

WATER MANAGEMENT

LOMAA Quarterly Meeting

June 19, 2024

Why Focus on Water Management

- Rising Water Rates
- Increasing Conservation Awareness
- Effective Budget Management

- Prior Presentation 5/3/21
Irrigation Management – *Randall Riefel*

Multiple Rate Structures

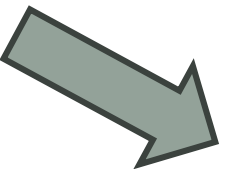
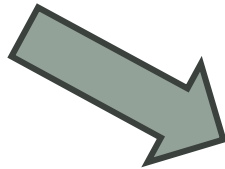
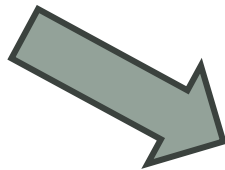
<https://www.srcity.org/817/Rate-Information>

Rate Table

July 1, 2023



Type of Account			Per 1,000 Gallons
Single Family Residential, Duplex (2 units) <i>(including Water Only*)</i>	Tiered Rates	Tier 1	Up to sewer cap \$6.36
		Tier 2	Usage above sewer cap \$7.20
Dedicated Irrigation (Potable)	Tiered Rates	Tier 1	Up to 125% of billing period water budget \$6.46
		Tier 2	Over 125% of billing period water budget \$8.00
Recycled Water (Irrigation)	Tiered Rates	Tier 1	Up to 125% of billing period water budget \$6.14
		Tier 2	Over 125% of billing period water budget \$8.00
Recycled Water (Commercial / Industrial)		All use billed at Recycled Commodity Rate	\$5.89
Z=Y (Single Family Residential with no irrigation needs)		All use billed at Residential Tier 1 Rate	\$6.36
Multi-Unit Residential		All use billed at Commodity Rate	\$6.72
Commercial / Industrial / Institutional		All use billed at Commodity Rate	\$6.72



Waste Water and Fixed Fees

Waste Water	
Residential	\$15.73
Non-Residential	
Standard Strength (Commercial / Industrial / Institutional)	\$15.73
Low Strength	\$12.92
Medium Strength	\$17.53
High Strength	\$21.86

Fixed Fees

Meter Size	Water	Sewer	Recycled Water	Fire Line	Specialty Meters
5/8" or 3/4"	\$14.95	\$27.11	\$13.45	-	\$5.61
1"	\$33.56	\$62.58	\$30.20	-	\$6.01
1.5"	\$64.57	\$121.69	\$58.11	-	\$8.68
2"	\$101.79	\$192.62	\$91.61	\$32.00	\$9.55
3"	\$188.64	\$358.12	\$169.77	-	\$15.65
4"	\$312.71	\$594.57	\$281.44	\$32.00	\$21.45
6"	\$622.89	\$1,185.67	\$560.60	\$41.00	\$30.93
Backflow Admin Fee	\$3.25				
Fireline Testing Fee	\$5.00				

* Not all rates and fees are noted here. For all rates and fees please reference:

Resolution #1306 Misc Fees / #980 Backflow / #1013 Fireline / #2021-087 Wastewater / Ordinance #2021-004 Water

Sewer Cap and Water Budget

- **Sewer Cap**

- Sewer charges for most single-family residential customers are determined by an account's "sewer cap." To determine the sewer cap we average the water usage during the winter billing periods. This occurs during the months of November through March. We use these billing periods because these are normally wet months when it can be reasonably assumed that virtually all water is used indoors and exits as wastewater. The average monthly indoor water usage is called the "sewer cap."

- **Water Budget**

- The amount of water that a dedicated irrigation account landscape needs during the billing period and is determined by a formula using the site's square footage measurements for the type of landscape and the evapotranspiration rate.

