



TRUCKEE MEADOWS WATER AUTHORITY

Board of Directors

AGENDA

Wednesday, August 18, 2021 at 10:00 a.m.
Sparks Council Chambers, 745 4th Street, Sparks, NV

Board Members

Chair Vaughn Hartung
Member Neoma Jardon
Member Jenny Brekhus
Member Paul Anderson

Vice Chair Kristopher Dahir
Member Alexis Hill
Member Naomi Duerr

NOTES:

1. The announcement of this meeting has been posted at the following locations: Truckee Meadows Water Authority (1355 Capital Blvd., Reno), Sparks City Hall (431 Prater Way, Sparks), at <http://www.tmwa.com>, and State of Nevada Public Notice Website, <https://notice.nv.gov/>.
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 (775) 834-8002 at least 24 hours before the meeting date.
3. Staff reports and supporting material for the meeting are available at TMWA and on the TMWA website at <http://www.tmwa.com/meeting/>. Supporting material is made available to the general public in accordance with NRS 241.020(6).
4. The Board 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. Public comment, may be provided by submitting written comments online on TMWA's Public Comment Form (tmwa.com/PublicComment) or by email sent to boardclerk@tmwa.com prior to the Board opening the public comment period during the meeting. In addition, public comments may be provided by leaving a voicemail at (775)834-0255 prior to 4:00 p.m. the day before the scheduled meeting. Voicemail messages received will be noted during the meeting and summarized for entry into the record. Public comment is limited to three minutes and is allowed during the public comment periods. The Board may elect to receive public comment only during the two public comment periods rather than each action item.
7. In the event the Chairman and Vice-Chairman are absent, the remaining Board 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**).
8. Notice of possible quorum of Western Regional Water Commission: Because several members of the Truckee Meadows Water Authority Board of Directors are also Trustees of the Western Regional Water Commission, it is possible that a quorum of the Western Regional Water Commission may be present, however, such members will not deliberate or take action at this meeting in their capacity as Trustees of the Western Regional Water Commission.

1. Roll call*
2. Pledge of allegiance*

¹The Board may adjourn from the public meeting at any time during the agenda to receive information and conduct labor-oriented discussions in accordance with NRS 288.220 or receive information from legal counsel regarding potential or existing litigation and to deliberate toward a decision on such matters related to litigation or potential litigation.

3. Public comment — limited to no more than three minutes per speaker*
4. Possible Board comments or acknowledgements*
5. Approval of the agenda (**For Possible Action**)
6. Approval of the minutes of the June 16, 2021 meeting of the TMWA Board of Directors (**For Possible Action**)
7. Water Supply Update — Bill Hauck*
8. Presentation of TMWA’s communication regarding the drought situation in the region — Andy Gebhardt*
9. Presentation of TMWAs cybersecurity at its facilities — Sean Feeney*
10. Presentation and discussion regarding consideration of adding a Risk Manager position, and possible direction to staff — Jessica Atkinson and Michele Sullivan (**For Possible Action**)
11. Presentation and status report for General Manager’s FY2020-2021 Specific Objectives #10, “Develop and implement a staffing plan to address and fill vacancies created by senior leadership retirements (General Manager, Director Engineering, and Director Distribution) scheduled to occur in 2022” — Jessica Atkinson and Mark Foree*
12. Discussion and possible direction from Board regarding the evaluation process for conducting the General Manager’s performance review — Jessica Atkinson and Mark Foree (**For Possible Action**)
13. Discussion and possible action on request for Board approval of settlement, through mediation, with 3D Data Com dba 3D Technology Services regarding work performed to upgrade TMWA’s electronic physical access control system and authorization to General Manager to negotiate and execute terms of settlement agreement — Laura Rader (**For Possible Action**)
14. General Manager’s Report*
15. Public comment — limited to no more than three minutes per speaker*
16. Board comments and requests for future agenda items*
17. Adjournment (**For Possible Action**)

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TRUCKEE MEADOWS WATER AUTHORITY
DRAFT MINUTES OF THE JUNE 16, 2021
MEETING OF THE BOARD OF DIRECTORS

The Board of Directors met on Wednesday June 16, 2021, Sparks Council Chambers. Chair Hartung called the meeting to order at 10:05 a.m.

1. ROLL CALL

Members Present: Paul Anderson, Jenny Brekhus, Kristopher Dahir, Naomi Duerr, Vaughn Hartung, and Alexis Hill.

