

# OLYMPIC VALLEY PUBLIC SERVICE DISTRICT



## 2023 WATER AND SEWER SYSTEM REPORT

Prepared May 2024  
By  
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# Olympic Valley Public Service District Annual Report 2023

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**EQUIPMENT CAPITAL REPLACEMENT PROJECTS**  
**Budget Year 2024 - 2029**

Equipment Type	Funding Source	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	Project Total
<b>Fleet</b>							
Dodge Ram 2500 ZEV	Water/Sewer FARF					\$ 75,000	\$ 75,000
Ford F-150	Water/Sewer FARF	\$ 50,000					\$ 50,000
305 EV Charing Station	Water/Sewer CIP		\$ 60,000				\$ 60,000
1810 EV Charing Station	Water/Sewer CIP		\$ 60,000				\$ 60,000
Ford F-350 ZEV	Water/Sewer FARF			\$ 80,000			\$ 80,000
<b>Equipment</b>							
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
SnoQuip Trackless MT Snow Blower	Bike Trail FARF					\$ 180,000	\$ 180,000
<b>Small Tools and Equipment</b>							
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
<b>TOTAL</b>		<b>\$ 95,000</b>	<b>\$ 262,900</b>	<b>\$ 193,800</b>	<b>\$ -</b>	<b>\$ 255,000</b>	<b>\$ 806,700</b>

# OVPSD Utilities Report 2023

## I. Flow Report

A. Water Production Total = 98.35 MG  
Comparison: 1.98 MG Less Than 2022

B. Sewer Collection Total = 97.16 MG  
Comparison: 14.88 MG More Than 2022

C. Aquifer Level 2023	Maximum Level	May 2, 2023: 6190.7'
	Minimum Level	November 4, 2023: 6185.3'

Total Change in Static Water Level 2022: 9.2'

Total Change in Static Water Level 2023: 5.4'

D. Precipitation Total            22/23 Water Year = 86.12"  
   58-Year average = 53.50"  
   22/23 Water Year % of the 58-Year average = 160.99%

\*\* 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 2022 through September 2023.

\*\*\*\*\* 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. Water meters replaced or installed: 256
2. Water meter upgrades: 0
3. Customer service water meters turned on or off: 19
4. Routine leak/high usage detection notification: 113
5. Customer requested leak detection services performed: 24
6. No water responses: 1
7. Fire hydrants flushed: 175
8. Blow-offs flushed: 20
9. Valves exercised: 32
10. Repair/Replace service line: 0
11. Repair leak on water main: 1
12. Backflow devices tested: 574
13. Test District backflows: 4
14. Quarterly vault inspections on Well 1R and Well 3: 8
15. Water tank inspections: 8
16. Water quality complaints serviced: 1
17. Tested commercial meters: 0
18. Replaced Air/Vac breakers: 0
19. Water samples collected:
  - Bacteriological: 37
  - Nitrate: 3
  - VOC: 3
  - Cyanide: 1
  - Asbestos: 2
  - Inorganic: 1
  - General Mineral/ Secondary: 3

### **B. Sewer**

1. Sanitary sewer overflows: 0
2. Main line repairs: 0
3. Service line repairs: 0
4. Sewer cleanout repairs: 3
5. Manhole repairs: 0
6. Manhole grouting: 0
7. Cleaning:
  - Spring and fall cleaning of high priority lines
  - Main sewer lines cleaned: 240
8. Inspections:
  - Underground Service Alerts: 189
  - Pre-remodel Inspections: 1
  - Final Inspections: 7
  - Fixture count Inspections: 1
  - Water service line Inspections: 10
  - Sewer service line Inspections: 10
  - Sewer service line pressure test: 17
  - Sewer main line Inspections: 0
  - Water quality complaint Investigations: 1

Water Backflow Inspections: 1  
Fog Inspections: 0  
Second Unit Inspection: 3

**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.
2. Ford utility truck was replaced with new dodge utility truck.

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. Sewer System I/I inspection
- D. Manhole Paving Repairs
- E. Spring and Fall Flushing
- F. Annual Sewer Cleaning
- G. High Priority Cleaning
- H. Hydrant Ballard Repairs
- I. Tank Inspections
- J. Fire Hydrant Repairs
- K. Sewer C/O Locating
- L. Meter Box replacements
- M. Green waste clean up
- N. Meter replacement and cellular endpoint install project start
- O. Zone 3 tank recoating project support

**VII. Summary**

2023 was a great year for District Operations. 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. Operations continue to train district crew to be as knowledgeable and up to date as possible so that we may provide the best available service to our customers.

**Water System Inventory – 2023**  
**Updated Information to Match District GIS Database**

1. Water Well #1R – 380 GPM average. \*
2. Water Well #2R – 330 GPM average. \*, \*\*
3. Water Well #3 – (Out of Service for Rehab and Repair).
4. Water Well #4 – (Not in Service)
5. Water Well #5R – 390 GPM average. \*
6. Horizontal Well – (Out of Service). \*\*\*

2023 Total average flow – 1100 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. 901 Water Meters connected per Billing
12. 132 Fire Hydrants
13. 24 Air Release Valves
14. 598 Backflow Prevention Devices
15. 456 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.