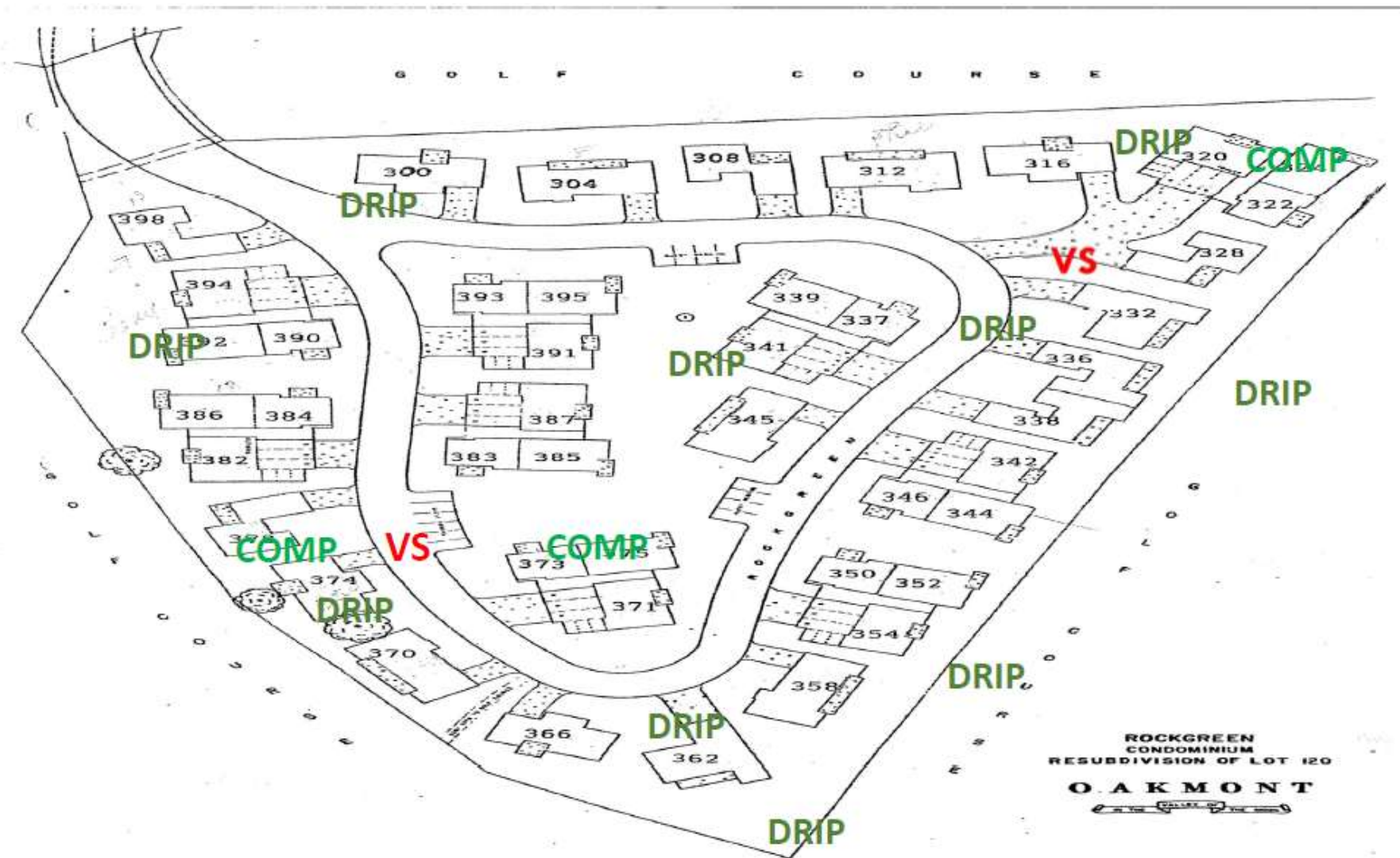
Multi-Family Charges

- Customers are charged a water fixed charge based on meter size and a usage charge based on a uniform rate. Multi-family, industrial, and commercial customers are charged a sewer fixed charge based on meter size and a sewer usage charge based on water use. Customers who use their domestic meters to irrigate outdoors are charged a sewer usage charge as defined by the sewer cap

