



**Presentation and
Discussion Item 11**

2023 Water Cost Comparison Study

March 12, 2025

Study Objective

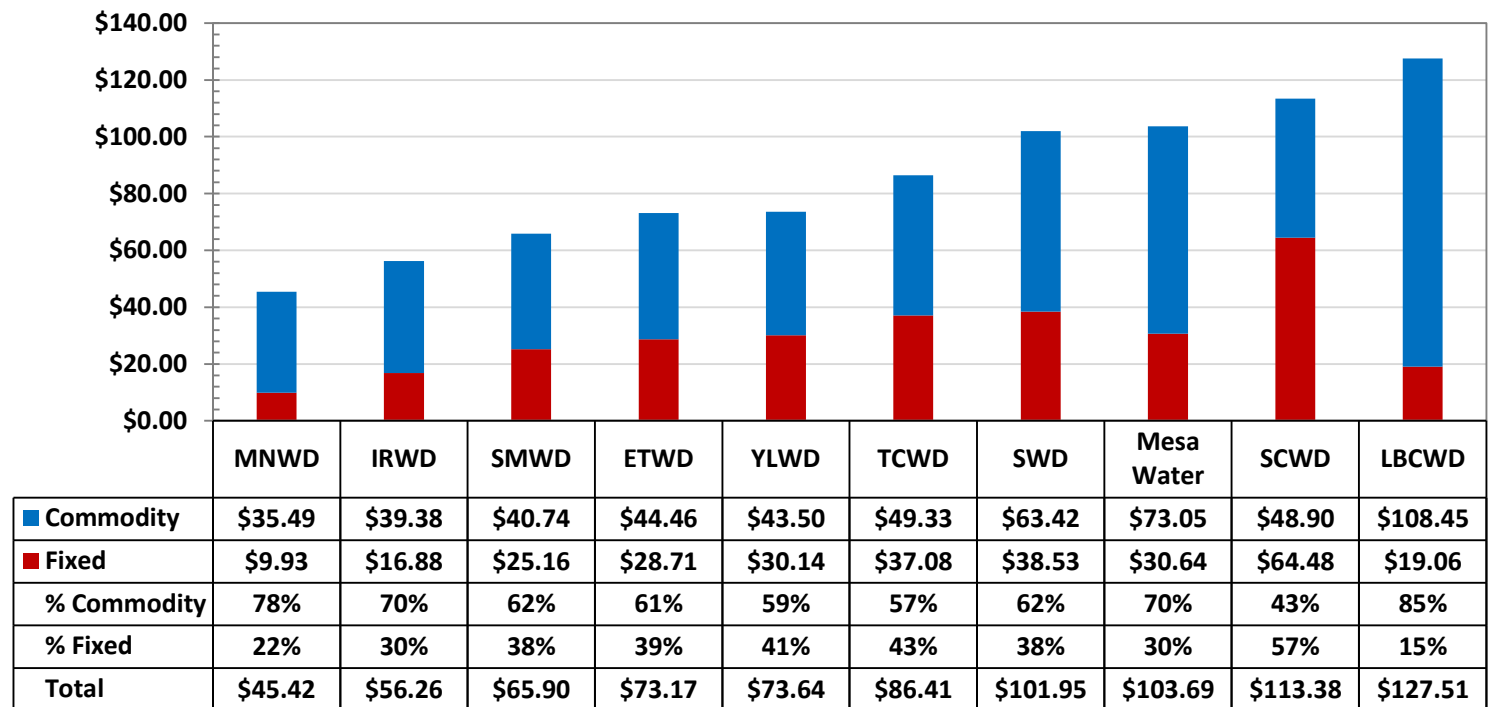
- To review a few efficiency metrics for Water Districts in Orange County
- This study uses historical data up to FY 2023 from the State Controller's Office



Sample water rate comparison 2023



Sample Water Rates - 3/4" SFR Customer 15 hcf Usage
2023



Data Source: Raftelis Cost Comparison Study 2024



Using water rates to measure operational efficiency

Challenges with using water bills to evaluate efficiency:

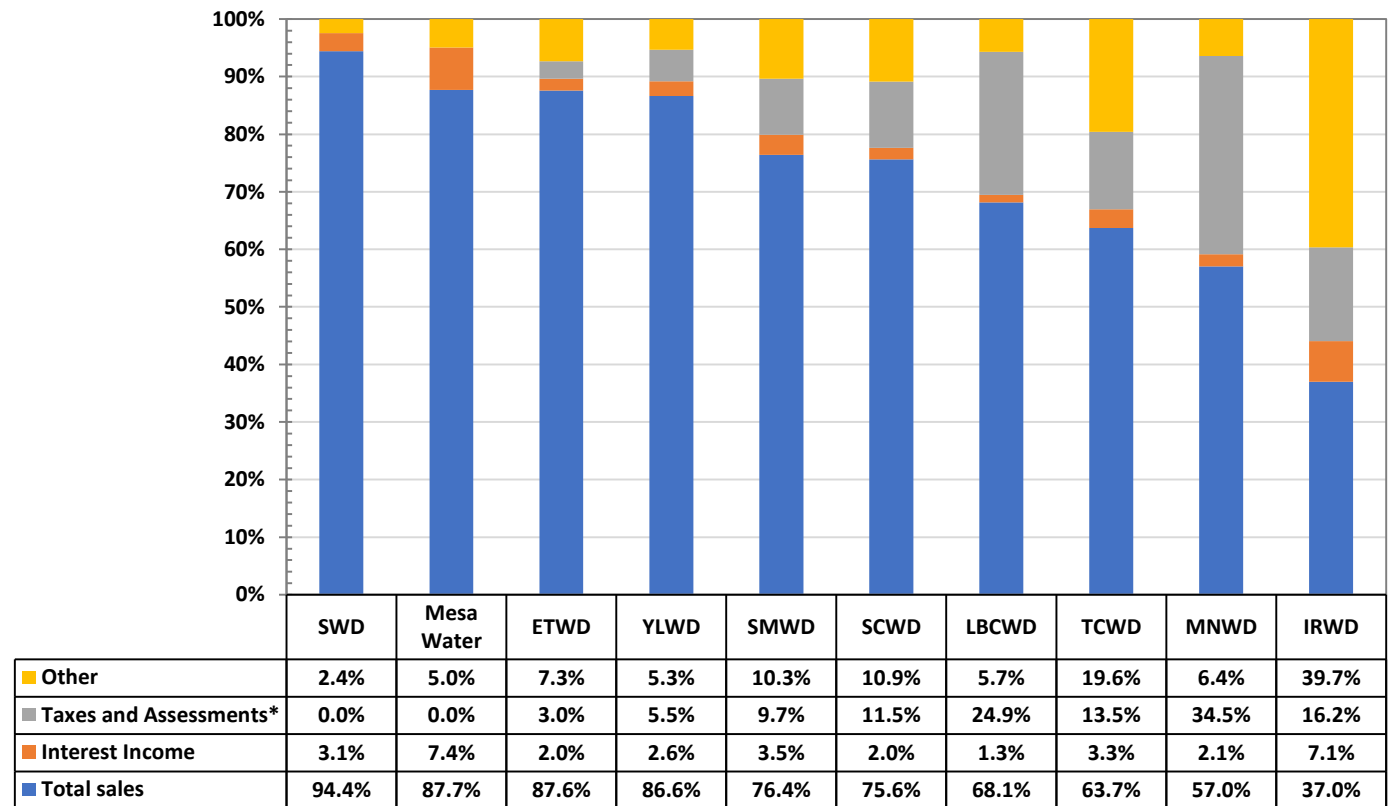
- Size of agency – larger agencies have more economies of scale
- Water sources affect agency costs as some agencies have more or less groundwater or surface water, which are cheaper compared to imported water.
- Topography affects pumping costs
- Age: Older water systems need more rehabilitation
- Non-Rate Revenues: Many agencies receive non-rate revenues, e.g., property tax, which lowers water rates



