

#### STANDING ADVISORY COMMITTEE AGENDA

Tuesday, October 3, 2023 at 3:00 p.m.
Truckee Meadows Water Authority
Independence Room, 1355 Capital Blvd., Reno, NV

#### NOTES:

- 1. The announcement of this meeting has been posted at the following locations: Truckee Meadows Water Authority (1355 Capital Blvd., Reno), at <a href="https://www.tmwa.com">https://www.tmwa.com</a>, and State of Nevada Public Notice Website, <a href="https://notice.nv.gov/">https://notice.nv.gov/</a>.
- 2. In accordance with NRS 241.020, this agenda closes three working days prior to the meeting. We are pleased to make reasonable accommodations for persons who are disabled and wish to attend meetings. If you require special arrangements for the meeting, please call 834-8002 at least 24 hours before the meeting date.
- 3. Staff reports and supporting material for the meeting are available on the TMWA website at <a href="http://www.tmwa.com/meeting/">http://www.tmwa.com/meeting/</a> or you can contact Sonia Folsom at (775) 834-8002. Supporting material is made available to the general public in accordance with NRS 241.020(6).
- 4. The Committee may elect to combine agenda items, consider agenda items out of order, remove agenda items, or delay discussion on agenda items. Arrive at the meeting at the posted time to hear item(s) of interest.
- 5. Asterisks (\*) denote non-action items.
- 6. Public comment is limited to three minutes and is allowed during the public comment periods. The public may sign-up to speak during the public comment period or on a specific agenda item by completing a "Request to Speak" card and submitting it to the clerk. In addition to the public comment periods, the Chairman has the discretion to allow public comment on any agenda item, including any item on which action is to be taken.
- 7. In the event the Chairman and Vice-Chairman are absent, the remaining SAC members may elect a temporary presiding officer to preside over the meeting until the Chairman or Vice-Chairman are present (**Standing Item of Possible Action**).
- 1. Roll call\*
- 2. Public comment limited to no more than three minutes per speaker\*
- 3. Approval of the agenda (**For Possible Action**)
- 4. Approval of the minutes of August 1, 2023 meeting (For Possible Action)
- 5. Presentation of Fiscal Year 2023 financial results Matt Bowman\*
- 6. Water supply update Bill Hauck\*
- 7. Aquifer storage recovery update John Enloe and Lauren Jones\*
- 8. Update on Standing Advisory Committee Membership Sonia Folsom\*

- 9. Presentation and possible approval of 2024 meeting schedule Sonia Folsom (**For Possible Action**)
- 10. Election of Chair and Vice Chair for 2024 Justina Caviglia (For Possible Action)
- 11. Discussion and possible direction to staff regarding agenda items for future meetings (**For Possible Action**)
- 12. Staff Items\* (Unless otherwise listed with a topic description, this portion of the agenda is limited to announcements)
- 13. Committee Items\* (Unless otherwise listed with a topic description, this portion of the agenda is limited to announcements)
- 14. Public Comment limited to no more than three minutes per speaker\*
- 15. Adjournment (For Possible Action)



#### STANDING ADVISORY COMMITTEE

#### **DRAFT** MINUTES

August 1, 2023

The Standing Advisory Committee (SAC) met at TMWA, 1355 Capital Blvd, Reno, NV. Vice Chair Hastings called the meeting to order at 3:00 p.m.

#### 1. ROLL CALL

**Primary Members and Voting Alternates Present:** Fred Arndt, Jordan Hastings, Colin Hayes, Karl Katt, John Krmpotic, Ken McNeil, Chris Melton, Jonnie Pullman, Dale Sanderson, Alex Talmant and Jerry Wager.

Alternates Present: Ken Becker, Kevin Ryan, and Jim Smith.

Primary Members and Alternates Absent: Robert Chambers, Neil McGuire, and Ann Silver.

**Staff Present:** Matt Bowman, John Enloe, Sophie Cardinal, Robert Charpentier, Andy Gebhardt, David Kershaw, Gina Martin, Eddie Quaglieri, Shawn Stoddard, Sandra Tozi, John Zimmerman, and Legal Counsel Justina Caviglia (PBL).

#### 2. PUBLIC COMMENT

There was no public comment.

#### 3. APPROVAL OF THE AGENDA

Upon motion duly made by Member Hayes, and seconded by Member Pullman, and carried by unanimous consent of the members present, the Committee approved the agenda.

#### 4. APPROVAL OF THE MINUTES OF APRIL 4, 2023 MEETING

Upon motion duly made by Member Hayes and seconded by Member Melton, and carried by unanimous consent of the members present, the Committee approved the minutes of April 4, 2023.

#### 5. PRESENTATION OF FISCAL YEAR 2023 Q3 YEAR TO DATE FINANCIAL RESULTS

Matt Bowman, TMWA Chief Financial Officer, presented the Q3 financials for fiscal year 2023: the change in net position was \$26.3m (45%) lower than budget which was driven by lower operating revenues and lower connection fees; operating revenue was \$2.0m (2%) lower than budget which was driven by lower water sales; operating expenses were \$2.1m (2%) lower than the augmented budget; nonoperating expenses were \$0.7m (10%) lower than budgeted related to loss on disposal of assets; and capital contributions were \$27.0m (45%) lower than budget driven by lower contributions from connection fees and other governments related to the American Flat Advanced Purified Water project.

#### 6. PRESENTATION ON THE FINAL BUDGET FOR THE FISCAL YEAR ENDING JUNE 30, 2024 AND THE 2024-2028 FIVE-YEAR CAPITAL IMPROVEMENT PLAN (CIP)

Mr. Bowman and Danny Rotter, TMWA Director of Engineering, presented the FY 2024 Budget and FY2024-2028 CIP, which was presented to the Board and approved in May.

#### 7. DISCUSSION AND ACTION, AND POSSIBLE RECOMMENDATION TO THE TMWA BOARD REGARDING FUNDING PLAN AND PROPOSED RATE ADJUSTMENTS

Mr. Bowman presented the 10-year funding plan and proposed rate adjustments, and rate structure study which will be conducted over the next 12 months. Working with PFM, TMWA's financial advisors, Mr. Bowman outlined all the data and financials that went into developing the funding plan and proposed scenarios for the rate adjustments as well as the public workshop/open houses schedule to be conducted if the Board gave the approval to proceed.

The Committee discussed the long-term outlook, TMWA's financial stability, the possibility of skipping a year if the rate increase is not necessary (similar to pushing out increases in the past), and using a Consumer Price Index (CPI) base for rate increases (with a cap) after the first three years in order to keep up with inflation..

Upon motion duly made by Member Krmpotic and seconded by Member Hayes, and carried by unanimous consent of the members present, the Committee approved recommending scenario 2-4.5%, 4% and 3.5% increases in FYs 2024, 2025 and 2026, and CPI based increases thereafter, to the TMWA Board.

#### 8. DISCUSSION AND POSSIBLE REQUESTS FOR AGENDA ITEMS FOR FUTURE MEETINGS

No motion taken.