Model Your HOA

- Single Family Homes
 - Owner vs. HOA billing
 - Irrigation?
- Multi-Family Homes
 - Duplex vs. Triplex & Quads
 - Irrigation?
- Dedicated Irrigation
 - Meters
 - Backflow Preventers
 - Controllers
 - Valves
 - High use vs. Low/Moderate use

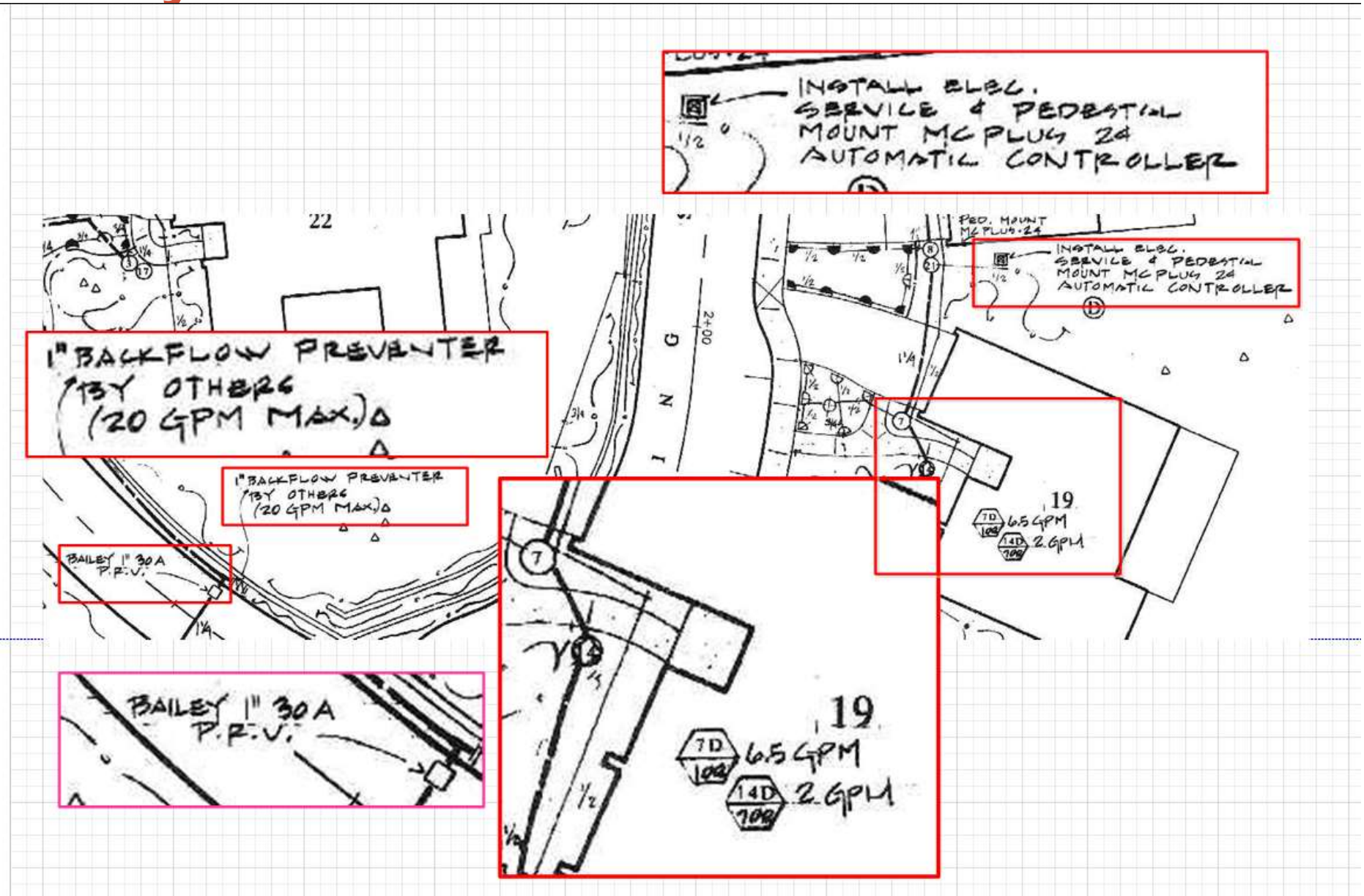
Rockgreen Example



Starry Knoll Example



Starry Knoll Detail



Monitor Use

- Single Family / Duplex Billing

Usage Information				
Service Address:				
Meter #	Current Read	Date	Previous Read	Date
115683	369	07/22/2021	365	06/23/2021
Read Date		Days		Usage
07-22-2021		29		4
06-23-2021		30		5
05-24-2021		32		6
04-22-2021		29		6
03-24-2021		28		5
02-24-2021		29		4
01-26-2021		28		5
12-29-2020		35		5
11-24-2020		28		6
10-27-2020		33		5
09-24-2020		28		6
08-27-2020		30		7
07-28-2020		33		7
<p>This bill reflects a rate change to water, recycled water, and sewer fixed and user charges. For more information, please visit srcity.org/WaterRates</p>				

WATER Consumption	Current Usage: 4 thousand gallons Average Daily Usage Per Person: 69 gallons
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Previous Balance		\$133.37
Payment 07/14/2021 - Thank you		\$133.37 CR
Subtotal		\$0.00
Current Charges (thousand gallons)		
Water Usage Tier 1	4.0 @ \$5.99	\$23.96
5/8" Water Fixed Charge		\$14.09
Sewer Usage Charge	4.0 @ \$15.12	\$60.48
