0%	6	2%	0	0%
MECHANIC	109	103	94%	0	0%	0	0%	0	0%
OPS	3	3	100%	0	0%	0	0%	0	0%
SCD	5	4	100%	1	20%	0	0%	0	0%
TOTAL	551	531	95%	1	0%	7	1%	0	0%

Reactive Maintenance

The reactive or corrective maintenance that occurred was limited primarily to:

- Cleaning and inspecting distribution system air relief valves
- Instrumentation failures and/or calibration drift
- Replacing failed UV lamps and wipers
- Debugging and/or fixing the control logic system
- Removing nitrified water and/or silt accumulations from the reservoirs

4. CUSTOMER SATISFACTION

4.1 Complaints and Responses

There were no customer complaints during 2011.

4.2 Spills and Responses: DSRSD Service Area

On April 7, 2011 DSRSD staff responded to a leak of fully treated tertiary recycled water coming from an air relief valve (ARV) on the DERWA distribution pipeline located east of Canyon Lakes Drive on Bollinger Canyon Road in San Ramon. The spilled recycled water drained into a nearby storm sewer. The recycled water had been in storage for a long period of time and therefore contained little or no residual chlorine. DSRSD staff estimated the volume of the spill to be approximately 1,000 gallons. The source of the leak was traced to a broken float on the ARV causing water to flow through the top of the ARV. The spill was reported in writing to the Regional Water Quality Control Board.

On June 26, 2011 DSRSD staff responded to a recycled water leak southeast of Iron Horse Trail and Martinelli Way in Dublin. The leak was traced to the rupture of a 2-inch blow-off valve on the distribution pipeline. DSRSD staff estimated the volume of the leak to be approximately 3,200 gallons. All of the recycled water drained to an undeveloped open field. The spill was reported in writing to the Regional Water Quality Control Board.

5. EMERGENCY READINESS AND RESPONSE

5.1 Emergency Responses in 2011

There were no emergencies declared during the past year.

5.2 Emergency Contact List

The current contact list, including general information, technical issues, and emergency response, is listed below.

5.2 Emergency Contact List

The current contact list, including general information, technical issues, and emergency response, is listed below.

General Information Contact Numbers

The general contact information for each agency is as follows:

AGENCY	CONTACT	OFFICE
DSRSD	Sue Stephenson, Community Affairs Supervisor	(925) 875-2295
DSRSD	Mary Gordon, Public Information Office	(925) 875-2290
EBMUD	Charles Hardy, Senior Public Affairs Representative	(510) 287-0141
EBMUD	Jeff Beccera, Senior Public Information Representative	(510) 287-0143
DERWA	Jim Bewley, Authority Manager	(925) 875-2234

Technical Questions and Complaints

The general contact information for each agency is as follows:

AGENCY	CONTACT	OFFICE
DSRSD	Jim Dryden, Field Operations Supervisor (Storage and Distribution Systems)	(925) 570-8916
DSRSD	Levi Fuller, Operations Supervisor (Production Facilities)	(925) 570-8775
DSRSD	Dan Gallagher, Operations Manager	(925) 570-8759
DSRSD	Stefanie Olson, Clean Water Program Coordinator	(925) 570-9756
EBMUD	Debra Skeaton, Water Distribution Supervisor	(510) 287-1071

Emergency Contact Numbers

The emergency contact information for each agency is as follows:

AGENCY	CONTACT	Office	WEEKEND/AFTER HOURS
DSRSD	24-Hour On-Call Operator		(925) 872-5890
DSRSD	Plant Operations	(925) 846-4565	(925) 519-0557
DSRSD	Jim Dryden, Field Operations Supervisor (Storage/Distribution)	(925) 875-2367	(925) 570-8916
DSRSD	Levi Fuller, Operations Supervisor (Treatment Facilities)	(925) 570-8775	(707) 552-4094
DSRSD	Dan Gallagher, Operations Manager	(925) 875-2345	(925) 570-8759
DSRSD	Dave Requa, Assist GM/District Engineer	(925) 875-2244	(925) 570-9085
EBMUD	24-Hour On-Call Operator		(866) 403-2683
DERWA	Jim Bewley, Authority Manager	(925) 875-2234	(650) 465-0042

6. INVOICED COSTS

6.1 Operations and Maintenance Costs during 2011

During 2011, the total cost invoiced to DERWA for the operation and maintenance of the treatment and distribution system was \$1,190,301 or \$473 per acre-foot delivered. Table 13 shows the 2011 overall expenditures for operating and maintaining the DERWA system.

TABLE 13
DERWA System: Overall Operations & Maintenance Expenditures

Month	Labor	Electric Costs	Materials Supplies Lab & Misc Expenses	Total O&M Cost	Cost \$/MG	Cost \$/AF
Jan-11	\$22,200	\$7,465	\$3,117	\$32,782	\$4,579	\$1,492
Feb-11	\$24,473	\$7,866	\$17,641	\$49,980	\$5,247	\$1,710
Mar-11	\$40,182	\$8,225	\$6,964	\$55,371	\$8,665	\$2,823
Apr-11	\$35,542	\$31,252	\$35,180	\$101,975	\$2,383	\$776
May-11	\$60,790	\$46,484	\$54,889	\$162,163	\$1,619	\$528
Jun-11	\$58,427	\$60,442	\$30,435	\$149,303	\$1,462	\$476
Jul-11	\$52,241	\$67,664	\$9,516	\$129,421	\$884	\$288
Aug-11	\$46,783	\$70,063	\$34,203	\$151,049	\$973	\$317
Sep-11	\$37,229	\$65,398	\$20,484	\$123,111	\$874	\$285
Oct-11	\$52,852	\$30,786	\$32,948	\$116,586	\$1,898	\$618
Nov-11	\$29,263	\$13,223	\$8,592	\$51,078	\$2,096	\$683
Dec-11	\$42,458	\$13,918	\$11,105	\$67,482	\$2,817	\$918
Total	\$502,439	\$422,787	\$265,075	\$1,190,301		
Average	\$41,870	\$35,232	\$22,090	\$99,192	\$1,445	\$471
Minimum	\$22,200	\$7,465	\$3,117	\$32,782	\$874	\$285
Maximum	\$60,790	\$70,063	\$54,889	\$162,163	\$8,665	\$2,823

6.2 Treatment versus Distribution Costs During 2011

Of the total O&M cost, \$846,115 or \$336 per acre-foot represents the cost related to treatment, and \$344,185 or \$137 per acre-foot represents the cost related to pumping and distribution. Table 14 shows the 2011 expenditures for operating and maintaining

the treatment system, and Table 15 shows the 2011 expenditures for operating and maintaining the distribution system.

TABLE 14
DERWA System: Treatment Expenditures, O&M

Month	Labor Expenses	Electric Costs	Materials Supplies & Lab Expenses	Total O&M Expenses	Cost \$/MG	Cost \$/AF	SF-UV Cost \$/AF	MF-UV Cost \$/AF
Jan-11	\$13,271	\$5,171	\$3,117	\$21,559	\$3,012	\$981		\$981
Feb-11	\$14,347	\$5,152	\$17,641	\$37,140	\$3,899	\$1,270		\$1,270
Mar-11	\$26,929	\$6,429	\$5,671	\$39,029	\$6,107	\$1,990		\$1,990
Apr-11	\$26,224	\$22,760	\$25,847	\$74,830	\$1,749	\$570	\$570	
May-11	\$43,196	\$20,578	\$51,272	\$115,046	\$1,149	\$374	\$374	
Jun-11	\$36,921	\$46,323	\$25,703	\$108,948	\$1,067	\$348	\$348	
Jul-11	\$44,776	\$38,447	\$9,516	\$92,739	\$634	\$206	\$206	
Aug-11	\$35,714	\$41,285	\$34,203	\$111,203	\$717	\$234	\$234	
Sep-11	\$30,735	\$36,672	\$15,223	\$82,631	\$587	\$191	\$191	
Oct-11	\$40,208	\$15,502	\$25,398	\$81,108	\$1,320	\$430	\$430	
Nov-11	\$20,336	\$7,388	\$8,533	\$36,256	\$1,488	\$485		\$485
Dec-11	\$26,280	\$8,243	\$11,105	\$45,628	\$1,905	\$621		\$621
Total	\$358,936	\$253,950	\$233,229	\$846,115				
Average	\$29,911	\$21,162	\$19,436	\$70,510	\$1,027	\$335	\$336	\$1,069
Minimum	\$13,271	\$5,152	\$3,117	\$21,559	\$587	\$191	\$191	\$485
Maximum	\$44,776	\$46,323	\$51,272	\$115,046	\$6,107	\$1,990	\$570	\$1,990

Note: Treatment expenditures include all labor costs coded to treatment; electric costs for treatment; all lab costs; backwash waste treatment; and all misc expenses coded to treatment.

TABLE 15
DERWA System: Distribution Expenditures, O&M

Month	Labor Expenses	Electric Costs	Materials & Supplies Expenses	Total O&M Expenses	Cost \$/MG	Cost \$/AF
Jan-11	\$8,930	\$2,293	\$0	\$11,223	\$1,568	\$511
Feb-11	\$10,127	\$2,714	\$0	\$12,841	\$1,348	\$439
Mar-11	\$13,253	\$1,796	\$1,292	\$16,342	\$2,557	\$833
Apr-11	\$9,319	\$8,492	\$9,334	\$27,145	\$634	\$207
May-11	\$17,594	\$25,906	\$3,617	\$47,117	\$470	\$153
Jun-11	\$21,506	\$14,118	\$4,732	\$40,356	\$395	\$129
Jul-11	\$7,465	\$29,217	\$0	\$36,682	\$251	\$82
Aug-11	\$11,069	\$28,778	\$0	\$39,846	\$257	\$84
Sep-11	\$6,493	\$28,726	\$5,261	\$40,480	\$287	\$94
Oct-11	\$12,644	\$15,285	\$7,550	\$35,479	\$577	\$188
Nov-11	\$8,927	\$5,835	\$60	\$14,821	\$608	\$198
Dec-11	\$16,178	\$5,676	\$0	\$21,854	\$912	\$297
Total	\$143,503	\$168,837	\$31,845	\$344,185		
Average	\$11,959	\$14,070	\$2,654	\$28,682	\$418	\$136
Minimum	\$6,493	\$1,796	\$0	\$11,223	\$251	\$82
Maximum	\$21,506	\$29,217	\$9,334	\$47,117	\$2,557	\$833

Note: Distribution expenditures include all labor costs coded to distribution; electric costs for distribution; no lab costs; hypochlorite added at the reservoirs; and all miscellaneous expenses coded to distribution.

6.3 Fixed versus Variable Costs During 2011

Of the total O&M cost, \$550,945 or 46% represents fixed costs, and \$639,356 or 54% represents variable costs. For the purpose of this analysis, fixed costs include all labor costs and laboratory expenses, and variable costs include electricity, chemicals, materials, supplies, contractual services, and backwash treatment. Table 16 shows the total 2011 expenditures itemized by fixed costs and variable costs.

TABLE 16
DERWA System: Fixed versus Variable Costs, O&M

Month	Fixed Costs			Variable Costs			Ratio Fixed vs Variable	
	Labor Expenses	Lab Costs	Subtotal	Electric Costs	Materials & Supplies	Backwash & Treatment		Subtotal
Jan-11	\$22,200	\$1,646	\$23,847	\$7,465	\$1,233	\$237	\$8,935	73%
Feb-11	\$24,473	\$1,814	\$26,288	\$7,866	\$15,484	\$342	\$23,693	53%
Mar-11	\$40,182	\$1,479	\$41,661	\$8,225	\$5,305	\$180	\$13,710	75%
Apr-11	\$35,542	\$4,041	\$39,584	\$31,252	\$30,482	\$657	\$62,391	39%
May-11	\$60,790	\$5,646	\$66,436	\$46,484	\$48,072	\$1,172	\$95,728	41%
Jun-11	\$58,427	\$5,142	\$63,569	\$60,442	\$23,005	\$2,287	\$85,734	43%
Jul-11	\$52,241	\$5,780	\$58,021	\$67,664	\$2,278	\$1,459	\$71,400	45%
Aug-11	\$46,783	\$5,793	\$52,575	\$70,063	\$25,463	\$2,948	\$98,474	35%
Sep-11	\$37,229	\$5,607	\$42,836	\$65,398	\$11,603	\$3,273	\$80,275	35%
Oct-11	\$52,852	\$4,833	\$57,685	\$30,786	\$27,465	\$650	\$58,902	49%
Nov-11	\$29,263	\$3,023	\$32,286	\$13,223	\$5,243	\$327	\$18,792	63%
Dec-11	\$42,458	\$3,701	\$46,159	\$13,918	\$6,899	\$505	\$21,323	68%
Total	\$502,439	\$48,505	\$550,945	\$422,787	\$202,533	\$14,036	\$639,356	
Average	\$41,870	\$4,042	\$45,912	\$35,232	\$16,878	\$1,170	\$53,280	46%
Minimum	\$22,200	\$1,479	\$23,847	\$7,465	\$1,233	\$180	\$8,935	35%
Maximum	\$60,790	\$5,793	\$66,436	\$70,063	\$48,072	\$3,273	\$98,474	75%

6.4 O&M Costs Itemized by Functional Category During 2011

Of the total O&M cost, \$426,804 represents operations costs, \$249,043 represents maintenance costs, \$91,667 represents chemical costs, and the remaining \$422,787 represents electrical costs. For the purpose of this analysis, operations costs include all labor for Treatment Plant Operations (Division 52) and Field Operations (Division 51); maintenance costs include all labor for Mechanical Maintenance (Division 53), and Electrical and Instrumentation (Division 54), and any other labor costs such as Safety and Engineering. Table 17 shows the 2011 expenditures itemized by these functional categories as described. The analysis shown in Table 17 is necessary for the computation of the metrics shown in Table 2.

TABLE 17
DERWA System: O&M Cost Breakdown by Category

Month	Operations Costs				Maintenance Costs			Power	Chemical Costs		
	Labor Expenses	Lab Costs	Backwash Treatment	Subtotal	Labor Expenses	Materials & Supplies	Subtotal	Electric Costs	PACL	Hypo	Subtotal
Jan-11	\$15,611	\$1,646	\$237	\$17,494	\$6,589	\$1,233	\$7,823	\$7,465	\$0	\$0	\$0
Feb-11	\$16,650	\$1,814	\$342	\$18,807	\$7,823	\$15,484	\$23,307	\$7,866	\$0	\$0	\$0
Mar-11	\$21,056	\$1,479	\$180	\$22,714	\$19,126	\$5,305	\$24,431	\$8,225	\$0	\$0	\$0
Apr-11	\$25,401	\$4,041	\$657	\$30,099	\$10,142	\$14,891	\$25,033	\$31,252	\$12,156	\$3,434	\$15,591
May-11	\$43,792	\$5,646	\$1,172	\$50,610	\$16,997	\$33,436	\$50,434	\$46,484	\$11,500	\$3,135	\$14,635
Jun-11	\$34,825	\$5,142	\$2,287	\$42,255	\$23,602	\$5,081	\$28,683	\$60,442	\$11,672	\$6,252	\$17,924
Jul-11	\$37,141	\$5,780	\$1,459	\$44,380	\$15,100	\$2,278	\$17,378	\$67,664	\$0	\$0	\$0
Aug-11	\$35,015	\$5,793	\$2,948	\$43,755	\$11,768	\$6,109	\$17,877	\$70,063	\$8,922	\$10,432	\$19,355
Sep-11	\$33,198	\$5,607	\$3,273	\$42,079	\$4,030	\$6,311	\$10,341	\$65,398	\$0	\$5,293	\$5,293
Oct-11	\$45,908	\$4,833	\$650	\$51,391	\$6,944	\$11,305	\$18,249	\$30,786	\$13,457	\$2,704	\$16,161
Nov-11	\$23,744	\$3,023	\$327	\$27,094	\$5,518	\$5,243	\$10,761	\$13,223	\$0	\$0	\$0
Dec-11	\$31,921	\$3,701	\$505	\$36,127	\$10,537	\$4,190	\$14,727	\$13,918	\$0	\$2,709	\$2,709
Total	\$364,262	\$48,505	\$14,036	\$426,804	\$138,177	\$110,866	\$249,043	\$422,787	\$57,708	\$33,959	\$91,667
Average	\$30,355	\$4,042	\$1,170	\$35,567	\$11,515	\$9,239	\$20,754	\$35,232	\$4,809	\$2,830	\$7,639
Minimum	\$15,611	\$1,479	\$180	\$17,494	\$4,030	\$1,233	\$7,823	\$7,465	\$0	\$0	\$0
Maximum	\$45,908	\$5,793	\$3,273	\$51,391	\$23,602	\$33,436	\$50,434	\$70,063	\$13,457	\$10,432	\$19,355

Note: Labor expenses included in Operations Costs are for Divisions 51 and 52 only. Labor expenses included in Maintenance Costs are for Divisions 53 and 54 and any other labor coded to DERWA (i.e. safety officer, engineering, etc).

7. SOURCE OF WATER

7.1 Sources of Water utilized for Recycling During 2011

Wastewater that is treated to secondary effluent standards and therefore becomes potentially available for recycling originates as sewage from within the DSRSD service area (i.e. Dublin and South San Ramon) and also from within the City of Pleasanton service area. As previously described in Section 1.6, during 2011 the City of Pleasanton agreed to allow DSRSD to utilize up to 2.5 MGD of the wastewater that originated from within Pleasanton for recycling. This 2.5 MGD daily maximum amount is defined as the "Schedule B water". During 2011 recycled water production rates utilized a portion of Pleasanton's wastewater on nine (9) separate days as shown in Table 18.

On all but one of the nine days DSRSD's utilization of Pleasanton's wastewater as a source for recycled water production averaged less than 1 MG. However, on September 17 approximately 3.44 MG of Pleasanton's source was utilized for recycling. The reason for the high utilization of Pleasanton's source on September 17 was due to a mechanical failure of the pumping system that prevented all recycled water production on September 16. On September 17 the mechanical failure was corrected and staff increased recycled water production significantly to "catch up" with customer demands, which at the time were averaging over 5 MGD.