#### **Next meeting:**

- 1. Preliminary FY2023 financial results
- 2. Funding Plan & Proposed Rate Adjustments

- 3. Presentation on TMWA's Aquifer Storage Recovery (ASR) program
- 4. Water supply update

#### 9. STAFF ITEMS

Andy Gebhardt, TMWA Director of Distribution, reminded the Committee of the picnic on Saturday, August 12<sup>th</sup> at the Verdi Hydro Plant and welcomed the SAC members to attend.

John Zimmerman, TMWA General Manager, introduced Justina Caviglia, TMWA's new Board Counsel, from Parsons, Behle & Latimer (PBL).

#### 10. COMMITTEE ITEMS

There were no committee items.

#### 11. PUBLIC COMMENT

There was no public comment.

#### 12. ADJOURNMENT

With no further items for discussion, Chair McGuire adjourned the meeting at 4:25 p.m.
Approved by the Standing Advisory Committee in session on
Sonia Folsom, Recording Clerk



**TO**: Board of Directors

**THRU:** John R. Zimmerman, General Manager **FROM**: Matt Bowman, Chief Financial Officer

**DATE**: September 12, 2023

**SUBJECT:** Presentation of fiscal year 2023 unaudited financial performance

#### **Summary**

Please refer to Attachments A-1 and A-2 for full Statements of Revenues, Expenses and Changes in Net Position for both actual to budget and year-over-year comparisons as discussed in the report below.

#### **Budget to Actual**

	Actual	Budget		
	YTD 2023	YTD 2023	Variance \$	Variance %
CHANGE IN NET POSITION	\$ 30,224,075	\$ 74,574,771	\$ (44,350,696)	(59)%

Change in net position was \$44.4m or 59% lower than budget in 2023. This was driven by lower operating revenues, and lower than budgeted contributions related to lower connection fees and less contributions related to the construction of the Advanced Purified Water (APW) facility at American Flat.

#### Year over Year

	Actual	Actual		
	YTD 2023	YTD 2022	Variance \$	Variance %
CHANGE IN NET POSITION	\$ 30,224,075	\$ 46,089,788	\$ (15,865,713)	(34)%

Change in net position was \$15.9m or 34% lower than the prior year. This was due to higher operating and nonoperating revenues offset by higher operating expenses and lower capital contributions.

#### Revenue

#### **Budget to Actual**

	Actual	Budget		
	YTD 2023	YTD 2023	Variance \$	Variance %
OPERATING REVENUES				
Charges for Water Sales	107,098,581	113,142,185	(6,043,604)	(5)%
Hydroelectric Sales	2,928,163	2,407,214	520,949	22 %
Other Operating Sales	3,122,397	3,861,065	(738,668)	(19)%
Total Operating Revenues	113,149,141	119,410,464	(6,261,323)	(5)%

Operating revenue was \$6.3m or 5% lower than budget through Q4 2023. This was mostly driven by lower water sales. Water consumption during the year was significantly lower than budget due both the first quarter (late summer 2022) and fourth quarter (spring 2023). There was significant precipitation and cooler temperatures in Q4 2023 which led to significantly lower water use. Nearly all of the \$6.0m variance resulted from Q4.

#### Year over Year

	Actual	Actual		
	YTD 2023	YTD 2022	Variance \$	Variance %
OPERATING REVENUES				
Charges for Water Sales	107,098,581	108,172,970	(1,074,389)	(1)%
Hydroelectric Sales	2,928,163	2,551,333	376,830	15 %
Other Operating Sales	3,122,397	3,846,679	(724,282)	(19)%
Total Operating Revenues	113,149,141	114,570,982	(1,421,841)	(1)%

Total operating revenues were lower than prior year by \$1.4m or 1%. Water sales were lower than prior year due to lower consumption primarily due to high precipitation in spring and summer offset by 2.5% rate increase in June 2023. Hydroelectric sales were higher due to sustained river flows and plants online for more time than in the prior year.

#### **Operating Expenses**

#### **Budget to Actual**

	Actual	Budget		
	YTD 2023	YTD 2023	Variance \$	Variance %
OPERATING EXPENSES				
Salaries and Wages	27,309,513	29,656,188	(2,346,675)	(8)%
Employee Benefits	13,905,722	12,842,853	1,062,869	8 %
Services and Supplies	38,311,560	38,572,516	(260,956)	(1)%
Total Operating Expenses Before Depreciation	79,526,795	81,071,557	(1,544,762)	(2)%
Depreciation	34,848,532	34,628,346	220,186	1 %
Total Operating Expenses	114,375,327	115,699,903	(1,324,576)	(1)%

Total operating expenses were \$1.3m lower or 1% than budget through Q4 2023. Salaries and wages and employee benefits are both lower due primarily to position vacancies. Employee benefits are higher than budget due to actuarial adjustments affecting both PERS and OPEB expenses. Both of those expenses are tied to annual actuarial valuations which consider the market value of the underlying investments. Due to poor investment performance, the valuations resulted in a large expense in FY 2023. Following the budget augmentation after the first half of the fiscal year related to electric power and chemical costs, services and supplies expense ended the year in line with budget.

#### Year over Year

	Actual	Actual		
	YTD 2023	YTD 2022	Variance \$	Variance %
OPERATING EXPENSES				
Salaries and Wages	27,309,513	24,735,686	2,573,827	10 %
Employee Benefits	13,905,722	7,461,199	6,444,523	86 %
Services and Supplies	38,311,560	32,768,771	5,542,789	17 %
Total Operating Expenses Before Depreciation	79,526,795	64,965,656	14,561,139	22 %
Depreciation	34,848,532	33,642,537	1,205,995	4 %
Total Operating Expenses	114,375,327	98,608,193	15,767,134	16 %

Year over year operating expenses were \$15.8m or 16% higher compared to the prior year. Salaries and wages and benefits are higher than prior year to due to Labor Market Index (LMI) increases, step increases, and additions to staff during FY 2023. Employee benefits were significantly higher than prior year for the reason discussed above. Services and supplies expenses are higher due to higher costs resulting from inflation, primarily price increases to electric power and chemical costs.

#### **Non-Operating Expenses**

#### **Budget to Actual**

	Actual	Budget		
	YTD 2023	YTD 2023	Variance \$	Variance %
NONOPERATING REVENUES (EXPENSES)				
Investment Earnings	3,576,888	3,064,024	512,864	17 %
Net Increase (Decrease) in FV of Investments	(1,626,597)	_	(1,626,597)	— %
Gain (Loss) on Disposal of Assets	(1,261,500)	(1,700,000)	438,500	(26)%
Amortization of Bond/note Issuance Costs	_	_	_	— %
Interest Expense	(11,522,905)	(11,499,699)	(23,206)	— %
Total Nonoperating Revenues (Expenses)	(10,834,114)	(10,135,675)	(698,439)	7 %

Nonoperating expenses were \$0.7m or 7% higher than budgeted than in 2023. This is primarily due to a net decrease in fair value of investments. Due to rising interest rates, TMWA recognizes a fair value loss on investments. Five and ten year treasury yields continue to increase. Five year treasury yield was 3.01% on June 30, 2022 and 4.13% on June 30, 2023. Investment earnings are greater than budget, as rates are rising, maturing securities are reinvested at higher rates.