Sewer Fixed Charge		\$26.06
Subtotal		\$124.59
Total Current Charges (Due by 08/25/2021)		

Total Balance Due	\$124.59
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Monitor Use

- Dedicated Irrigation Billing**

Usage Information

Service Address: 492 SHOOTING STAR PL

Meter #	Current Read	Date	Previous Read	Date
113945	2,471	07/22/2021	2,429	06/23/2021

Read Date	Days	Usage
07-22-2021	29	42
06-23-2021	30	41
05-24-2021	32	37
04-22-2021	29	37
03-24-2021	28	0
02-24-2021	29	0
01-26-2021	28	0
12-29-2020	35	11
11-24-2020	28	26
10-27-2020	33	39
09-24-2020	28	46
08-27-2020	30	46
07-28-2020	33	61

This bill reflects a rate change to water, recycled water, and sewer fixed and user charges. For more information, please visit socity.org/WaterRates

Water budget is based on weather and current landscape area.

Your water budget this month is (thousand gallons):	106
High water use plants (sq. ft.):	7,088
Other plants (sq. ft.):	28,938
Current Usage (thousand gallons):	42

Previous Balance	\$276.01
Payment 07/27/2021 - Thank you	\$276.01 CR
Subtotal	\$0.00

Current Charges	(thousand gallons)		
Irrigation Usage Tier 1	42.0 @	\$6.09	\$255.78
1" Irrigation Fixed Charge			\$31.63
Backflow Program Administration Fee			\$3.25
Subtotal			\$290.66

Total Current Charges (Due by 08/25/2021)
Automatic Bill Payment scheduled 25Aug2021