TABLE 18

DERWA System: Production and Source of Recycled Water

Day	Date	WWTP Treatment Influent MGD	Dublin San Ramon Flow MGD	City of Pleasanton Flow MGD	DERWA Recycled Water Production MGD	City of Pleasanton Flow Used MGD
Mon	7/25/11	10.65	5.48	5.16	5.61	0.12
Thu	7/28/11	10.96	5.79	5.17	5.81	0.02
Thu	8/4/11	10.22	5.15	5.06	5.74	0.58
Sun	8/7/11	10.22	5.24	4.98	5.49	0.24
Thu	9/1/11	10.30	5.20	5.11	6.26	1.06
Thu	9/8/11	10.60	5.52	5.08	5.73	0.22
Thu	9/15/11	10.84	5.81	5.03	6.08	0.27
Sat	9/17/11	11.33	6.27	5.06	9.72	3.44
Thu	9/22/11	10.93	5.81	5.12	6.11	0.29

Number of Days RW Production Exceeded DSR Supply: 9

APPENDIX A

Recycled Water Customer Demands, Production, and Weather Data Calendar Year 2011

DUBLIN SAN RAMON SERVICES DISTRICT
 DERWA Recycled Water Daily Demand
 2011 Monthly Average Summary

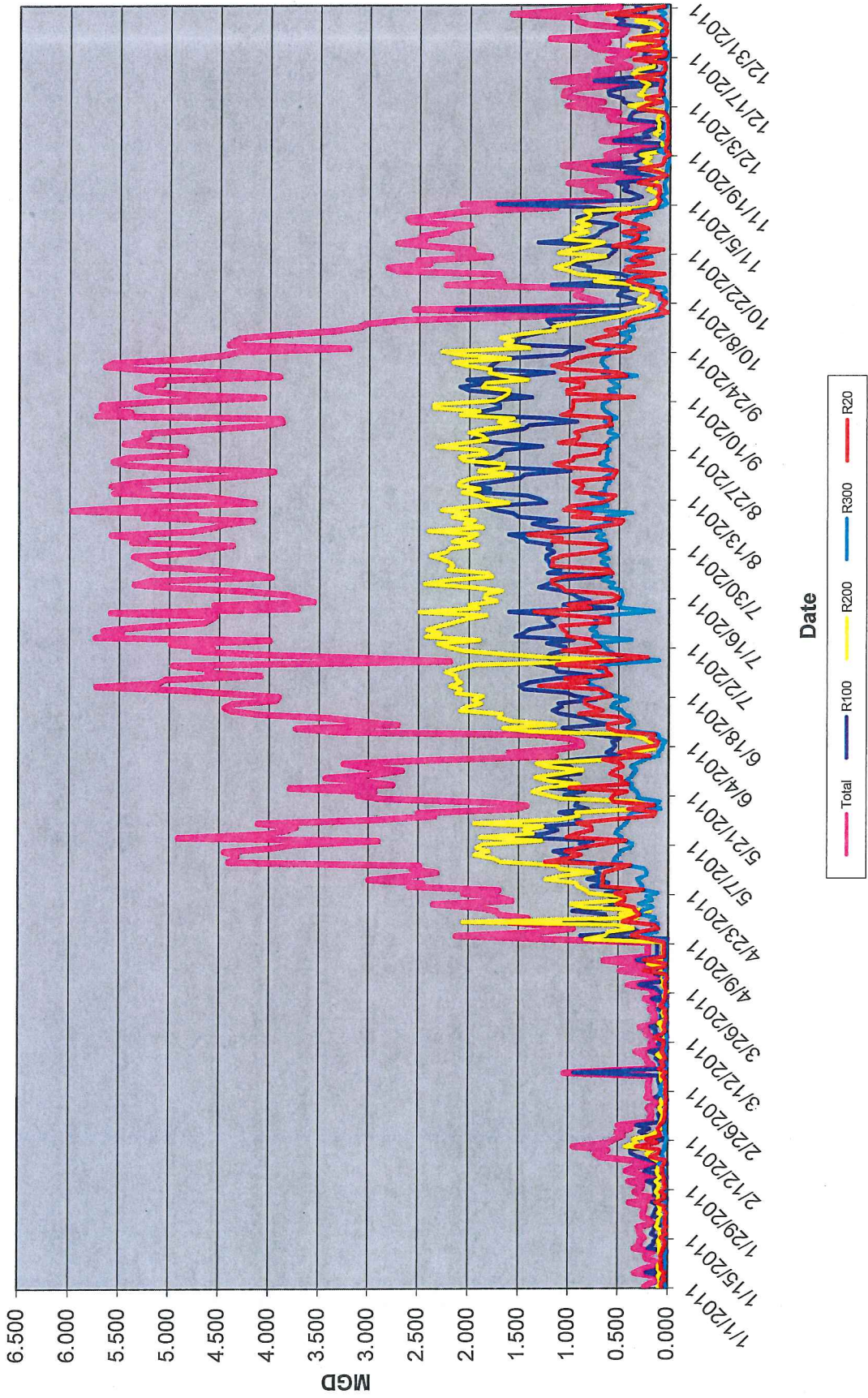
Month	Recycled Water Demand (MGD)										Weather Conditions									
	Total	R100	R200	R300	R20	Load Out Station	Mean Temp °F	Max Temp °F	Avg Humidity	Total Rainfall inches	Avg Wind mph	Eto inches	SF-UV MG	MF-UV MG	Production Potable MG	Total MG	Total AF			
JAN	0.231	0.098	0.083	0.026	0.042	0.0000	46.2	59.5	84	0.03	1.0	0.05	0.00	8.92	0.00	8.92	27.39			
FEB	0.340	0.134	0.115	0.032	0.065	0.0000	47.4	60.7	65	0.15	2.7	0.09	0.00	9.42	0.00	9.42	28.90			
MAR	0.206	0.109	0.046	0.019	0.040	0.0000	49.6	61.4	75	0.20	2.4	0.10	0.00	5.23	0.00	5.23	16.06			
APR	1.426	0.465	0.564	0.152	0.318	0.0000	55.4	65.8	66	0.00	3.8	0.16	46.56	0.00	0.00	46.56	142.90			
MAY	3.231	0.996	1.236	0.371	0.627	0.0000	57.1	67.6	63	0.02	4.2	0.19	99.72	0.00	0.00	99.72	306.04			
JUN	3.405	0.956	1.436	0.424	0.588	0.0000	64.0	77.0	63	0.06	4.0	0.21	98.87	3.00	0.00	101.87	312.65			
JUL	4.721	1.133	2.102	0.593	0.893	0.0001	68.1	81.7	60	0.00	4.7	0.23	147.50	0.00	0.00	147.50	452.69			
AUG	5.006	1.556	1.968	0.634	0.848	0.0000	66.9	82.7	61	0.00	4.7	0.20	144.21	9.70	0.00	153.91	472.37			
SEP	4.694	1.550	1.780	0.570	0.793	0.0000	70.0	86.7	55	0.00	3.4	0.17	141.15	0.55	0.00	141.70	434.88			
OCT	1.982	0.739	0.712	0.258	0.275	0.0004	62.5	76.8	68	0.03	2.5	0.11	50.32	8.80	0.00	59.12	181.44			
NOV	0.812	0.417	0.208	0.066	0.120	0.0000	51.2	63.0	75	0.04	2.9	0.06	9.31	11.50	0.00	20.81	63.86			
DEC	0.773	0.326	0.230	0.060	0.157	0.0000	47.5	61.3	63	0.00	2.6	0.06	4.41	19.21	0.00	23.62	72.48			
TOTAL	823.573	259.107	320.622	98.054	145.774	0.0154				0.55			742.05	76.33	0.00	818.38	2,511.67			
AVG	2.236	0.707	0.874	0.267	0.397	0.0000	57.2	70.3	67	0.05	3.3	0.13	61.84	6.36	0.00	68.20	209.31			
MIN	0.206	0.098	0.046	0.019	0.040	0.0000	46.2	59.5	55	0.00	1.0	0.05	0.00	0.00	0.00	5.23	16.06			
MAX	5.006	1.556	2.102	0.634	0.893	0.0004	70.0	86.7	84	0.20	4.7	0.23	147.50	19.21	0.00	153.91	472.37			

Sources of weather data used:

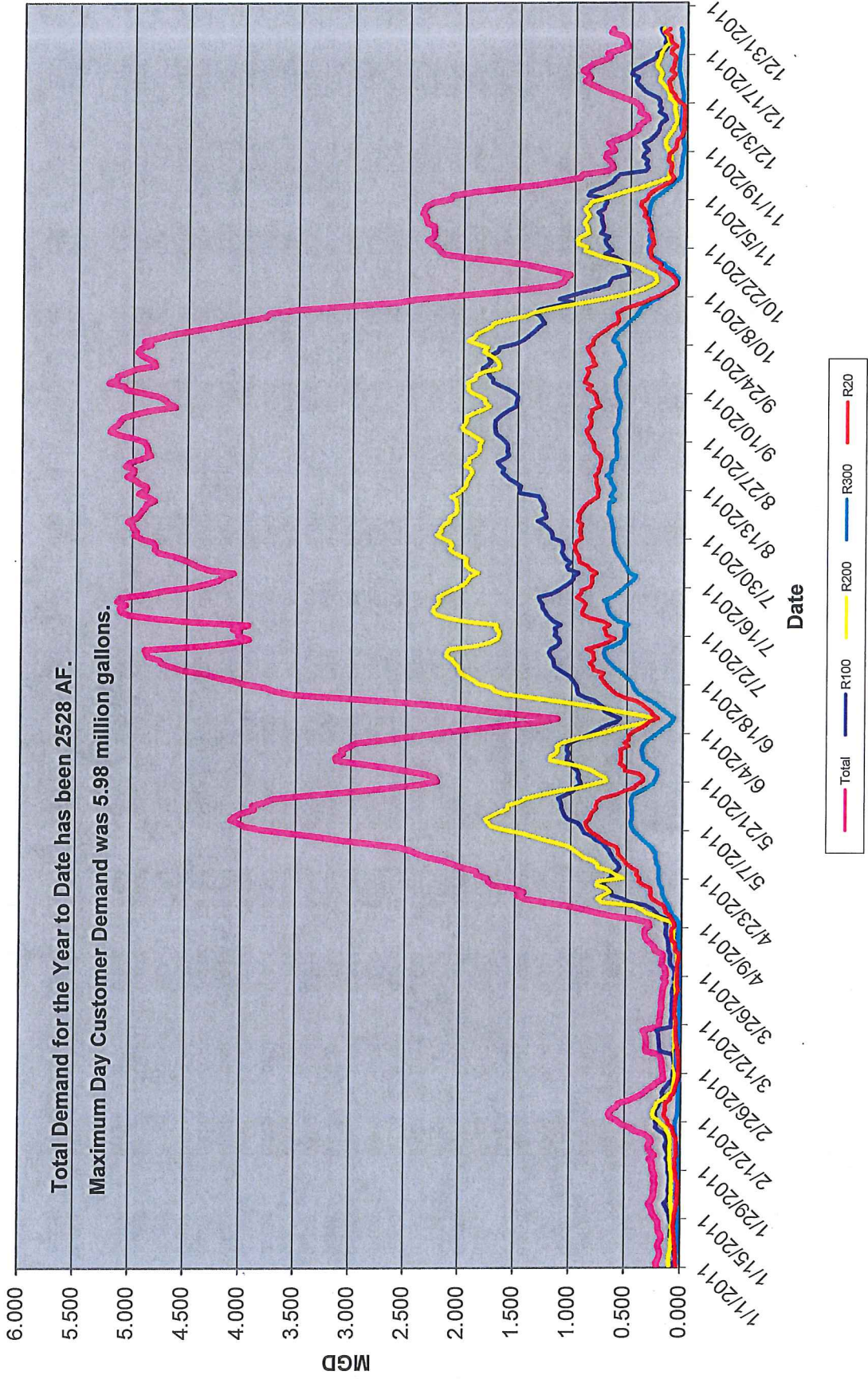
Temperatures, rainfall, and wind speed reported at the DSRSD WWTP
 Humidity (average relative) reported at Pleasanton by CIMIS, www.ipm.ucdavis.edu
 Evapotranspiration (Eto) reported at Pleasanton by CIMIS, www.ipm.ucdavis.edu

Total Demand for the Year to Date has been 2528 AF.

2011 DERWA Recycled Water Demand



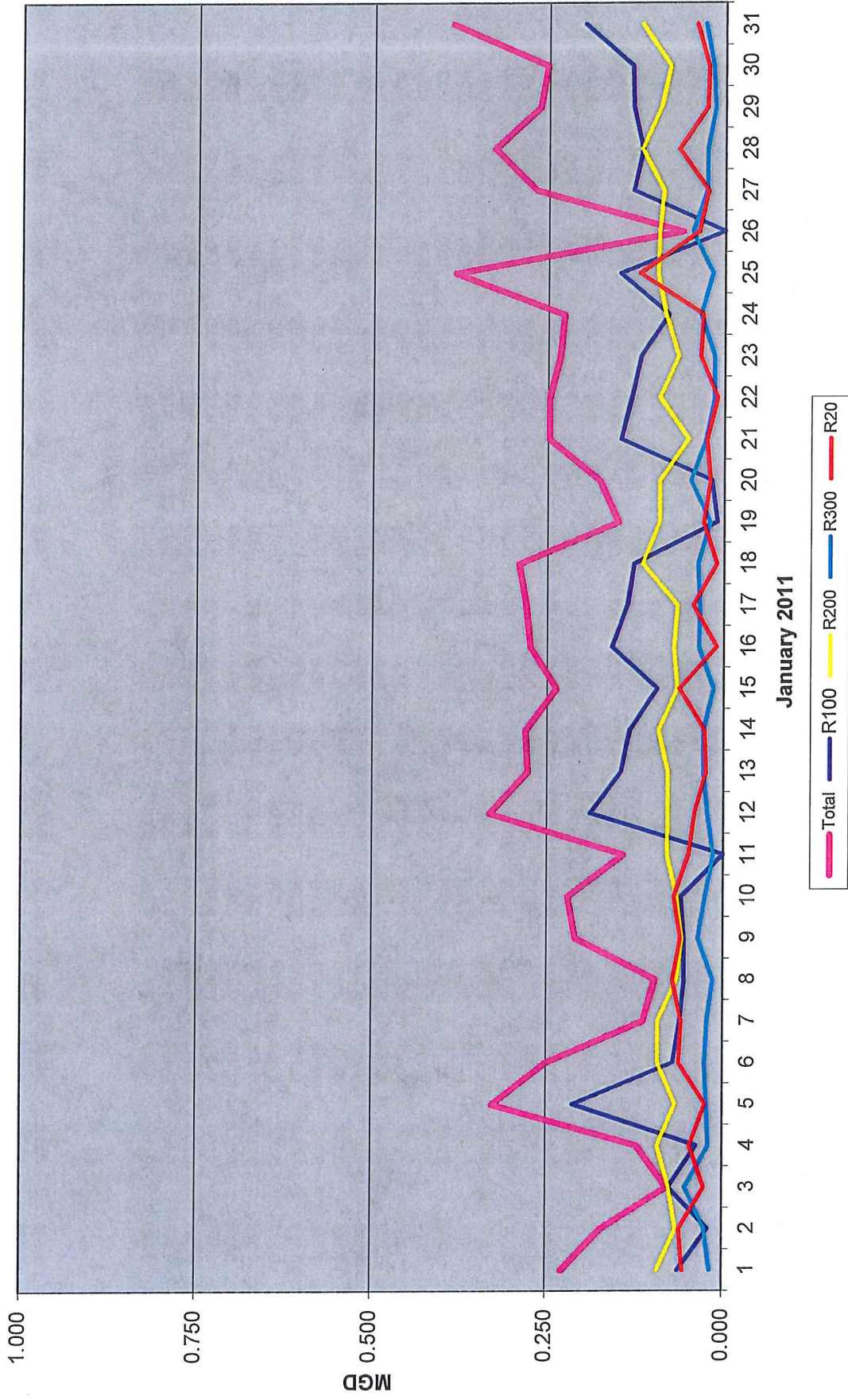
2011 DERWA 7-Day Running Average Recycled Water Demand



DUBLIN SAN RAMON SERVICES DISTRICT
 DERWA Recycled Water Daily Demand
 January 2011