Members Absent: Neoma Jardon

A quorum was present.

2. PLEDGE OF ALLEGIANCE

The pledge of allegiance was led by Member Hill.

3. PUBLIC COMMENT

There was no public comment.

4. POSSIBLE BOARD COMMENTS OR ACKNOWLEDGEMENTS*

There were no Board comments.

5. APPROVAL OF THE AGENDA

Vice Chair Dahir requested to move agenda item #13 after #6.

Upon motion by Member Dahir second by Member Hill, which motion duly carried by unanimous consent of the members present, the Board approved the agenda as amended.

6. APPROVAL OF THE MINUTES OF THE MAY 20, 2021 MEETING

Upon motion by Member Hill, second by Member Dahir, which motion duly carried by unanimous consent of the members present, the Board approved the May 20, 2021 minutes.

13. DISCUSSION AND ACTION ON NOMINATION AND ELECTION OF CHAIRMAN AND VICE CHAIRMAN AND REQUEST FOR BOARD ADOPTION OF RESOLUTION NO. 296 APPOINTING A CHAIRMAN AND VICE CHAIRMAN FOR FISCAL YEAR 2022

Mark Foree, TMWA General Manager, presented the staff report.

Member Brekhus said she would not support the motion to recommend Chair and Vice Chair from either Washoe County or City of Sparks due to the fact that there are no governing rules for rotation of local agency representation and City of Reno has never held the Chair position.

Upon motion by Member Hill, second by Member Dahir, which motion duly carried five to one with Member Brekhus dissenting, the Board adopted Resolution No. 296: A resolution to appoint Vaughn Hartung Chairman for fiscal year 2022.

Upon motion by Member Anderson, second by Member Hartung, which motion duly carried five to one with Member Brekhus dissenting, the Board adopted Resolution No. 296: A resolution to appoint Kristopher Dahir Vice Chairman for fiscal year 2022.

7. PRESENTATION OF RESULTS OF 2021 LEGISLATIVE ACTIVITIES AND BILLS

John Zimmerman, TMWA Water Resources Manager, Michael Pagni, TMWA General Counsel, and Leo Drozdoff, TMWA Lobbyist, provided an update on significant bills and the outcome of the 2021 legislative session: AB3 (authorized the electronic submission of maps and other documents) TMWA supported this bill and it passed unanimously; AB6 (temporary change applications for water rights), passed; AB87 (proposes to streamline the process by which certain easements of cities and counties can be vacated and abandoned without a hearing), staff worked with the bill sponsors to include an amendment whereby TMWA would no longer be affected, shifted position from oppose to monitor, passed; AB97 (revises provisions governing toxic chemicals), staff worked with the bill sponsor, passed with amendments about forming a working group and working with Nevada Department of Environmental Protection (NDEP) to address issues and concerns; AB356 (State Engineer's water conservation bill) was significantly amended and now states Colorado River water cannot be used to irrigate non-functional turf in the Las Vegas Valley after 2026, passed as amended; and SCR11 which proposes to create a special committee (made up of members of the Assembly and Senate) to evaluate innovation zones. The intent is that it would meet at least once a month for 6 months to study the potential economic benefits of innovation zones. The committee is charged with soliciting input from interested stakeholders, including water authorities as well as tribal governments, environmental groups, labor organizations and local governments; recommendations must be submitted to the Governor before December 31, 2021.

Member Brekhus inquired if the wording in AB87 changed from "shall" to "may." Mr. Pagni replied yes.

Member Duerr inquired how non-functional turf is applied and stated she is hearing that some groups are now pushing to have a similar bill in Northern Nevada, which she would like to be prepared should it

continue to gain traction. Mr. Zimmerman replied it applies to non-functional turf areas, not residential areas. Mr. Pagni added the final language in the bill authorizes the Board of Directors of the Southern Nevada Water Authority (SNWA) to define what is functional and non-functional turf.

Vice Chair Dahir stated that may be setting a precedent and the “drought” language used in the northern Nevada is compared to what is happening in the south; it is important to educate and communicate to the public that the region in the north is not experiencing the same circumstances as in the south.

Member Brekhus inquired who would be the leaders from both houses on water policy and Justice Hardesty’s water court. Mr. Zimmerman replied, with regards to water court, he represents TMWA on the commission to study water adjudication and will keep both the Board and Legislative Subcommittee apprised of its progress. Mr. Drozdoff replied leaders in the Assembly would be Assemblyman Howard Watts and Assemblywoman Sarah Peters, and in the Senate, it is a bit unclear at this time from the south, but from the north it would most likely be Pete Goicoechea.

