

OLYMPIC VALLEY PUBLIC SERVICE DISTRICT



2022 WATER AND SEWER SYSTEM REPORT

Prepared June 2023
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EQUIPMENT CAPITAL REPLACEMENT PROJECTS
Budget Year 2023 - 2028

Equipment Type	Funding Source	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	Project Total
Fleet							
Ford F-250	Water/Sewer FARF	\$ 67,900					\$ 67,900
Ford F-150	Water/Sewer FARF		\$ 45,000				\$ 45,000
Ford F-350	Water/Sewer FARF			\$ 58,800			\$ 58,800
Equipment							
Sewer Bypass Trailer and Hose	Sewer CIP			\$ 35,000			\$ 35,000
New Holland	Water/Sewer FARF			\$ 107,900			\$ 107,900
JD Loader	Water/Sewer FARF		\$ 105,400				\$ 105,400
Small Tools and Equipment							
Sewer Lateral CCTV Cam	Sewer FARF	\$ 25,000					\$ 25,000
SCBA Cart	Water/Sewer FARF	\$ 20,000					\$ 20,000
Hydraulic Trench Shoring	Water/Sewer FARF				\$ 8,400		\$ 8,400
TOTAL		\$ 112,900	\$ 150,400	\$ 201,700	\$ 8,400	\$ -	\$ 473,400

OVPSD Utilities Report 2022

I. Flow Report

A. Water Production Total = 100.33 MG
Comparison: 2.39 MG Less Than 2021

B. Sewer Collection Total = 82.28 MG
Comparison: 11.38 MG More Than 2021

C. Aquifer Level 2022	Maximum Level	December 31, 2022: 6190.0'
	Minimum Level	October 9, 2022: 6181.8'

Total Change in Static Water Level 2021: 12.5'

Total Change in Static Water Level 2022: 9.2'

D. Precipitation Total	21/22 Water Year = 61.40"
	57-Year average = 53.51"
	21/22 Water Year % of the 57-Year average = 114.75%

* The maximum level represents a rough average of the highest levels measured in the aquifer during spring melt period.

** The lowest level recorded in the aquifer was 6,174.0 feet above mean sea level on October 12, 2001. This level is not necessarily indicative of the total capacity of the aquifer.

*** Creek bed elevation (per Kenneth Loy, West Yost Associates) near Well 2r is 6,186.9 feet.

**** The season total for Precipitation is calculated from October 2021 through September 2022.

***** The true average could be higher or lower than the reported value due to the uncertainty of the Old Fire Station precipitation measurement during the period 1994 to 2004.

***** The production number is different than scada reports due to time of day reading issues.

II. Leaks, Repairs, and Maintenance

A. Water

1. New meters installed: 18
2. Water meters replaced or rebuilt: 28
3. Water meter upgrades: 0
4. Customer service water meters turned on or off: 5
5. Routine leak/high usage detection notification: 103
6. Customer requested leak detection services performed: 12
7. No water responses: 0
8. Fire hydrants flushed: 170
9. Blow-offs flushed: 20
10. Valves exercised: 56
11. Repair/Replace service line: 1
12. Repair leak on water main: 2
13. Backflow devices tested: 541
14. Test District backflows: 4
15. Quarterly vault inspections on Well 1R and Well 3: 8
16. Water tank inspections: 8
17. Water quality complaints serviced: 0
18. Tested commercial meters: 0
19. Replaced Air/Vac breakers: 0
20. Water samples collected:
 - Bacteriological: 24
 - Nitrate: 4

B. Sewer

1. Sanitary sewer overflows: 0
2. Main line repairs: 0
3. Service line repairs: 0
4. Sewer cleanout repairs: 2
5. Manhole repairs: 1
6. Manhole grouting: 0
7. Cleaning:
 - Spring and fall cleaning of high priority lines
 - Main sewer lines cleaned: 275
8. Inspections:
 - Underground Service Alerts: 240
 - Pre-remodel Inspections: 1
 - Final Inspections: 16
 - Fixture count Inspections: 1
 - Water service line Inspections: 8
 - Sewer service line Inspections: 9
 - Sewer service line pressure test: 35
 - Sewer main line Inspections: 0
 - Water quality complaint Investigations: 0
 - Water Backflow Inspections: 2
 - Fog Inspections: 1

III. Building and Grounds Maintenance and Repair

A. 305 Squaw Valley Road Fire Department and Administration

1. Continued monthly service and maintenance of facility and equipment.

B. 1810 Squaw Valley Road District Equipment Garage

1. Continued monthly service and maintenance of facility and equipment.

IV. Vehicles and Equipment

A. Vehicles

1. All vehicles received an annual service, with the exception of the Ford Interceptor and Ford F-150 which received biannual services.

B. Equipment

1. All small equipment received an annual service.

V. Administrative

- #### **A. VUE Works data input.**

VI. Operation & Maintenance Projects

- A. Vegetation removal from access roads to tanks
- B. Gate valve box repairs
- C. Completed Operations and Maintenance of SV Mutual Water Company.
- D. Sewer System I/I inspection
- E. 2022 CCTV Sewer Project
- F. Manhole Repairs
- G. Spring and Fall Flushing
- H. Annual Sewer Cleaning
- I. High Priority Cleaning
- J. Hydrant Ballard Repairs
- K. Tank Inspections
- L. Fire Hydrant Repairs
- M. Sewer C/O Locating
- N. Meter Box replacements
- O. Green waste clean up
- P. West tank recoating project support

VII. Summary

2022 was another challenging year. OVPSD Operations Department has restaffed after multiple operators left District employment. The Operations department was able to make a few repairs to assets in the district. The District dis-continued a contract to operate and maintain the Squaw Valley Mutual Water Company. Training continued this year keeping the district crew as knowledgeable and up to date as possible so that we may provide the best available service to our customers.