## Water System Inventory – 2023

16. 10 Butterfly Valves
17. 27 Blow Off Assemblies
18. 6 Control Valves (Granite Chief, East Booster, Zone 3 Booster, Hz Well, Well 5)
19. 3 Transducer Stations (West Tank, East Tank, and Zone Three Tank)
20. 7 Remote Terminal Units (RTU), SCADA Telemetry System
21. 16,358 Feet 12" Water Distribution Main
22. 10,514 Feet 10" Water Distribution Main
23. 28,960 Feet 8" Water Distribution Main
24. 26,927 Feet 6" Water Distribution Main
25. 726 Feet 4" Water Distribution Main
26. 505 Feet 2" Water Distribution Main
27. 30 Feet 8" Water Service Line
28. 87 Feet 6" Water Service Line
29. 20 Feet 4" Water Service Line
30. 143 Feet 3" Water Service Line
31. 2,847 Feet 2" Water Service Line
32. 291 Feet 1.5" Water Service Line
33. 3,109 Feet 1" Water Service Line
34. 11,518 Feet ¾" or smaller Water Service Line

Total Water Main = 84,014 Feet = 15.91 Miles  
Total Water Services = 18,047 Feet = 3.42 Miles  
Combined Total = 102,061 Feet = 19.33 Miles



# Olympic Valley Public Service District - Year End Water Audit Report

Report Date: May 10, 2024      Performed By: Sam Donahue

Year: 2023

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): 81,006,569

Additional Consumption - Unmetered

Fire Department Use: 115,000  
 Hydrant Flushing: 1,475,000  
 Blow-Off Flushing: 65,000  
 Sewer Cleaning: 130,000  
 Street Cleaning:  
 Well Flushing:  
 Tank Overflows:  
 Unread Meter Estimated Reads:  
 Other:

Total Unmetered Consumption (for audit period specified): 1,785,000

Estimated Unknown Loss - Unmetered

Known Theft: \_\_\_\_\_  
 Known Illegal Connections: \_\_\_\_\_  
 Total Estimated leaks that have been repaired: 558,400  
 Total Estimated Unmetered (for audit period specified): 558,400

Total Production for audit period specified: 97,787,620

Total Metered/Unmetered Consumption for audit period specified: 83,349,969

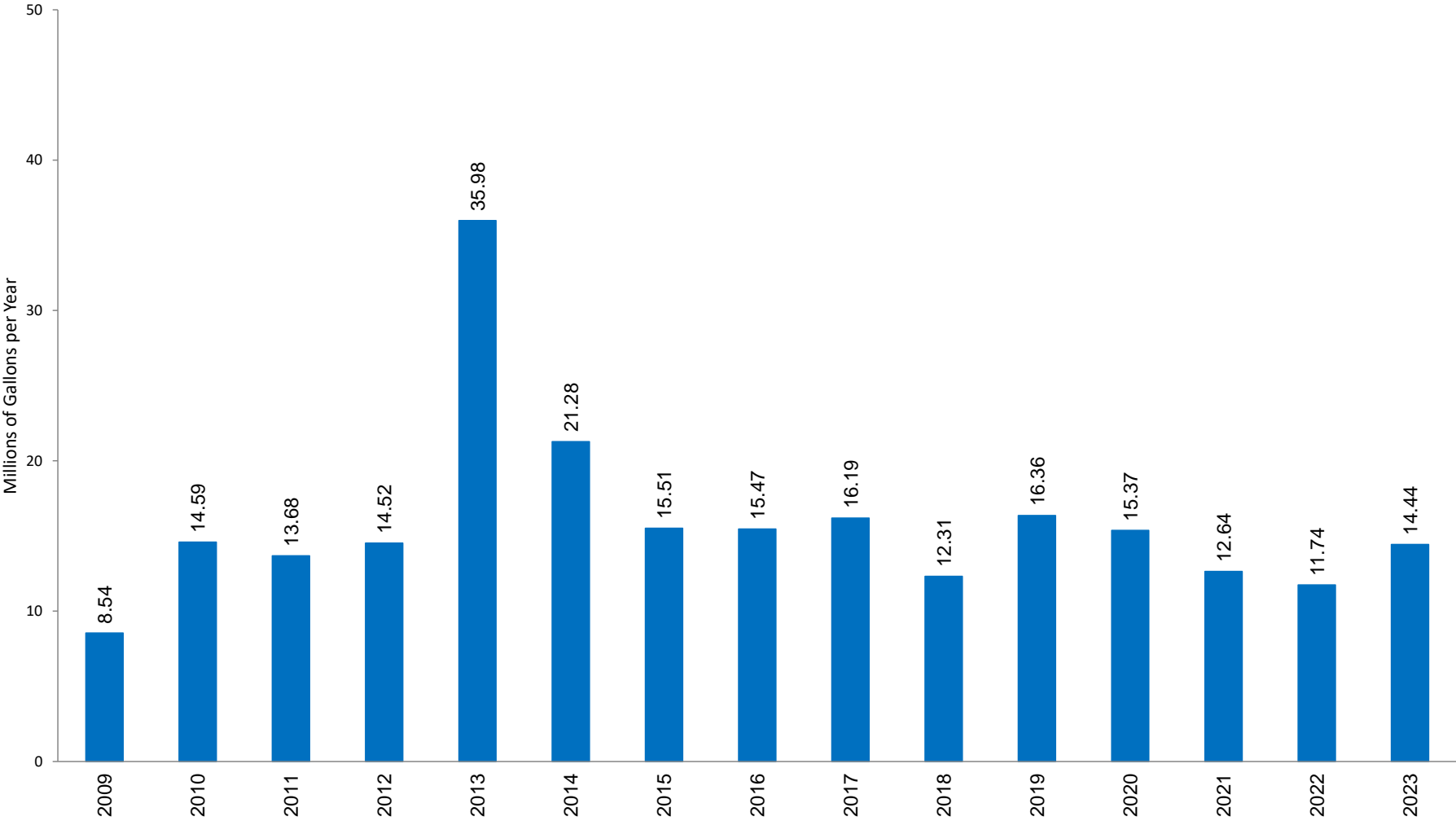
**Total Water Loss (Production - Consumption): 14,437,651**  
**Loss Percentage: 14.8% \*\*\***