Sources of income 2023

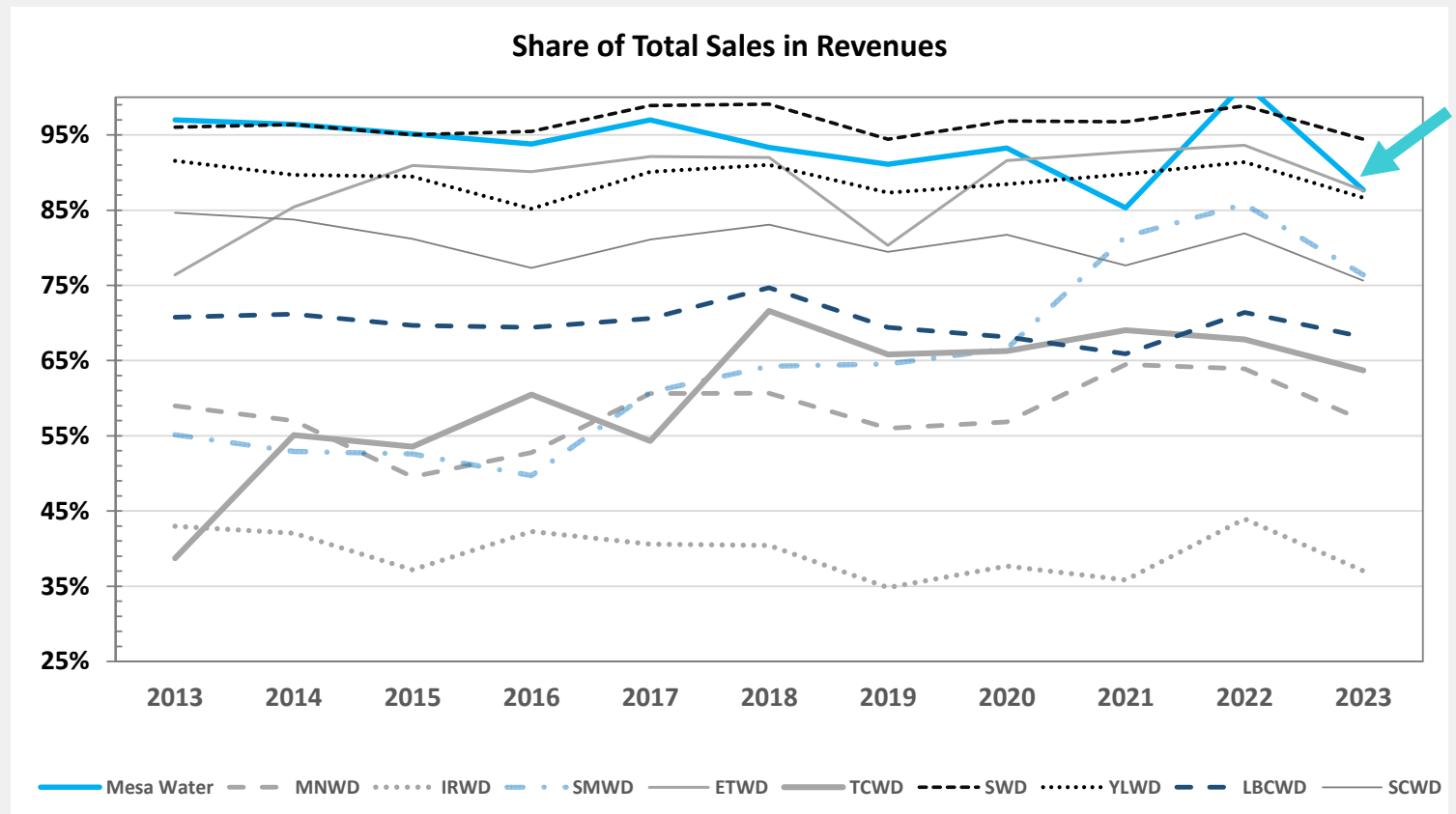


Sources of Income Comparison: 2023



Data Source: California State Controller's Office, Special Districts Financial Data

Water Sales Revenue as a % of total revenue 2012-2023



Data Source: California State Controller's Office, Special Districts Financial data;

2022 was an odd date year in which some agencies reported negative interest

Total expenditure per capita

Total Expenditure Per Capita:

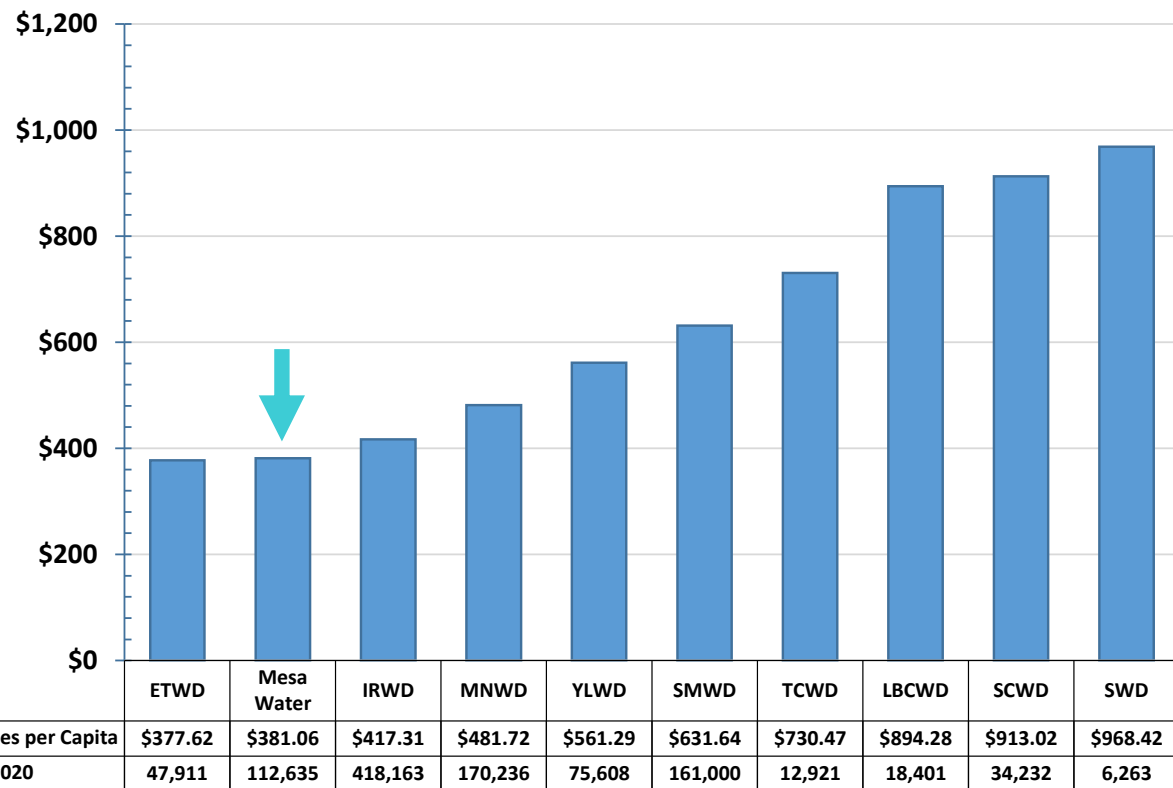
- One way to Measure Efficiency
- Total expenditures for special districts are gathered by the CA State Controller's *Special Districts Annual Report*
- Population service area is available from the last MWDOC and 2020 Urban Water Management Plan by Water District



Expenditure per capita 2023



Total Expenses (Incl. LT Debt Service, Excl. Sales for Resale) Per Capita



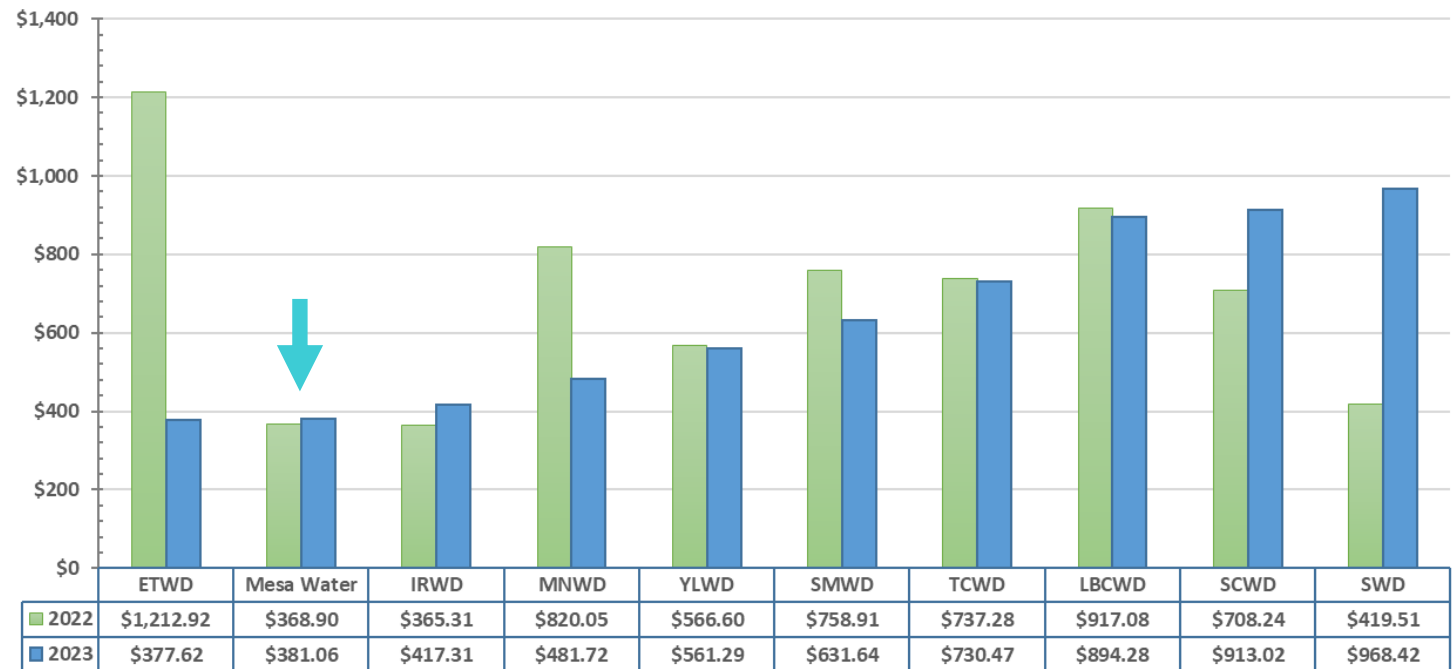
Mesa Water is 2nd in expense per capita

Data Source: California State Controller's Office, Special Districts Financial Data for total costs and long-term debt
Population from Orange County Water Suppliers - respective agencies' 2020 UWMP