Water System Inventory – 2022

1. Water Well #1R – 370 GPM average. *
2. Water Well #2R – 320 GPM average. *, **
3. Water Well #3 – 110 GPM average. *
4. Water Well #4 – (Not in Service)
5. Water Well #5R – 385 GPM average. *
6. Horizontal Well – (Out of Service). *, ***

2022 Total average flow – 1,185 GPM ****

7. West Tank - 1,150,000 Gallon Water Tank
8. East Tank - 500,000 Gallon Water Tank
9. Zone 3 Tank - 135,000 Gallon Water Tank

Total Storage – 1,785,000 Gallons

10. 2 Booster Pumping Stations
11. 860 Water Meters connected per Billing
12. 138 Fire Hydrants
13. 34 Air Release Valves
14. 575 Backflow Prevention Devices
15. 417 Gate Valves

Notes:

* GPM averaged from the time wells were on and running.

** Well 2R GPM is affected by seasonal aquifer level changes. During low aquifer level years the well GPM is reduced to prevent pumping below the well screens.

*** Horizontal Well is out of service. When it runs GPM is affected by gravity flow and changes from one year to the next. Longer periods of operation will lower the GPM. The average in 2016 was 70 GPM.

**** 2022 total average flow does not indicate total capacity. This total is the combined GPM flows from all the wells as they were operated in 2021 calendar year.

Water System Inventory – 2022

16. 17 Butterfly Valves
17. 23 Blow Off Assemblies
18. 5 Control Valves (Granite Chief, East Booster, Zone 3 Booster, Hz Well)
19. 3 Transducer Stations (West Tank, East Tank, and Zone Three Tank)
20. 7 Remote Terminal Units (RTU), SCADA Telemetry System
21. 12,761 Feet 12" Water Distribution Main
22. 10,752 Feet 10" Water Distribution Main
23. 32,312 Feet 8" Water Distribution Main
24. 21,015 Feet 6" Water Distribution Main
25. 696 Feet 4" Water Distribution Main
26. 990 Feet 2" Water Distribution Main
27. 439 Feet 6" Water Service Line
28. 240 Feet 4" Water Service Line
29. 3,170 Feet 2" Water Service Line
30. 254 Feet 1.25" Water Service Line
31. 39 Feet 1.5" Water Service Line
32. 3,033 Feet 1" Water Service Line
33. 128 Feet $\frac{3}{4}$ " Water Service Line

Total Water Main = 78,526 Feet = 14.872 Miles

Total Water Services = 7,303 Feet = 1.383 Miles

Combined Total = 85,829 Feet = 16.250 Miles

Olympic Valley Public Service District - Year End Water Audit Report

Report Date: January 10, 2023 Performed By: Brandon Burks

Year: 2022

Begin Audit Period: 12/31/21 12:00 AM
 End Audit Period: 1/5/23 12:00 AM

Total Metered Consumption for audit period specified (including hydrant meters): 82,598,011

Additional Consumption - Unmetered

Fire Department Use:	<u>101,500</u>	
Hydrant Flushing:	<u>965,000</u>	
Blow-Off Flushing:	<u>30,000</u>	
Sewer Cleaning:	<u>140,000</u>	
Street Cleaning:		
Well Flushing:		
Tank Overflows:	<u>250,000</u>	
Unread Meter Estimated Reads:		
Other:	<u>1,000,000</u>	
Total Unmetered Consumption (for audit period specified):		<u>2,486,500</u>

Estimated Unknown Loss - Unmetered

Known Theft:		
Known Illegal Connections:		
Total Estimated leaks that have been repaired:	<u>932,000</u>	
Total Estimated Unmetered (for audit period specified):		<u>932,000</u>

Total Production for audit period specified: 97,753,398

Total Metered/Unmetered Consumption for audit period specified: 86,016,511

Total Water Loss (Production - Consumption): 11,736,887
Loss Percentage: 12.0% ***

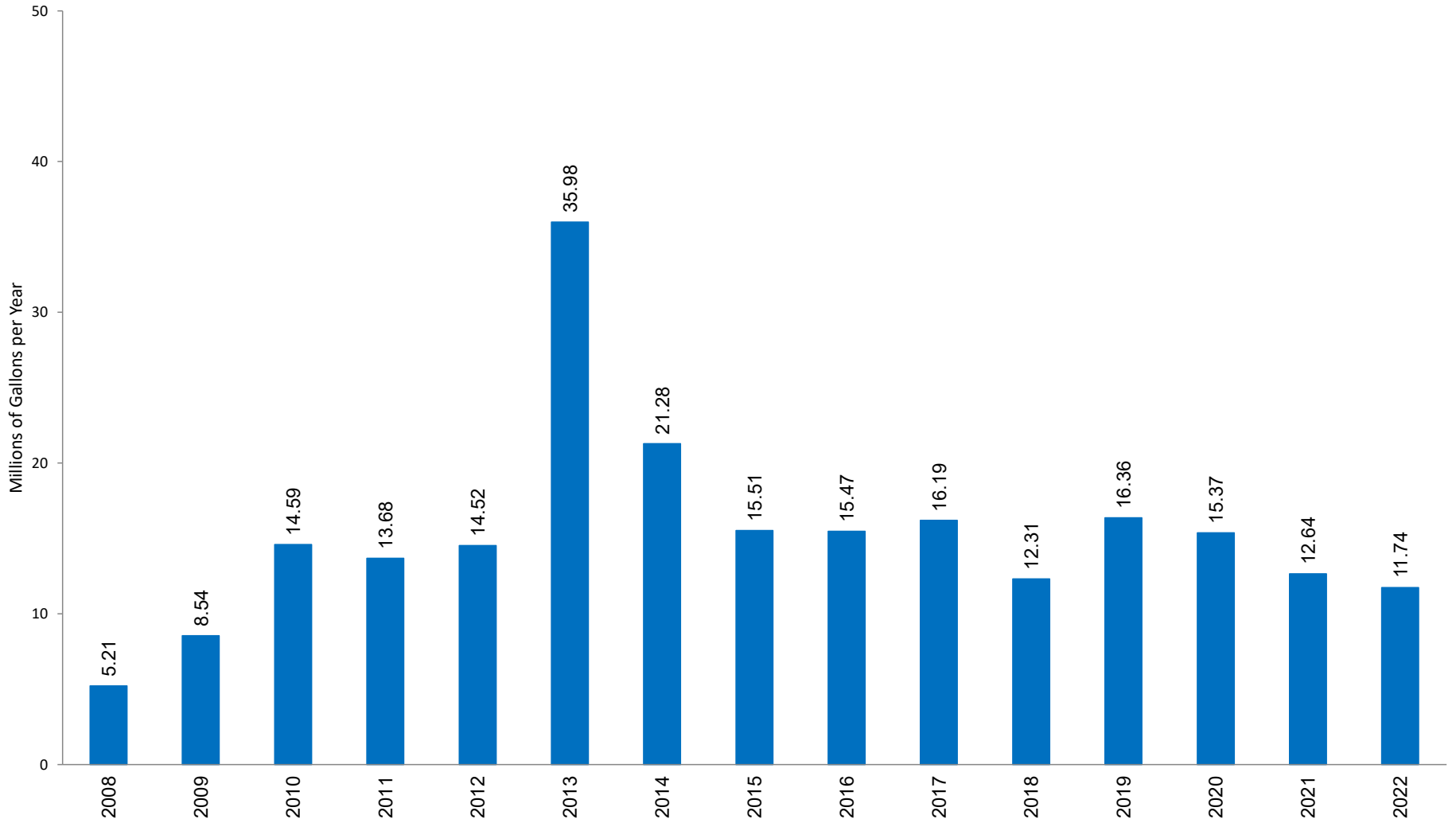
Comments: The production totals are different than the monthly report due to a different time frame being used.