#### Year over Year

	Actual	Actual		
	YTD 2023	YTD 2022	Variance \$	Variance %
NONOPERATING REVENUES (EXPENSES)				
Investment Earnings	3,576,888	2,028,627	1,548,261	76 %
Net Increase (Decrease) in FV of Investments	(1,626,597)	(10,605,392)	8,978,795	(85)%
Gain (Loss) on Disposal of Assets	(1,261,500)	(938,661)	(322,839)	34 %
Amortization of Bond/note Issuance Costs	_	801	(801)	(100)%
Interest Expense	(11,522,905)	(11,954,097)	431,192	(4)%
Total Nonoperating Revenues (Expenses)	(10,834,114)	(21,468,722)	10,634,608	(50)%

Nonoperating expenses were lower than prior year by \$10.6m or 50%, primarily due to reasons discussed above.

#### **Capital Contributions**

#### **Budget to Actual**

	Actual	Budget		
	YTD 2023	YTD 2023	Variance \$	Variance %
CAPITAL CONTRIBUTIONS				
Grants	88,724	3,585,636	(3,496,912)	(98)%
Water Resource Sustainability Program	798,007	2,840,000	(2,041,993)	(72)%
Developer Infrastructure Contributions	19,884,818	21,903,168	(2,018,350)	(9)%
Developer Will-serve Contributions (Net of Refunds)	3,620,779	7,245,700	(3,624,921)	(50)%
Developer Capital Contributions - Other	9,374,789	11,044,199	(1,669,410)	(15)%
Developer Facility Charges (Net of Refunds)	7,062,713	13,186,258	(6,123,545)	(46)%
Contributions from Others	40,741	94,924	(54,183)	(57)%
Contributions from Other Governments	1,413,804	21,100,000	(19,686,196)	(93)%
Net Capital Contributions	42,284,375	80,999,885	(38,715,510)	(48)%

Capital contributions were \$38.7m or 48% lower than budget. The primary driver is lower contributions from other governments related to the American Flat APW project. This is timing related and is based on the actual spend on the project which is in the design phase. These contributions are expected in FY 2024. Also contributing to the variance are lower connection fees. The total connection fee variance is approximately \$13.5m which reflects a slow down in developer payments on water projects.

#### Year over Year

	Actual	Actual		
	YTD 2023	YTD 2022	Variance \$	Variance %
CAPITAL CONTRIBUTIONS				
Grants	88,724	2,164,651	(2,075,927)	(96)%
Water Resource Sustainability Program	798,007	1,409,024	(611,017)	(43)%
Developer Infrastructure Contributions	19,884,818	18,167,149	1,717,669	9 %
Developer Will-serve Contributions (Net of Refunds)	3,620,779	4,436,788	(816,009)	(18)%
Developer Capital Contributions - Other	9,374,789	11,835,501	(2,460,712)	(21)%
Developer Facility Charges (Net of Refunds)	7,062,713	12,862,786	(5,800,073)	(45)%
Contributions from Others	40,741	_	40,741	— %
Contributions from Other Governments	1,413,804	719,822	693,982	96 %
Net Capital Contributions	42,284,375	51,595,721	(9,311,346)	(18)%

Year over year, capital contributions are \$9.3m or 18% lower than the prior year due to lower connection fees offset by higher developer infrastructure contributions.

#### **Capital Spending**

Cash spent on capital outlays and construction projects in FY2023 was approximately \$53.6m. Total budgeted capital spend for FY2023 is \$83.9m, which includes \$20m and \$15m for the American Flat APW facility and Orr Ditch pump station and hydro facility, respectively. Spending on the top three projects is listed below:

Orr Ditch Pump Station BPS	\$5.9m
Tank rehab/improvements	\$4.4m
AMI - meter installations	\$3.7m

#### **Cash Position**

At June 30, 2023 total cash and investments was \$207.3m or \$21.3m lower than at the beginning of the fiscal year. Of the total cash and investments, \$153.0m was unrestricted to be used to meet upcoming and future operating and maintenance expenses, principal and interest payments and construction project payments. The remaining \$54.3m was restricted to pay for scheduled bond principal and interest payments as well as maintaining required reserves as stipulated in our bond covenants.

#### **Truckee Meadows Water Authority**

Comparative Statements of Revenues, Expenses and Changes in Net Position For the four quarters ended June  $30,\,2023$ 

		Actual	Budget			
	Υ٦	TD 2023	YTD 2023		Variance \$	Variance %
OPERATING REVENUES						
Charges for Water Sales	\$ 10	07,098,581	\$ 113,142,185	\$	(6,043,604)	(5)%
Hydroelectric Sales		2,928,163	2,407,214		520,949	22 %
Other Operating Sales		3,122,397	3,861,065		(738,668)	(19)%
Total Operating Revenues	11	13,149,141	119,410,464		(6,261,323)	(5)%
OPERATING EXPENSES						
Salaries and Wages	2	27,309,513	29,656,188		(2,346,675)	(8)%
Employee Benefits	1	13,905,722	12,842,853		1,062,869	8 %
Services and Supplies	3	38,311,560	38,572,516		(260,956)	(1)%
Total Operating Expenses Before Depreciation	7	79,526,795	81,071,557		(1,544,762)	(2)%
Depreciation	3	34,848,532	34,628,346		220,186	1 %
Total Operating Expenses	11	14,375,327	115,699,903		(1,324,576)	(1)%
OPERATING INCOME		(1,226,186)	3,710,561		(4,936,747)	(133)%
NONOPERATING REVENUES (EXPENSES)						
Investment Earnings		3,576,888	3,064,024		512,864	17 %
Net Increase (Decrease) in FV of Investments		(1,626,597)	_		(1,626,597)	— %
Gain (Loss) on Disposal of Assets	(	(1,261,500)	(1,700,000	)	438,500	(26)%
Amortization of Bond/note Issuance Costs		_	_		_	— %
Interest Expense	(1	11,522,905)	(11,499,699	)	(23,206)	<b>-</b> %
Total Nonoperating Revenues (Expenses)	(1	10,834,114)	(10,135,675	)	(698,439)	7 %
Gain (Loss) Before Capital Contributions	(1	12,060,300)	(6,425,114	)	(5,635,186)	88 %
CAPITAL CONTRIBUTIONS						
Grants		88,724	3,585,636		(3,496,912)	(98)%
Water Resource Sustainability Program		798,007	2,840,000		(2,041,993)	(72)%
Developer Infrastructure Contributions	1	19,884,818	21,903,168		(2,018,350)	(9)%
Developer Will-serve Contributions (Net of Refunds)		3,620,779	7,245,700		(3,624,921)	(50)%
Developer Capital Contributions - Other		9,374,789	11,044,199		(1,669,410)	(15)%
Developer Facility Charges (Net of Refunds)		7,062,713	13,186,258		(6,123,545)	(46)%
Contributions from Others		40,741	94,924		(54,183)	(57)%
Contributions from Other Governments		1,413,804	21,100,000		(19,686,196)	(93)%
Net Capital Contributions	4	12,284,375	80,999,885		(38,715,510)	(48)%
CHANGE IN NET POSITION	\$ 3	30,224,075	\$ 74,574,771	\$	(44,350,696)	(59)%