Expenditure per capita over two years; 2022 and 2023

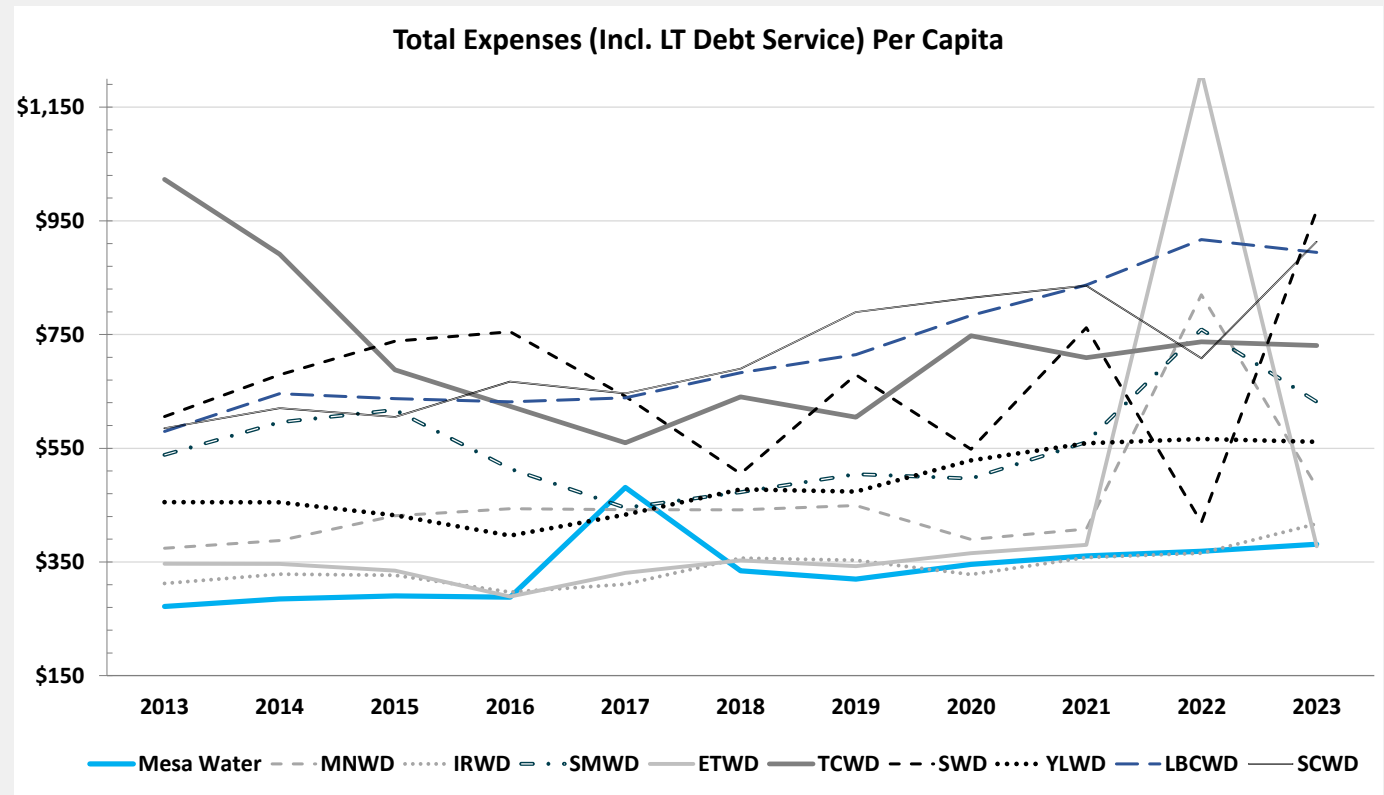


**FY2022/2023 Comparison of Total Expenses per Capita
(incl. LT debt principal payments, excl. resale)**



Data Source: California State Controller's Office, Special Districts Financial Data for total costs and long-term debt
Population from Orange County Water Suppliers - respective agencies' 2020 UWMP

Total expenditures per capita 2013-2023

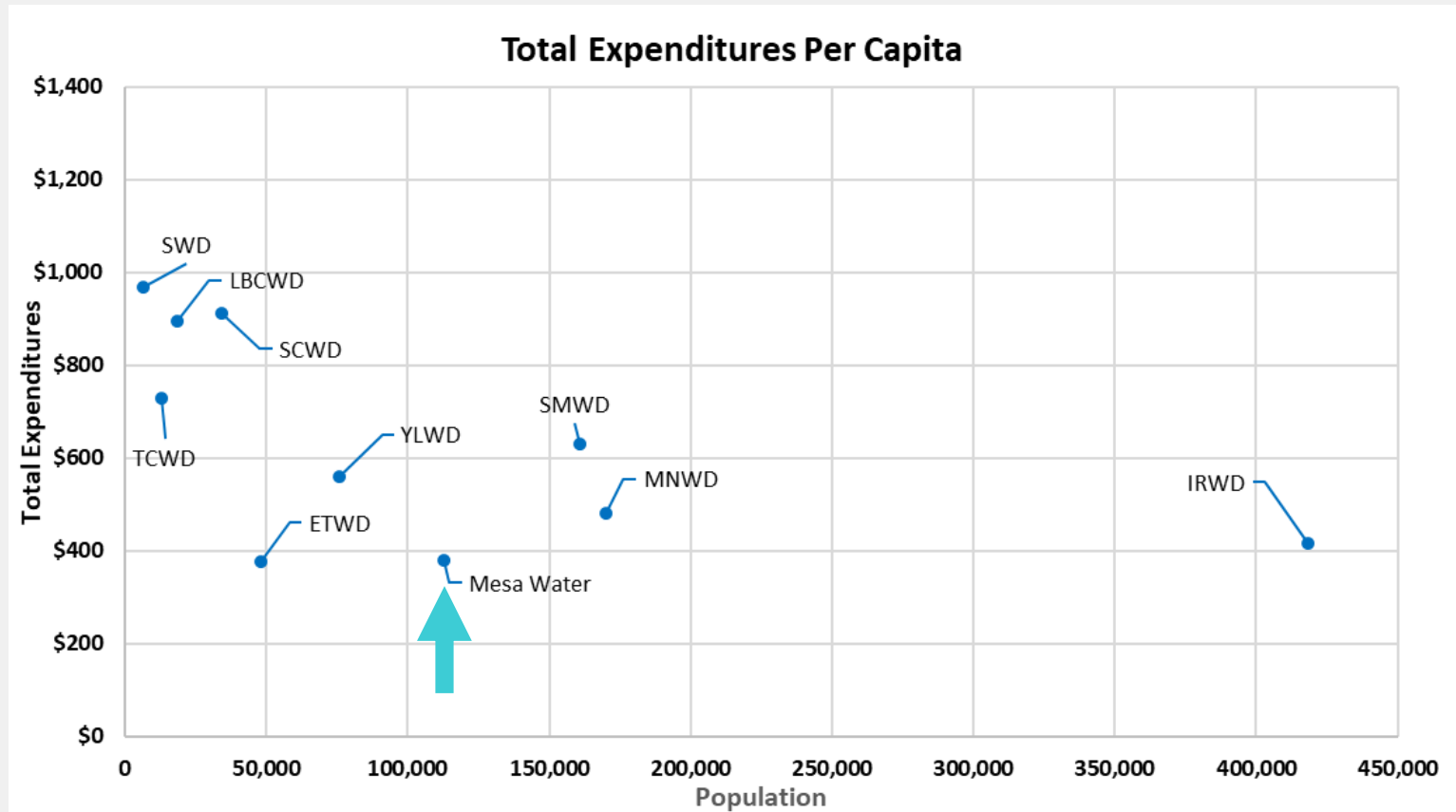


	MNWD	IRWD	SMWD	ETWD	TCWD	SWD	YLWD	LBCWD	SCWD	Mesa Water
2022- 2023										
% change	-41%	14%	-17%	-69%	-1%	131%	-1%	-2%	29%	3%
\$ change	-\$338	\$52	-\$127	-\$835	-\$7	\$549	-\$5	-\$23	\$205	\$12