* Instructions - Only fill in the blue cells *

* Note - All Production & Consumption Totals In U.S. Gallons *

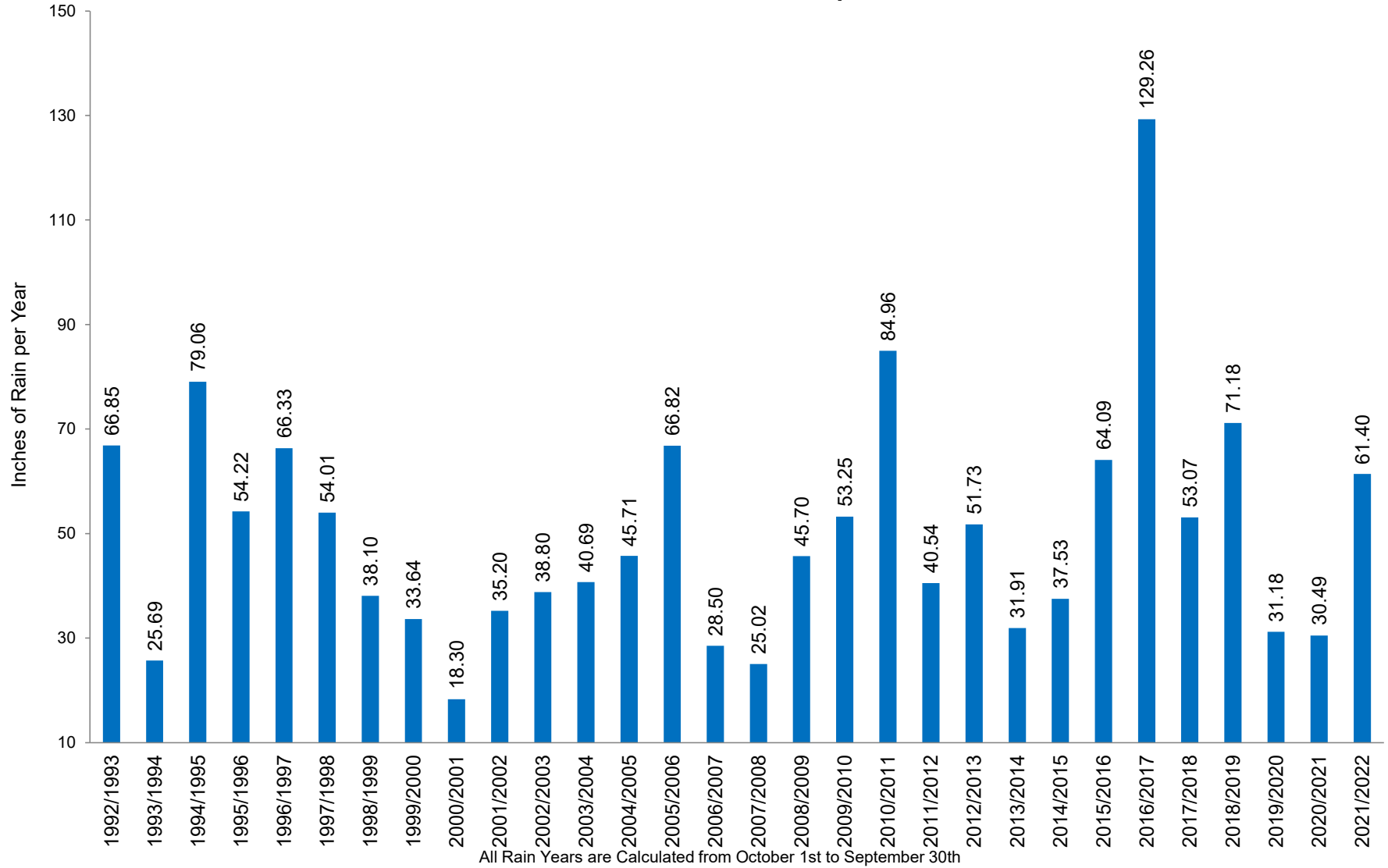
*** Note - Total Water Loss Percentage included theft, Illegal Connections or Leaks that have been repaired