Date:	Day:	Recycled Water Customer Demand (MG)										Weather Conditions					Production (MG)		
		Total	R100	R200	R300	R20	Load Out Station	Mean Temp °F	Max Temp °F	Avg Hum	Rainfall inches	Avg Wind mph	Eto inches	SF-UV Recycled	MF-UV Recycled	Potable	Total		
1	Sat	0.228	0.063	0.092	0.017	0.056	0.0000	43.6	47.0	99	0.25	2.4	0.01	0.00	0.00	0.00	0.00		
2	Sun	0.172	0.020	0.066	0.025	0.061	0.0000	46.0	48.8	97	0.16	1.9	0.00	0.00	0.00	0.00	0.00		
3	Mon	0.079	0.076	0.076	0.053	0.026	0.0000	46.6	54.8	95	0.00	0.8	0.02	0.00	1.19	0.00	1.19		
4	Tue	0.122	0.037	0.092	0.020	0.047	0.0000	42.0	55.1	89	0.01	0.5	0.05	0.00	0.00	0.00	0.00		
5	Wed	0.327	0.212	0.067	0.022	0.025	0.0000	40.7	56.7	96	0.01	0.7	0.04	0.00	0.13	0.00	0.13		
6	Thu	0.251	0.070	0.092	0.025	0.063	0.0000	37.8	50.4	100	0.01	0.9	0.02	0.00	0.00	0.00	0.00		
7	Fri	0.113	0.061	0.092	0.022	0.059	0.0000	38.5	49.4	100	0.00	0.4	0.01	0.00	1.04	0.00	1.04		
8	Sat	0.097	0.055	0.066	0.014	0.072	0.0000	39.9	45.6	100	0.02	0.4	0.00	0.00	0.00	0.00	0.00		
9	Sun	0.210	0.055	0.058	0.035	0.061	0.0000	40.6	53.3	89	0.00	0.6	0.04	0.00	0.00	0.00	0.00		
10	Mon	0.220	0.059	0.066	0.025	0.070	0.0000	37.3	46.3	83	0.01	1.6	0.05	0.00	0.00	0.00	0.00		
11	Tue	0.142	0.000	0.080	0.014	0.050	0.0000	42.9	47.2	87	0.08	2.5	0.01	0.00	1.79	0.00	1.79		
12	Wed	0.332	0.189	0.079	0.022	0.042	0.0000	48.3	62.4	83	0.00	0.8	0.05	0.00	0.62	0.00	0.62		
13	Thu	0.277	0.145	0.079	0.028	0.025	0.0000	49.2	59.8	97	0.08	0.7	0.02	0.00	0.00	0.00	0.00		
14	Fri	0.281	0.133	0.092	0.028	0.027	0.0000	52.9	66.3	87	0.01	1.3	0.04	0.00	0.00	0.00	0.00		
15	Sat	0.237	0.094	0.066	0.014	0.063	0.0000	51.1	70.1	81	0.01	0.6	0.07	0.00	0.00	0.00	0.00		
16	Sun	0.274	0.158	0.071	0.035	0.010	0.0000	47.4	62.5	92	0.01	1.2	0.04	0.00	0.00	0.00	0.00		
17	Mon	0.280	0.137	0.066	0.034	0.043	0.0000	48.9	65.0	91	0.01	0.9	0.05	0.00	0.00	0.00	0.00		
18	Tue	0.290	0.128	0.116	0.036	0.010	0.0000	49.8	70.0	75	0.02	0.3	0.07	0.00	0.00	0.00	0.00		
19	Wed	0.150	0.009	0.092	0.020	0.029	0.0000	50.2	64.7	68	0.01	1.7	0.08	0.00	0.96	0.00	0.96		
20	Thu	0.176	0.017	0.092	0.047	0.020	0.0000	49.6	58.5	62	0.00	1.7	0.09	0.00	0.00	0.00	0.00		
21	Fri	0.248	0.147	0.051	0.025	0.025	0.0000	44.6	66.2	80	0.00	0.2	0.07	0.00	0.00	0.00	0.00		
22	Sat	0.248	0.132	0.092	0.014	0.010	0.0000	49.5	67.4	60	0.01	1.7	0.09	0.00	0.00	0.00	0.00		
23	Sun	0.233	0.119	0.066	0.014	0.035	0.0000	49.3	66.4	59	0.00	0.7	0.08	0.00	0.00	0.00	0.00		
24	Mon	0.228	0.079	0.084	0.034	0.031	0.0000	45.6	68.9	67	0.00	0.2	0.08	0.00	0.00	0.00	0.00		
25	Tue	0.382	0.148	0.096	0.017	0.121	0.0000	46.7	63.4	70	0.00	1.1	0.09	0.00	1.48	0.00	1.48		
26	Wed	0.060	0.000	0.094	0.046	0.037	0.0000	46.6	63.2	75	0.00	0.7	0.08	0.00	0.00	0.00	0.00		
27	Thu	0.268	0.130	0.088	0.025	0.024	0.0000	48.5	69.7	89	0.00	0.6	0.08	0.00	0.00	0.00	0.00		
28	Fri	0.327	0.117	0.119	0.025	0.066	0.0000	46.5	60.3	82	0.01	1.1	0.06	0.00	0.00	0.00	0.00		
29	Sat	0.263	0.130	0.092	0.014	0.027	0.0000	52.6	61.3	87	0.04	1.9	0.04	0.00	0.00	0.00	0.00		
30	Sun	0.253	0.132	0.079	0.017	0.025	0.0000	50.1	56.6	85	0.29	1.6	0.02	0.00	0.00	0.00	0.00		
31	Mon	0.387	0.199	0.119	0.028	0.041	0.0000	47.8	66.4	79	0.02	0.8	0.07	0.00	1.72	0.00	1.72		
TOTAL		7.159	3.053	2.584	0.796	1.301	0.0000				1.07				8.92		8.92		
AVG		0.231	0.098	0.083	0.026	0.042	0.0000	46.2	59.5	84	0.03	1.0	0.05	0.00	0.29	0.00	0.29		
MIN		0.060	0.000	0.051	0.014	0.010	0.0000	37.3	45.6	59	0.00	0.2	0.00	0.00	0.00	0.00	0.00		
MAX		0.387	0.212	0.119	0.053	0.121	0.0000	52.9	70.1	100	0.29	2.5	0.09	0.00	1.79	0.00	1.79		

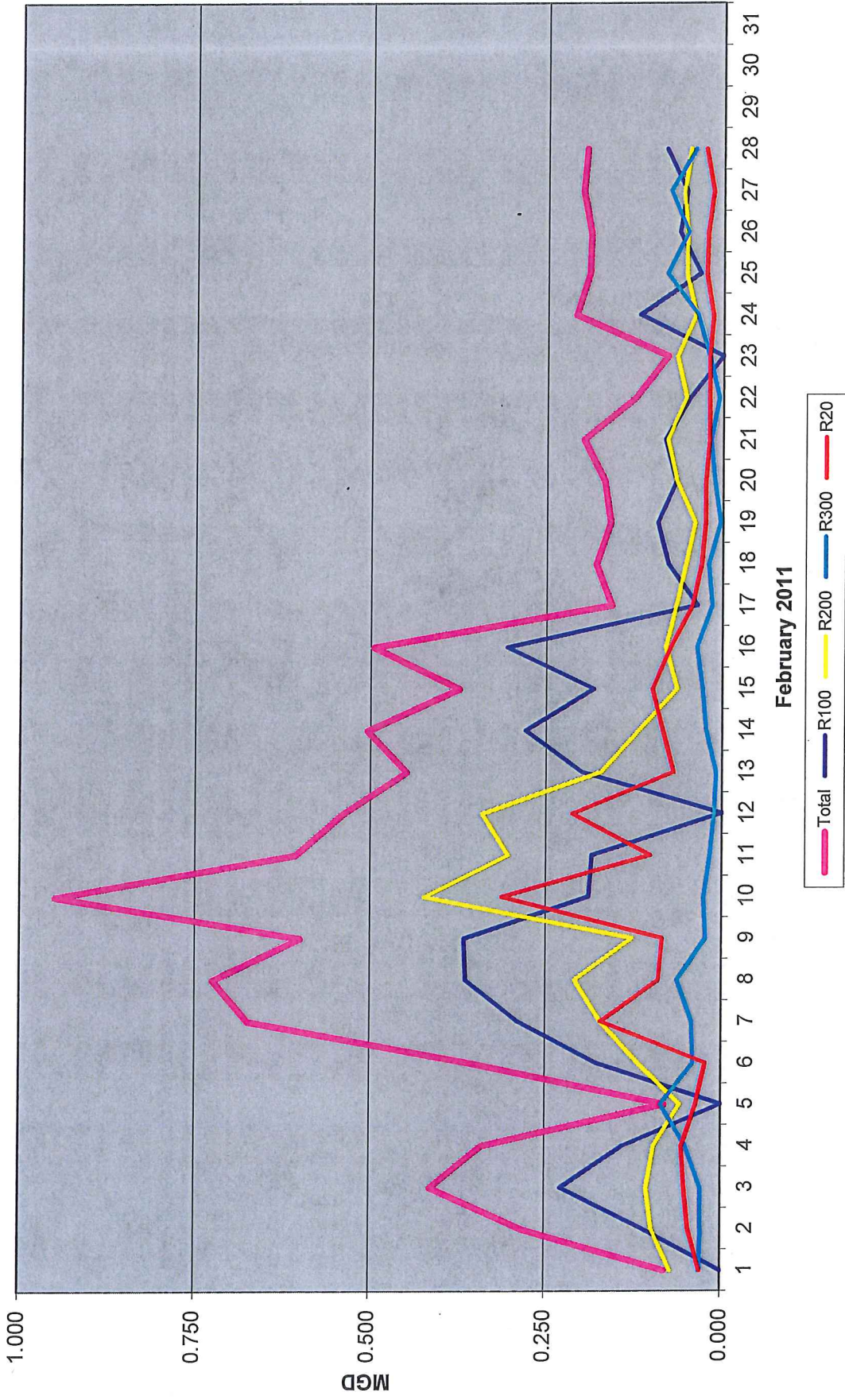
DERWA Recycled Water Demand



DUBLIN SAN RAMON SERVICES DISTRICT
 DERWA Recycled Water Daily Demand
 February 2011

Date:	Day:	Recycled Water Customer Demand (MG)										Weather Conditions							Production (MG)		
		Total	R100	R200	R300	R20	Load Out Station	Mean Temp °F	Max Temp °F	Avg Hum	Rainfall inches	Avg Wind mph	Eto inches	SF-UV Recycled	MF-UV Recycled	Potable	Total				
1	Tue	0.080	0.000	0.071	0.030	0.029	0.0000	53.3	65.0	26	0.00	2.5	0.10	0.00	0.00	0.00	0.00				
2	Wed	0.283	0.111	0.098	0.028	0.046	0.0000	49.0	60.5	37	0.00	1.5	0.09	0.00	0.00	0.00	0.00				
3	Thu	0.413	0.227	0.106	0.028	0.052	0.0000	43.4	62.9	59	0.00	0.4	0.08	0.00	0.00	0.00	0.00				
4	Fri	0.341	0.139	0.096	0.050	0.056	0.0000	48.8	72.7	64	0.00	0.2	0.09	0.00	1.46	0.00	1.46				
5	Sat	0.081	0.000	0.058	0.085	0.036	0.0000	59.0	75.3	47	0.00	6.9	0.15	0.00	0.00	0.00	0.00				
6	Sun	0.358	0.177	0.119	0.039	0.023	0.0000	65.1	77.2	43	0.00	3.6	0.14	0.00	0.00	0.00	0.00				
7	Mon	0.674	0.289	0.172	0.042	0.172	0.0000	55.0	75.3	63	0.00	1.2	0.10	0.00	0.00	0.00	0.00				
8	Tue	0.725	0.363	0.209	0.063	0.090	0.0000	51.6	59.0	31	0.00	10.6	0.13	0.00	0.00	0.00	0.00				
9	Wed	0.600	0.366	0.128	0.022	0.085	0.0000	49.5	63.1	43	0.00	1.5	0.10	0.00	1.82	0.00	1.82				
10	Thu	0.949	0.189	0.422	0.025	0.313	0.0000	47.5	69.9	57	0.00	0.2	0.09	0.00	1.46	0.00	1.46				
11	Fri	0.607	0.185	0.304	0.017	0.102	0.0000	48.3	64.5	65	0.00	0.8	0.10	0.00	1.34	0.00	1.34				
12	Sat	0.539	0.000	0.341	0.011	0.213	0.0000	51.1	76.8	59	0.00	0.5	0.10	0.00	0.00	0.00	0.00				
13	Sun	0.448	0.199	0.172	0.008	0.069	0.0000	49.3	71.1	63	0.00	1.6	0.09	0.00	0.00	0.00	0.00				
14	Mon	0.505	0.279	0.119	0.022	0.084	0.0000	54.7	62.5	73	0.01	5.9	0.06	0.00	0.00	0.00	0.00				
15	Tue	0.374	0.182	0.064	0.027	0.100	0.0000	54.8	64.3	67	0.10	7.5	0.10	0.00	0.00	0.00	0.00				
16	Wed	0.496	0.306	0.081	0.035	0.074	0.0000	46.4	51.7	75	0.74	6.3	0.07	0.00	1.30	0.00	1.30				
17	Thu	0.158	0.035	0.066	0.014	0.043	0.0000	42.1	46.5	84	1.02	4.9	0.02	0.00	0.00	0.00	0.00				
18	Fri	0.180	0.077	0.053	0.020	0.030	0.0000	40.0	44.0	94	0.68	1.6	0.01	0.00	0.00	0.00	0.00				
19	Sat	0.160	0.092	0.040	0.003	0.025	0.0000	38.8	45.6	90	0.30	1.7	0.01	0.00	0.00	0.00	0.00				
20	Sun	0.168	0.066	0.066	0.011	0.025	0.0000	42.7	53.6	80	0.01	1.4	0.08	0.00	0.00	0.00	0.00				
21	Mon	0.198	0.082	0.079	0.017	0.020	0.0000	42.9	54.5	73	0.00	0.3	0.08	0.00	0.89	0.00	0.89				
22	Tue	0.125	0.047	0.053	0.006	0.020	0.0000	45.4	60.1	72	0.01	1.1	0.10	0.00	1.14	0.00	1.14				
23	Wed	0.079	0.000	0.066	0.020	0.020	0.0000	42.6	55.4	76	0.00	1.4	0.09	0.00	0.00	0.00	0.00				
24	Thu	0.210	0.119	0.040	0.036	0.015	0.0000	41.4	50.1	81	0.39	1.6	0.04	0.00	0.00	0.00	0.00				
25	Fri	0.191	0.033	0.053	0.080	0.025	0.0000	41.2	48.4	75	1.02	6.6	0.10	0.00	0.00	0.00	0.00				
26	Sat	0.189	0.063	0.053	0.050	0.023	0.0000	36.2	48.2	70	0.00	1.0	0.07	0.00	0.00	0.00	0.00				
27	Sun	0.200	0.053	0.057	0.075	0.015	0.0000	40.3	59.5	72	0.01	1.0	0.10	0.00	0.00	0.00	0.00				
28	Mon	0.195	0.082	0.048	0.040	0.026	0.0000	43.1	60.7	71	0.00	1.3	0.11	0.00	0.00	0.00	0.00				
TOTAL		9.525	3.759	3.231	0.906	1.829	0.0000	47.4	60.7	65	4.29	2.7	0.09	0.00	9.42	0.00	9.42				
AVG		0.340	0.134	0.115	0.032	0.065	0.0000	47.4	60.7	65	0.15	2.7	0.09	0.00	0.34	0.00	0.34				
MIN		0.079	0.000	0.040	0.003	0.015	0.0000	36.2	44.0	26	0.00	0.2	0.01	0.00	0.00	0.00	0.00				
MAX		0.949	0.366	0.422	0.085	0.313	0.0000	65.1	77.2	94	1.02	10.6	0.15	0.00	1.82	0.00	1.82				

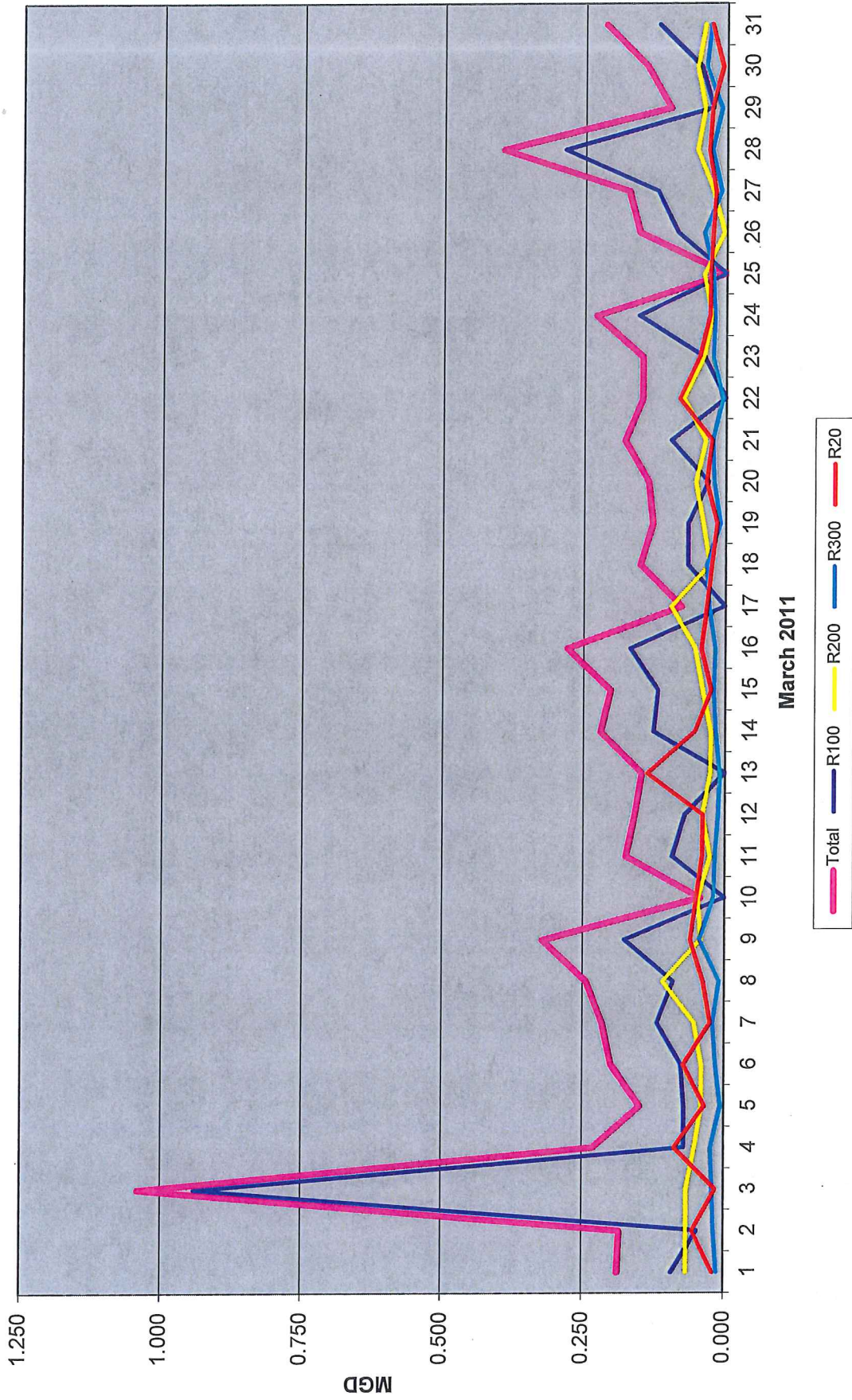
DERWA Recycled Water Demand



DUBLIN SAN RAMON SERVICES DISTRICT
 DERWA Recycled Water Daily Demand
 March 2011