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

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

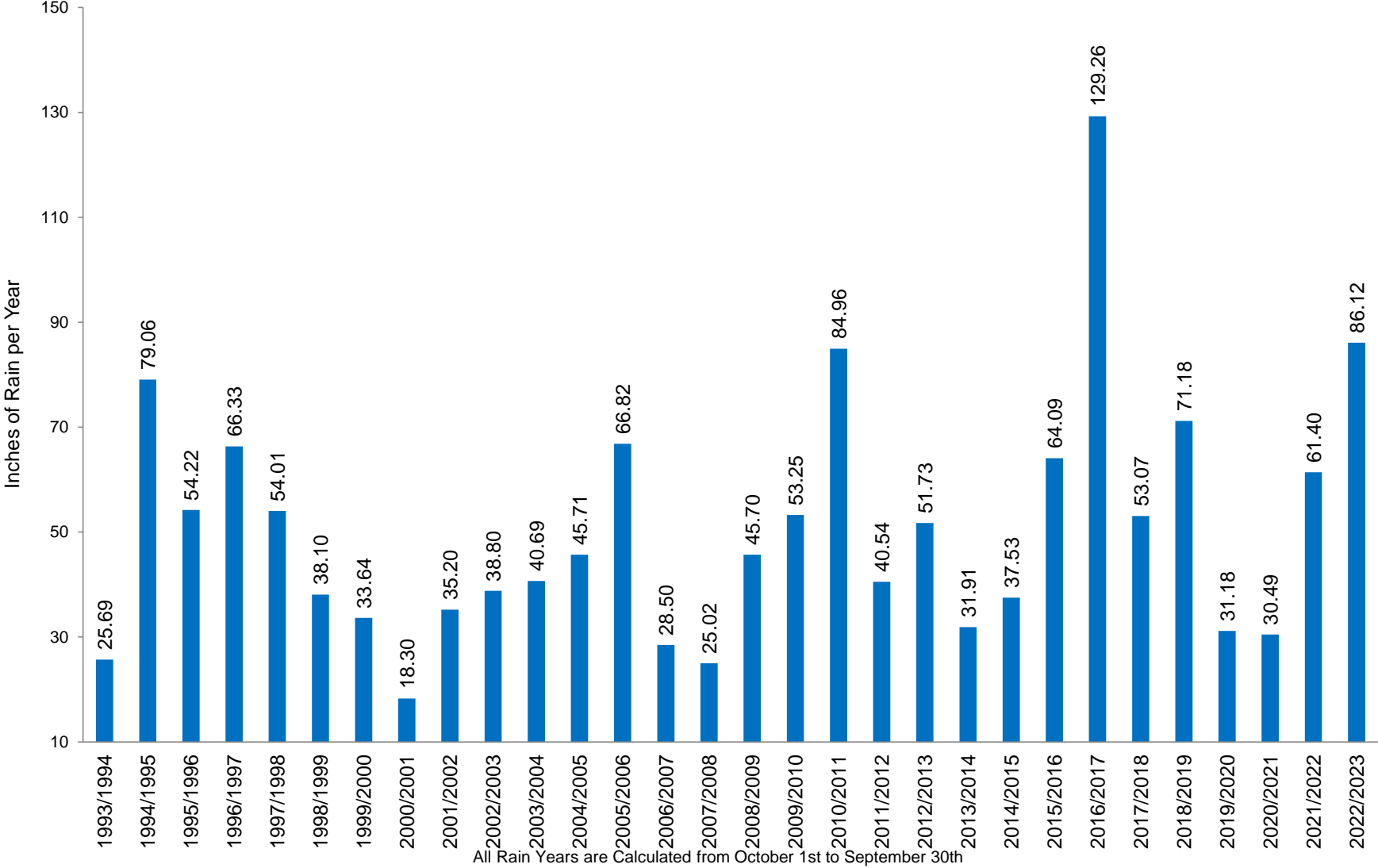
\*\*\* Note - Total Water Loss Percentage included theft, Illegal Connections or Leaks that have been repaired