OVPSD 15 Year Water Loss Trend

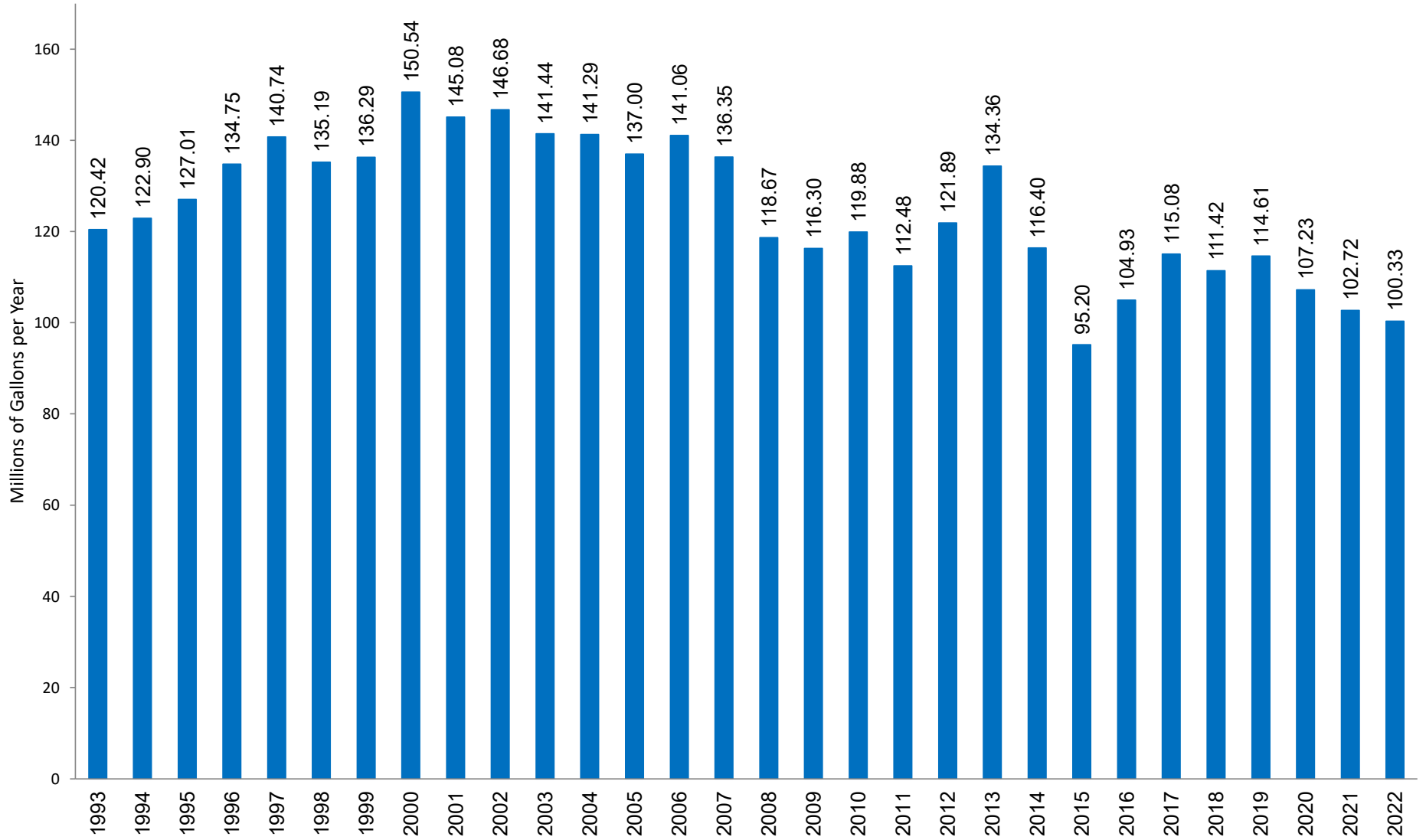


Information comes from from Year End Water Audit Report

OVPSD 30 Year Precipitation

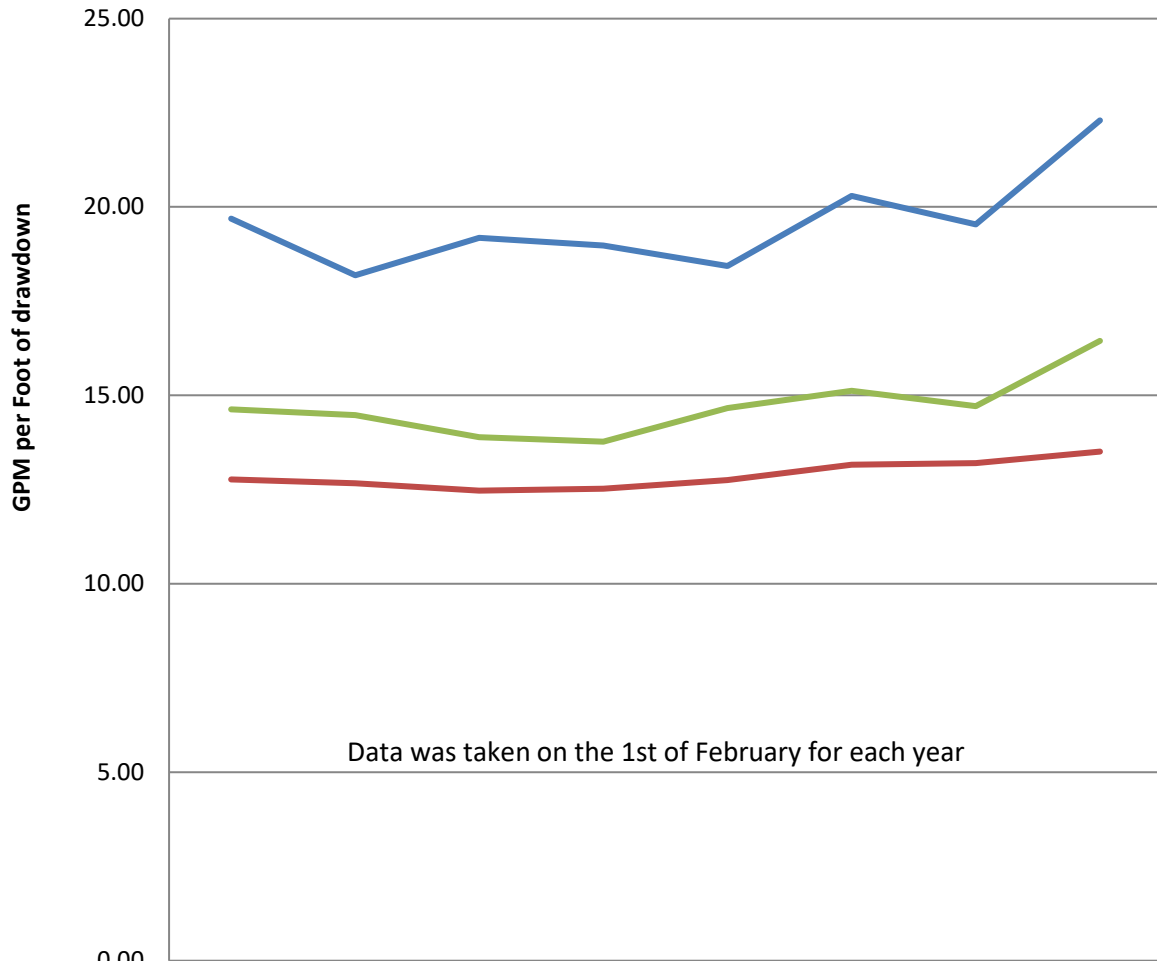


OVPD 30 Year Water Production Trend



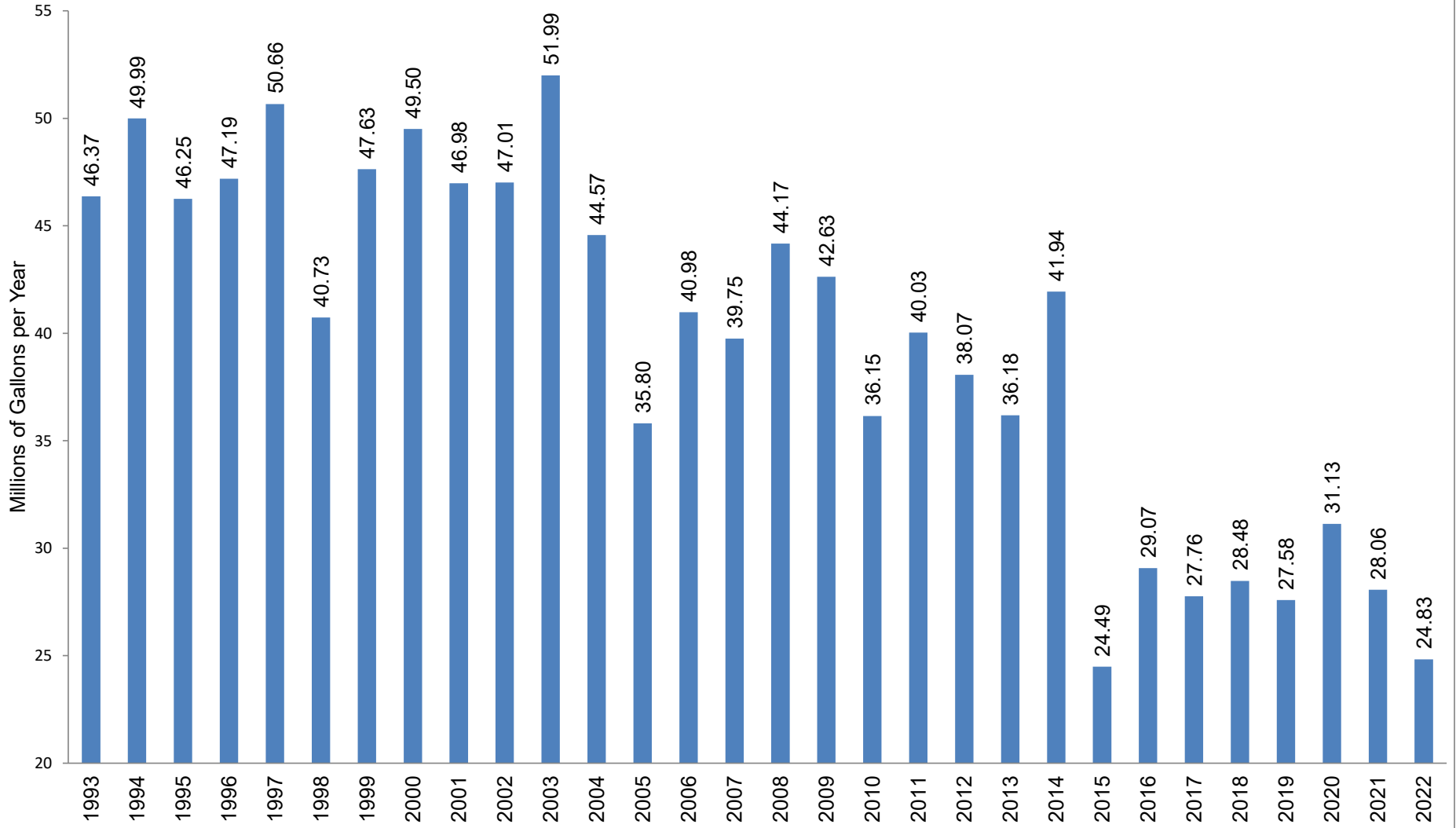
Information comes from from well logs