No action taken.

8. DISCUSSION AND ACTION ON ESTABLISHING A LEGISLATIVE SUBCOMMITTEE FOR THE 2021-2022 INTERIM LEGISLATIVE SESSION AND APPOINTMENT OF TWO OR MORE BOARD MEMBERS TO SUBCOMMITTEE

Mr. Zimmerman presented the staff report.

Upon motion by Member Hartung, second by Member Duerr, which motion duly carried unanimous consent of the members present, the Board approved the appointment of Kristopher Dahir, Naomi Duerr and Alexis Hill as members and Paul Anderson and Jenny Brekhus as alternates to the Legislative Subcommittee for the 2021-2022 Interim Legislative Session.

9. WATER SUPPLY UPDATE

Bill Hauck, TMWA Water Supply Administrator, informed the Board that: the region has officially entered into its second year of drought; 11% and 33% of normal for run-off at Lake Tahoe and Truckee River at Farad, respectively; there is about 1.9 feet of stored water in Lake Tahoe; projections show Lake Tahoe will be below the natural rim by end of October; the required rate of flow (Floriston Rates) are expected to drop in mid-August and upstream storage which is currently at 53k acre feet (AF) (about two-thirds of annual demand) will be used to meet customer demand later this summer; 2015 was much worse when Floriston Rates dropped in April and TMWA only had about 26k AF; staff does not foresee using reserves from either Donner or Independences Lakes; and no additional conservation measures will be required.

Member Brekhus asked how much demand has increased compared to 2015. Mr. Hauck replied about 3% due to a dry spring and customers were using water earlier in the season.

Member Duerr requested a comparison to the national drought be added in the next water supply update.

10. PRESENTATION AND INFORMATIONAL REPORT ON PROPOSED FUTURE ADJUSTMENTS TO SCHEDULE WSF AND BSF FEES

Scott Estes, TMWA Director of Engineering, and Danny Rotter, TMWA Engineering Manager, presented the staff report. Mr. Rotter reiterated that WSF and BSF fees are not rates funded by existing customers, rather the fees are paid for by growth (related to new or expanded service). Mr. Rotter presented the proposed schedule (six months) for public hearings, and planned implementation in January 2022.

Vice Chair Dahir suggested staff have projected numbers beyond what will be implemented in 2022 so there is a foundation and asked if the new fees apply to current projects. Mr. Rotter replied they had not but could do so, and that new fees will apply to new water service agreements entered after the fees are effective. Mr. Estes added the one component in their calculations that can be accurately projected is the carrying charge, but they can also determine if construction costs have risen or decreased.

11. DISCUSSION AND ACTION ON TRANSFER OF SURPLUS REAL PROPERTY LOCATED AT 1905 E. 4TH STREET, RENO, NEVADA TO WASHOE COUNTY FOR NO CONSIDERATION AND REQUEST FOR ADOPTION OF RESOLUTION NO. 294: A RESOLUTION TO APPROVE DONATION OF SURPLUS REAL PROPERTY TO WASHOE COUNTY

Andy Gebhardt, TMWA Director of Operations & Water Quality, presented the staff report.

At this time, the Board discussed the sale of the property and any impact on access to TMWA's 4th Street Well (no impact); process for transferring the property (no appraisal required due to the transfer going to a government agency); how much TMWA initially paid for the property (about \$150k).

Member Hill stated for the record that this is exciting and staff at Washoe County will be working with HOPES to create a clinic on the site that will replicate their services at their main office.

Upon motion by Member Duerr, second by Member Anderson, which motion duly carried unanimous consent of the members present, the Board adopted Resolution No. 294: A resolution to transfer of surplus real property located at 1905 E. 4th Street, Reno, Nevada to Washoe County for no consideration and request for adoption of Resolution No. 294: A resolution to approve donation of surplus real property to Washoe County.

12. DISCUSSION AND ACTION ON REQUEST FOR ADOPTION OF RESOLUTION NO. 295: A RESOLUTION TO APPROVE DONATION OF SURPLUS VEHICLE TO THE NATURE CONSERVANCY FOR INDEPENDENCE LAKE MANAGEMENT ACTIVITIES

Pat Nielson, TMWA Director of Distribution, Maintenance & Generation, presented the staff report.