# OVPSD 15 Year Water Loss Trend

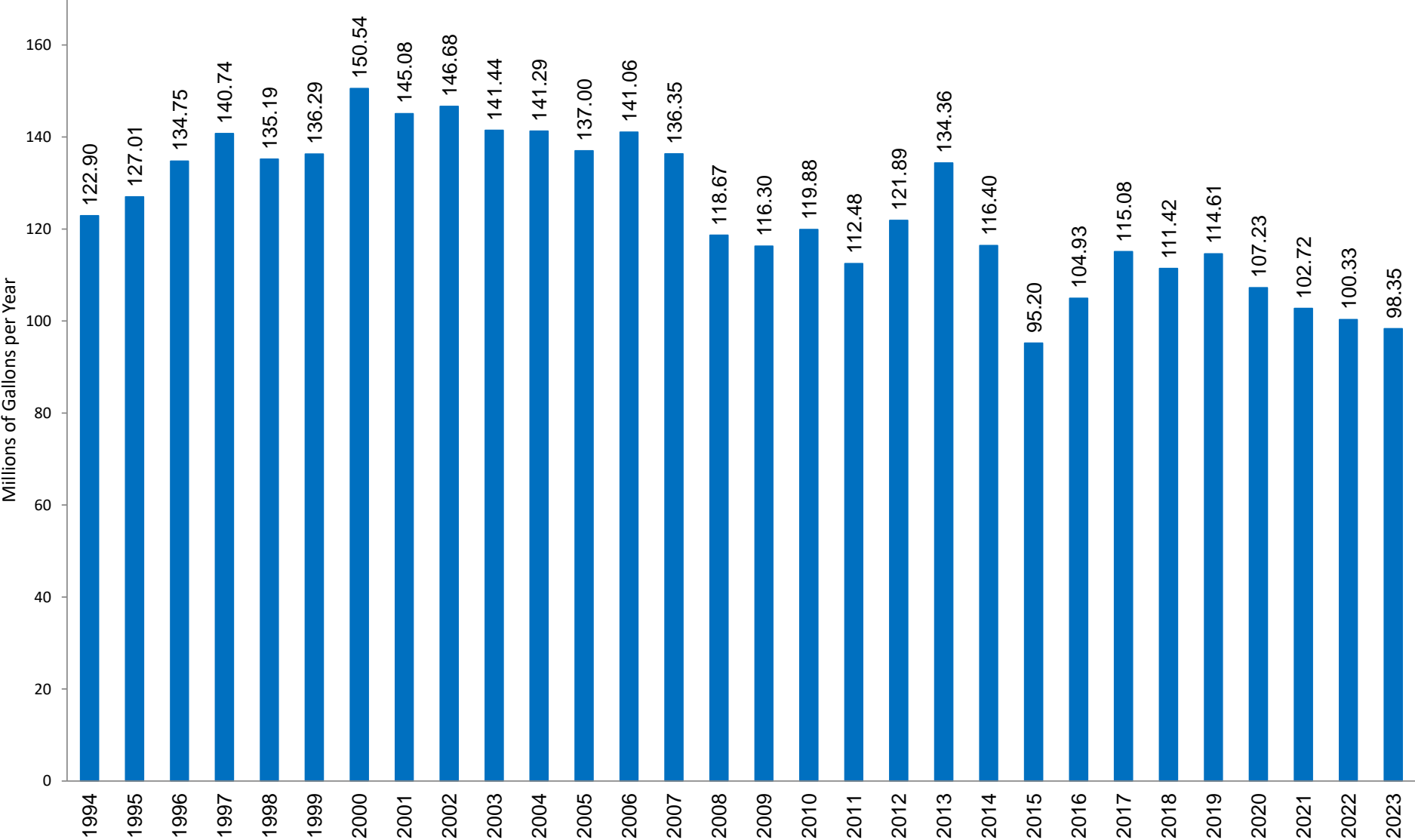


Information comes from from Year End Water Audit Report

# OVPD 30 Year Precipitation

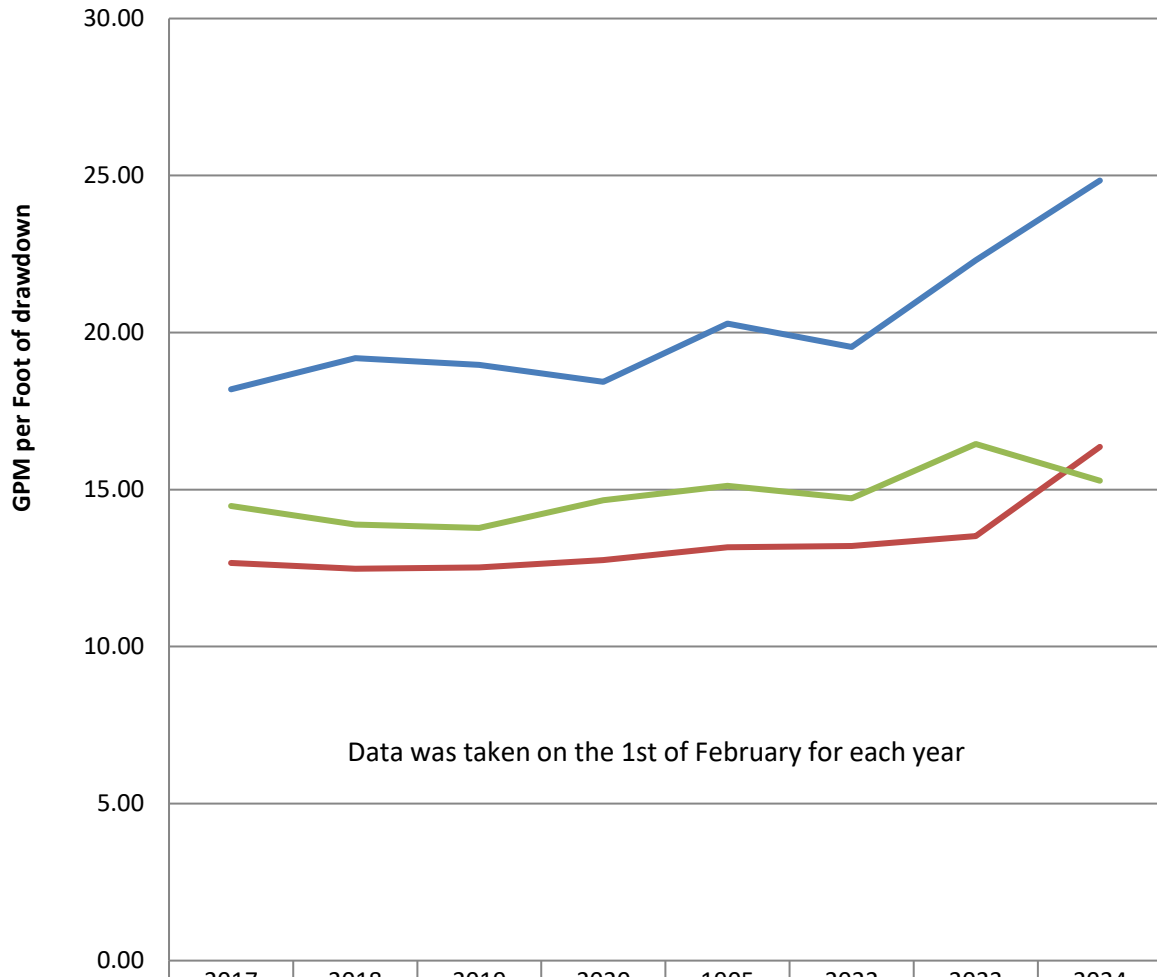


# OVPSD 30 Year Water Production Trend



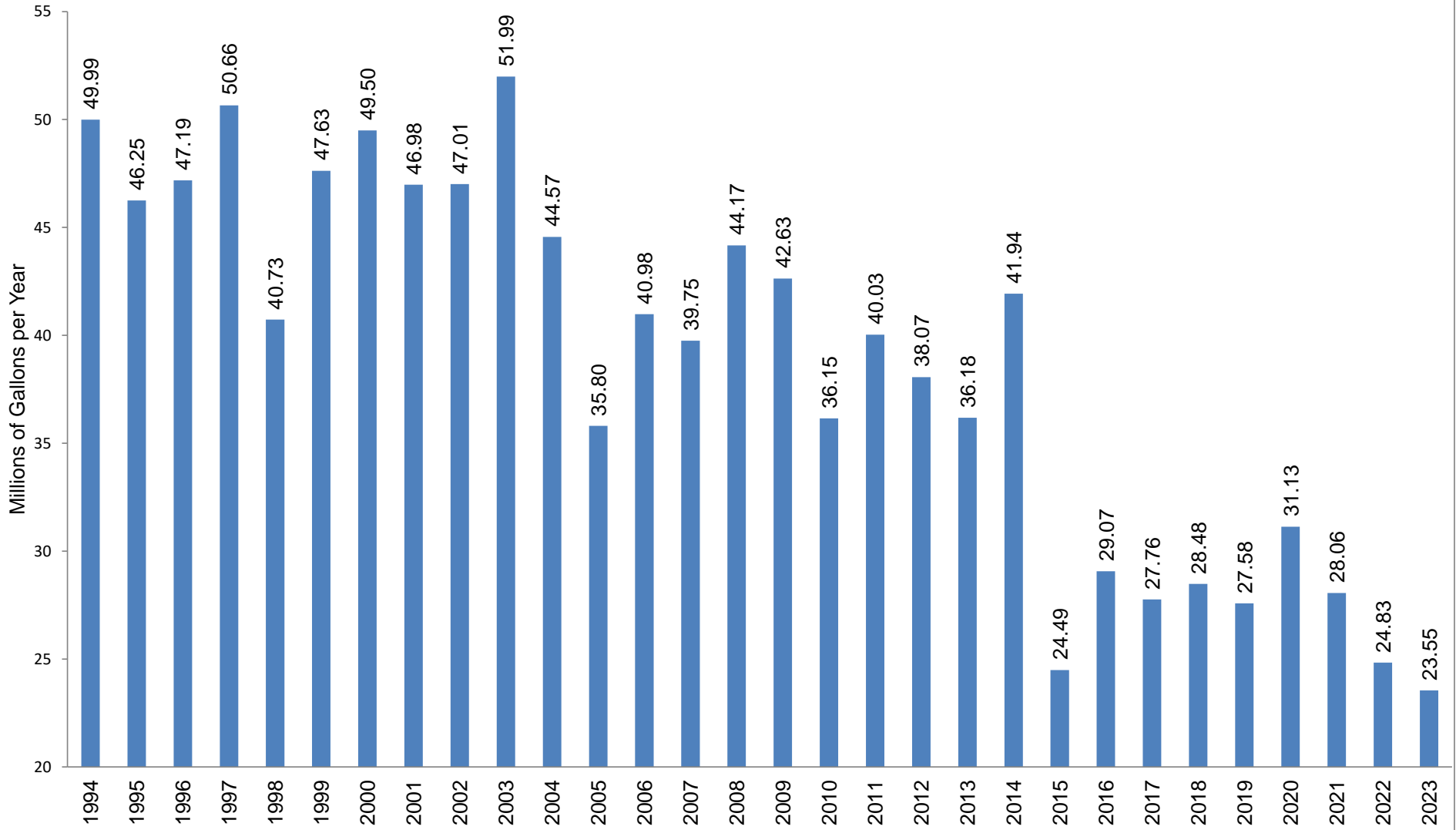
Information comes from from well logs