OVPSD Production Wells Specific Capacity



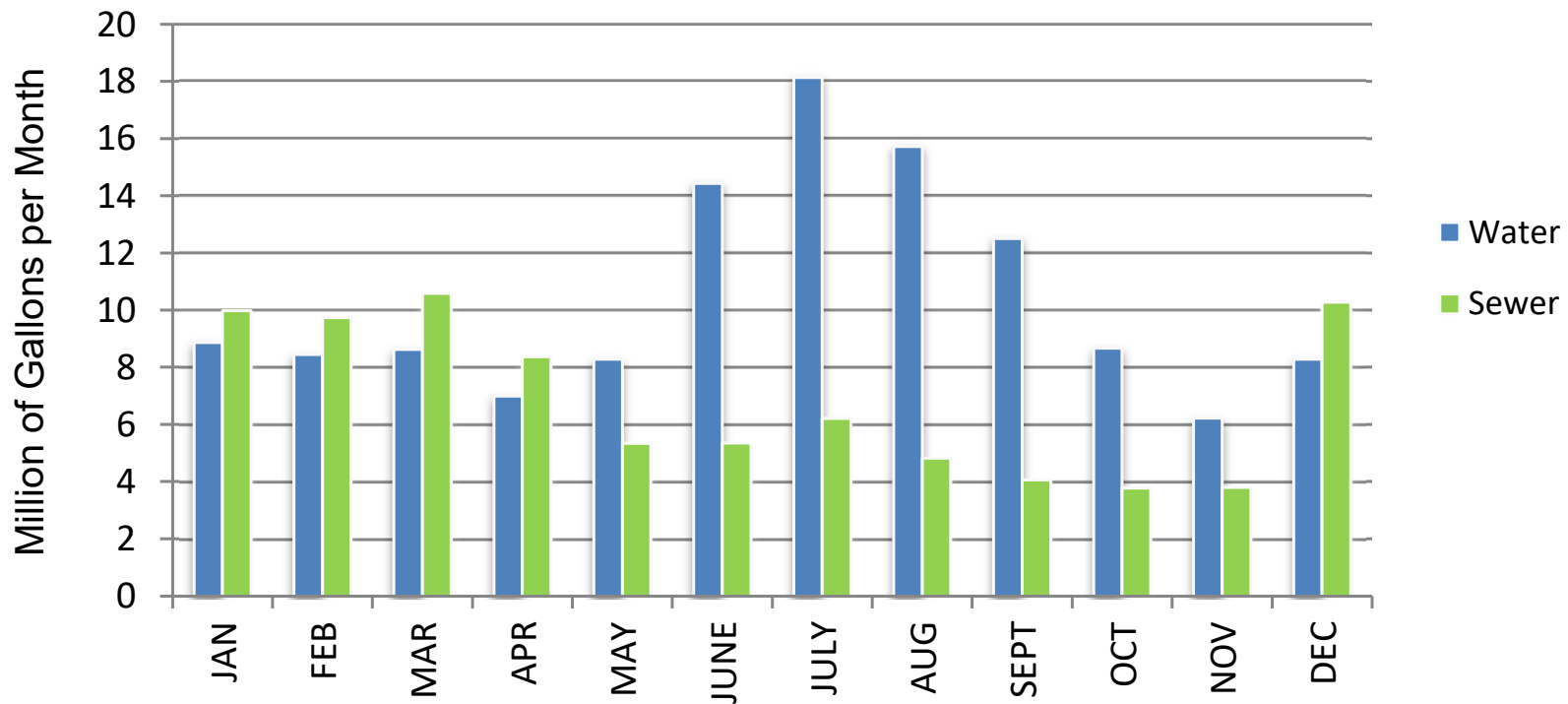
	2016	2017	2018	2019	2020	2021	2022	2023
Well 1R	19.69	18.19	19.18	18.97	18.43	20.29	19.54	22.30
Well 2R	12.77	12.66	12.48	12.52	12.75	13.16	13.20	13.51
Well 5R	14.63	14.47	13.89	13.78	14.66	15.12	14.72	16.5