Data Source: California State Controller's Office, Special Districts Financial Data
Population from Orange County Water Suppliers - respective agencies' 2020 UWMP

Mesa Water District – Cost Comparison Study

Total expenditures per capita 2023

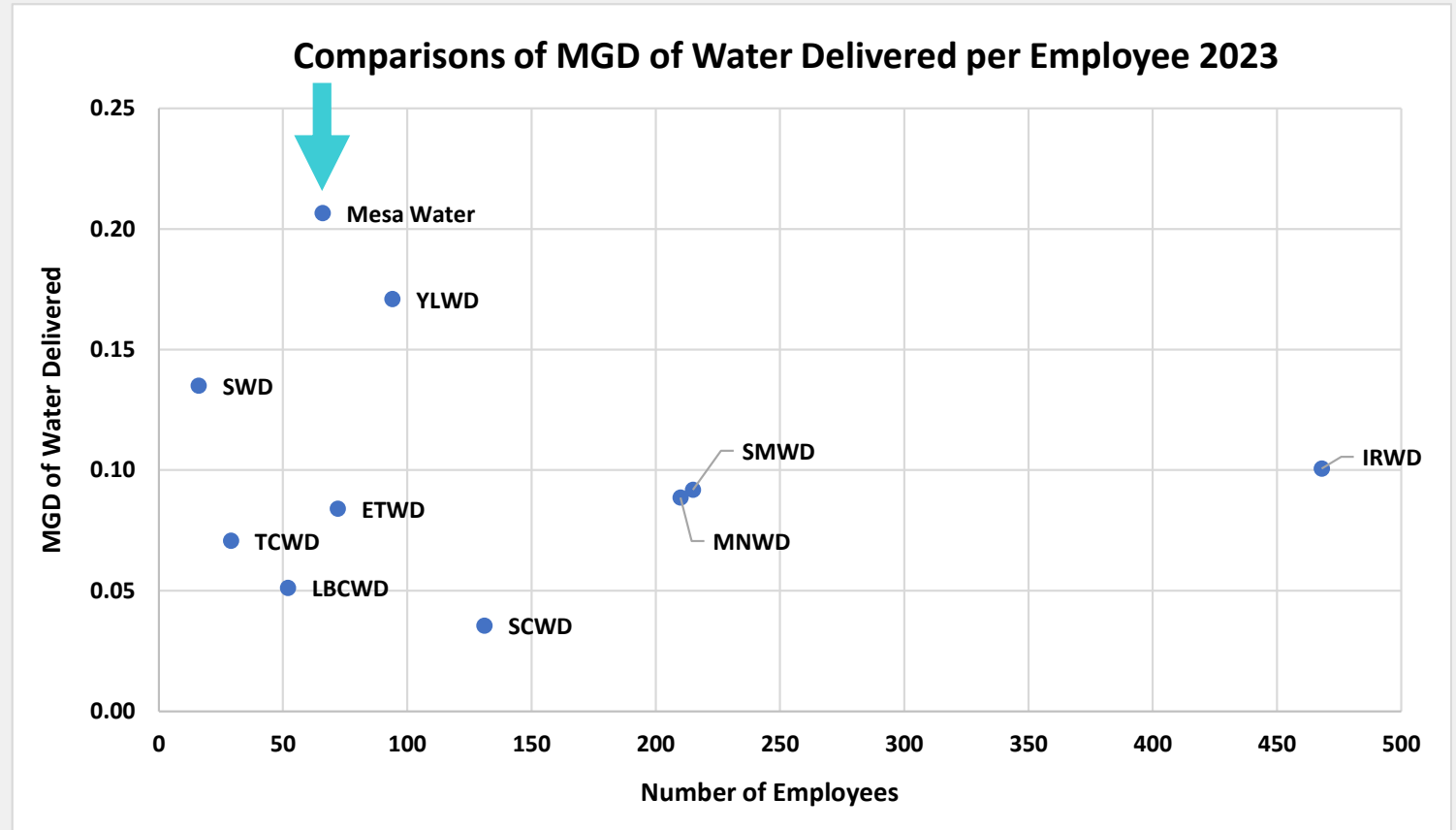


Mesa Water is 2nd in expense per capita

*Data Source: California State Controller's Office, Special Districts Financial Data
Population from Orange County Water Suppliers - respective agencies' 2020 UWMP*

Mesa Water District – Cost Comparison Study

MGD of water delivered per employee



Mesa Water is 1st in MGD per employee

*Data Source: California State Controller's Office, Special Districts Financial Data
Population from Orange County Water Suppliers - respective agencies' 2020 UWMP*

Summary

- Water bills are not the best way to assess efficiency
- Mesa Water is among the most efficient water districts in Orange County as measured by expenditures per capita
- Mesa Water delivers the most water per employee