#### **Truckee Meadows Water Authority**

Comparative Statements of Revenues, Expenses and Changes in Net Position For the four quarters ended June  $30,\,2023$ 

		Actual	Actual			
	Y	TD 2023	YTD 2022	Varia	ance \$	Variance %
OPERATING REVENUES						
Charges for Water Sales	\$ 1	07,098,581	\$ 108,172,970	\$ (1	,074,389)	(1)%
Hydroelectric Sales		2,928,163	2,551,333		376,830	15 %
Other Operating Sales		3,122,397	3,846,679	(	(724,282)	(19)%
Total Operating Revenues	1	13,149,141	114,570,982	(1	,421,841)	(1)%
OPERATING EXPENSES						
Salaries and Wages		27,309,513	24,735,686	2	,573,827	10 %
Employee Benefits		13,905,722	7,461,199	6	,444,523	86 %
Services and Supplies		38,311,560	32,768,771	5	,542,789	17 %
Total Operating Expenses Before Depreciation		79,526,795	64,965,656	14	,561,139	22 %
Depreciation		34,848,532	33,642,537	1,	,205,995	4 %
Total Operating Expenses	1	14,375,327	98,608,193	15	,767,134	16 %
OPERATING INCOME		(1,226,186)	15,962,789	(17	,188,975)	(108)%
NONOPERATING REVENUES (EXPENSES)						
Investment Earnings		3,576,888	2,028,627	1	,548,261	76 %
Net Increase (Decrease) in FV of Investments		(1,626,597)	(10,605,392)	8	,978,795	(85)%
Gain (Loss) on Disposal of Assets		(1,261,500)	(938,661)	(	(322,839)	34 %
Amortization of Bond/note Issuance Costs		_	801		(801)	(100)%
Interest Expense	- (	(11,522,905)	(11,954,097)		431,192	(4)%
Total Nonoperating Revenues (Expenses)	(	(10,834,114)	(21,468,722)	10	,634,608	(50)%
Gain (Loss) Before Capital Contributions	(	(12,060,300)	(5,505,933)	(6	,554,367)	119 %
CAPITAL CONTRIBUTIONS						
Grants		88,724	2,164,651	(2	,075,927)	(96)%
Water Resource Sustainability Program		798,007	1,409,024		(611,017)	(43)%
Developer Infrastructure Contributions		19,884,818	18,167,149	1	,717,669	9 %
Developer Will-serve Contributions (Net of Refunds)		3,620,779	4,436,788	(	(816,009)	(18)%
Developer Capital Contributions - Other		9,374,789	11,835,501	(2	,460,712)	(21)%
Developer Facility Charges (Net of Refunds)		7,062,713	12,862,786	(5	,800,073)	(45)%
Contributions from Others		40,741	_		40,741	— %
Contributions from Other Governments		1,413,804	719,822		693,982	96 %
Net Capital Contributions		42,284,375	51,595,721	(9	,311,346)	(18)%
CHANGE IN NET POSITION	\$	30,224,075	\$ 46,089,788	\$ (15	,865,713)	(34)%



#### **Water Supply Update**

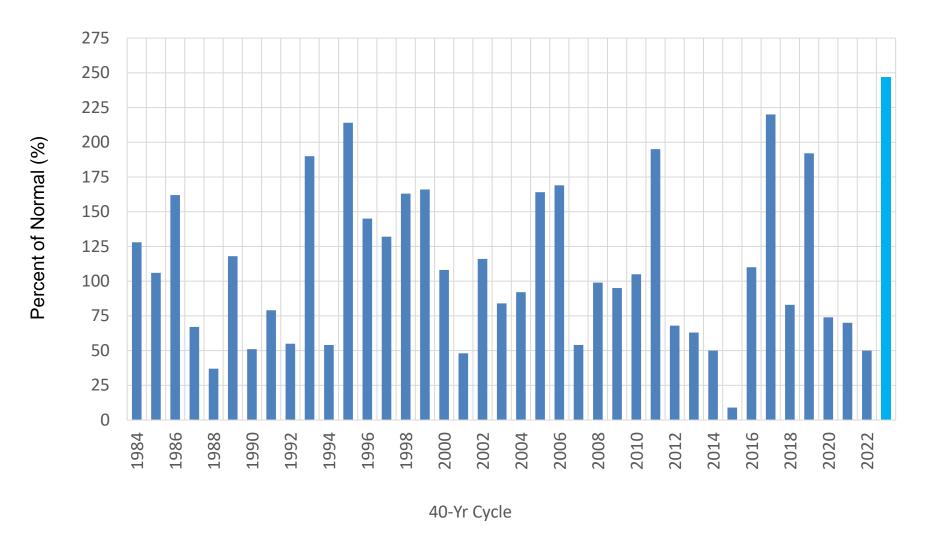
**Standing Advisory Committee Meeting** 

October 3, 2023



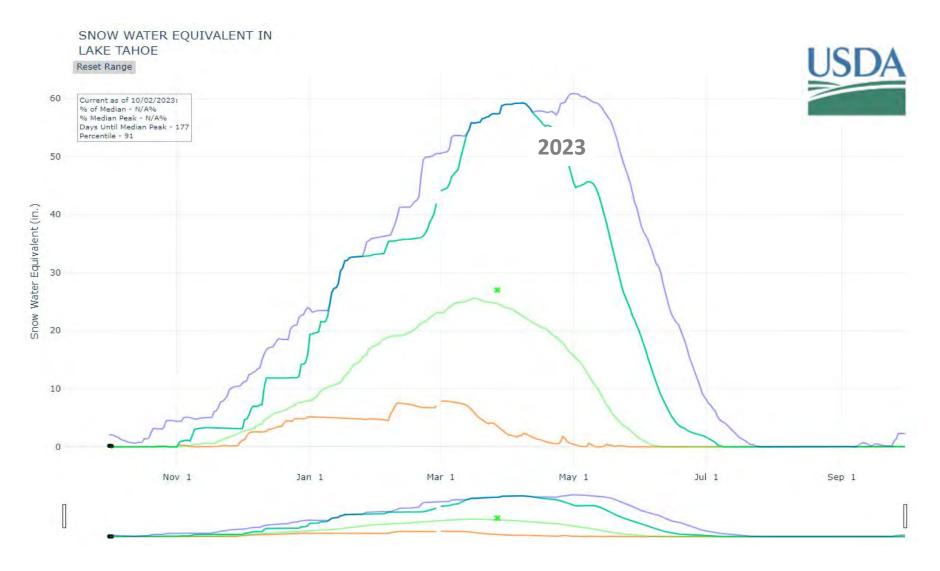


#### **April 1 Lake Tahoe Basin Snowpack (last 40 years)**





### Lake Tahoe Basin Snowpack Comparison





#### **April 01, 2023 NRCS Final Streamflow Forecast**

Lake Tahoe Gates Closed Rise (GCR):