SVMWC 30 Year Water Production Trend



Information comes from SV Mutual

2022 Water and Sewer Comparison

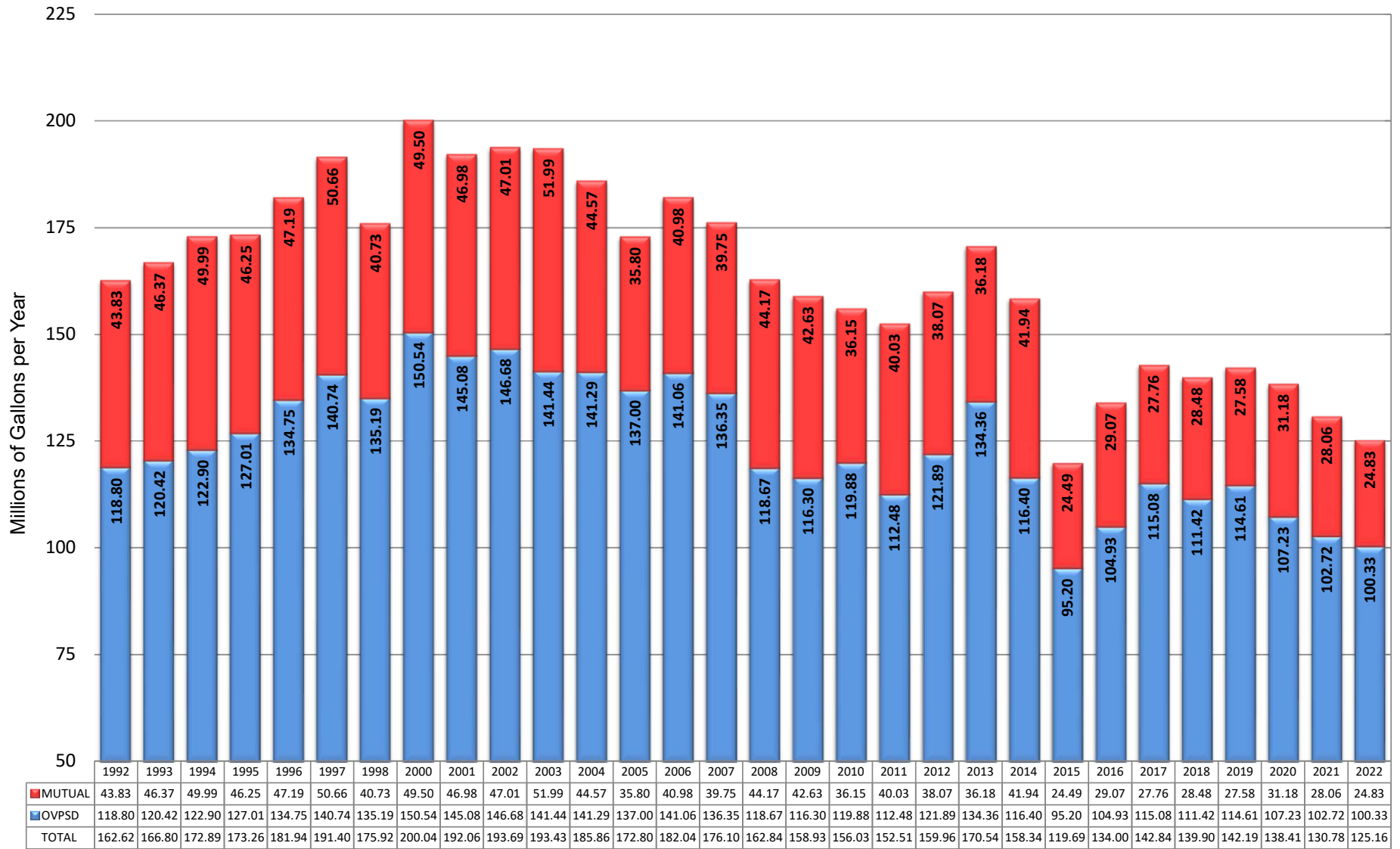


Compares Total Monthly Water Production to Total Sewer Collection

Water information comes from well logs
Water total includes OVPSD and SVMWC
Sewer information comes from SCADA

Water and Sewer Production 2022					
	WATER	WATER	WATER	SEWER	
	OVPSD	SVMWC	TOTAL	TOTAL	
JAN	7.39	1.48	8.87	9.98	
FEB	6.86	1.59	8.45	9.73	
MAR	6.88	1.74	8.62	10.58	
APR	5.76	1.23	6.99	8.37	
MAY	6.47	1.81	8.28	5.34	
JUNE	11.56	2.87	14.43	5.35	
JULY	14.67	3.46	18.13	6.21	
AUG	12.56	3.16	15.72	4.82	
SEPT	9.71	2.79	12.50	4.06	
OCT	6.63	2.04	8.67	3.77	
NOV	5.05	1.17	6.22	3.79	
DEC	6.79	1.49	8.28	10.28	
	100.33	24.83	125.16	82.28	Million Gallons