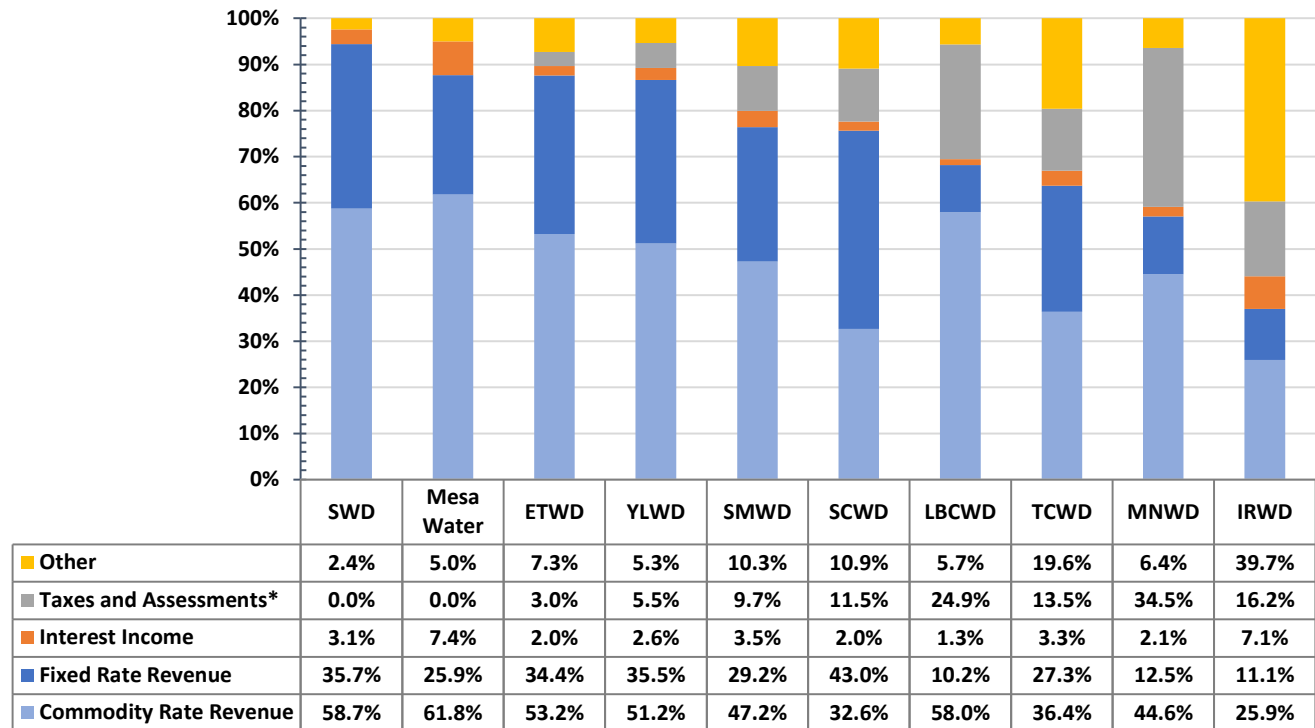
T) D



Percentage of water revenue from commodity charges



**Comparisons of Revenue Sources
2023**



Data Source: California State Controller's Office, Special Districts Financial Data for 2023
Raftelis rate survey 2023

**Back Up Slides
not to be presented**



Rate Survey Sources

District	Initials	Website
El Toro Water District	ETWD	http://etwd.com/
Irvine Ranch Water District	IRWD	http://www.irwd.com/
Laguna Beach County Water District	LBCWD	http://www.ibc wd.org/
Mesa Consolidated Water District	Mesa Water	https://www.mesawater.org/
Moulton-Niguel Water District	MNWD	https://www.mnwd.com/
Santa Margarita Water District	SMWD	http://www.smwd.com/
Serrano Water District	SWD	http://www.serranowater.org/
South Coast Water District	SCWD	https://www.scwd.org/
Trabuco Canyon Water District	TCWD	http://www.tcwd.ca.gov/home
Yorba Linda Water District	YLWD	https://www.ylwd.com/
CIMIS Stations		https://cimis.water.ca.gov/



Raftelis' Rate Survey Assumptions

ETWD - Rates effective Aug. 2022; Water Budget PPH=4, GPD=55, DOS=30, WF =4.4, DF =1, ETAF =0.8, LA=4000
IRWD - Rates effective Aug. 2022; Water Budget PPH=4, GPD=50, DOS=30, WF =4.4, DF =0, ETAF =0.75, LA=1300
LBCWD - Rates effective Mar. 2023; Water Budget PPH=3, GPD=60, DOS=60, WF =4.4, DF =1, ETAF =0.8, LA=4000
Mesa Water - Rates effective Jan. 2023; Uniform Rate
MNWD - Rates effective Jan. 2023; Water Budget PPH=4, GPD=55, DOS=30, WF =4.4, DF =0, ETAF =0.7, LA=4000
SMWD - Rates effective Jan. 2023; Water Budget PPH=4, GPD=55, DOS=30, WF =4.4, DF =0, ETAF =0.8, LA=4000
SWD - Rates effective Jul. 2022; Uniform Rate
SCWD - Rates effective Jul. 2022; Inclining Block
TCWD - Rates effective Jan. 2023; Inclining Block
YLWD - Rates effective Jul. 2022; Uniform Rate

Abbreviations

PPH: Persons Per Household
GPD: Gallons Per Day
DOS: Days of Service
ETo: Evapotranspiration (inches of water)
DF: Drought Factor
ETAF: Evapotranspiration Adjustment Factor
LA: Landscape Area (sqf)



Raftelis' Population Survey

Water District	Population	Source
Mesa Water	112,635	UWMP – 2020
IRWD	418,163	UWMP - 2020
ETWD	47,911	UWMP - 2020
MNWD	170,236	UWMP - 2020
YLWD	75,608	UWMP - 2020
SWD	6,263	UWMP - 2020
LBCWD	18,401	UWMP - 2020
SCWD	34,232	UWMP – 2020
SMWD	161,000	UWMP – 2020
TCWD	12,921	UWMP – 2020