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3.9' (336% Avg.) 05% COE (Apr-High)
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#### **Actual 3.1' rise (267% 30-yr median Apr-High) 1.16'**

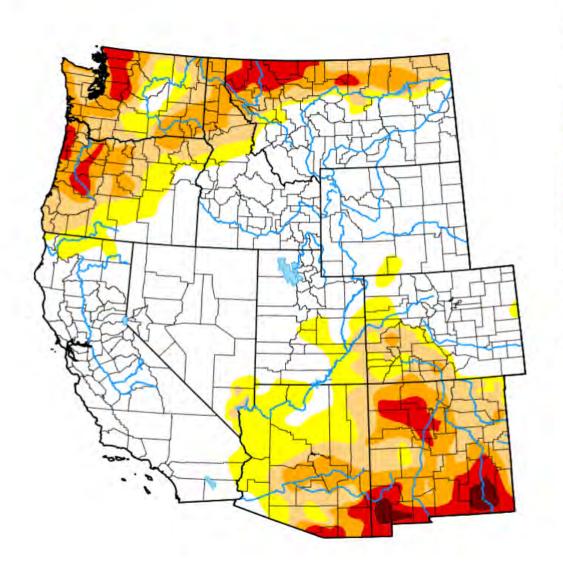
Truckee River at Farad, CA (A-J)

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675 KAF (300% Avg.) 05% COE (Apr-Jul) 560 KAF (249% Avg.) 50% COE (Apr-Jul) 460 KAF (204% Avg.) 95% COE (Apr-Jul)
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Actual 600 KAF (267% 30-yr median Apr-Jul) 225 KAF



#### **U.S. Drought Monitor**



Map released: Thurs. September 28, 2023

Data valid: September 26, 2023 at 8 a.m. EDT

#### Intensity

None

D0 (Abnormally Dry)

D1 (Moderate Drought)

D2 (Severe Drought)

D3 (Extreme Drought)

D4 (Exceptional Drought)

No Data

#### Authors

United States and Puerto Rico Author(s):

Richard Heim, NOAA/NCEI

Pacific Islands and Virgin Islands Author(s):

Richard Tinker, NOAA/NWS/NCEP/CPC

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TRUCKEE MEADOWS WATER

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#### Nevada

#### **U.S. Drought Monitor**



Map released: Thurs. September 28, 2023

Data valid: September 26, 2023 at 8 a.m. EDT

#### Intensity

None

D0 (Abnormally Dry)

D1 (Moderate Drought)

D2 (Severe Drought)

D3 (Extreme Drought)

D4 (Exceptional Drought)

No Data

#### Authors

United States and Puerto Rico Author(s):

Richard Heim, NOAA/NCEI

Pacific Islands and Virgin Islands Author(s):

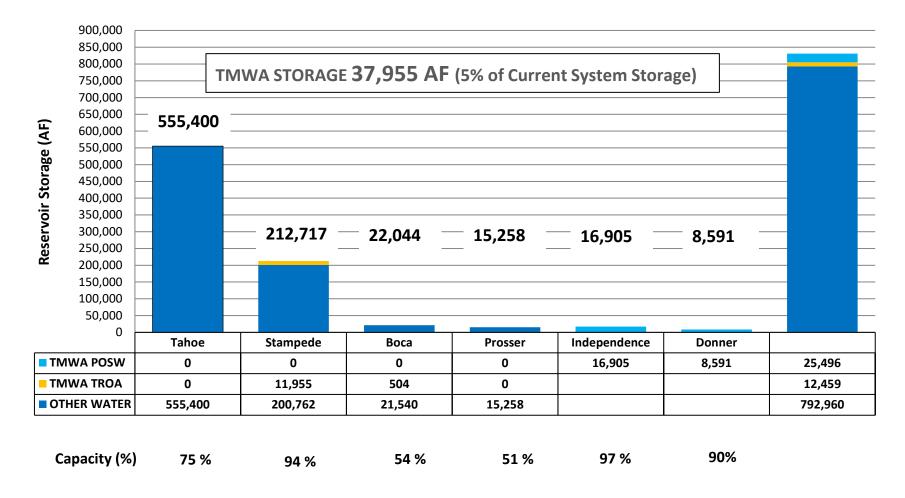
Richard Tinker, NOAA/NWS/NCEP/CPC

#### **Truckee River System**





#### TMWA System Storage (Oct 02, 2023)



**MAX SYSTEM CAPACITY 1,068,270 AF** 

**CURRENT STORAGE 830,915 (78% Capacity)** 



#### **Key Points**

- 2023 April 01 snowpack in the Lake Tahoe Basin was largest ever recorded
- This monster snowpack year in effect ended the 3-drought on the Truckee System
- Record streamflow runoff also occurred along with all reservoirs filling and even spilling (Tahoe came close to filling ~87% capacity)
- Lake Tahoe physically rose ~5.80 feet from a low on 12/1/22 until it peaked in mid-July (6222.50'- 6228.30')
- As a result, a tremendous amount of upstream storage will be carried-over into the winter months setting the region up for the following year
- An average winter this year 2023/2024 would mean that Lake Tahoe fills or comes close to filling again next summer
- Normal river flows are projected at least through the end of next year (2024) regardless of what happens this winter
- The region is extremely well positioned from a water supply perspective



#### Thank you!

Questions?

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## TMWA's Aquifer Storage and Recovery (ASR) Program

Presentation by Lauren Jones



## TMWA's Aquifer Storage and Recovery Program

During the fall and winter months TMWA uses treated water from Chalk Bluff Treatment Plant and Mount Rose Treatment Plant to inject water into selected production wells within 5 different hydrographic basins:

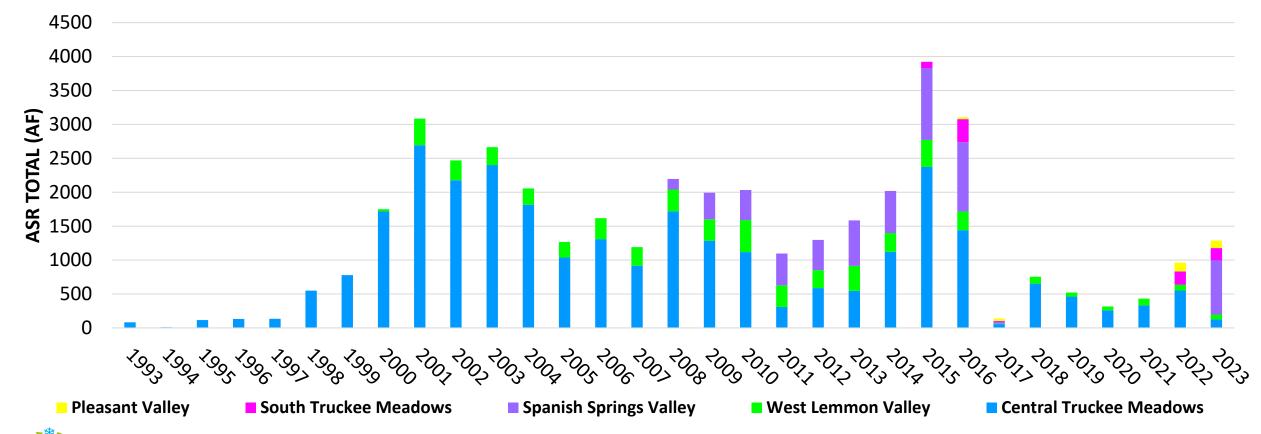
- Central Truckee Meadows-Basin 87
- West Lemmon Valley-Basin 92A
- Spanish Springs Valley-Basin 85
- South Truckee Meadows-Basin 87S
- Pleasant Valley- Basin 88