Mickey Hazelwood, The Nature Conservancy, thanked the Board for their consideration and approval of this request. Mr. Hazelwood appreciates their working relationship with TMWA at Independence Lake and all their work directly correlates to the health of the water quality at the lake.

Upon motion by Member Brekhus, second by Member Dahir, which motion duly carried unanimous consent of the members present, the Board adopted Resolution No. 295: A resolution to approve donation of surplus vehicle to The Nature Conservancy for Independence Lake management activities.

14. GENERAL MANAGER'S REPORT

Mr. Foree stated TMWA celebrated its 20th Anniversary last Friday, June 11th, a party is scheduled on Saturday, August 28th at Verdi and the Board is invited; Chalk Bluff hydro is exempt from licensing; plan to cancel the July Board meeting; and Mr. Zimmerman has been promoted to Assistant General Manager.

15. PUBLIC COMMENT

There was no public comment.

16. BOARD COMMENTS AND REQUESTS FOR FUTURE AGENDA ITEMS

Chair Hartung requested a future item on cybersecurity and security at TMWA's facilities.

Member Hill requested an item on drought and conservation measures in response to a constituent request.

17. ADJOURNMENT

With no further discussion, Chair Hartung adjourned the meeting at 11:10 a.m.

Approved by the TMWA Board of Directors in session on _____.

Sonia Folsom, Board Clerk.