Date:	Day:	Recycled Water Customer Demand (MG)										Weather Conditions							Production (MG)	
		Total	R100	R200	R300	R20	Load Out Station	Mean Temp °F	Max Temp °F	Avg Hum	Rainfall inches	Avg Wind mph	Eto inches	SF-UV Recycled	MF-UV Recycled	Potable	Total			
1	Tue	0.188	0.091	0.066	0.011	0.020	0.0000	46.2	63.8	64	0.04	2.0	0.11	0.00	0.00	0.00	0.00			
2	Wed	0.185	0.047	0.066	0.017	0.055	0.0000	51.0	60.0	75	0.05	5.7	0.10	0.00	1.05	0.00	1.05			
3	Thu	1.041	0.940	0.066	0.020	0.015	0.0000	51.3	65.8	66	0.00	0.8	0.08	0.00	0.00	0.00	0.00			
4	Fri	0.232	0.070	0.052	0.022	0.088	0.0000	48.7	65.9	73	0.01	0.4	0.10	0.00	0.00	0.00	0.00			
5	Sat	0.149	0.070	0.040	0.006	0.034	0.0000	51.7	68.1	71	0.04	1.0	0.10	0.00	0.00	0.00	0.00			
6	Sun	0.201	0.075	0.040	0.014	0.072	0.0000	48.9	54.4	92	0.40	1.2	0.03	0.00	0.00	0.00	0.00			
7	Mon	0.216	0.119	0.053	0.020	0.025	0.0000	45.7	53.2	70	0.00	4.7	0.12	0.00	0.00	0.00	0.00			
8	Tue	0.245	0.090	0.109	0.008	0.037	0.0000	48.6	60.5	83	0.01	1.7	0.08	0.00	0.00	0.00	0.00			
9	Wed	0.322	0.177	0.041	0.044	0.060	0.0000	50.6	65.6	82	0.00	0.6	0.09	0.00	1.10	0.00	1.10			
10	Thu	0.043	0.000	0.046	0.020	0.050	0.0000	49.2	60.7	84	0.01	1.9	0.06	0.00	0.00	0.00	0.00			
11	Fri	0.176	0.092	0.026	0.011	0.040	0.0000	46.2	57.4	76	0.01	2.2	0.12	0.00	0.00	0.00	0.00			
12	Sat	0.160	0.070	0.040	0.017	0.039	0.0000	47.7	63.4	69	0.00	1.3	0.13	0.00	0.00	0.00	0.00			
13	Sun	0.148	0.000	0.026	0.008	0.138	0.0000	49.6	64.8	79	0.29	1.9	0.07	0.00	0.00	0.00	0.00			
14	Mon	0.221	0.127	0.025	0.015	0.053	0.0000	58.0	70.5	86	0.10	1.5	0.07	0.00	0.00	0.00	0.00			
15	Tue	0.203	0.119	0.040	0.020	0.025	0.0000	58.5	70.6	85	0.33	2.4	0.06	0.00	0.00	0.00	0.00			
16	Wed	0.280	0.168	0.053	0.017	0.042	0.0000	53.8	62.4	76	0.10	1.6	0.09	0.00	1.36	0.00	1.36			
17	Thu	0.077	0.000	0.096	0.028	0.033	0.0000	47.0	59.4	70	0.01	1.0	0.13	0.00	0.00	0.00	0.00			
18	Fri	0.151	0.066	0.028	0.032	0.025	0.0000	41.8	51.1	77	0.85	5.2	0.04	0.00	0.00	0.00	0.00			
19	Sat	0.129	0.066	0.040	0.008	0.015	0.0000	40.1	45.9	79	0.79	4.3	0.05	0.00	0.00	0.00	0.00			
20	Sun	0.137	0.030	0.053	0.020	0.034	0.0000	42.6	49.0	83	0.32	3.3	0.05	0.00	0.00	0.00	0.00			
21	Mon	0.179	0.096	0.036	0.022	0.025	0.0000	42.3	51.1	76	0.06	3.3	0.10	0.00	0.00	0.00	0.00			
22	Tue	0.148	0.000	0.075	0.006	0.082	0.0000	45.7	59.3	70	0.06	2.2	0.12	0.00	0.00	0.00	0.00			
23	Wed	0.148	0.038	0.040	0.022	0.048	0.0000	47.0	57.4	75	0.45	3.9	0.10	0.00	0.00	0.00	0.00			
24	Thu	0.230	0.154	0.026	0.020	0.030	0.0000	43.9	46.3	82	1.79	6.5	0.02	0.00	0.78	0.00	0.78			
25	Fri	0.000	0.000	0.040	0.022	0.029	0.0000	47.7	55.4	74	0.05	3.1	0.10	0.00	0.00	0.00	0.00			
26	Sat	0.155	0.086	0.005	0.039	0.025	0.0000	44.4	50.8	82	0.36	3.4	0.07	0.00	0.00	0.00	0.00			
27	Sun	0.174	0.121	0.024	0.008	0.020	0.0000	45.9	59.4	77	0.01	2.2	0.12	0.00	0.00	0.00	0.00			
28	Mon	0.396	0.286	0.053	0.025	0.032	0.0000	53.5	68.6	68	0.00	1.6	0.16	0.00	0.21	0.00	0.21			
29	Tue	0.100	0.025	0.040	0.008	0.027	0.0000	56.7	72.6	74	0.00	1.9	0.16	0.00	0.73	0.00	0.73			
30	Wed	0.142	0.045	0.053	0.036	0.008	0.0000	65.3	84.3	61	0.00	1.5	0.18	0.00	0.00	0.00	0.00			
31	Thu	0.215	0.120	0.040	0.028	0.027	0.0000	68.2	85.2	49	0.00	0.9	0.19	0.00	0.00	0.00	0.00			
TOTAL		6.390	3.390	1.434	0.596	1.253	0.0000	49.6	61.4	75	6.14	2.4	0.10	0.00	5.23	0.00	5.23			
AVG		0.206	0.109	0.046	0.019	0.040	0.0000	49.6	61.4	75	0.20	2.4	0.10	0.00	0.17	0.00	0.17			
MIN		0.000	0.000	0.005	0.006	0.008	0.0000	40.1	45.9	49	0.00	0.4	0.02	0.00	0.00	0.00	0.00			
MAX		1.041	0.940	0.109	0.044	0.138	0.0000	68.2	85.2	92	1.79	6.5	0.19	0.00	1.36	0.00	1.36			

DERWA Recycled Water Demand

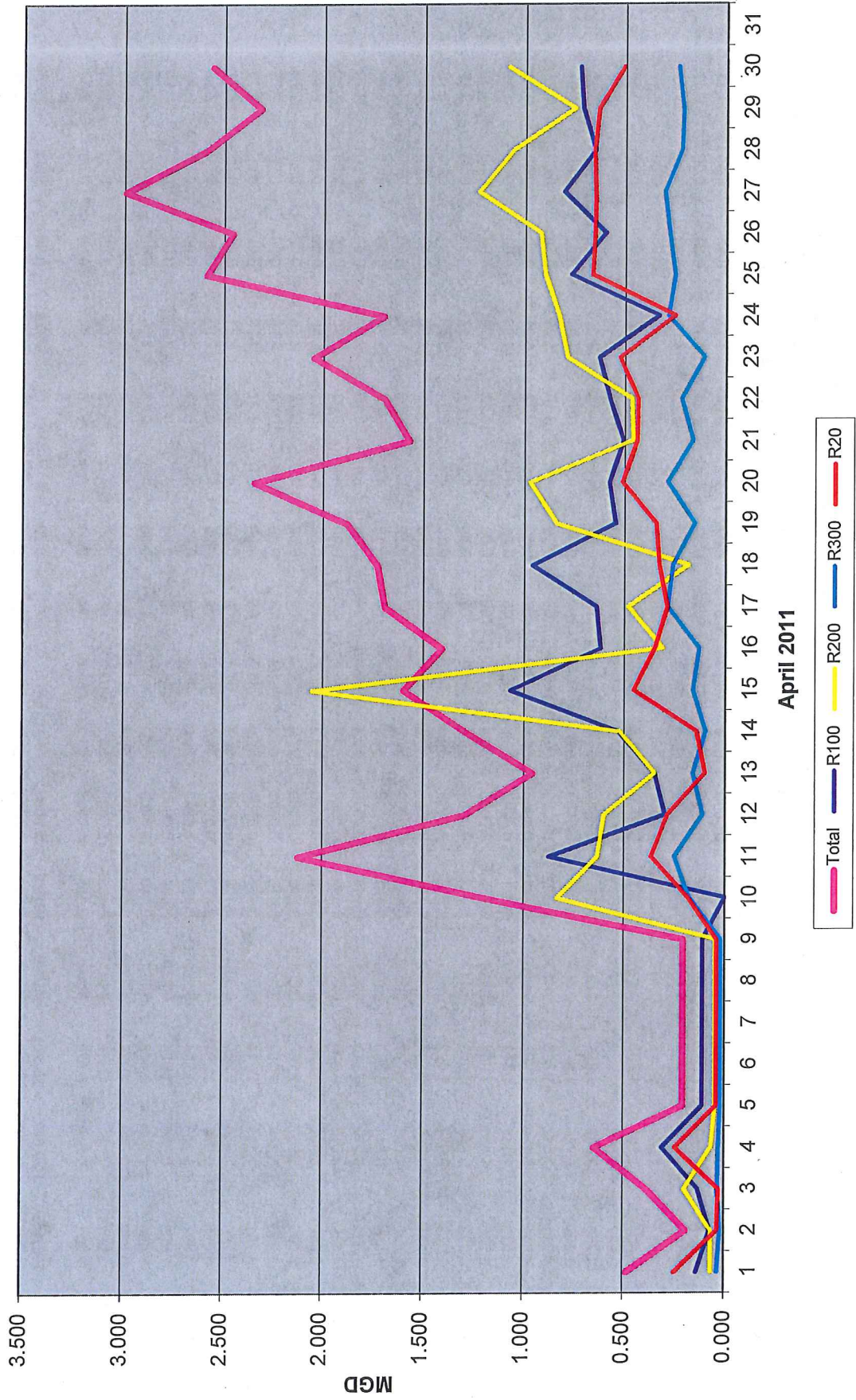


DUBLIN SAN RAMON SERVICES DISTRICT
 DERWA Recycled Water Daily Demand
 April 2011

Date:	Day:	Recycled Water Customer Demand (MG)										Weather Conditions						Production (MG)		
		Total	R100	R200	R300	R20	Load Out Station	Mean Temp °F	Max Temp °F	Avg Hum	Rainfall inches	Avg Wind mph	Eto inches	SF-UV Recycled	MF-UV Recycled	Potable	Total			
1	Fri	0.483	0.137	0.066	0.034	0.246	0.0000	66.4	84.4	65	0.00	2.1	0.18	0.00	0.00	0.00	0.00			
2	Sat	0.190	0.070	0.066	0.020	0.034	0.0000	57.7	65.6	74	0.00	3.7	0.10	0.00	0.00	0.00	0.00			
3	Sun	0.386	0.129	0.197	0.031	0.028	0.0000	55.6	69.2	52	0.00	2.5	0.17	0.00	0.00	0.00	0.00			
4	Mon	0.645	0.308	0.066	0.028	0.243	0.0000	60.9	80.0	47	0.00	2.2	0.19	0.00	0.00	0.00	0.00			
5	Tue	0.206	0.109	0.046	0.019	0.040	0.0000	57.5	68.5	61	0.00	3.3	0.16	0.00	0.00	0.00	0.00			
6	Wed	0.206	0.109	0.046	0.019	0.040	0.0000	52.9	64.2	69	0.00	3.3	0.17	0.00	0.00	0.00	2.94			
7	Thu	0.206	0.109	0.046	0.019	0.040	0.0000	47.6	53.5	68	0.05	6.0	0.16	0.00	0.00	0.00	0.00			
8	Fri	0.206	0.109	0.046	0.019	0.040	0.0000	47.8	57.3	64	0.01	2.4	0.11	1.53	0.00	0.00	1.53			
9	Sat	0.206	0.109	0.046	0.019	0.040	0.0000	48.5	60.9	68	0.00	3.5	0.16	0.00	0.00	0.00	0.00			
10	Sun	1.192	0.000	0.834	0.176	0.182	0.0000	52.3	62.2	65	0.00	4.0	0.17	0.00	0.00	0.00	0.00			
11	Mon	2.124	0.875	0.632	0.249	0.368	0.0000	52.8	62.8	72	0.00	3.4	0.15	2.12	0.00	0.00	2.12			
12	Tue	1.295	0.297	0.601	0.110	0.287	0.0000	49.3	60.0	72	0.00	4.4	0.16	1.70	0.00	0.00	1.70			
13	Wed	0.958	0.350	0.349	0.159	0.100	0.0000	50.7	57.5	68	0.05	4.3	0.15	0.00	0.00	0.00	0.00			
14	Thu	1.290	0.528	0.524	0.096	0.142	0.0000	50.7	62.8	67	0.00	2.8	0.14	1.92	0.00	0.00	1.92			
15	Fri	1.600	1.068	2.053	0.159	0.456	0.0000	57.5	70.5	71	0.00	3.4	0.19	2.13	0.00	0.00	2.13			
16	Sat	1.408	0.618	0.310	0.129	0.351	0.0000	60.4	71.2	79	0.00	3.4	0.17	2.07	0.00	0.00	2.07			
17	Sun	1.694	0.638	0.482	0.286	0.288	0.0000	57.6	67.0	83	0.00	4.4	0.16	1.77	0.00	0.00	1.77			
18	Mon	1.730	0.958	0.183	0.261	0.328	0.0000	57.7	65.1	82	0.00	3.7	0.09	1.72	0.00	0.00	1.72			
19	Tue	1.880	0.544	0.840	0.151	0.345	0.0000	60.6	69.1	68	0.00	4.3	0.14	1.80	0.00	0.00	1.80			
20	Wed	2.346	0.575	0.973	0.286	0.512	0.0000	59.3	68.5	66	0.00	3.8	0.15	1.88	0.00	0.00	1.88			
21	Thu	1.572	0.507	0.461	0.162	0.442	0.0000	55.7	64.2	69	0.02	4.0	0.18	2.26	0.00	0.00	2.26			
22	Fri	1.696	0.574	0.467	0.218	0.437	0.0000	51.6	59.6	75	0.00	3.5	0.10	2.15	0.00	0.00	2.15			
23	Sat	2.050	0.628	0.789	0.106	0.527	0.0000	56.5	67.9	68	0.00	2.6	0.15	0.00	0.00	0.00	0.00			
24	Sun	1.702	0.331	0.831	0.286	0.253	0.0000	56.4	60.2	76	0.01	4.6	0.13	2.36	0.00	0.00	2.36			
25	Mon	2.590	0.770	0.901	0.254	0.665	0.0000	56.4	64.2	71	0.00	4.4	0.14	2.28	0.00	0.00	2.28			
26	Tue	2.459	0.599	0.924	0.282	0.655	0.0000	54.5	66.4	61	0.00	3.7	0.20	3.23	0.00	0.00	3.23			
27	Wed	2.996	0.807	1.231	0.306	0.652	0.0000	55.5	67.0	59	0.00	3.8	0.20	3.77	0.00	0.00	3.77			
28	Thu	2.592	0.650	1.062	0.222	0.658	0.0000	53.9	61.9	67	0.00	4.4	0.20	3.17	0.00	0.00	3.17			
29	Fri	2.320	0.714	0.756	0.214	0.636	0.0000	55.1	67.6	47	0.00	5.8	0.23	2.76	0.00	0.00	2.76			
30	Sat	2.563	0.727	1.085	0.239	0.511	0.0000	62.4	75.0	31	0.00	5.9	0.26	2.99	0.00	0.00	2.99			
TOTAL		42.791	13.946	16.915	4.560	9.547	0.0000				0.14			46.56	0.00	0.00	46.56			
AVG		1.426	0.465	0.564	0.152	0.318	0.0000	55.4	65.8	66	0.00	3.8	0.16	1.55	0.00	0.00	1.55			
MIN		0.190	0.000	0.046	0.019	0.028	0.0000	47.6	53.5	31	0.00	2.1	0.09	0.00	0.00	0.00	0.00			
MAX		2.996	1.068	2.053	0.306	0.665	0.0000	66.4	84.4	83	0.05	6.0	0.26	3.77	0.00	0.00	3.77			

Note: During April 3.44 MG of recycled water were drained from the DERWA system back to the Wastewater Treatment Plant and discharged through the LAVWMA effluent to the San Francisco Bay. The reservoirs were then refilled with recycled water.