#### Historical ASR by Hydrographic Basin

Cumulative ASR Total (1993-2023): 41,553 acre-feet





## Current Operations and ASR strategies



- Conjunctive use-maximize surface water and allow groundwater levels to recover through passive recharge
  - Truckee River water and Mt. Rose Treatment Plant allow TMWA to rest wells and recover groundwater levels
- Active ASR where feasible
- Recharge in areas that have declining water levels
  - The Mount Rose Fan
  - Spanish Springs Valley
  - A handful of wells in the Central Truckee Meadows
- Recharge in areas that have undesirable water quality
  - West Lemmon Valley (arsenic)
  - Wells near the PCE plume
  - Some areas in Central Truckee Meadows (arsenic)
- Recharge in areas that are easier to store water in (mechanically, without compromising water quality or potential losses from The Truckee River)
  - Central Truckee Meadows

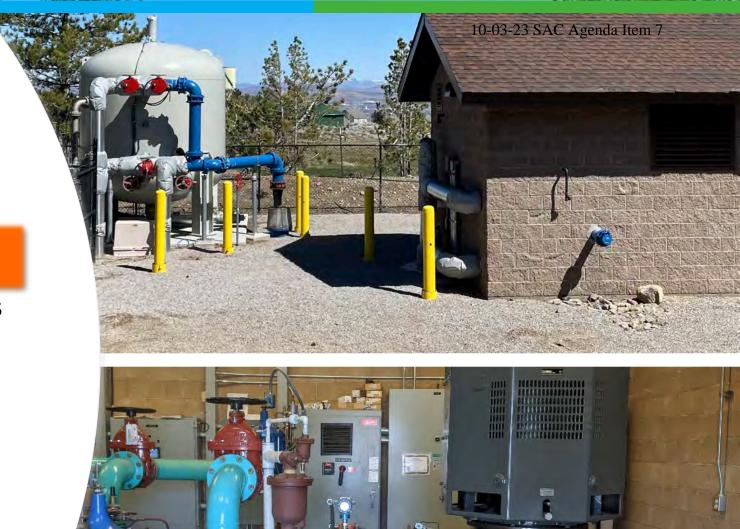


#### Example: 2021-2023 ASR Selection and Total Volume

Injection Volume: **432 AF** (2021), **962 AF**(2022), **1,286** AF (2023)

- Recharge in areas that have declining water levels (5 wells)
  - Tessa East, Arrowcreek 2, and STMGID 11 (Basins 87S and 88)









#### Goal: Recharge up to 7,000 AF!

- To obtain this goal, the following need to occur:
  - Mechanical upgrades at well sites
  - Disinfection by-product (DBP) mitigation at specific well sites
  - Amend current permits to include additional wells
  - Mount Rose Treatment Plant operational active & passive recharge
  - American Flat A+ Water Treatment Facility will need to be constructed and operational

Basin	Recharge Rate (AFY)	Recharge Source
Pleasant Valley	1,731	Mt. Rose Treatment Plant
Truckee Meadows	2,000	Truckee River
Spanish Springs Valley	2,000	Truckee River
Lemmon Valley	2,000	American Flat APWF
Total		7,731



## Other ASR Projects



#### DBP Mitigation and Investigation:

- Granular activated carbon (GAC) Filters: Arrowcreek 2,
   STMGID 11, Tessa East (Basin 87S and 88)
- Liquid Ammonium Sulfate (LAS) injection: Hawkings
   Well

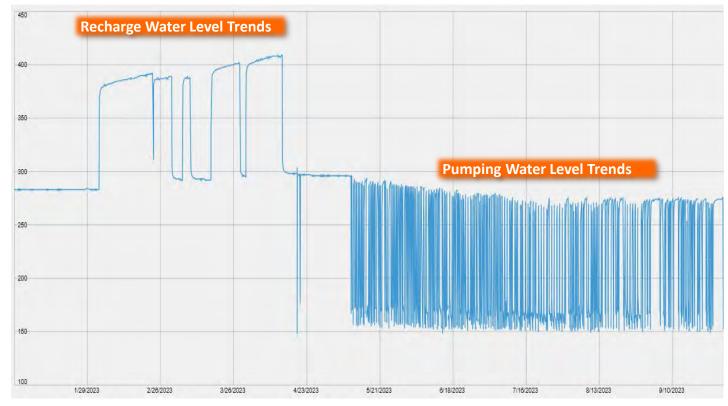
#### Research Study:

- Extensive data collection
  - Water treatment plant monitoring
  - o ASR well monitoring and adjacent monitoring wells
  - o GAC monitoring
  - LAS monitoring
  - o Distribution system
  - Water Storage (tanks and reservoirs)
  - DBP Formation potential hold test
- Guidance Manual development

# How Does ASR Affect Groundwater Elevationsby Hydrographic Basin

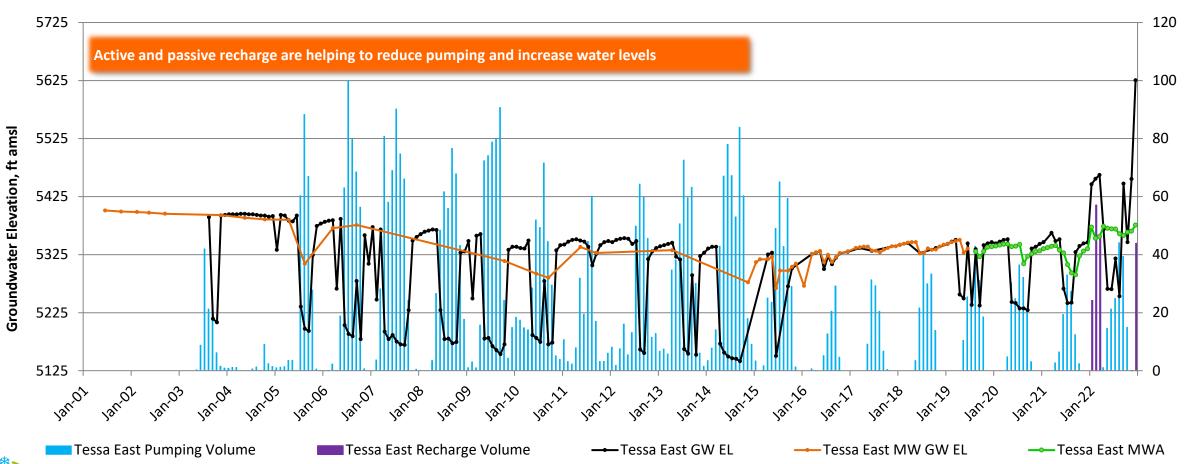
#### **Observing Trends:**

- Remotely through SCADA
- Deployed transducers in adjacent and/or downgradient MWs
- Manual measurements