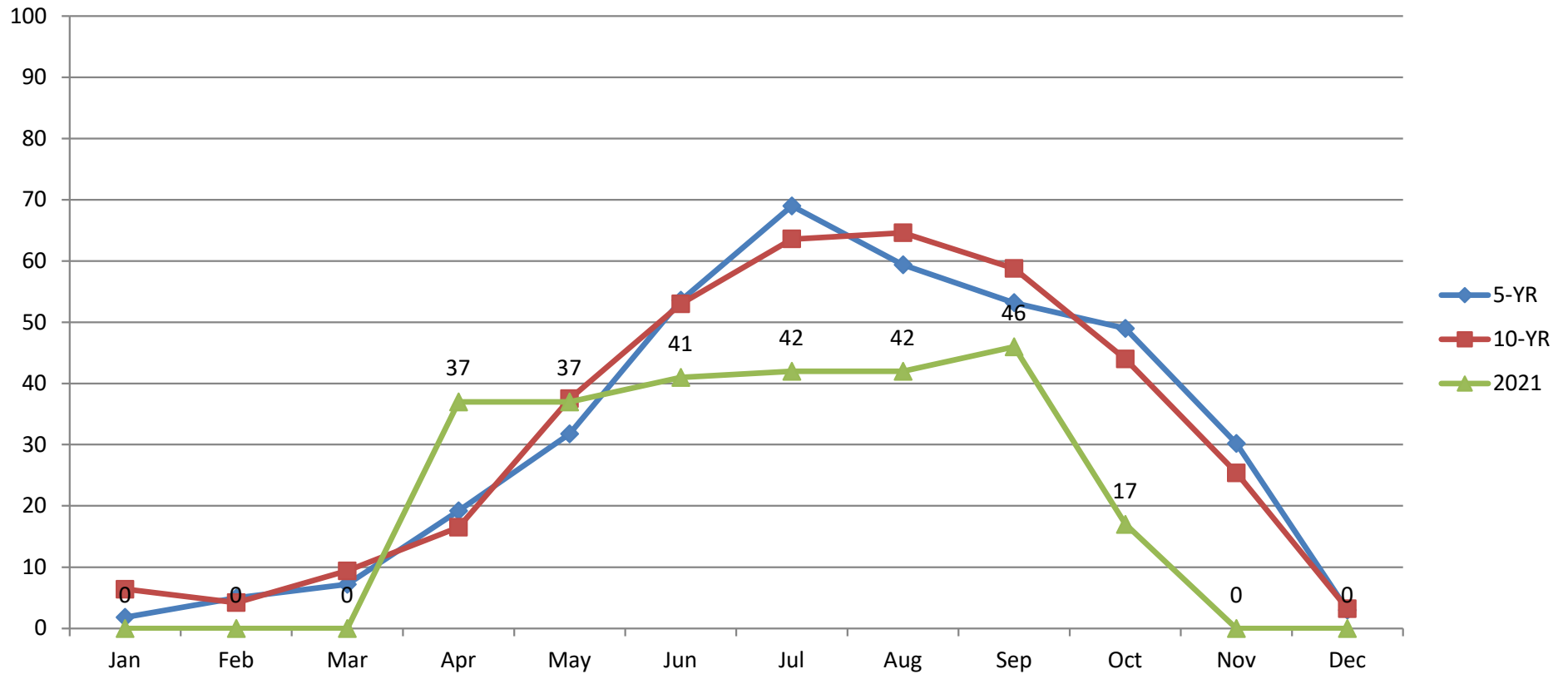
Total Balance Due	\$290.66
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Monitor Trends