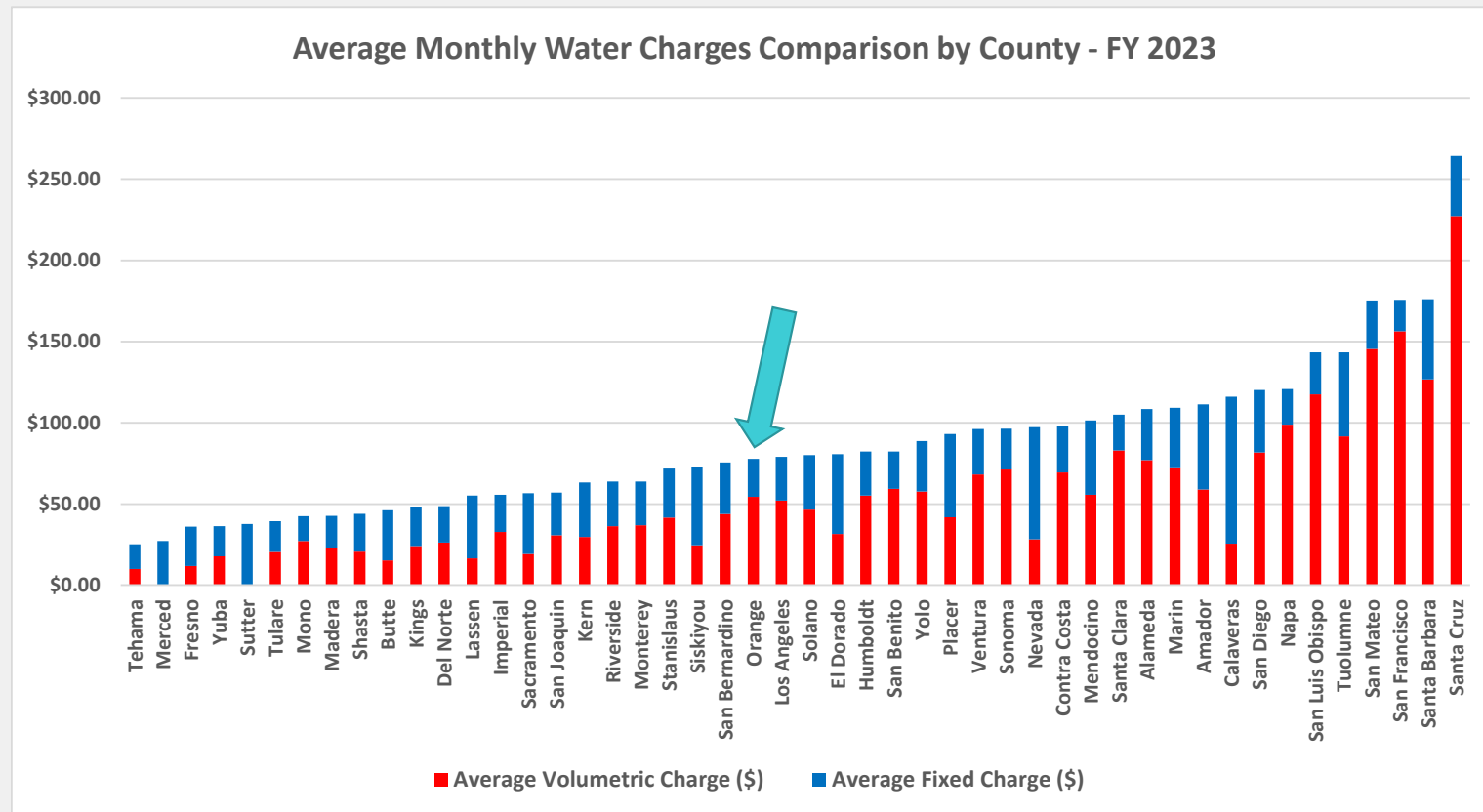
Data availability note and assumptions

MWDOC decided to discontinue the “Orange County Water Suppliers - Water Rates & Financial Information” (aka. MWDOC Rate Survey), which was used to provide data on rate structures (incl. fixed vs commodity rates) and on population served by the water districts.

This hinders our ability to precisely report Expenditure Per Capita figures.



Water rate comparison 2023



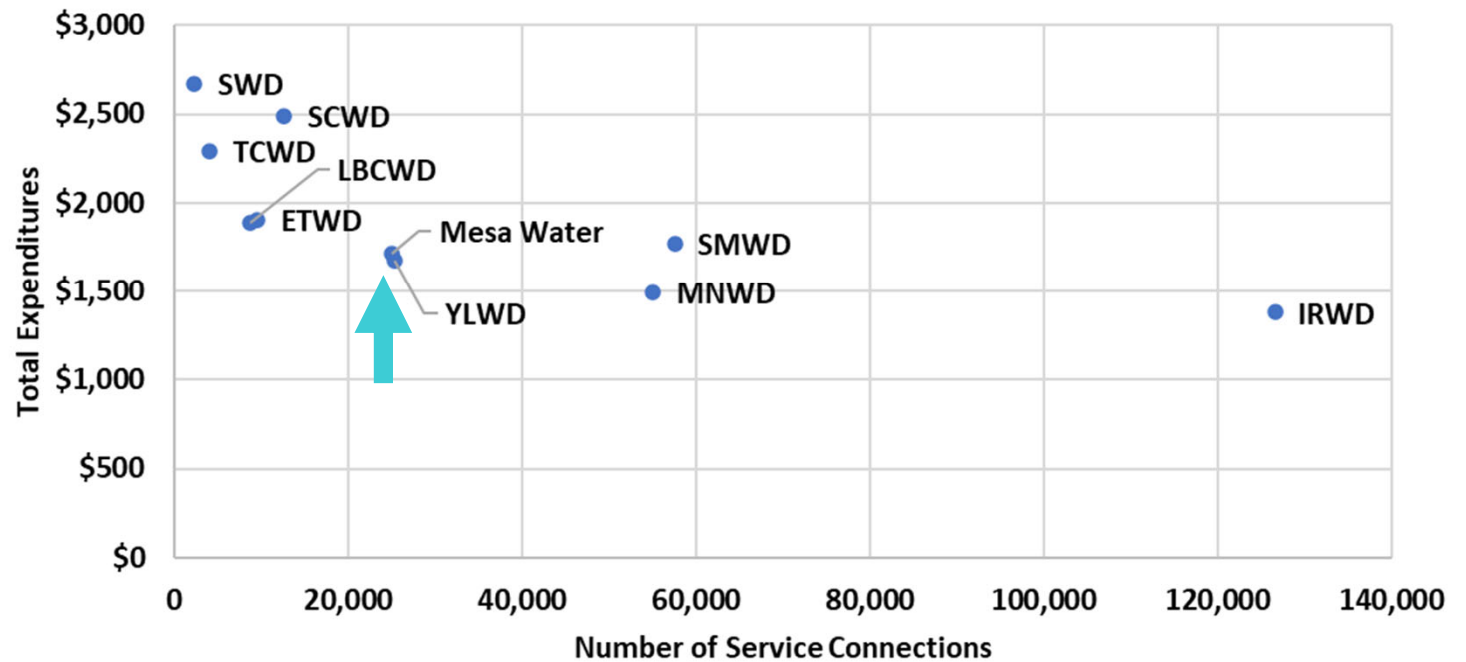
Data Source: Raftelis CA Rate Survey FY2023

Mesa Water District – Cost Comparison Study

Expense per service connection



Comparisons of Total Expenditures Per Service Connection (Includes Long-Term Debt, Excl. Resale)



Mesa Water is 4th in expenses per connection

*Data Source: California State Controller's Office, Special Districts Financial Data
Population from Orange County Water Suppliers - respective agencies' 2020 UWMP*