Water Supply and Drought Operations Planning

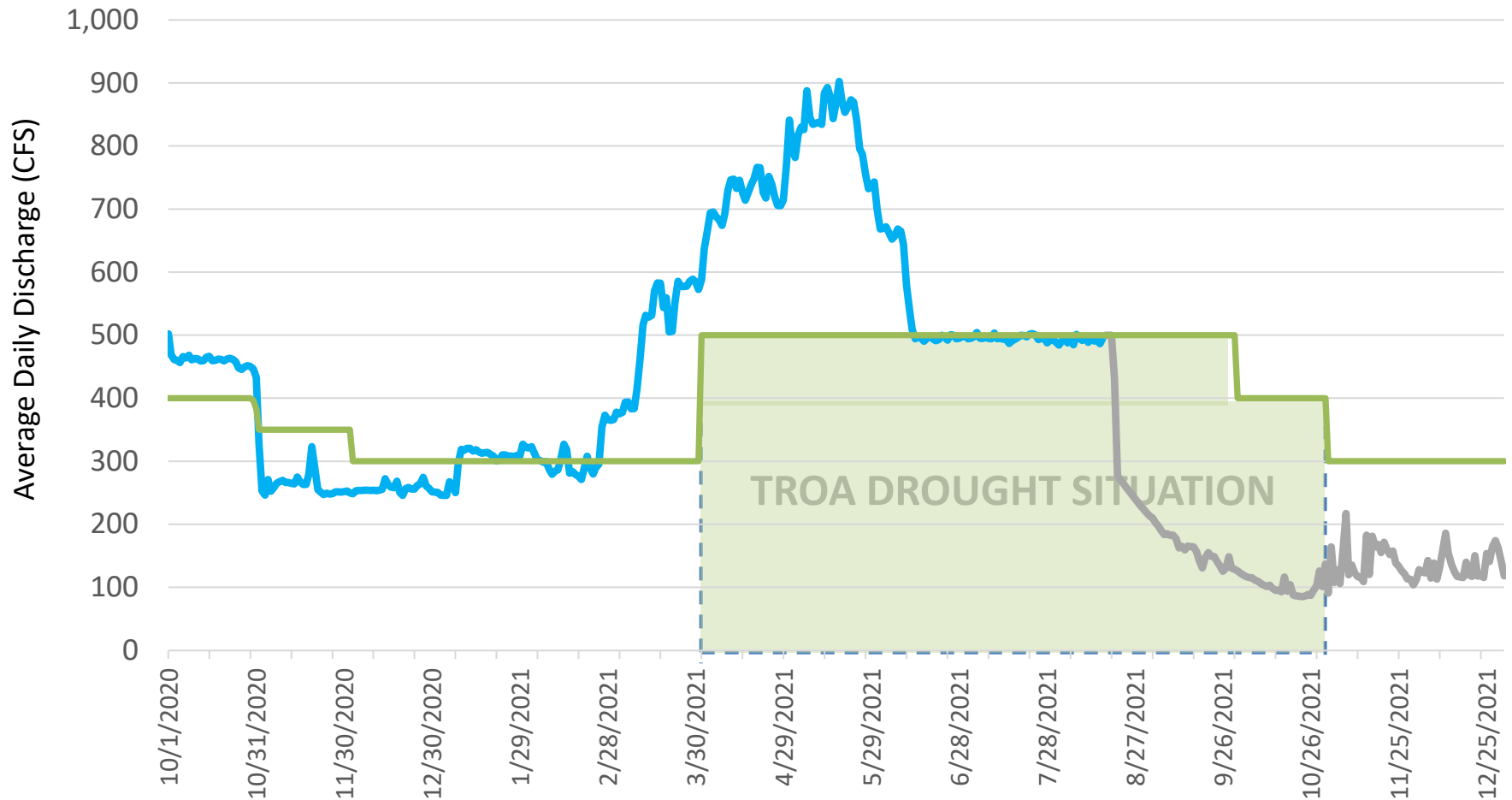
Board of Directors Meeting

August 18, 2021





Actual and Projected Floriston Rate Water at Farad through 2021