Starry Knoll Owners Association				Meter		91808		Address		1014 Oak Mesa Dr						
2021 Water Consumption																
Thousand Gallons													Read			
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	5-YR	10-YR	2021	Date	2021 Reduction	
Jan	0	37	8	75	0	0	0	0	0	0	0.0	12.0	0	26-Jan		
Feb	0	0	20	9	0	0	0	73	0	10	16.6	11.2	0	24-Feb		
Mar	0	0	46	11	15	0	2	47	0	42	18.2	16.3	0	24-Mar		
Apr	0	0	41	15	56	22	0	144	14	40	44.1	33.2	74	22-Apr		
May	16	39	131	72	45	61	163	99	94	78	98.9	79.8	81	24-May		
Jun	19	104	169	132	79	101	171	233	135	112	150.3	125.5	95	23-Jun	-15%	
Jul	29	140	175	130	113	143	211	238	133	139	172.8	145.1	94	22-Jul	-32%	
Aug	163	163	165	150	145	160	153	149	186	117	153.0	155.1	96	23-Aug	-18%	
Sep	61	159	171	136	131	163	172	149	126	116	145.2	138.4	98	22-Sep	-16%	
Oct	13	115	98	83	146	103	167	144	126	120	132.0	111.5	37	21-Oct	-69%	
Nov	15	0	67	15	34	0	68	100	136	70	74.8	50.5	0	21-Nov	-100%	
Dec	18	0	20	0	0	0	0	0	8	26	6.8	7.2	0	21-Dec	-100%	
Total	334	757	1111	828	764	753	1107	1376	958	870	1012.7	885.8	575		-34%	
Average	27.8	63.1	92.6	69.0	63.7	62.7	92.3	114.7	79.8	72.5	84.4	73.8	47.9			
												80% Target		696		