Water information comes from well logs					
Sewer information comes from SCADA					

30 Year OVPSD and SVMWC Combined Water Production Trend



Information comes from from well logs

SEWER SYSTEM INVENTORY – 2022

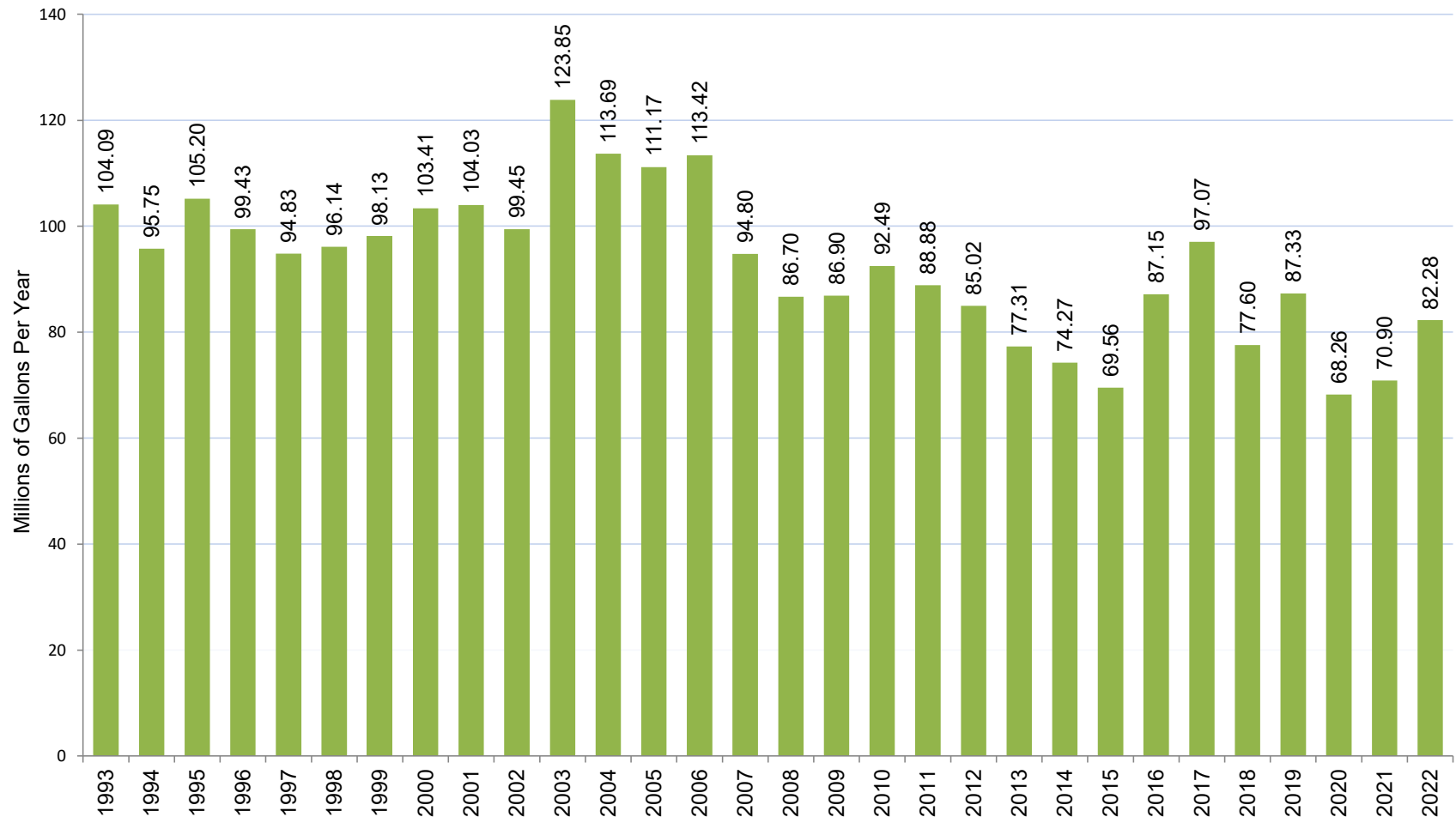
1. 457 Sanitary Manholes
2. 3 Siphons (6",12",16")
3. 3 Sewer Flow Meters
 - Mag Meter, Painted Rock Siphon T-45A - District owned
 - Mag Meter, Mountain Run - Ski Corp owned
 - Mag Meter, HWY 89 - T-TSA owned
4. 587 Feet 16" Sewer Main
5. 11,791 Feet 15" Sewer Main
6. 3,104 Feet 12" Sewer Main
7. 8,945 Feet 10" Sewer Main
8. 18,242 Feet 8" Sewer Main
9. 54,115 Feet 6" Sewer Main
10. 6,687 Feet 4" Sewer Main
11. 45,052 Feet 4" Sewer Lateral
12. 1,042 Sewer Connections per Billing
13. 2 Remote Terminal Units (RTU)