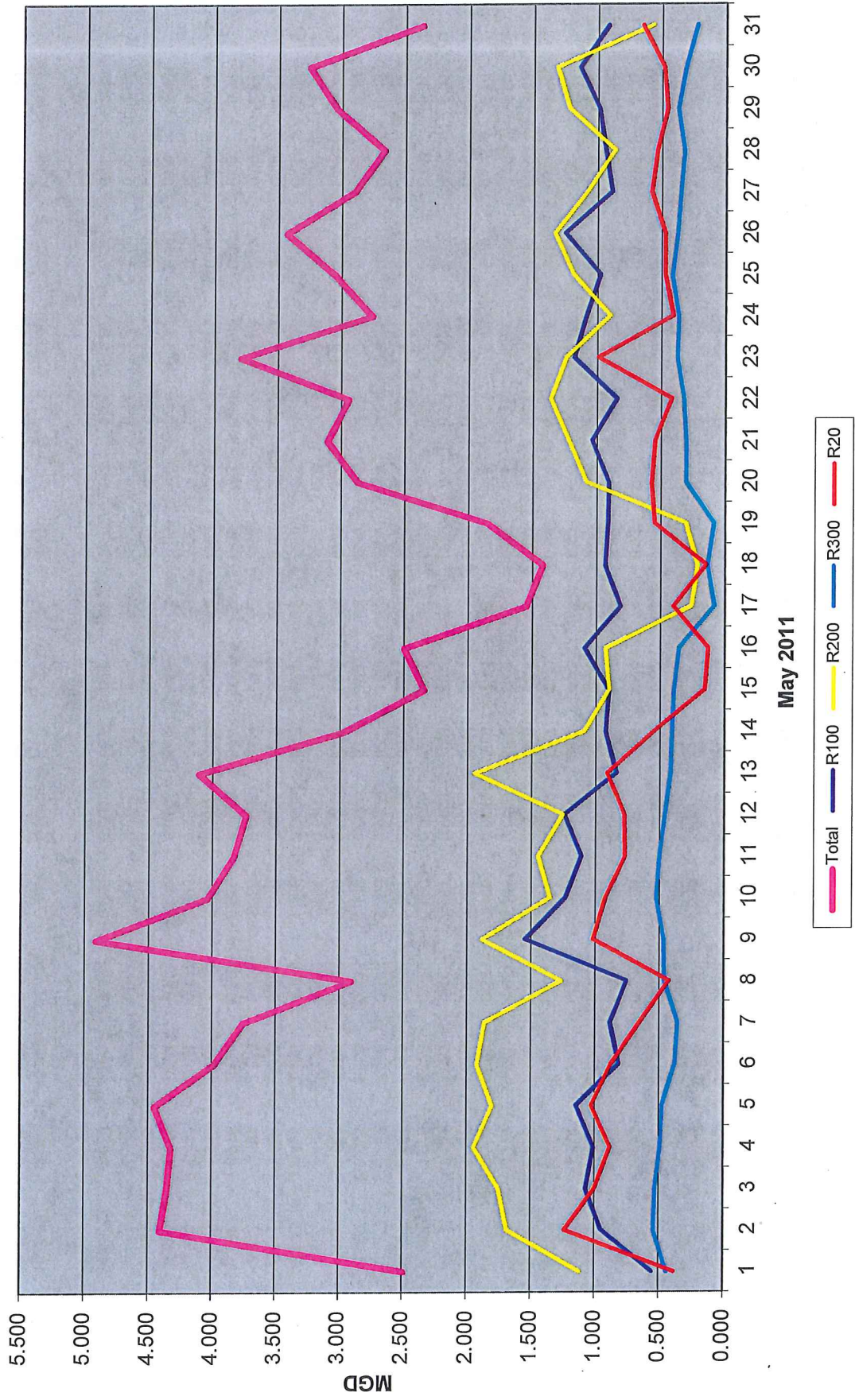
DERWA Recycled Water Demand



DUBLIN SAN RAMON SERVICES DISTRICT
 DERWA Recycled Water Daily Demand
 May 2011

Date:	Day:	Recycled Water Customer Demand (MG)										Weather Conditions							Production (MG)		
		Total	R100	R200	R300	R20	Load Out Station	Mean Temp °F	Max Temp °F	Avg Hum	Rainfall inches	Avg Wind mph	Eto inches	SF-UV Recycled	MF-UV Recycled	Potable	Total				
1	Sun	2,492	0.553	1,120	0.436	0.383	0.0000	61.9	81.2	37	0.00	2.8	0.24	1.77	0.00	0.00	1.77				
2	Mon	4,407	0.947	1,682	0.542	1,236	0.0000	62.2	77.2	41	0.00	3.8	0.24	3.47	0.00	0.00	3.47				
3	Tue	4,352	1,070	1,750	0.530	1,001	0.0000	62.9	79.8	40	0.00	3.1	0.22	4.05	0.00	0.00	4.05				
4	Wed	4,322	1,010	1,943	0.489	0.880	0.0000	70.2	89.6	38	0.00	2.4	0.25	4.47	0.00	0.00	4.47				
5	Thu	4,451	1,147	1,801	0.475	1,029	0.0000	71.2	89.6	38	0.00	3.0	0.26	5.06	0.00	0.00	5.06				
6	Fri	3,987	0.815	1,919	0.376	0.876	0.0000	57.9	69.6	64	0.00	5.0	0.21	5.46	0.00	0.00	5.46				
7	Sat	3,758	0.883	1,863	0.355	0.657	0.0000	54.6	61.5	74	0.00	4.3	0.16	3.01	0.00	0.00	3.01				
8	Sun	2,909	0.756	1,268	0.457	0.427	0.0000	53.3	60.0	68	0.00	6.4	0.15	3.94	0.00	0.00	3.94				
9	Mon	4,915	1,547	1,883	0.465	1,020	0.0000	56.1	65.1	63	0.00	4.2	0.19	1.28	0.00	0.00	1.28				
10	Tue	4,041	1,235	1,356	0.526	0.924	0.0000	56.9	73.4	60	0.00	4.6	0.22	6.01	0.00	0.00	6.01				
11	Wed	3,832	1,111	1,447	0.502	0.771	0.0000	53.8	60.1	75	0.00	5.0	0.18	4.85	0.00	0.00	4.85				
12	Thu	3,735	1,243	1,256	0.458	0.778	0.0000	59.4	71.3	62	0.00	4.2	0.22	4.30	0.00	0.00	4.30				
13	Fri	4,112	0.840	1,943	0.417	0.912	0.0000	55.0	67.0	62	0.00	4.5	0.21	3.17	0.00	0.00	3.17				
14	Sat	2,973	0.924	1,092	0.407	0.550	0.0000	52.9	58.5	64	0.12	4.4	0.12	3.72	0.00	0.00	3.72				
15	Sun	2,344	0.900	0.898	0.392	0.154	0.0001	50.5	58.6	69	0.20	4.0	0.11	2.08	0.00	0.00	2.08				
16	Mon	2,500	1,091	0.927	0.352	0.130	0.0000	51.0	58.9	77	0.12	3.3	0.09	3.02	0.00	0.00	3.02				
17	Tue	1,550	0.811	0.260	0.078	0.401	0.0000	52.9	59.4	81	0.15	4.6	0.09	1.78	0.00	0.00	1.78				
18	Wed	1,421	0.932	0.213	0.131	0.145	0.0000	55.4	64.6	74	0.05	5.1	0.15	2.26	0.00	0.00	2.26				
19	Thu	1,849	0.912	0.305	0.084	0.549	0.0000	58.8	74.1	62	0.00	4.0	0.23	2.20	0.00	0.00	2.20				
20	Fri	2,869	0.907	1,083	0.303	0.576	0.0000	57.3	70.7	71	0.00	5.0	0.21	2.18	0.00	0.00	2.18				
21	Sat	3,109	1,037	1,222	0.301	0.549	0.0000	57.4	66.2	69	0.00	4.2	0.22	2.74	0.00	0.00	2.74				
22	Sun	2,943	0.844	1,362	0.319	0.418	0.0001	55.1	61.6	74	0.00	4.4	0.18	2.75	0.00	0.00	2.75				
23	Mon	3,791	1,180	1,244	0.373	0.994	0.0000	56.0	65.0	68	0.00	3.8	0.21	2.79	0.00	0.00	2.79				
24	Tue	2,760	1,088	0.900	0.363	0.409	0.0000	56.7	67.1	62	0.00	4.2	0.22	3.71	0.00	0.00	3.71				
25	Wed	3,055	0.976	1,191	0.416	0.472	0.0000	54.7	61.7	70	0.05	3.6	0.13	2.97	0.00	0.00	2.97				
26	Thu	3,434	1,253	1,334	0.372	0.475	0.0000	56.2	64.2	66	0.00	4.2	0.21	2.92	0.00	0.00	2.92				
27	Fri	2,903	0.886	1,084	0.350	0.584	0.0000	57.4	64.4	70	0.00	4.3	0.17	2.66	0.00	0.00	2.66				
28	Sat	2,668	0.939	0.868	0.321	0.540	0.0000	55.1	64.2	68	0.00	5.0	0.18	2.90	0.00	0.00	2.90				
29	Sun	3,043	0.989	1,224	0.372	0.459	0.0000	55.8	67.7	60	0.00	4.9	0.22	2.84	0.00	0.00	2.84				
30	Mon	3,257	1,141	1,319	0.312	0.485	0.0000	55.3	62.8	66	0.00	4.4	0.18	2.94	0.00	0.00	2.94				
31	Tue	2,371	0.919	0.573	0.224	0.655	0.0000	55.1	59.5	74	0.04	3.9	0.08	2.44	0.00	0.00	2.44				
TOTAL		100,155	30,887	38,328	11,499	19,442	0.0001				0.72			99.72	0.00	0.00	99.72				
AVG		3,231	0.996	1,236	0.371	0.627	0.0000	57.1	67.6	63	0.02	4.2	0.19	3.22	0.00	0.00	3.22				
MIN		1,421	0.553	0.213	0.078	0.130	0.0000	50.5	58.5	37	0.00	2.4	0.08	1.28	0.00	0.00	1.28				
MAX		4,915	1,547	1,943	0.542	1,236	0.0001	71.2	89.6	81	0.20	6.4	0.26	6.01	0.00	0.00	6.01				

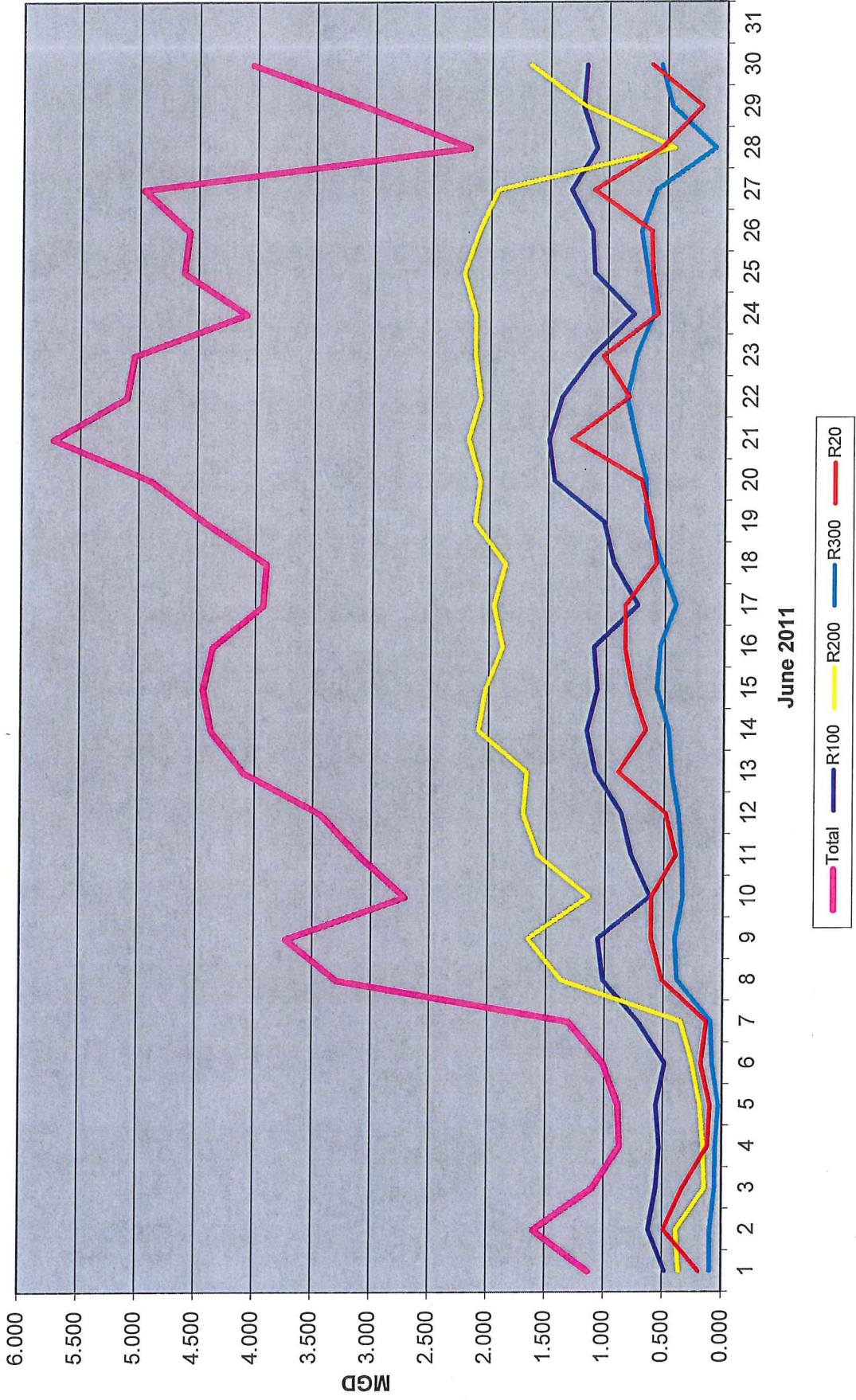
DERWA Recycled Water Demand



DUBLIN SAN RAMON SERVICES DISTRICT
 DERWA Recycled Water Daily Demand
 June 2011

Date:	Day:	Recycled Water Customer Demand (MG)										Weather Conditions							Production (MG)		Total
		Total	R100	R200	R300	R20	Load Out Station	Mean Temp °F	Max Temp °F	Avg Hum	Rainfall inches	Avg Wind mph	Eto inches	SF-UV Recycled	MF-UV Recycled	Potable					
1	Wed	1.132	0.478	0.362	0.099	0.194	0.0000	54.3	61.5	72	0.31	3.6	0.16	3.35	0.00	0.00	3.35				
2	Thu	1.600	0.619	0.386	0.101	0.494	0.0000	56.2	65.6	63	0.00	4.0	0.19	1.47	0.00	0.00	1.47				
3	Fri	1.099	0.558	0.145	0.060	0.336	0.0000	57.0	65.6	70	0.00	2.6	0.10	1.79	0.00	0.00	1.79				
4	Sat	0.870	0.530	0.158	0.056	0.125	0.0000	59.3	65.3	83	0.47	2.7	0.07	0.00	0.00	0.00	0.00				
5	Sun	0.884	0.561	0.187	0.030	0.106	0.0000	59.6	68.4	74	0.12	3.5	0.11	0.00	0.00	0.00	0.00				
6	Mon	1.015	0.488	0.255	0.087	0.185	0.0000	58.9	65.7	72	0.00	4.5	0.17	1.88	0.00	0.00	1.88				
7	Tue	1.310	0.714	0.354	0.101	0.141	0.0000	61.6	72.6	70	0.00	4.6	0.22	2.34	0.00	0.00	2.34				
8	Wed	3.290	1.014	1.370	0.388	0.518	0.0000	60.7	71.3	64	0.00	5.5	0.21	1.98	0.00	0.00	1.98				
9	Thu	3.732	1.059	1.657	0.407	0.609	0.0000	61.7	78.0	67	0.00	5.1	0.17	1.95	0.00	0.00	1.95				
10	Fri	2.710	0.620	1.138	0.342	0.611	0.0000	58.5	68.4	68	0.00	4.3	0.22	3.79	0.00	0.00	3.79				
11	Sat	3.105	0.779	1.571	0.351	0.405	0.0000	55.8	62.8	78	0.00	4.1	0.16	2.60	0.00	0.00	2.60				
12	Sun	3.438	0.863	1.702	0.381	0.492	0.0000	60.6	75.4	70	0.00	5.6	0.21	2.78	0.00	0.00	2.78				
13	Mon	4.099	1.087	1.676	0.440	0.897	0.0000	63.4	76.9	72	0.00	5.3	0.23	3.72	0.00	0.00	3.72				
14	Tue	4.377	1.161	2.089	0.466	0.661	0.0000	72.3	90.3	54	0.00	3.6	0.26	5.05	0.00	0.00	5.05				
15	Wed	4.448	1.070	2.028	0.570	0.780	0.0000	75.6	90.9	46	0.00	3.6	0.26	5.28	0.03	0.00	5.31				
16	Thu	4.367	1.101	1.883	0.542	0.841	0.0000	66.0	78.3	54	0.00	4.8	0.23	4.37	0.00	0.00	4.37				
17	Fri	3.937	0.732	1.958	0.407	0.839	0.0000	62.9	78.3	61	0.00	5.5	0.24	4.25	0.00	0.00	4.25				
18	Sat	3.909	0.935	1.863	0.533	0.578	0.0000	63.7	79.7	63	0.00	5.1	0.23	3.76	0.00	0.00	3.76				
19	Sun	4.435	1.022	2.125	0.682	0.626	0.0000	71.6	87.0	48	0.00	4.2	0.26	4.06	0.00	0.00	4.06				
20	Mon	4.895	1.446	2.079	0.666	0.704	0.0000	79.1	96.6	39	0.00	2.9	0.28	4.10	0.00	0.00	4.10				
21	Tue	5.732	1.493	2.186	0.755	1.298	0.0000	81.0	98.8	38	0.00	3.1	0.28	3.87	0.00	0.00	3.87				
22	Wed	5.111	1.384	2.080	0.831	0.816	0.0000	72.9	92.5	50	0.00	2.8	0.27	4.13	0.77	0.00	4.91				
23	Thu	5.048	1.127	2.128	0.755	1.038	0.0000	65.4	78.0	52	0.00	2.9	0.25	4.28	2.19	0.00	6.48				
24	Fri	4.092	0.776	2.129	0.607	0.579	0.0000	64.1	81.2	57	0.00	3.3	0.24	5.81	0.00	0.00	5.81				
25	Sat	4.625	1.113	2.228	0.661	0.623	0.0000	62.2	78.7	65	0.00	2.6	0.23	3.71	0.00	0.00	3.71				
26	Sun	4.583	1.132	2.101	0.717	0.633	0.0000	65.9	85.1	59	0.00	3.3	0.25	4.10	0.00	0.00	4.10				
27	Mon	4.970	1.313	1.944	0.591	1.122	0.0000	64.1	79.9	65	0.00	3.9	0.24	4.47	0.00	0.00	4.47				
28	Tue	2.191	1.099	0.444	0.093	0.554	0.0000	60.0	68.9	84	0.81	4.1	0.04	5.35	0.00	0.00	5.35				
29	Wed	3.085	1.217	1.195	0.461	0.213	0.0000	59.4	67.8	75	0.00	5.4	0.14	1.65	0.00	0.00	1.65				
30	Thu	4.050	1.188	1.671	0.555	0.636	0.0000	66.4	81.5	62	0.00	3.3	0.24	2.97	0.00	0.00	2.97				
TOTAL		102.139	28.679	43.092	12.714	17.654	0.0000	64.0	77.0	63	1.71	4.0	0.21	98.87	3.00	0.00	101.87				
AVG		3.405	0.956	1.436	0.424	0.588	0.0000	64.0	77.0	63	0.06	4.0	0.21	3.30	0.10	0.00	3.40				
MIN		0.870	0.478	0.145	0.030	0.106	0.0000	54.3	61.5	38	0.00	2.6	0.04	0.00	0.00	0.00	0.00				
MAX		5.732	1.493	2.228	0.831	1.298	0.0000	81.0	98.8	84	0.81	5.6	0.28	5.81	2.19	0.00	6.48				