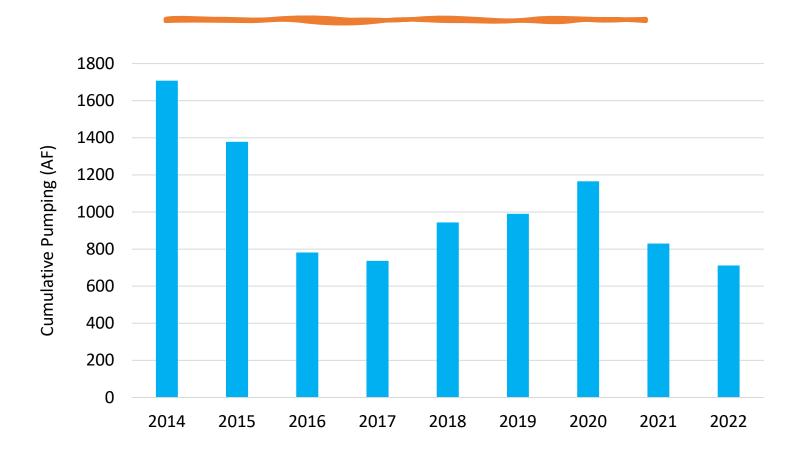




#### Basin 88-Pleasant Valley: Tessa East Well

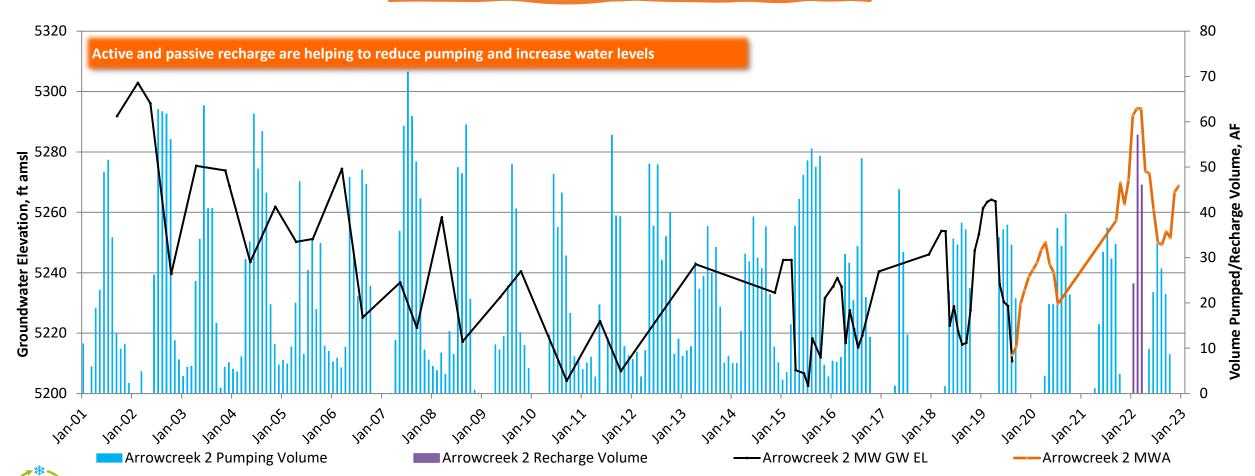


#### Basin 88-Pleasant Valley: Cumulative Pumping





#### Basin 87 South-South Truckee Meadows: Arrowcreek 2 Well

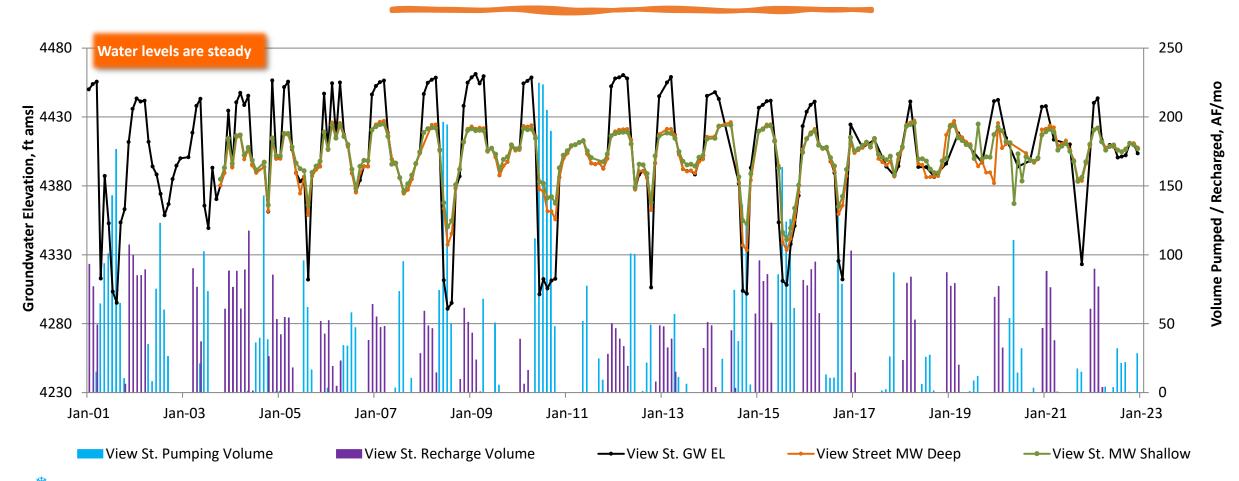


## Basin 87 South-South Truckee Meadows: Cumulative Pumping



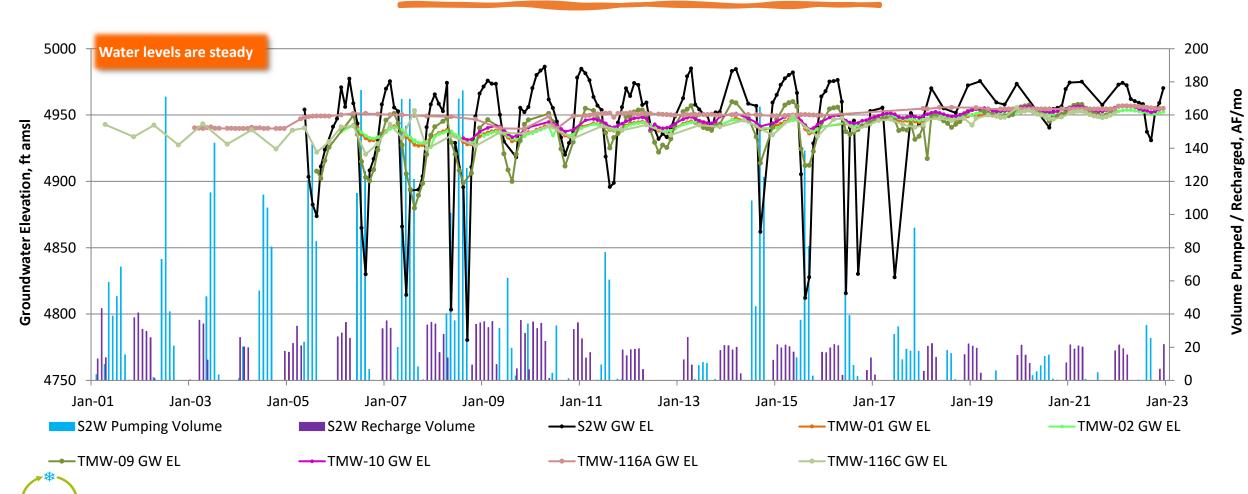


#### Basin 87-Central Truckee Meadows: View Street Well



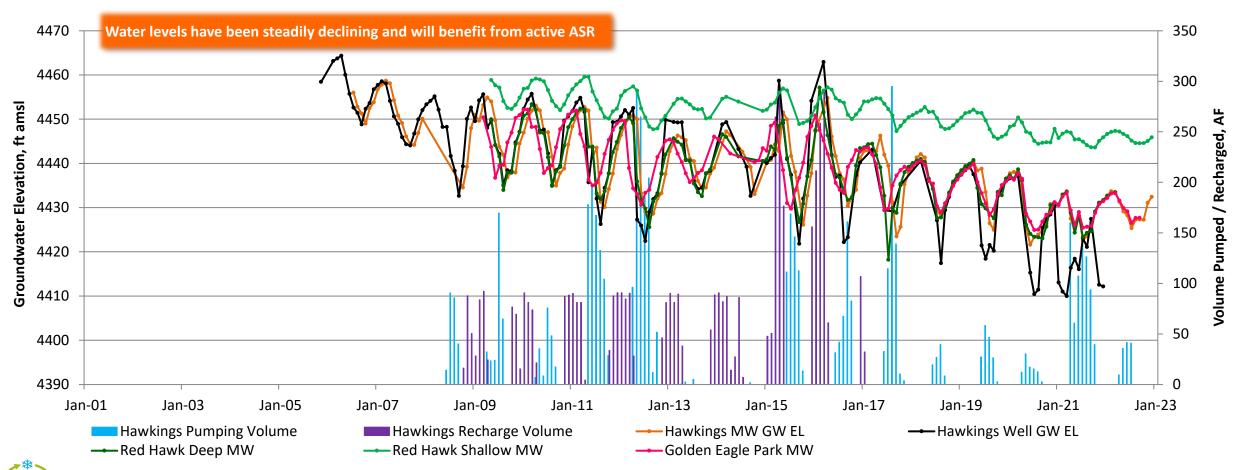


#### Basin 92A-West Lemmon Valley: Silver Lake Well

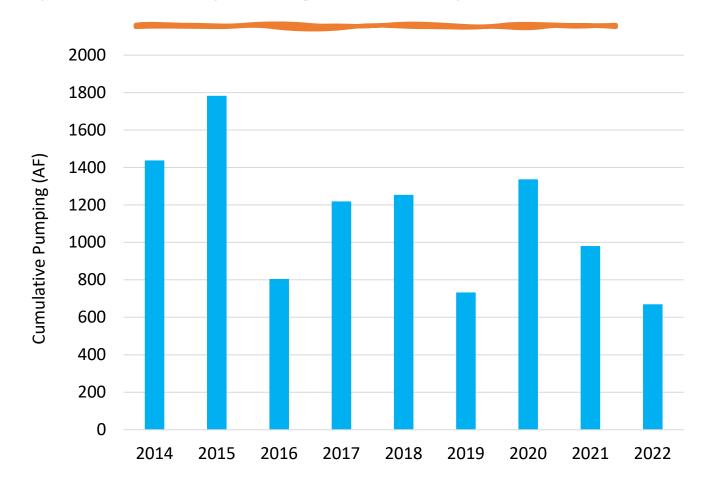


Quality. Delivered.

#### Basin 85-Spanish Springs Valley: Hawkings Well



#### Basin 85-Spanish Springs Valley: Cumulative Pumping







#### **STAFF REPORT**

TO: Standing Advisory Committee FROM: Sonia Folsom, SAC Liaison

DATE: September 25, 2023

**SUBJECT: Update on Standing Advisory Committee Membership** 

Please find attached the 2024-25 Standing Advisory Committee (SAC) membership. Those whose term-limits expire on December 31, 2023 have been notified. The final SAC membership list will be presented to the Board of Directors for approval at the December Board meeting.

#### **TMWA Standing Advisory Committee**

Term Appointments 2024-2025 Membership List

	Primary			Alternate			
<b>Customer Class</b>	Representative	Member Since	Term Ends	Representative	Member Since	Term Ends	