Total Sewer Main = 103,471 Feet = 19.597 Miles

Total Sewer Laterals = 44,152 Feet = 8.532 Miles

Combined Totals = 147,623 Feet = 27.959 Miles

OVPSD 30 YEAR SEWER FLOW TREND



Annual Report on District Fleet

2022

Vehicle/Equipment	Mileage Hours	Age	Replacement Schedule	Service Life		Maintenance Due	2023
2008 Ford 1 Ton 4x4 Flat	48,201	15	15	0		Annual Service	\$350
1999 Ford Utility 4x4	78,260	24	15	-9		Annual Service	\$350
2014 Dodge Ram 4x4	61,373	9	15	6		Annual Service	\$350
1997 Ford Explorer	129,875	26	15	-11		Annual Service	\$350
2014 F-150 4x4	173,499	9	15	6		2x Annual Service	\$350
						New Tires	\$550
2008 F-750 Dump Truck	11,742	15	30	15		Annual Service	\$350
1998 JD 444H Loader	4,072	25	30	5		Annual Service	\$350
						Cutting Blade	\$1,500
JD Backhoe	743	5	30	25		Annual Service	\$350
2020 Isuzu Compressor	15	2	20	18		Annual Service	\$350
I/R Compressor							
2007 New Holland	592	16	30	14		Annual Service	\$350
						Cutting blade/Wear shoes	\$1,000
2009 Vac-Con Hydro-Vac	10,030	14	30	16		Annual Service	\$350
Power Take Off (PTO)	315	14	30	16		Hydraulic Filters	\$1,000
2009 Duetz Rear Engine	997	14	30	16		Annual Service	\$350
2016 Ford Interceptor	31,586	7	15	8		2x Annual Service	\$350
6" Trash Pump (2020)	7	2	30	28		Annual Service	\$350
2010 Prowler Easement	244	11	20	9		Annual Service	\$350
Well House Generator (1993)	281	30	40	10		Annual Service	\$600
1810 Generator (1991)	842	32	40	8		Annual Service	\$600
305 Generator (2004)	214	19	40	21		Annual Service	\$600
						Equipment	\$1,000
						Rags, Cleaning Supp. Ect.	\$600
Total	Fleet Ave.	15.2					\$12,700

10 Year Vehicle Maintenance Costs

■ Fleet Maintenance Cost

\$25,000

\$20,000

\$15,000

\$10,000

\$5,000

\$0

2013

2014

2015

2016

2017

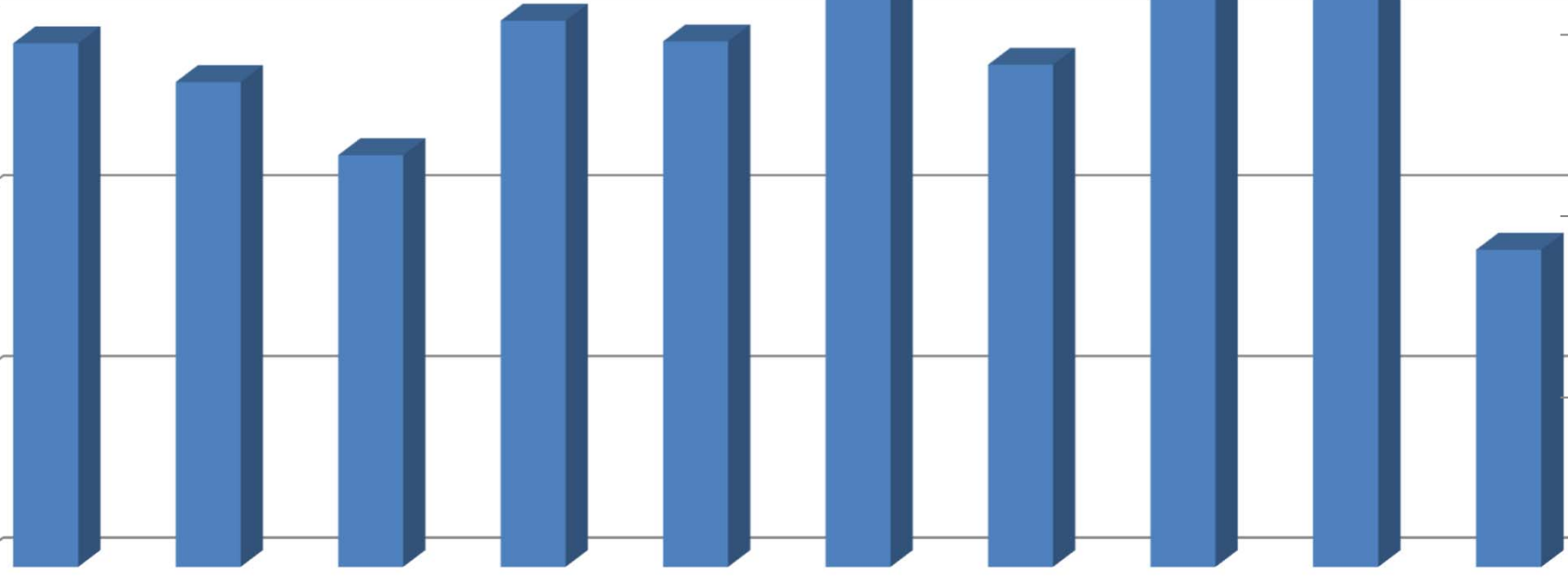
2018

2019

2020

2021

2022



OVPSD Operation Department 10 Year Fuel Usage Trend