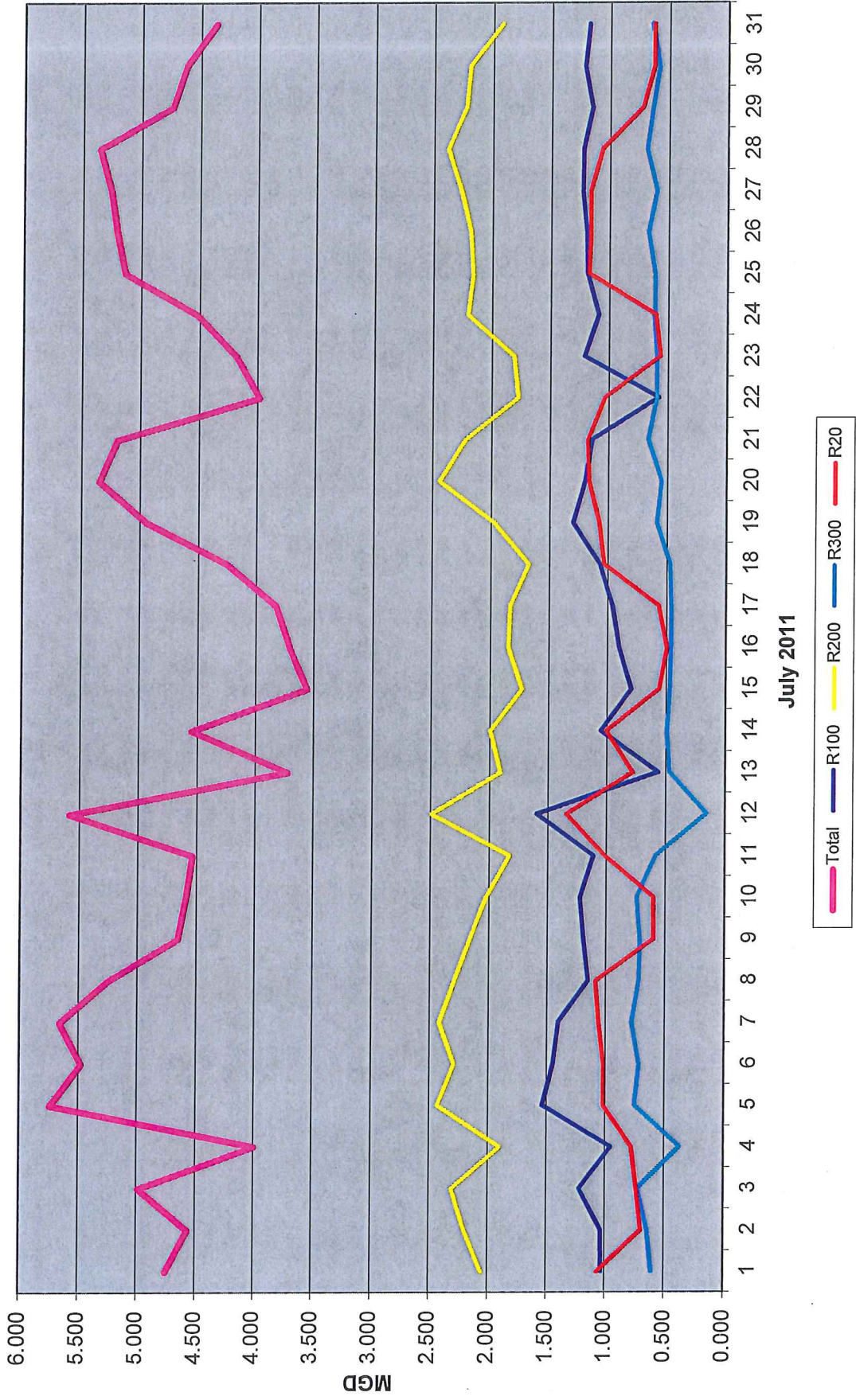
DERWA Recycled Water Demand



DUBLIN SAN RAMON SERVICES DISTRICT
 DERWA Recycled Water Daily Demand
 July 2011

Date:	Day:	Recycled Water Customer Demand (MG)										Weather Conditions							Production (MG)		
		Total	R100	R200	R300	R20	Load Out Station	Mean Temp °F	Max Temp °F	Avg Hum	Rainfall inches	Avg Wind mph	Eto inches	SF-UV Recycled	MF-UV Recycled	Potable	Total				
1	Fri	4.755	1.031	2.052	0.606	1.067	0.0000	74.1	91.2	49	0.00	3.1	0.28	4.04	0.00	0.00	4.04				
2	Sat	4.569	1.034	2.199	0.640	0.696	0.0000	77.3	93.4	45	0.00	3.4	0.27	5.68	0.00	0.00	5.68				
3	Sun	4.988	1.218	2.307	0.727	0.736	0.0000	79.9	97.4	45	0.00	3.0	0.27	5.21	0.00	0.00	5.21				
4	Mon	4.002	0.951	1.901	0.371	0.779	0.0004	76.6	92.3	44	0.00	4.0	0.25	4.31	0.00	0.00	4.31				
5	Tue	5.741	1.537	2.430	0.756	1.019	0.0000	79.1	96.5	44	0.00	3.6	0.27	4.55	0.00	0.00	4.55				
6	Wed	5.479	1.449	2.291	0.719	1.020	0.0000	79.0	96.5	41	0.00	3.6	0.27	5.64	0.00	0.00	5.64				
7	Thu	5.664	1.405	2.416	0.781	1.061	0.0000	75.1	93.7	46	0.00	4.1	0.27	4.78	0.00	0.00	4.78				
8	Fri	5.252	1.150	2.291	0.724	1.087	0.0000	73.5	90.9	51	0.00	4.9	0.26	5.95	0.00	0.00	5.95				
9	Sat	4.661	1.190	2.159	0.713	0.599	0.0000	63.5	77.3	63	0.00	6.2	0.23	5.39	0.00	0.00	5.39				
10	Sun	4.592	1.223	2.025	0.741	0.603	0.0000	63.6	77.2	60	0.00	5.7	0.23	3.92	0.00	0.00	3.92				
11	Mon	4.540	1.110	1.829	0.584	1.017	0.0000	58.7	64.9	75	0.00	4.9	0.22	5.32	0.00	0.00	5.32				
12	Tue	5.589	1.597	2.493	0.153	1.346	0.0000	59.2	67.4	76	0.00	4.9	0.19	5.00	0.00	0.00	5.00				
13	Wed	3.725	0.564	1.909	0.469	0.783	0.0000	60.3	66.0	78	0.00	3.9	0.15	4.54	0.00	0.00	4.54				
14	Thu	4.553	1.053	1.997	0.494	1.008	0.0000	58.1	63.9	75	0.00	4.1	0.19	3.47	0.00	0.00	3.47				
15	Fri	3.561	0.795	1.728	0.473	0.565	0.0000	58.8	67.1	80	0.00	4.5	0.18	4.39	0.00	0.00	4.39				
16	Sat	3.710	0.903	1.847	0.463	0.497	0.0000	61.6	71.9	77	0.00	5.0	0.16	4.48	0.00	0.00	4.48				
17	Sun	3.827	0.959	1.835	0.460	0.572	0.0000	62.4	70.0	72	0.00	5.0	0.19	3.83	0.00	0.00	3.83				
18	Mon	4.252	1.068	1.677	0.472	1.035	0.0013	64.4	76.9	69	0.00	4.7	0.23	4.07	0.00	0.00	4.07				
19	Tue	4.940	1.297	1.976	0.588	1.078	0.0000	69.1	81.7	60	0.00	4.5	0.23	4.01	0.00	0.00	4.01				
20	Wed	5.353	1.197	2.442	0.549	1.165	0.0000	74.5	91.4	46	0.00	3.2	0.25	4.43	0.00	0.00	4.43				
21	Thu	5.199	1.139	2.220	0.664	1.176	0.0000	71.5	88.1	50	0.00	3.9	0.23	5.53	0.00	0.00	5.53				
22	Fri	3.983	0.578	1.775	0.594	1.036	0.0000	68.8	83.7	59	0.00	5.2	0.23	5.55	0.00	0.00	5.55				
23	Sat	4.183	1.208	1.812	0.596	0.567	0.0000	65.9	81.7	65	0.00	5.3	0.23	3.10	0.00	0.00	3.10				
24	Sun	4.522	1.088	2.207	0.617	0.609	0.0000	65.2	78.3	66	0.00	6.5	0.23	3.36	0.00	0.00	3.36				
25	Mon	5.140	1.184	2.164	0.614	1.178	0.0000	63.8	78.0	67	0.00	6.1	0.22	5.61	0.00	0.00	5.61				
26	Tue	5.212	1.192	2.185	0.672	1.162	0.0000	67.2	81.5	58	0.00	4.7	0.23	5.40	0.00	0.00	5.40				
27	Wed	5.262	1.228	2.267	0.602	1.165	0.0000	72.5	92.3	50	0.00	3.5	0.24	5.36	0.00	0.00	5.36				
28	Thu	5.361	1.225	2.382	0.686	1.067	0.0000	70.5	86.7	53	0.00	4.4	0.23	5.81	0.00	0.00	5.81				
29	Fri	4.743	1.149	2.229	0.639	0.725	0.0000	67.4	81.1	62	0.00	6.3	0.22	5.20	0.00	0.00	5.20				
30	Sat	4.626	1.214	2.195	0.585	0.632	0.0000	65.5	77.9	69	0.00	7.5	0.21	5.05	0.00	0.00	5.05				
31	Sun	4.372	1.177	1.921	0.643	0.631	0.0000	64.1	77.0	72	0.00	7.0	0.22	4.54	0.00	0.00	4.54				
TOTAL		146.356	35.116	65.162	18.397	27.681	0.0017	68.1	81.7	60	0.00	4.7	0.23	147.50	0.00	0.00	147.50				
AVG		4.721	1.133	2.102	0.593	0.893	0.0001	68.1	81.7	60	0.00	4.7	0.23	4.76	0.00	0.00	4.76				
MIN		3.561	0.564	1.677	0.153	0.497	0.0000	58.1	63.9	41	0.00	3.0	0.15	3.10	0.00	0.00	3.10				
MAX		5.741	1.597	2.493	0.781	1.346	0.0013	79.9	97.4	80	0.00	7.5	0.28	5.95	0.00	0.00	5.95				

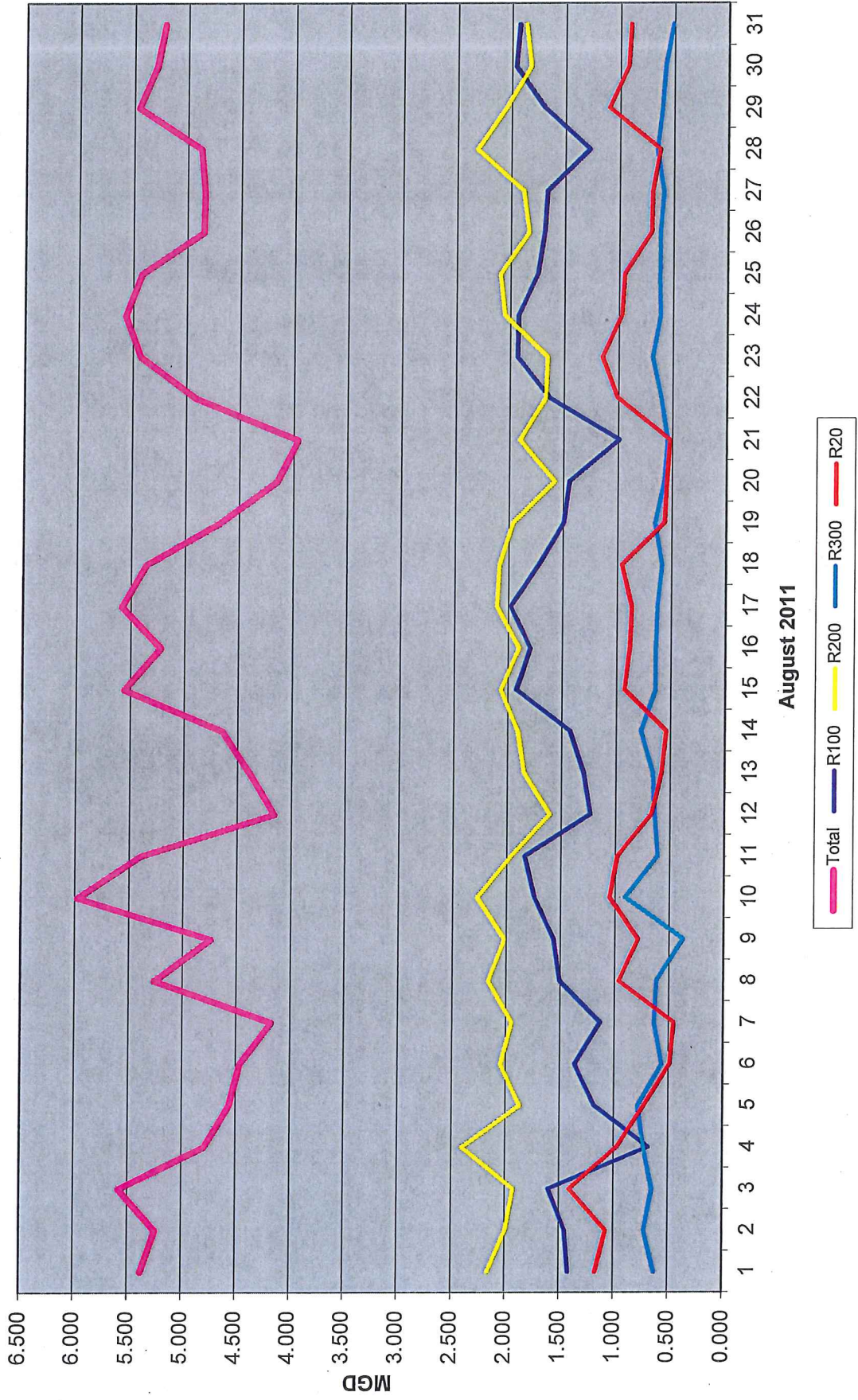
DERWA Recycled Water Demand



DUBLIN SAN RAMON SERVICES DISTRICT
 DERWA Recycled Water Daily Demand
 August 2011

Date:	Day:	Recycled Water Customer Demand (MG)										Weather Conditions							Production (MG)		
		Total	R100	R200	R300	R20	Load Out Station	Mean Temp °F	Max Temp °F	Avg Hum	Rainfall inches	Avg Wind mph	Eto inches	SF-UV Recycled	MF-UV Recycled	Potable	Total				
1	Mon	5,379	1,417	2,164	0.628	1.171	0.0000	64.5	78.2	66	0.00	6.5	3.91	0.00	0.00	0.00	3.91				
2	Tue	5,244	1,449	1,996	0.722	1.076	0.0000	67.0	84.0	59	0.00	4.7	4.80	0.00	0.00	0.00	4.80				
3	Wed	5,585	1,601	1,924	0.650	1.411	0.0000	64.9	81.1	66	0.00	4.5	5.12	0.00	0.00	0.00	5.12				
4	Thu	4,795	0,685	2,402	0.730	0.977	0.0000	62.2	71.1	73	0.00	5.0	5.74	0.00	0.00	0.00	5.74				
5	Fri	4,564	1,183	1,868	0.784	0.730	0.0000	68.4	85.3	64	0.00	5.1	4.67	0.00	0.00	0.00	4.67				
6	Sat	4,466	1,364	2,048	0.563	0.492	0.0000	65.2	81.0	70	0.00	5.4	4.85	0.00	0.00	0.00	4.85				
7	Sun	4,176	1,132	1,946	0.637	0.461	0.0000	62.4	73.3	73	0.00	7.5	5.49	0.00	0.00	0.00	5.49				
8	Mon	5,264	1,508	2,169	0.620	0.968	0.0000	65.0	80.2	65	0.00	4.9	4.75	0.00	0.00	0.00	4.75				
9	Tue	4,744	1,566	2,017	0.370	0.791	0.0000	68.2	87.1	42	0.00	4.3	4.69	0.00	0.00	0.00	4.69				
10	Wed	5,981	1,741	2,275	0.910	1.055	0.0000	67.1	85.4	59	0.00	5.3	5.26	0.00	0.00	0.00	5.26				
11	Thu	5,395	1,836	1,961	0.613	0.986	0.0000	64.0	78.5	66	0.00	5.1	4.35	0.00	0.00	0.00	4.35				
12	Fri	4,158	1,232	1,608	0.641	0.676	0.0000	66.5	81.4	62	0.00	4.2	4.26	0.00	0.00	0.00	5.03				
13	Sat	4,389	1,296	1,847	0.662	0.584	0.0000	68.9	86.0	54	0.00	4.1	5.66	0.00	0.00	0.00	5.66				
14	Sun	4,645	1,425	1,905	0.775	0.541	0.0000	68.3	86.7	49	0.00	3.7	4.38	0.00	0.00	0.00	4.38				
15	Mon	5,559	1,923	2,067	0.639	0.930	0.0000	69.1	83.9	52	0.00	3.9	5.09	0.00	0.00	0.00	5.09				
16	Tue	5,222	1,796	1,899	0.642	0.884	0.0000	68.2	86.7	54	0.00	4.3	4.93	0.00	0.00	0.00	4.93				
17	Wed	5,584	1,979	2,110	0.628	0.867	0.0000	66.6	83.9	61	0.00	4.8	3.95	0.00	0.00	0.00	4.60				
18	Thu	5,359	1,724	2,088	0.586	0.961	0.0000	66.6	84.4	59	0.00	4.7	5.69	0.00	0.00	0.00	6.52				
19	Fri	4,685	1,496	1,965	0.655	0.570	0.0000	62.4	75.5	71	0.00	6.5	2.92	0.00	0.00	0.00	3.87				
20	Sat	4,150	1,445	1,583	0.570	0.551	0.0000	62.9	75.5	70	0.00	4.6	1.46	2.10	0.00	0.00	3.56				
21	Sun	3,961	0,989	1,906	0.541	0.525	0.0000	63.2	74.6	72	0.00	6.2	4.89	1.41	0.00	0.00	6.30				
22	Mon	4,910	1,628	1,672	0.602	1.008	0.0000	67.4	82.8	60	0.00	4.7	4.09	0.00	0.00	0.00	4.09				
23	Tue	5,426	1,930	1,657	0.687	1.151	0.0000	75.7	95.2	41	0.00	2.5	5.23	0.00	0.00	0.00	5.23				
24	Wed	5,568	1,923	2,053	0.614	0.977	0.0000	75.2	89.5	45	0.00	4.4	5.44	0.00	0.00	0.00	5.44				
25	Thu	5,420	1,748	2,095	0.624	0.953	0.0000	69.4	85.4	66	0.00	4.4	4.25	1.78	0.00	0.00	6.03				
26	Fri	4,852	1,690	1,833	0.622	0.707	0.0000	69.9	88.2	58	0.00	4.5	3.79	0.51	0.00	0.00	4.29				
27	Sat	4,842	1,667	1,884	0.591	0.701	0.0000	68.9	87.1	58	0.00	3.7	4.27	0.71	0.00	0.00	4.97				
28	Sun	4,877	1,272	2,321	0.653	0.631	0.0000	70.4	89.3	55	0.00	3.3	4.89	0.00	0.00	0.00	4.89				
29	Mon	5,457	1,694	2,050	0.610	1.103	0.0000	66.6	81.0	63	0.00	4.6	4.37	0.00	0.00	0.00	4.37				
30	Tue	5,295	1,963	1,823	0.582	0.928	0.0000	64.8	80.5	65	0.00	4.8	5.56	0.00	0.00	0.00	5.56				
31	Wed	5,218	1,930	1,869	0.513	0.906	0.0000	65.3	80.2	65	0.00	4.0	5.48	0.00	0.00	0.00	5.48				
TOTAL		155,171	48,232	61,003	19,662	26,273	0.0000				0.00		144.21	9.70	0.00	0.00	153.91				
AVG		5,006	1,556	1,968	0.634	0.848	0.0000	66.9	82.7	61	0.00	4.7	4.65	0.31	0.00	0.00	4.96				
MIN		3,961	0,685	1,583	0.370	0.461	0.0000	62.2	71.1	41	0.00	2.5	1.46	0.00	0.00	0.00	3.56				
MAX		5,981	1,979	2,402	0.910	1.411	0.0000	75.7	95.2	73	0.00	7.5	5.74	2.10	0.00	0.00	6.52				