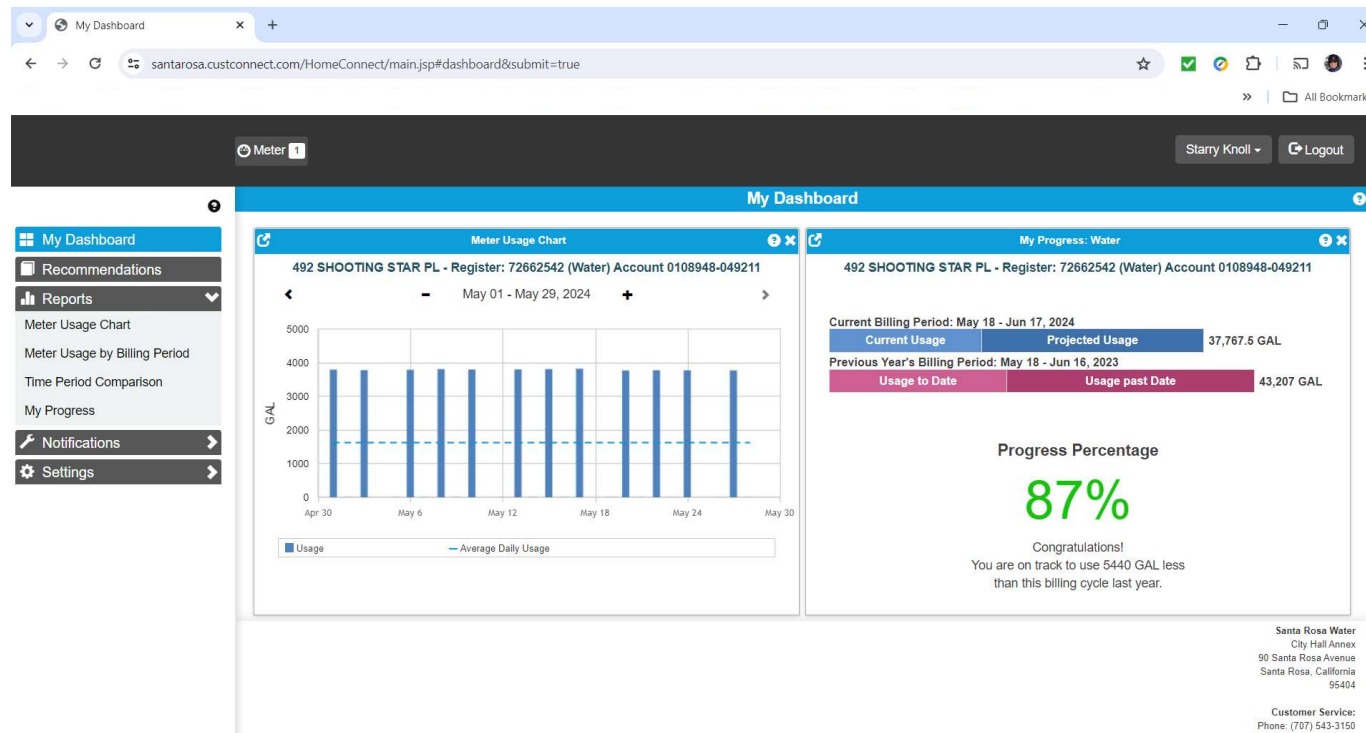
Monitor Trends

113945 - 492 Shooting Star PI



Check Unusual Usage

- Santa Rosa Water Use Portal



Check Usage Details

The screenshot shows a web browser window with the URL `santarosa.custconnect.com/HomeConnect/main.jsp#dashboard&submit=true`. The page title is "My Dashboard" and it features a "Meter 1" indicator and "Starry Knoll" and "Logout" buttons.

My Dashboard

- My Dashboard
- Recommendations
- Reports
 - Meter Usage Chart
 - Meter Usage by Billing Period
 - Time Period Comparison
 - My Progress
- Notifications
- Settings

Meter Usage Chart

492 SHOOTING STAR PL - Register: 72662542 (Water) Account 0108948-049211

May 27, 2024

The chart displays usage in GAL (Gallons) over a 24-hour period. The y-axis ranges from 0 to 1000 GAL. The x-axis shows time intervals from 11:00 PM to 5:00 AM. A blue bar chart represents "Usage" and a dashed blue line represents "Average Usage".

Time	Usage (GAL)	Average Usage (GAL)
11:00 PM	850	150
12:00 AM	550	150
1:00 AM	450	150
2:00 AM	600	150
3:00 AM	550	150
4:00 AM	400	150
5:00 AM	250	150

My Progress: Water

492 SHOOTING STAR PL - Register: 72662542 (Water) Account 0108948-049211

Current Billing Period: May 18 - Jun 17, 2024

Current Usage	Projected Usage	Total
		37,767.5 GAL

Previous Year's Billing Period: May 18 - Jun 16, 2023

Usage to Date	Usage past Date	Total
		43,207 GAL

Progress Percentage

87%

Congratulations!
You are on track to use 5440 GAL less than this billing cycle last year.

Santa Rosa Water
City Hall Annex
90 Santa Rosa Avenue
Santa Rosa, California
95404

Customer Service:
Phone: (707) 543-3150

Checking the Plan

Controller Location: Front of # 484







Schedule may be subject to change depending on weather conditions

Zone #	Prog. #	Irrig. Type	Station	Zone	Location	Lot #	Start Time 1	Start Time 2	Start Time 3	Watering minutes	S	M	T	W	Th	F	S
1	A	MP Rot.	Lawn	front driveway #496	4D	21				15		X		X		X	
2	A	MP Rot.	Lawn	front driveway #486	7D	19				15		X		X		X	
3	A	MP Rot.	Lawn	front driveway #484	8D	18				15		X		X		X	
4	A	MP Rot.	Lawn	front driveway #484	9D	18	12:00 AM			15		X		X		X	
5	A	MP Rot.	Lawn	front driveway #480	10D	17		3:00 AM		15		X		X		X	
6	A	MP Rot.	Lawn	front driveway #480	11D	17				15		X		X		X	
7	B	Sprays	Flower Bed	#480	12D	17				10		X		X		X	
8	B	Drips	Shrubs	#484	13D	18				45		X		X		X	
9	B	Drips	Shrubs	#484	21D	18				45		X		X		X	
10	B	Drips	Front window landscape	486	14D	19	12:00 AM			45		X		X		X	
11	B	Drips	Shrubs	#498	19D	23				45		X		X		X	
12	B	Drips	Garden	#488	15D	20				45		X		X		X	
13	B	Drips	Shrubs	#496	18D	19				45		X		X		X	
14	B	Drips	Shrubs	#496	20D	21				45		X		X		X	
15	B	Drips	Garden	#488	17D	22				45		X		X		X	
16	B	Drips	rosemary by timer and rock wa		22D	17				45		X		X		X	