Wholesale (Sun Valley)	Chris Melton	2020	12/31/2023	Vacant			
Irrigation	Neil McGuire	2005	12/31/2024	Karl Katt 2013 12		12/31/2024	
Multi-family Residential	Vacant			Jonnie Pullman 2012 12/31/20			
Commercial	John Krmpotic	2020	12/31/2023	Vacant			
Senior Citizen	Robert Chambers	2005	12/31/2024	Alex Talmant	2021	12/31/2023	
At-Large 1	Ken McNeil	2013	12/31/2024	Vacant			
At-Large 2	Jordan Hastings	2017	12/31/2024	Ken Becker 2017 1		12/31/2024	
Residential:							
Representative 1	Dale Sanderson	2017	12/31/2024	Vacant			
Representative 2	Fred Arndt	2017	12/31/2024	Vacant			
Representative 3	Jerry Wager	2014	12/31/2024	Kevin Ryan	2021	12/31/2023	
Appointments:							
BANN	Colin Hayes	2010	12/31/2025	Jim Smith	2010	12/31/2025	
Reno-Sparks Chamber	Brian Bosma	2023	12/31/2025	Conner Naisbitt	2023	12/31/2025	



#### STAFF REPORT

TO: Standing Advisory Committee FROM: Sonia Folsom, SAC Liaison

DATE: September 25, 2023

**SUBJECT:** Presentation and possible approval of 2024 meeting schedule

The TMWA Standing Advisory Committee meets quarterly on the first Tuesday at 3:00 p.m. The schedule of proposed meeting dates for 2024 is:

- Tuesday, February 6
- Tuesday, April 2
- Tuesday, June 4
- Tuesday, October 1

Meetings that appear on this schedule may be cancelled or changed due to lack of agenda items or other considerations. Also, a meeting may be called upon if an emergency arises.