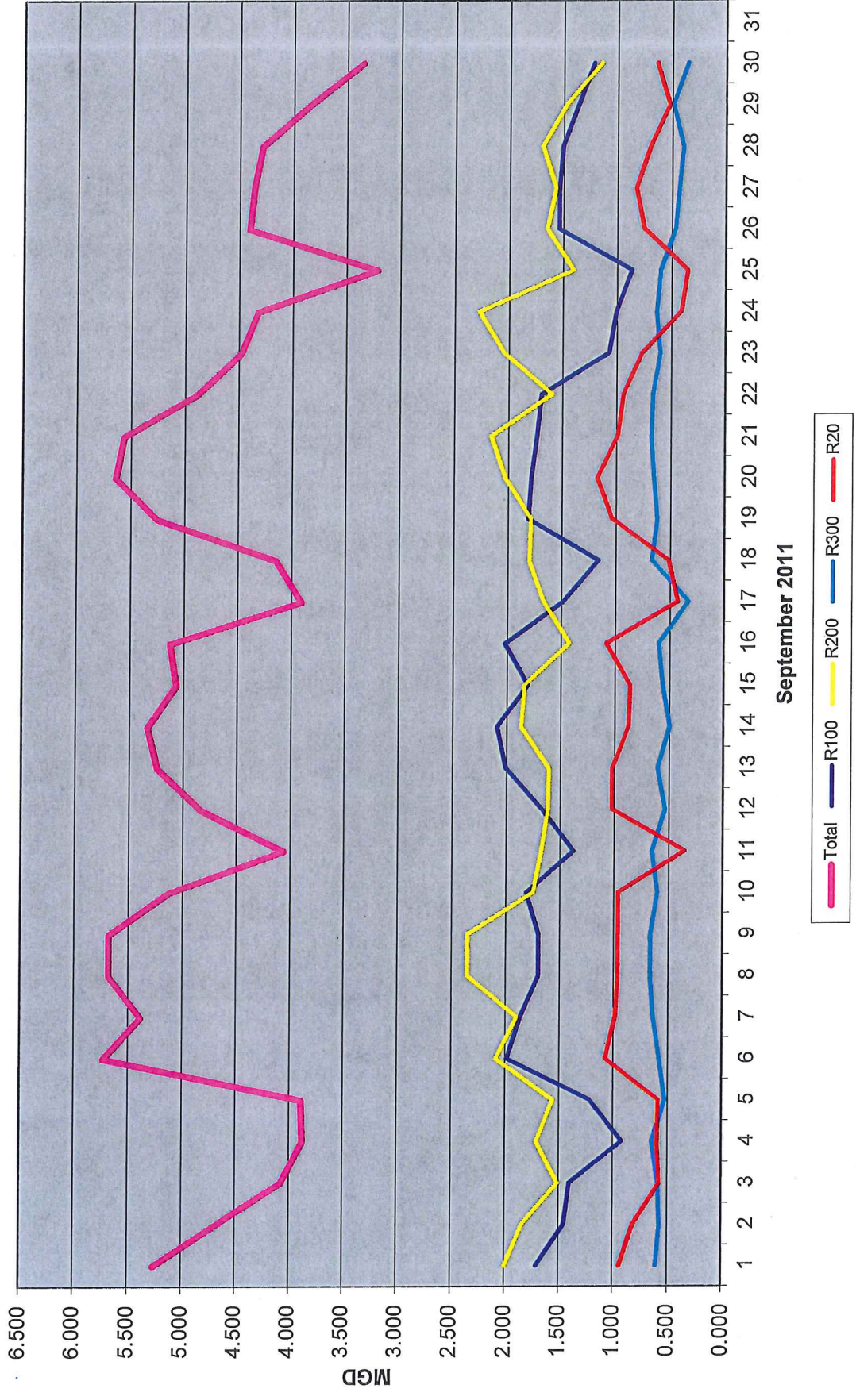
DERWA Recycled Water Demand



DUBLIN SAN RAMON SERVICES DISTRICT
 DERWA Recycled Water Daily Demand
 September 2011

Date:	Day:	Recycled Water Customer Demand (MG)										Weather Conditions							Production (MG)		
		Total	R100	R200	R300	R20	Load Out Station	Mean Temp °F	Max Temp °F	Avg Hum	Rainfall inches	Avg Wind mph	Eto inches	SF-UV Recycled	MF-UV Recycled	Potable	Total				
1	Thu	5,262	1,710	2,002	0,607	0,944	0,0000	69.9	89.6	56	0.00	2.8	6.26	0.00	0.00	0.00	6.26				
2	Fri	4,684	1,454	1,843	0,571	0,815	0,0000	74.7	95.4	41	0.00	2.6	4.38	0.55	0.00	0.00	4.92				
3	Sat	4,080	1,405	1,512	0,586	0,577	0,0000	69.5	85.7	54	0.00	3.5	3.21	0.00	0.00	0.00	3.21				
4	Sun	3,876	0,921	1,712	0,645	0,597	0,0000	63.8	80.2	69	0.00	5.1	4.93	0.00	0.00	0.00	4.93				
5	Mon	3,891	1,216	1,558	0,526	0,590	0,0000	65.5	83.6	61	0.00	3.8	3.60	0.00	0.00	0.00	3.60				
6	Tue	5,735	1,988	2,089	0,578	1,079	0,0000	73.1	96.5	43	0.00	2.4	4.40	0.00	0.00	0.00	4.40				
7	Wed	5,391	1,865	1,899	0,639	0,988	0,0000	76.0	93.4	34	0.00	3.2	5.32	0.00	0.00	0.00	5.32				
8	Thu	5,685	1,698	2,352	0,666	0,969	0,0000	69.7	85.4	49	0.00	3.8	5.73	0.00	0.00	0.00	5.73				
9	Fri	5,685	1,698	2,352	0,666	0,969	0,0000	72.9	92.8	39	0.00	3.1	5.73	0.00	0.00	0.00	5.73				
10	Sat	5,132	1,812	1,750	0,603	0,966	0,0000	74.1	90.9	54	0.00	4.4	5.37	0.00	0.00	0.00	5.37				
11	Sun	4,064	1,377	1,676	0,654	0,357	0,0000	66.0	77.4	73	0.00	5.5	4.71	0.00	0.00	0.00	4.71				
12	Mon	4,840	1,668	1,616	0,535	1,021	0,0000	67.4	82.0	64	0.00	5.3	4.29	0.00	0.00	0.00	4.29				
13	Tue	5,243	2,007	1,608	0,604	1,024	0,0000	69.8	85.8	62	0.00	3.1	4.39	0.00	0.00	0.00	4.39				
14	Wed	5,336	2,091	1,871	0,497	0,876	0,0000	64.6	78.2	70	0.00	5.8	4.67	0.00	0.00	0.00	4.67				
15	Thu	5,072	1,808	1,841	0,560	0,864	0,0000	62.3	75.4	70	0.00	4.7	6.08	0.00	0.00	0.00	6.08				
16	Fri	5,129	2,020	1,426	0,598	1,085	0,0000	61.9	74.4	70	0.00	3.2	0.00	0.00	0.00	0.00	0.00				
17	Sat	3,906	1,486	1,665	0,326	0,430	0,0000	65.3	83.9	60	0.00	2.7	9.72	0.00	0.00	0.00	9.72				
18	Sun	4,145	1,159	1,802	0,668	0,516	0,0000	72.2	93.3	48	0.00	1.6	3.95	0.00	0.00	0.00	3.95				
19	Mon	5,255	1,812	1,789	0,619	1,036	0,0000	77.1	97.9	43	0.00	1.9	3.95	0.00	0.00	0.00	3.95				
20	Tue	5,643	1,787	2,030	0,651	1,175	0,0000	78.2	98.6	40	0.00	2.4	5.66	0.00	0.00	0.00	5.66				
21	Wed	5,568	1,735	2,162	0,578	0,992	0,0000	76.6	97.6	38	0.00	2.5	5.85	0.00	0.00	0.00	5.85				
22	Thu	4,896	1,694	1,596	0,666	0,940	0,0000	74.9	93.9	49	0.00	2.5	6.11	0.00	0.00	0.00	6.11				
23	Fri	4,481	1,072	2,043	0,597	0,769	0,0000	78.2	97.9	41	0.00	2.9	4.53	0.00	0.00	0.00	4.53				
24	Sat	4,325	1,006	2,276	0,632	0,411	0,0000	66.5	75.4	64	0.00	5.1	3.91	0.00	0.00	0.00	3.91				
25	Sun	3,214	0,860	1,404	0,599	0,351	0,0000	63.9	69.1	74	0.00	2.8	4.38	0.00	0.00	0.00	4.38				
26	Mon	4,408	1,541	1,651	0,465	0,751	0,0000	64.3	81.0	66	0.00	2.6	2.71	0.00	0.00	0.00	2.71				
27	Tue	4,368	1,539	1,571	0,430	0,828	0,0000	70.6	91.2	45	0.00	1.4	4.31	0.00	0.00	0.00	4.31				
28	Wed	4,291	1,504	1,695	0,391	0,701	0,0000	76.5	97.2	48	0.00	1.7	4.45	0.00	0.00	0.00	4.45				
29	Thu	3,848	1,362	1,473	0,488	0,525	0,0000	70.0	84.0	62	0.00	4.6	4.44	0.00	0.00	0.00	4.44				
30	Fri	3,355	1,218	1,148	0,349	0,640	0,0000	64.6	74.1	74	0.00	4.4	4.11	0.00	0.00	0.00	4.11				
TOTAL		140,809	46,513	53,413	17,094	23,789	0,0000				0.00		141.15	0.55	0.00	0.00	141.70				
AVG		4,694	1,550	1,780	0,570	0,793	0,0000	70.0	86.7	55	0.00	3.4	4.71	0.02	0.00	0.00	4.72				
MIN		3,214	0,860	1,148	0,326	0,351	0,0000	61.9	69.1	34	0.00	1.4	0.00	0.00	0.00	0.00	0.00				
MAX		5,735	2,091	2,352	0,678	1,175	0,0000	78.2	98.6	74	0.00	5.8	9.72	0.55	0.00	0.00	9.72				

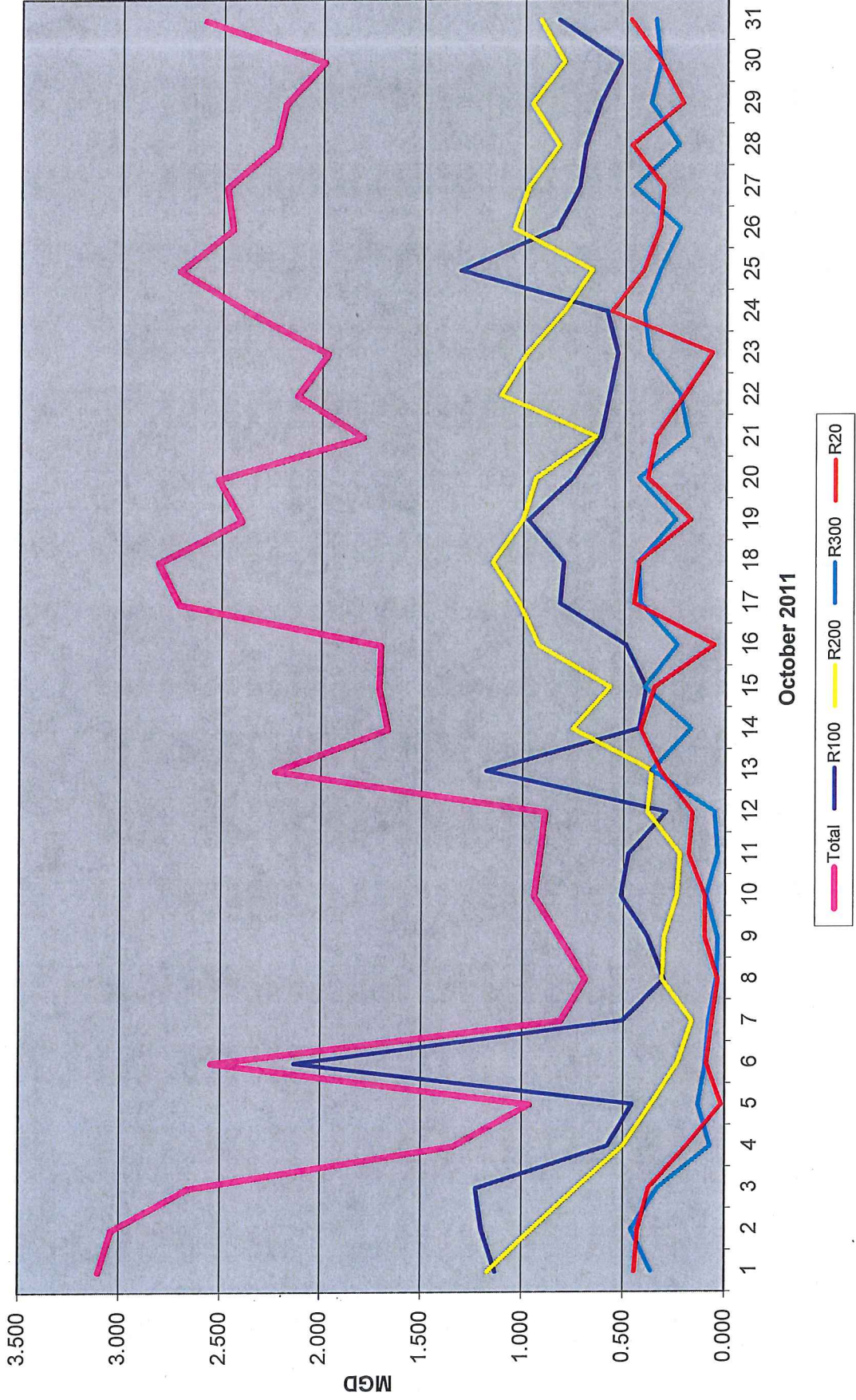
DERWA Recycled Water Demand



DUBLIN SAN RAMON SERVICES DISTRICT
 DERWA Recycled Water Daily Demand
 October 2011

Date:	Day:	Recycled Water Customer Demand (MG)										Weather Conditions					Production (MG)		
		Total	R100	R200	R300	R20	Load Out Station	Mean Temp °F	Max Temp °F	Avg Hum	Rainfall inches	Avg Wind mph	Eto inches	SF-UV Recycled	MF-UV Recycled	Potable	Total		
1	Sat	3.103	1.129	1.169	0.361	0.444	0.0000	65.8	74.1	67	0.00	3.6	0.15	3.56	0.00	0.00	3.56		
2	Sun	3.039	1.196	0.953	0.461	0.429	0.0000	62.5	73.2	70	0.00	3.2	0.12	2.59	0.00	0.00	2.59		
3	Mon	2.661	1.226	0.730	0.330	0.375	0.0000	58.7	68.0	78	0.11	2.1	0.06	2.55	0.00	0.00	2.55		
4	Tue	1.339	0.578	0.502	0.069	0.190	0.0000	60.6	66.9	75	0.20	3.0	0.08	1.55	0.00	0.00	1.55		
5	Wed	0.966	0.456	0.363	0.130	0.016	0.0000	57.4	62.8	78	0.56	4.3	0.08	1.87	0.00	0.00	1.87		
6	Thu	2.550	2.131	0.234	0.093	0.092	0.0000	54.8	62.2	81	0.17	2.5	0.08	1.87	0.00	0.00	1.87		
7	Fri	0.812	0.505	0.163	0.079	0.065	0.0000	57.1	71.7	70	0.00	2.3	0.12	1.49	0.00	0.00	1.49		
8	Sat	0.690	0.302	0.312	0.041	0.035	0.0000	60.1	77.1	71	0.00	2.6	0.13	0.00	0.00	0.00	0.00		
9	Sun	0.816	0.380	0.302	0.034	0.100	0.0000	61.7	78.2	72	0.00	2.9	0.11	0.00	0.00	0.00	0.00		
10	Mon	0.945	0.515	0.238	0.092	0.100	0.0000	63.0	68.5	89	0.00	1.9	0.04	0.00	0.00	0.00	0.00		
11	Tue	0.916	0.478	0.224	0.034	0.180	0.0000	67.3	76.2	81	0.00	2.8	0.09	2.08	0.00	0.00	2.08		
12	Wed	0.891	0.292	0.385	0.050	0.163	0.0000	67.3	82.4	48	0.00	1.8	0.13	0.00	0.00	0.00	0.00		
13	Thu	2.233	1.181	0.365	0.365	0.322	0.0000	69.7	90.4	55	0.00	1.3	0.13	0.00	0.00	0.00	1.38		
14	Fri	1.670	0.427	0.754	0.168	0.420	0.0000	70.5	88.5	59	0.00	1.4	0.11	0.00	1.99	0.00	1.99		
15	Sat	1.714	0.392	0.571	0.400	0.351	0.0000	66.3	79.8	70	0.00	3.7	0.12	0.00	1.74	0.00	1.74		
16	Sun	1.707	0.491	0.924	0.237	0.055	0.0000	65.0	73.7	77	0.00	4.3	0.11	0.00	1.98	0.00	1.98		
17	Mon	2.712	0.818	1.019	0.420	0.455	0.0000	69.1	86.7	63	0.00	2.5	0.13	0.00	1.71	0.00	1.71		
18	Tue	2.815	0.801	1.152	0.432	0.430	0.0000	65.4	84.5	70	0.00	3.1	0.12	2.95	0.00	0.00	2.95		
19	Wed	2.402	0.975	1.005	0.247	0.175	0.0000	61.1	67.8	74	0.00	4.2	0.11	2.77	0.00	0.00	2.77		
20	Thu	2.518	0.757	0.942	0.431	0.388	0.0000	59.8	72.6	79	0.00	3.7	0.10	2.38	0.00	0.00	2.38		
21	Fri	1.798	0.620	0.645	0.184	0.348	0.0000	62.2	80.6	75	0.00	2.0	0.10	2.80	0.00	0.00	2.80		
22	Sat	2.125	0.577	1.114	0.228	0.206	0.0000	66.5	87.1	60	0.00	1.4	0.11	2.31	0.00	0.00	2.31		
23	Sun	1.974	0.538	0.987	0.380	0.069	0.0020	66.5	85.8	64	0.00	1.6	0.11	2.52	0.00	0.00	2.52		
24	Mon	2.369	0.590	0.804	0.406	0.569	0.0000	62.3	76.4	73	0.00	4.1	0.10	0.00	0.00	0.00	0.00		
25	Tue	2.716	1.313	0.665	0.328	0.410	0.0000	59.2	71.2	72	0.00	3.1	0.09	2.64	0.00	0.00	2.64		
26	Wed	2.452	0.837	1.051	0.230	0.333	0.0000	56.9	74.7	48	0.00	2.2	0.11	2.32	0.00	0.00	2.32		
27	Thu	2.482	0.729	0.983	0.455	0.315	0.0000	56.4	75.5	51	0.00	1.7	0.11	2.80	0.00	0.00	2.80		
28	Fri	2.237	0.698	0.829	0.237	0.473	0.0000	58.8	78.5	55	0.00	1.3	0.10	2.38	0.00	0.00	2.38		
29	Sat	2.191	0.628	0.965	0.378	0.219	0.0000	59.9	81.5	52	0.00	1.5	0.11	2.57	0.00	0.00	2.57		
30	Sun	1.997	0.528	0.806	0.332	0.331	0.0107	62.6	83.2	58	0.00	1.1	0.10	2.64	0.00	0.00	2.64		
31	Mon	2.593	0.832	0.926	0.355	0.480	0.0000	63.7	82.2	62	0.00	1.6	0.10	1.68	0.00	0.00	1.68		
TOTAL		61.435	22.921	22.083	7.990	8.540	0.0127				1.04			50.32	8.80	0.00	59.12		
AVG		1.982	0.739	0.712	0.258	0.275	0.0004	62.5	76.8	68	0.03	2.5	0.11	1.62	0.28	0.00	1.91		
MIN		0.690	0.292	0.163	0.034	0.016	0.0000	54.8	62.2	48	0.00	1.1	0.04	0.00	0.00	0.00	0.00		
MAX		3.103	2.131	1.169	0.461	0.569	0.0107	70.5	90.4	89	0.56	4.3	0.15	3.56	1.99	0.00	3.56		