## OVPSD Production Wells Specific Capacity



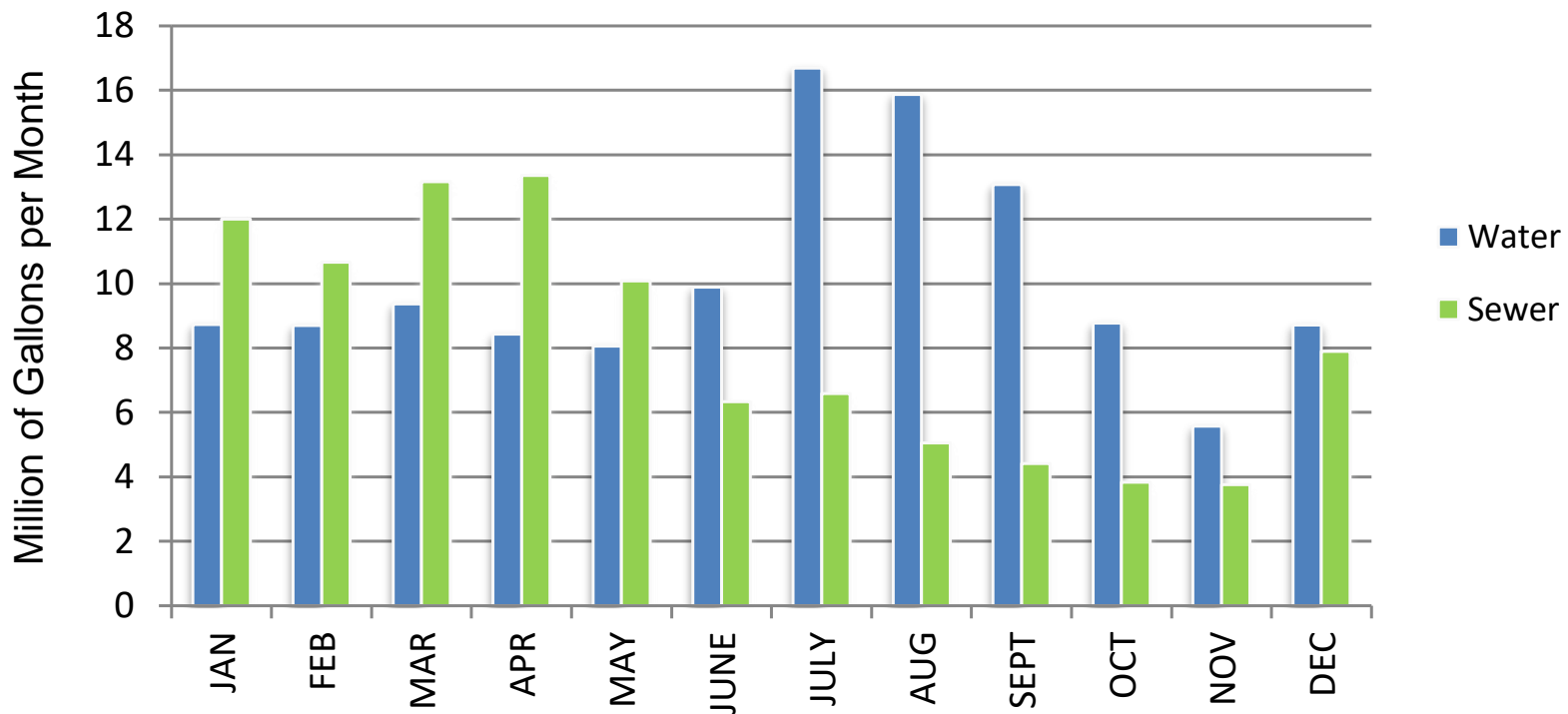
	2017	2018	2019	2020	1905	2022	2023	2024
Well 1R	18.19	19.18	18.97	18.43	20.29	19.54	22.30	24.84
Well 2R	12.66	12.48	12.52	12.75	13.16	13.20	13.51	16.36
Well 5R	14.47	13.89	13.78	14.66	15.12	14.72	16.45	15.3