Usually increase lawn to 5 days during summer

Adjusting the Plan

- **WaterSmart Irrigation Scheduling Tool**
 - <https://www.savingwaterpartnership.org/watering-times/>
- Water index for controllers that include a water budget percentage adjustment feature.
- Weekly watering tool for controllers that need individual Zone changes.

	Moderate Water Use			High Water Use (Lawn)		
						
Irrigation Type	Drip Emitters	Inline Drip	Micro Spray	Multi-stream	Rotor	Fixed Spray
Run Time (Minutes)	17	12	8	21	14	8
Cycles Per Day	2	2	2	2	2	2
Days Per Week	3	2	2	3	3	3
Total Weekly Run Time (Minutes)	102	48	32	126	84	48

Future Plan and Budget

- Check the rate change for the next July
 - <https://www.srcity.org/817/Rate-Information>
 - 2026 rates need an ordinance update
- Estimate usage for upcoming year
 - Use historical data from Trend Monitoring
 - “Cash for Grass”
 - Should reduce usage where turf is replaced
 - Should also reduce water budget for dedicated irrigation systems
 - Should not change sewer cap if irrigation is not used Nov to Mar
 - Evaluate adjustment needs
 - Late start/Early stop for irrigation
 - Change limits for peak summer irrigation schedule
 - Conservation changes for domestic uses

Future Plan and Budget

- Do the arithmetic
 - Jan to Jun will be at the current year rate
 - Jul to Dec will be at the new rate for next year and sewer cap will be adjusted.

	Tier 1			Tier 2			Sewer	Fixed Charges			
	Usage	Rate	Charge	Usage	Rate	Charge		Water	Sewer	Backflow	
January	0	\$ 6.09	\$ -		\$ 7.54	\$ -	\$ -	\$ 31.63	\$ -	\$ 3.25	
February	0	\$ 6.09	\$ -		\$ 7.54	\$ -	\$ -	\$ 31.63	\$ -	\$ 3.25	
March	0	\$ 6.09	\$ -		\$ 7.54	\$ -	\$ -	\$ 31.63	\$ -	\$ 3.25	
April	50	\$ 6.09	\$ 304.50		\$ 7.54	\$ -	\$ -	\$ 31.63	\$ -	\$ 3.25	
May	40	\$ 6.09	\$ 243.60		\$ 7.54	\$ -	\$ -	\$ 31.63	\$ -	\$ 3.25	
June	60	\$ 6.09	\$ 365.40		\$ 7.54	\$ -	\$ -	\$ 31.63	\$ -	\$ 3.25	
July	65	\$ 6.27	\$ 407.55		\$ 7.77	\$ -	\$ -	\$ 32.58	\$ -	\$ 3.25	
August	50	\$ 6.27	\$ 313.50		\$ 7.77	\$ -	\$ -	\$ 32.58	\$ -	\$ 3.25	
September	50	\$ 6.27	\$ 313.50		\$ 7.77	\$ -	\$ -	\$ 32.58	\$ -	\$ 3.25	
October	40	\$ 6.27	\$ 250.80		\$ 7.77	\$ -	\$ -	\$ 32.58	\$ -	\$ 3.25	
November	0	\$ 6.27	\$ -		\$ 7.77	\$ -	\$ -	\$ 32.58	\$ -	\$ 3.25	
December	0	\$ 6.27	\$ -		\$ 7.77	\$ -	\$ -	\$ 32.58	\$ -	\$ 3.25	
Totals			\$ 2,198.85		\$ -	\$ -	\$ -	\$ 385.26	\$ -	\$ 39.00	\$ 2,623.11