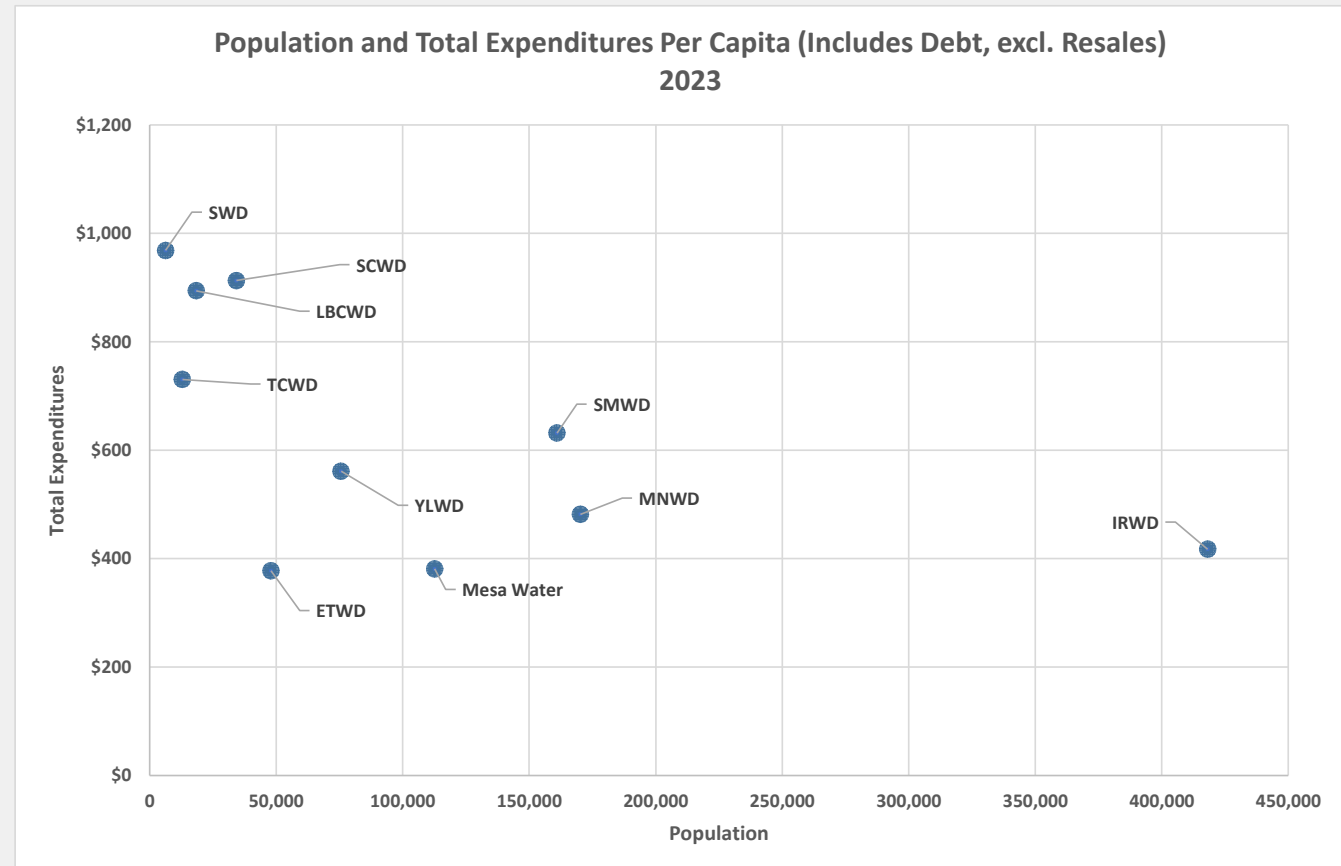
The value of water and water conservation

Higher percentages of revenue from commodity rates are more likely to send a price signal; that water is a scarce/limited resource and promote conservation

This will change in the future as you put more and more on the tax roll



Expenditure per service connection



Mesa Water is 2nd in expenses per connection

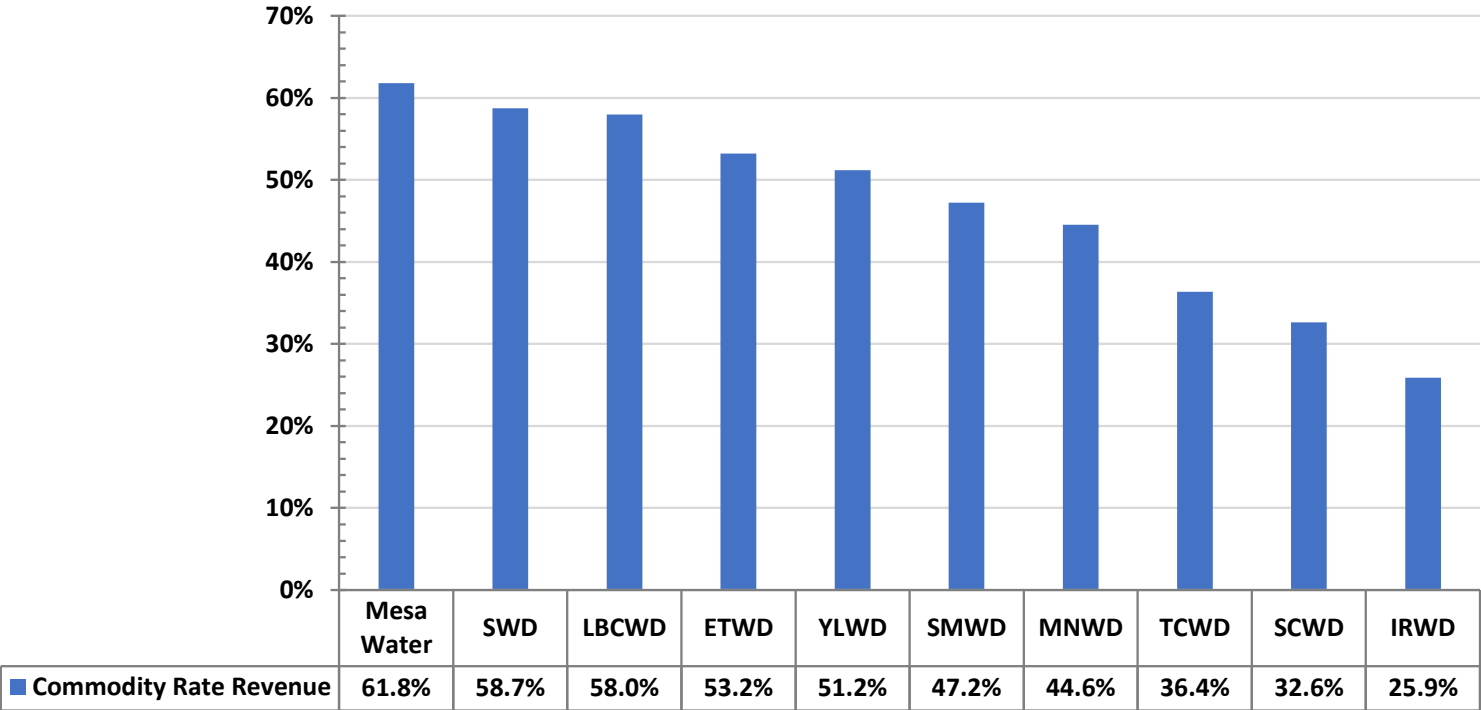
Data Source: California State Controller's Office, Special Districts Financial Data for 2023
Commodity/Fixed rate revenue shares – Raftelis Rate Survey 2023

Mesa Water District – Cost Comparison Study

Commodity
(Volumetric)
Revenue as a
Percent of
Total
Revenue



Commodity Rate Revenue, as a % of Total Revenues - 2023



Data Source: California State Controller's Office, Special Districts Financial Data for 2023
Commodity/Fixed rate revenue shares – Raftelis Rate Survey 2023

Slide 25

SG0

I believe this will change a lot in FY 2024 as more revenue is collected via fixed charges on the tax rolls, not sure if you want to show this slide.

Steve Gagnon, 2024-12-16T21:43:02.412

Where to Get Data

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