# SVMWC 30 Year Water Production Trend



Information comes from SV Mutual

# 2023 Water and Sewer Comparison

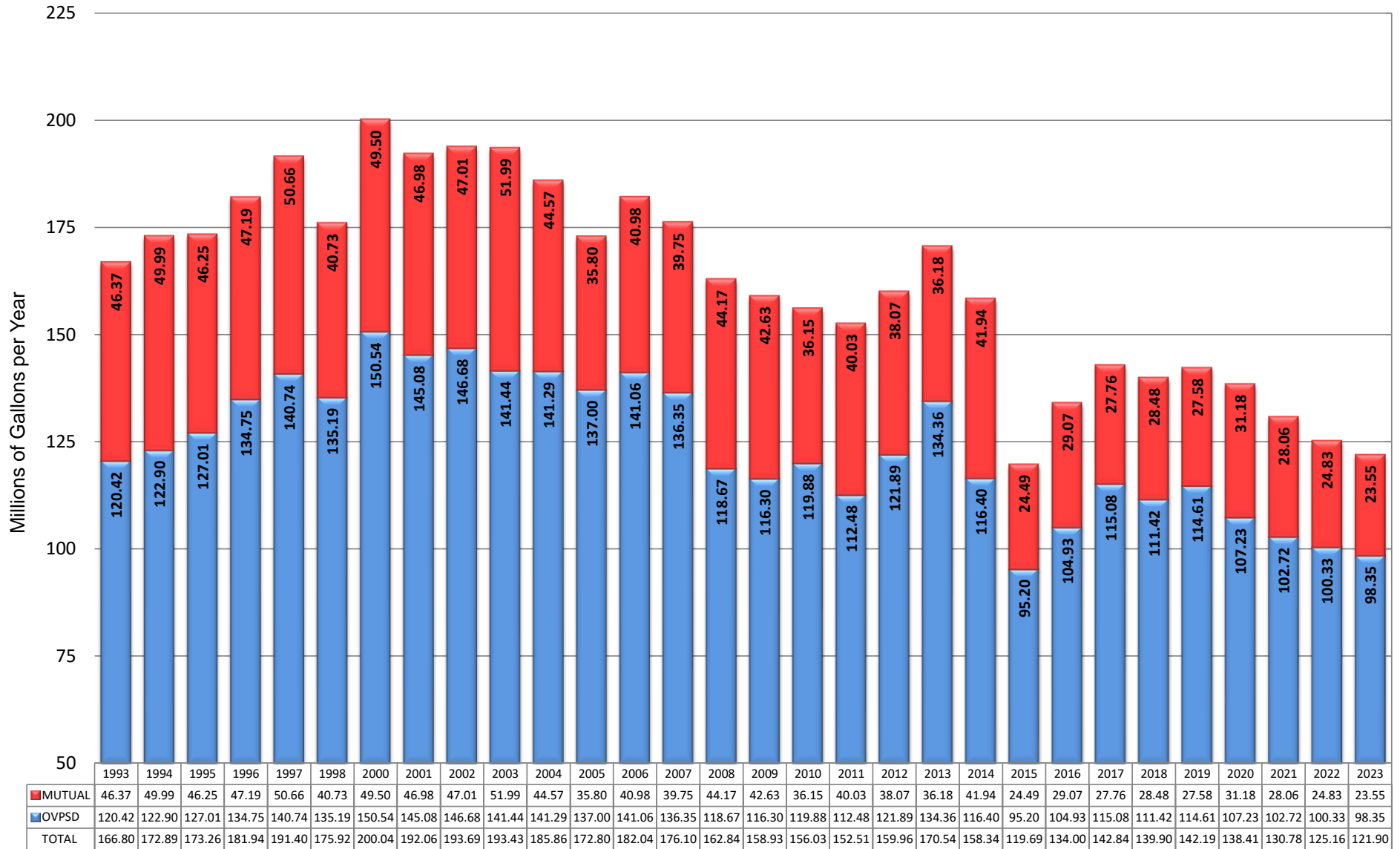


Compares Total Monthly Water Production to Total Sewer Collection  
Water information comes from well logs  
Water total includes OVPSD and SVMWC  
Sewer information comes from SCADA