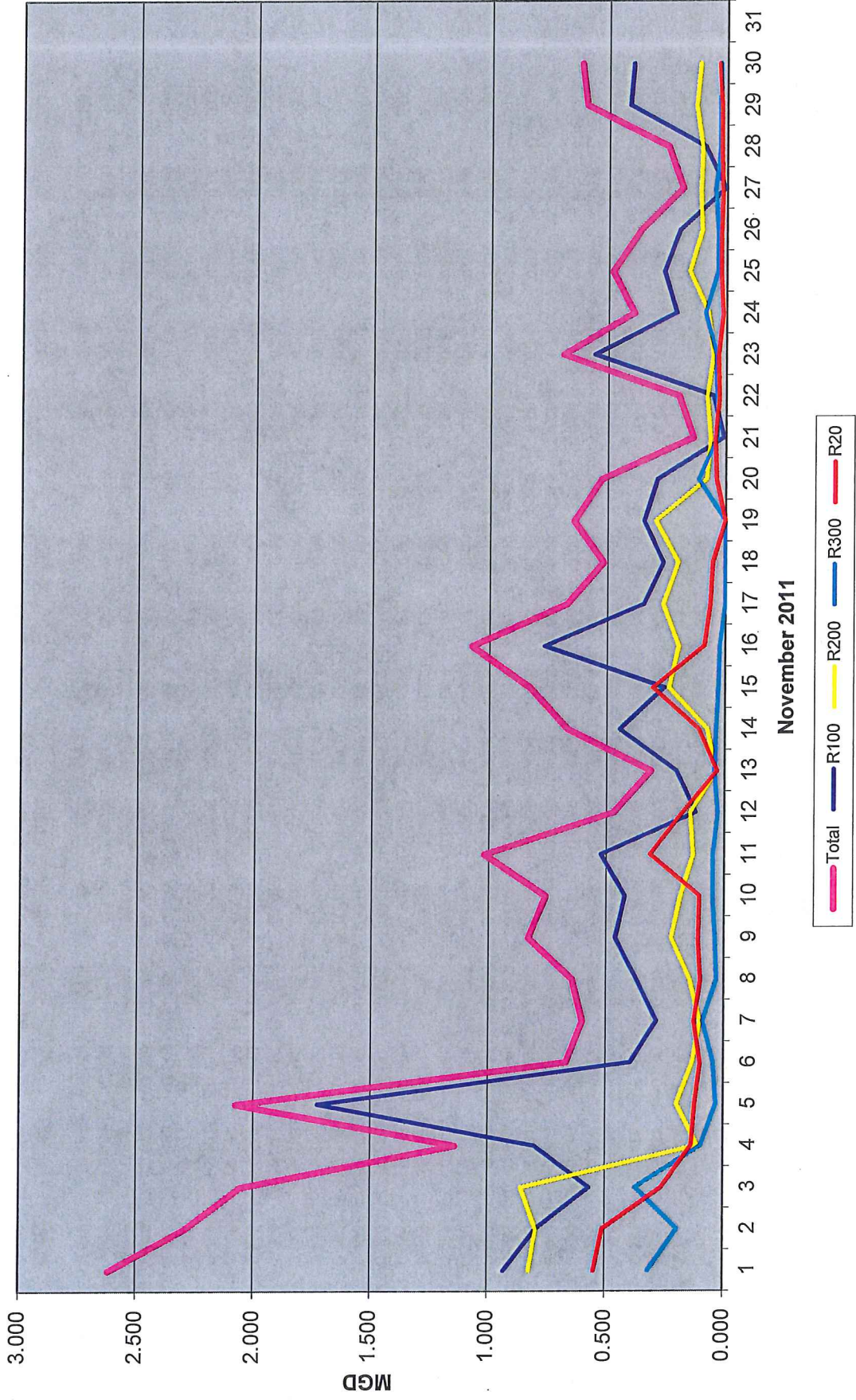
DERWA Recycled Water Demand



DUBLIN SAN RAMON SERVICES DISTRICT
 DERWA Recycled Water Daily Demand
 November 2011

Date:	Day:	Recycled Water Customer Demand (MG)										Weather Conditions							Production (MG)	
		Total	R100	R200	R300	R20	Load Out Station	Mean Temp °F	Max Temp °F	Avg Hum	Rainfall inches	Avg Wind mph	Eto inches	SF-UV Recycled	MF-UV Recycled	Potable	Total			
1	Tue	2.617	0.929	0.823	0.317	0.549	0.0000	61.9	73.2	28	0.01	4.0	2.50	0.00	0.00	0.00	2.50			
2	Wed	2.294	0.794	0.794	0.194	0.512	0.0000	58.3	75.2	29	0.02	2.2	2.34	0.00	0.00	0.00	2.34			
3	Thu	2.058	0.568	0.856	0.372	0.262	0.0000	49.2	62.3	75	0.17	4.4	2.48	0.00	0.00	0.00	2.48			
4	Fri	1.141	0.801	0.109	0.095	0.137	0.0000	48.2	58.4	74	0.08	3.3	0.07	0.00	0.00	0.00	0.00			
5	Sat	2.077	1.726	0.198	0.031	0.122	0.0000	47.9	56.0	80	0.39	4.4	1.73	0.00	0.00	0.00	1.73			
6	Sun	0.670	0.396	0.132	0.042	0.100	0.0000	50.5	57.9	78	0.00	3.3	0.06	0.00	0.00	0.00	0.00			
7	Mon	0.601	0.285	0.101	0.089	0.127	0.0000	47.6	63.4	77	0.00	2.2	0.08	0.00	0.00	0.00	0.00			
8	Tue	0.646	0.370	0.145	0.031	0.100	0.0000	51.6	62.5	63	0.00	3.4	0.08	0.00	0.00	0.00	0.00			
9	Wed	0.833	0.462	0.224	0.036	0.110	0.0000	47.0	62.4	77	0.00	2.5	0.08	0.00	0.00	0.00	0.00			
10	Thu	0.759	0.421	0.185	0.048	0.106	0.0000	50.8	69.5	74	0.00	1.7	0.07	0.00	0.00	0.00	0.00			
11	Fri	1.020	0.524	0.132	0.048	0.316	0.0000	50.8	59.8	83	0.02	2.5	0.01	0.25	1.00	0.00	1.25			
12	Sat	0.473	0.121	0.145	0.028	0.179	0.0000	53.9	62.8	84	0.02	2.0	0.04	0.00	1.11	0.00	1.11			
13	Sun	0.313	0.203	0.036	0.042	0.032	0.0000	54.9	68.9	77	0.00	1.7	0.07	0.00	1.09	0.00	1.09			
14	Mon	0.667	0.446	0.075	0.036	0.110	0.0000	54.8	64.2	77	0.00	2.5	0.07	0.00	1.17	0.00	1.17			
15	Tue	0.829	0.257	0.238	0.028	0.306	0.0000	53.3	70.4	76	0.00	1.6	0.08	0.00	0.00	0.00	0.00			
16	Wed	1.076	0.766	0.197	0.022	0.090	0.0000	53.9	72.1	71	0.00	1.6	0.08	0.00	0.00	0.00	0.00			
17	Thu	0.674	0.345	0.264	0.000	0.065	0.0000	52.6	59.3	85	0.00	2.8	0.06	0.00	1.20	0.00	1.20			
18	Fri	0.519	0.263	0.201	0.000	0.055	0.0000	51.0	57.3	80	0.03	4.4	0.04	0.00	1.68	0.00	1.68			
19	Sat	0.644	0.345	0.297	0.000	0.002	0.0000	48.3	57.1	72	0.27	3.3	0.06	0.00	0.00	0.00	0.00			
20	Sun	0.528	0.290	0.082	0.115	0.040	0.0000	49.9	54.5	83	0.23	3.5	0.02	0.00	0.00	0.00	0.00			
21	Mon	0.139	0.009	0.066	0.036	0.045	0.0000	50.1	61.0	79	0.00	2.3	0.06	0.00	0.77	0.00	0.77			
22	Tue	0.201	0.053	0.082	0.036	0.030	0.0000	47.3	63.4	79	0.00	1.8	0.06	0.00	0.00	0.00	0.00			
23	Wed	0.691	0.559	0.056	0.042	0.035	0.0000	48.8	59.8	78	0.00	3.1	0.04	0.00	1.22	0.00	1.22			
24	Thu	0.392	0.211	0.077	0.089	0.015	0.0000	51.3	58.4	83	0.05	3.5	0.03	0.00	0.00	0.00	0.00			
25	Fri	0.484	0.264	0.158	0.036	0.025	0.0000	51.4	63.4	82	0.00	2.7	0.04	0.00	0.00	0.00	0.00			
26	Sat	0.365	0.198	0.106	0.036	0.025	0.0000	49.4	59.0	88	0.00	3.3	0.05	0.00	0.00	0.00	0.00			
27	Sun	0.187	0.006	0.113	0.049	0.020	0.0000	51.1	62.7	86	0.00	2.3	0.04	0.00	1.18	0.00	1.18			
28	Mon	0.251	0.092	0.106	0.028	0.025	0.0000	49.2	61.0	90	0.00	1.7	0.03	0.00	0.00	0.00	0.00			
29	Tue	0.597	0.412	0.132	0.028	0.025	0.0000	49.8	66.7	78	0.00	1.5	0.06	0.00	1.07	0.00	1.07			
30	Wed	0.618	0.398	0.116	0.028	0.035	0.0000	52.6	66.7	50	0.00	7.4	0.11	0.00	0.00	0.00	0.00			
TOTAL		24.365	12.515	6.245	1.981	3.599	0.0000	51.2	63.0	75	1.30	2.9	9.31	11.50	0.00	20.81				
AVG		0.812	0.417	0.208	0.066	0.120	0.0000				0.04		0.31	0.38	0.00	0.69				
MIN		0.139	0.006	0.036	0.000	0.002	0.0000	47.0	54.5	28	0.00	1.5	0.01	0.00	0.00	0.00	0.00			
MAX		2.617	1.726	0.856	0.372	0.549	0.0000	61.9	75.2	90	0.39	7.4	2.50	1.68	0.00	2.50				

DERWA Recycled Water Demand



DUBLIN SAN RAMON SERVICES DISTRICT
 DERWA Recycled Water Daily Demand
 December 2011

Date:	Day:	Recycled Water Customer Demand (MG)										Weather Conditions						Production (MG)		
		Total	R100	R200	R300	R20	Load Out Station	Mean Temp °F	Max Temp °F	Avg Hum	Rainfall inches	Wind mph	Eto inches	SF-UV Recycled	MF-UV Recycled	Potable	Total			
1	Thu	0.517	0.373	0.034	0.045	0.065	0.0000	60.2	66.5	19	0.00	10.0	0.19	0.00	0.00	1.29	0.00	1.29		
2	Fri	0.776	0.199	0.224	0.034	0.320	0.0000	61.7	73.7	31	0.00	4.2	0.12	0.00	0.00	0.00	0.00	0.00		
3	Sat	1.032	0.348	0.413	0.029	0.242	0.0000	55.6	62.9	19	0.00	4.9	0.12	0.00	0.88	0.00	0.00	0.88		
4	Sun	0.672	0.463	0.090	0.029	0.090	0.0000	47.9	64.5	47	0.00	1.7	0.07	0.00	0.00	1.02	0.00	1.02		
5	Mon	0.935	0.475	0.158	0.056	0.245	0.0000	47.4	58.6	50	0.00	3.0	0.08	0.00	0.00	0.00	0.00	0.00		
6	Tue	1.072	0.607	0.318	0.072	0.075	0.0000	44.1	62.9	62	0.00	1.3	0.06	0.00	0.00	0.00	0.00	0.00		
7	Wed	1.061	0.620	0.278	0.059	0.104	0.0000	43.9	61.5	65	0.00	1.2	0.06	0.00	0.00	1.05	0.00	1.05		
8	Thu	0.921	0.476	0.258	0.089	0.097	0.0000	43.7	60.0	68	0.00	1.7	0.06	0.00	0.92	0.00	0.00	2.01		
9	Fri	0.449	0.068	0.209	0.082	0.088	0.0000	44.8	61.5	65	0.00	2.3	0.06	0.00	0.00	0.00	0.00	1.71		
10	Sat	1.179	0.761	0.290	0.048	0.080	0.0000	44.4	62.8	70	0.00	1.3	0.06	0.00	0.00	0.00	0.00	0.74		
11	Sun	0.988	0.382	0.179	0.079	0.348	0.0000	46.4	53.1	76	0.00	2.2	0.04	0.00	0.00	0.00	0.00	0.00		
12	Mon	0.590	0.069	0.381	0.056	0.084	0.0000	45.6	51.3	85	0.00	2.3	0.02	0.00	0.00	1.05	0.00	1.05		
13	Tue	0.770	0.317	0.330	0.069	0.055	0.0000	44.3	58.5	77	0.00	2.1	0.05	0.00	0.52	0.00	0.00	0.52		
14	Wed	0.407	0.144	0.165	0.045	0.053	0.0000	44.8	59.4	81	0.00	1.9	0.05	0.00	0.82	0.00	0.00	0.82		
15	Thu	0.489	0.193	0.165	0.077	0.055	0.0000	45.7	52.2	87	0.09	2.3	0.02	0.00	0.83	0.00	0.00	0.83		
16	Fri	0.631	0.060	0.173	0.034	0.365	0.0000	49.2	64.6	61	0.00	3.4	0.07	0.00	0.93	0.00	0.00	0.93		
17	Sat	0.460	0.262	0.121	0.022	0.055	0.0000	45.2	64.2	74	0.00	1.5	0.05	0.00	0.00	0.00	0.00	0.00		
18	Sun	0.363	0.256	0.047	0.020	0.040	0.0000	43.8	53.7	85	0.00	2.9	0.05	0.00	0.00	0.00	0.00	0.00		
19	Mon	0.730	0.173	0.118	0.052	0.388	0.0000	51.0	65.7	59	0.00	2.2	0.05	0.00	0.00	0.00	0.00	0.00		
20	Tue	0.806	0.205	0.431	0.045	0.125	0.0000	45.4	62.8	64	0.00	1.6	0.05	0.00	0.00	0.00	0.00	1.44		
21	Wed	0.624	0.249	0.189	0.107	0.079	0.0000	46.1	63.2	47	0.00	2.3	0.08	0.00	0.00	0.00	0.00	0.00		
22	Thu	1.204	0.364	0.389	0.053	0.397	0.0000	51.0	60.7	25	0.00	4.3	0.10	0.00	0.00	0.00	0.00	0.00		
23	Fri	0.505	0.147	0.215	0.092	0.051	0.0000	41.8	62.9	47	0.00	1.4	0.06	0.00	2.17	0.00	0.00	2.17		
24	Sat	0.458	0.272	0.067	0.083	0.035	0.0000	41.2	56.2	60	0.00	2.8	0.06	0.00	0.00	0.00	0.00	1.75		
25	Sun	0.437	0.229	0.114	0.090	0.055	0.0000	40.5	60.8	68	0.00	1.6	0.04	0.00	0.00	0.00	0.00	0.00		
26	Mon	0.817	0.517	0.174	0.090	0.035	0.0000	41.3	58.6	77	0.00	2.0	0.05	0.00	0.00	0.00	0.00	0.00		
27	Tue	0.942	0.468	0.346	0.053	0.075	0.0000	46.9	61.5	71	0.00	1.8	0.05	0.00	0.96	0.00	0.00	0.96		
28	Wed	0.950	0.543	0.182	0.103	0.122	0.0000	50.8	68.2	67	0.00	1.9	0.06	0.00	1.09	0.00	0.00	1.09		
29	Thu	1.585	0.259	0.643	0.048	0.635	0.0000	52.0	65.6	86	0.00	2.2	0.04	0.00	0.90	0.00	0.00	0.90		
30	Fri	1.073	0.254	0.355	0.118	0.347	0.0000	54.4	62.2	89	0.00	2.5	0.03	0.00	1.38	0.00	0.00	1.38		
31	Sat	0.510	0.343	0.074	0.034	0.060	0.0000	50.1	58.9	72	0.00	4.3	0.06	0.00	1.08	0.00	0.00	1.08		
TOTAL		23.954	10.096	7.132	1.860	4.865	0.0008				0.09				19.21	0.00	23.62			
AVG		0.773	0.326	0.230	0.060	0.157	0.0000	47.5	61.3	63	0.00	2.6	0.06	0.00	0.62	0.00	0.76			
MIN		0.363	0.060	0.034	0.020	0.035	0.0000	40.5	51.3	19	0.00	1.2	0.02	0.00	0.00	0.00	0.00	0.00		
MAX		1.585	0.761	0.643	0.118	0.635	0.0008	61.7	73.7	89	0.09	10.0	0.19	0.00	2.17	0.00	2.17	2.17		

DERWA Recycled Water Demand