<b>Water and Sewer Production 2023</b>					
	<b>WATER</b>	<b>WATER</b>	<b>WATER</b>	<b>SEWER</b>	
	<b>OVPD</b>	<b>SVMWC</b>	<b>TOTAL</b>	<b>TOTAL</b>	
JAN	6.94	1.79	8.73	12.01	
FEB	6.72	1.99	8.71	10.66	
MAR	7.24	2.14	9.38	13.16	
APR	6.82	1.61	8.43	13.35	
MAY	6.47	1.59	8.06	10.09	
JUNE	8.29	1.59	9.88	6.34	
JULY	13.43	3.25	16.68	6.59	
AUG	13.04	2.84	15.88	5.06	
SEPT	10.82	2.26	13.08	4.42	
OCT	7.41	1.36	8.77	3.83	
NOV	4.24	1.34	5.58	3.76	
DEC	6.93	1.79	8.72	7.89	
	98.35	23.55	121.90	97.16	Million Gallons
Water information comes from well logs					
Sewer information comes from SCADA					



# 30 Year OVPD and SVMWC Combined Water Production Trend



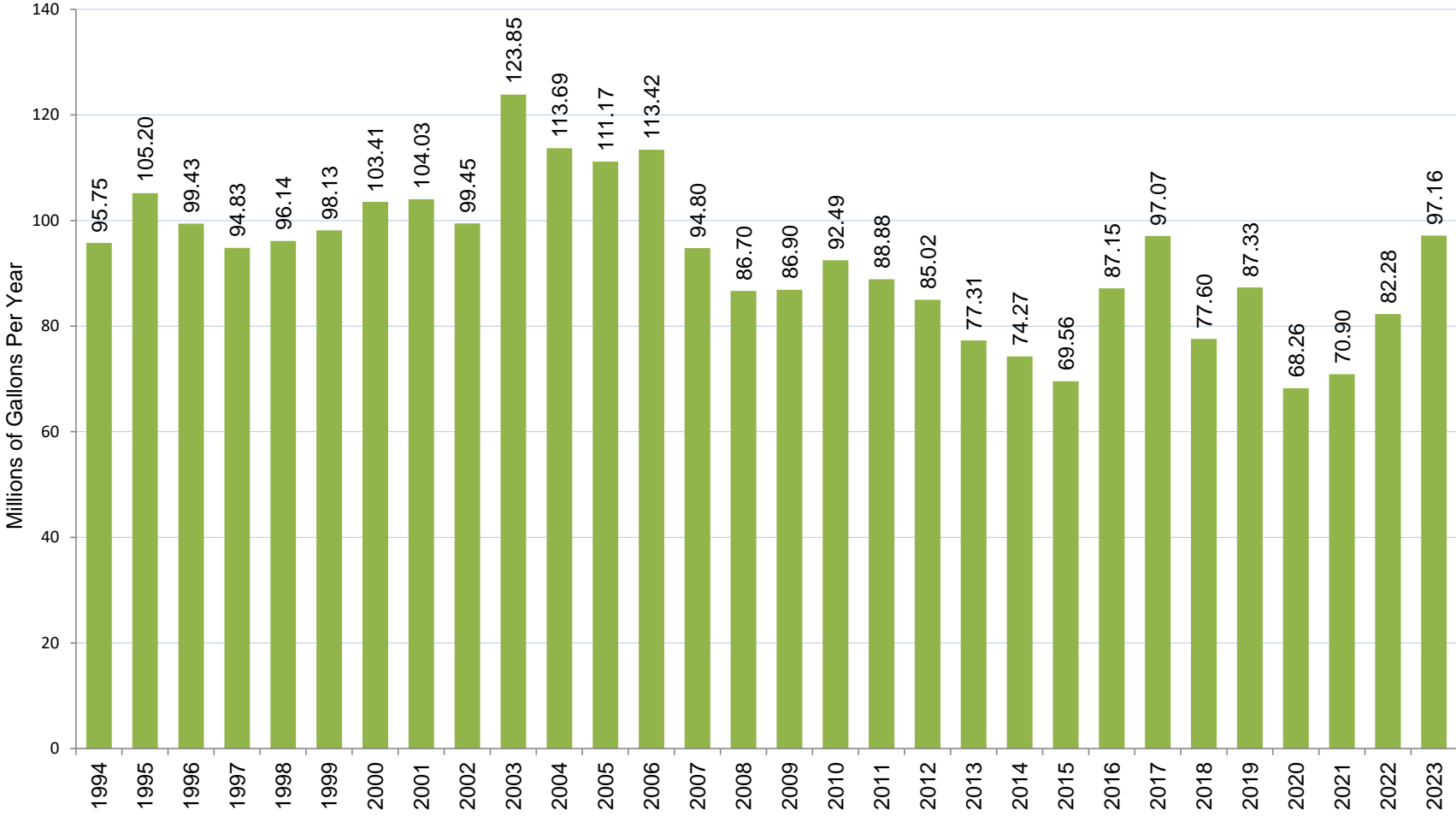
Information comes from from well logs

**SEWER SYSTEM INVENTORY – 2023**  
**Updated Information to Match District GIS Database**

1. 440 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. 9 Feet 18" Sewer Main
5. 11,170 Feet 15" Sewer Main
6. 2,406 Feet 12" Sewer Main
7. 9,012 Feet 10" Sewer Main
8. 16,771 Feet 8" Sewer Main
9. 49,061 Feet 6" Sewer Main
10. 6,933 Feet 4" Sewer Main
11. 19,658 Feet 4" District Sewer Lateral
12. 668 Feet 6" District Sewer Lateral
13. 1,054 Sewer Connections per Billing
14. 2 Remote Terminal Units (RTU)

Total Sewer Main = 95,362 Feet = 18.06 Miles  
Total District Sewer Laterals = 20,326 Feet = 3.85 Miles  
Combined Totals = 115,689 Feet = 21.91 Miles

# OVPSD 30 YEAR SEWER FLOW TREND



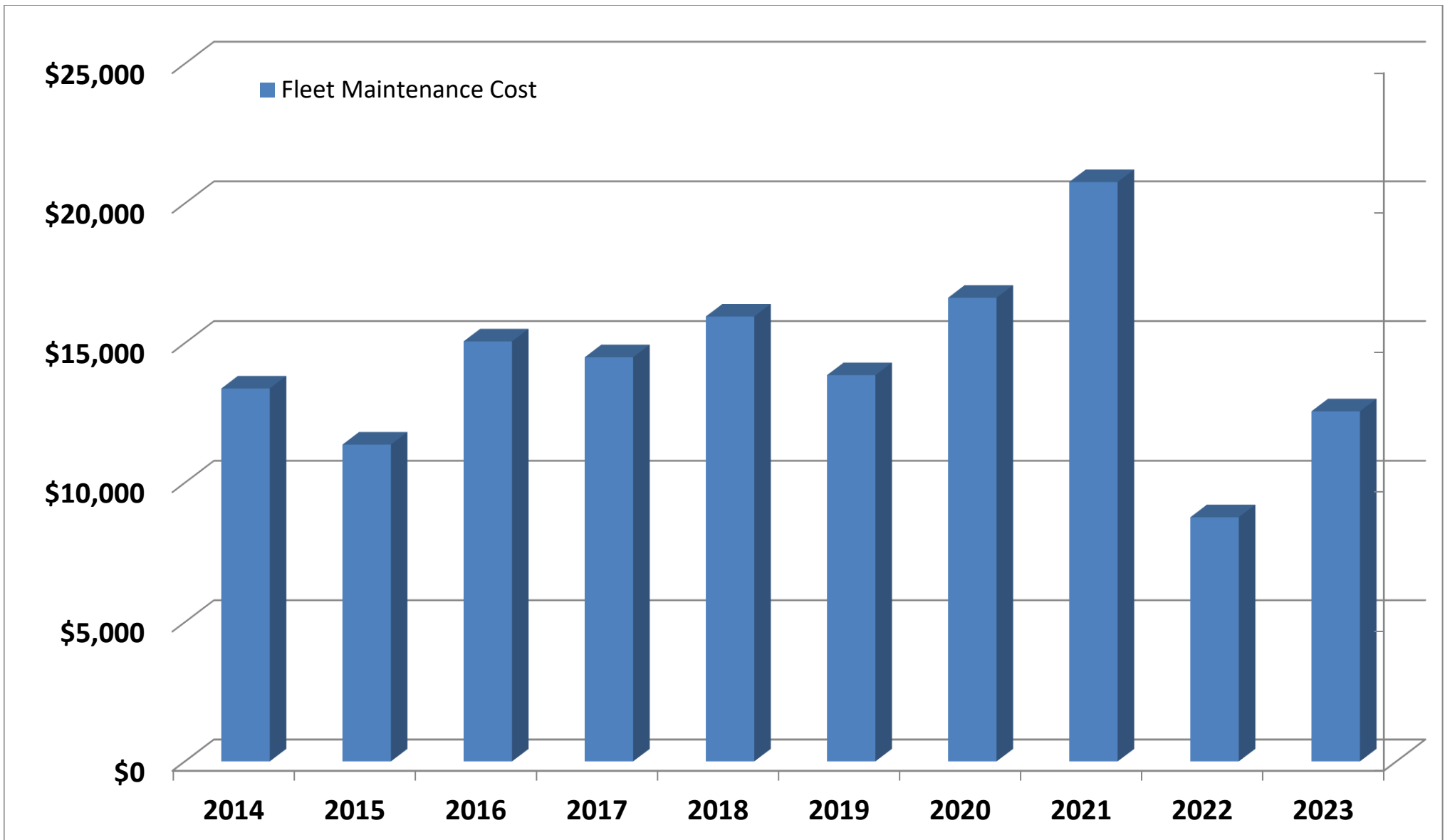
Information from SCADA

# Annual Report on District Fleet

2023

Vehicle/Equipment	Mileage Hours	Age	Replacement Schedule	Service Life		Maintenance Due	2023
2008 Ford 1 Ton 4x4 Flat	48,201	16	15	-1		Annual Service	\$400
2022 Ram 2500 Utility		0	15	15		Annual Service	\$400
2014 Dodge Ram 4x4	61,373	10	15	5		Annual Service	\$400
1997 Ford Explorer	129,875	27	15	-12		Annual Service	\$400
2014 F-150 4x4	173,499	10	15	5		2x Annual Service	\$400
2008 F-750 Dump Truck	11,742	16	30	14		Annual Service	\$400
1998 JD 444H Loader	4,072	26	30	4		Annual Service	\$400
JD Backhoe	743	6	30	24		Annual Service	\$400
2020 Isuzu Compressor I/R Compressor	15	3	20	17		Annual Service	\$400
2007 New Holland	592	17	30	13		Annual Service Cutting blade/Wear shoes	\$400 \$1,000
2009 Vac-Con Hydro-Vac Power Take Off (PTO)	10,030 315	15 15	30 30	15 15		Annual Service	\$400
2009 Duetz Rear Engine	997	15	30	15		Annual Service	\$400
2016 Ford Interceptor	31,586	8	15	7		2x Annual Service	\$400
6" Trash Pump (2020)	7	3	30	27		Annual Service	\$400
2010 Prowler Easement	244	12	20	8		Annual Service	\$400
Well House Generator (1993)	281	31	40	9		Annual Service	\$600
1810 Generator (1991)	842	33	40	7		Annual Service	\$600
305 Generator (2004)	214	20	40	20		Annual Service Equipment Rags, Cleaning Supp. Ect.	\$600 \$1,000 \$1,000
<b>Total</b>	<b>Fleet Ave.</b>	<b>14.9</b>					<b>\$10,800</b>

# 10 Year Vehicle Maintenance Costs



# OVPSD Operation Department 10 Year Fuel Usage Trend