USGS Gage at Farad (CA/NV state line) #10346000

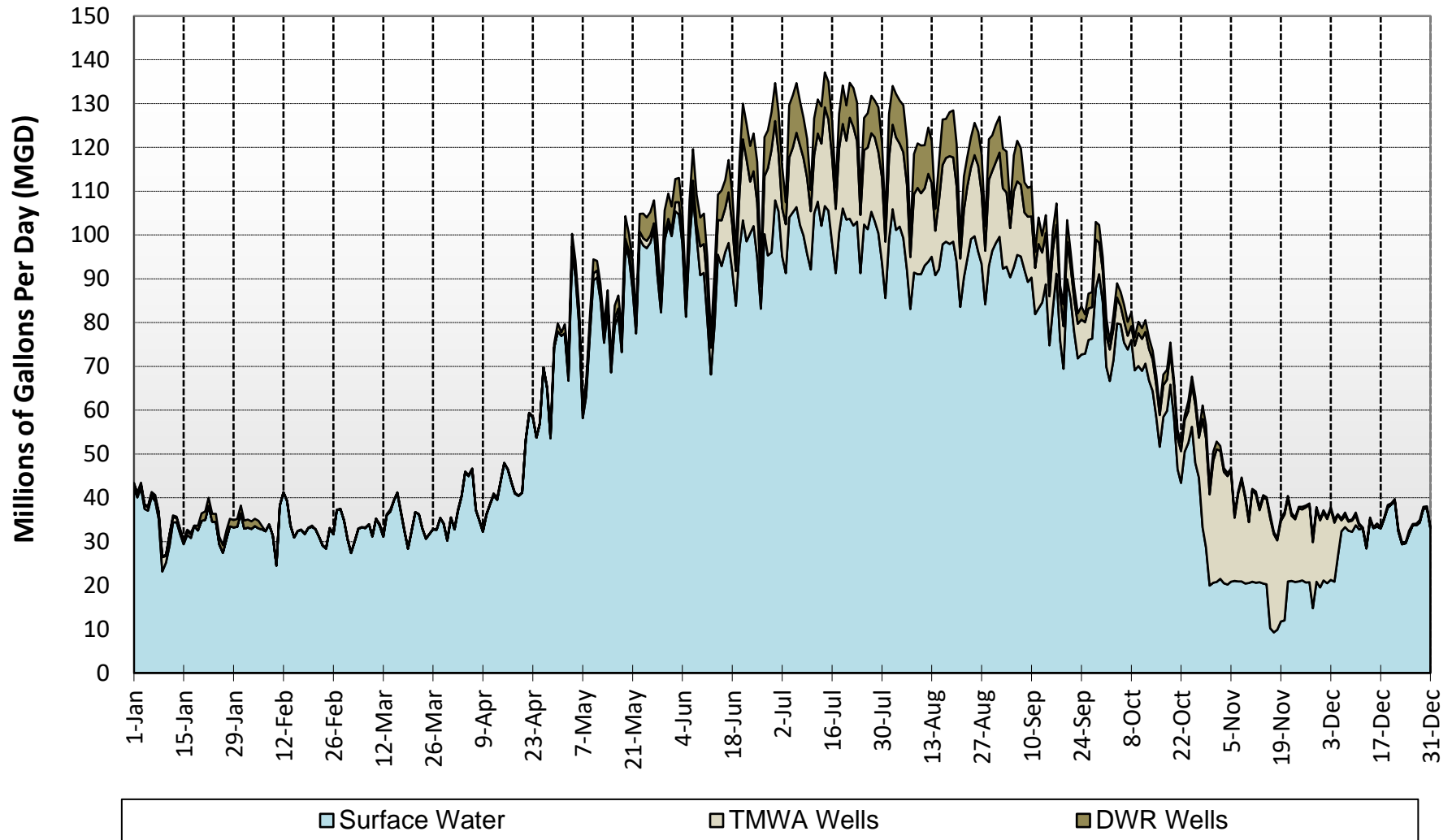


Actual and Projected Lake Tahoe Elevation through 2021

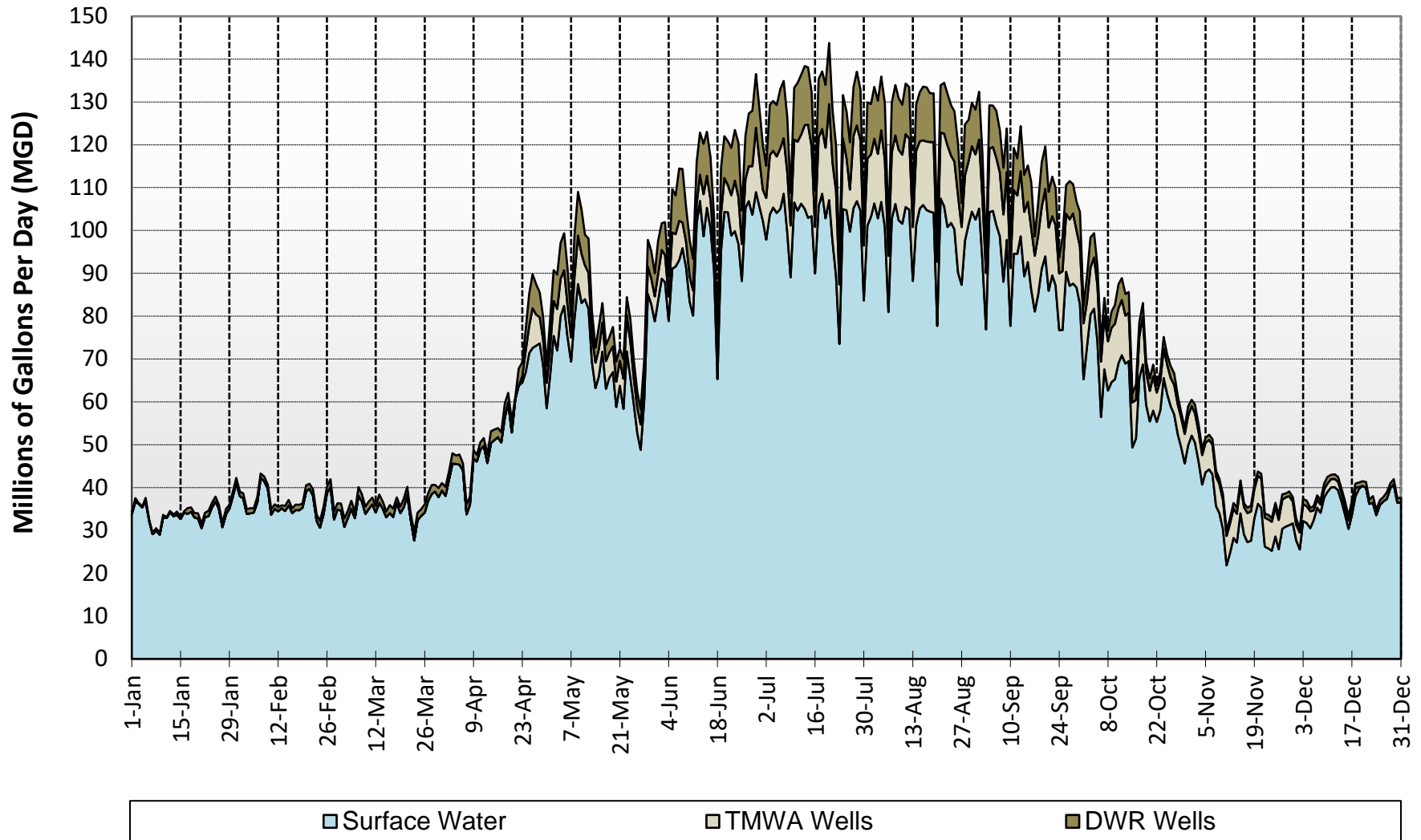




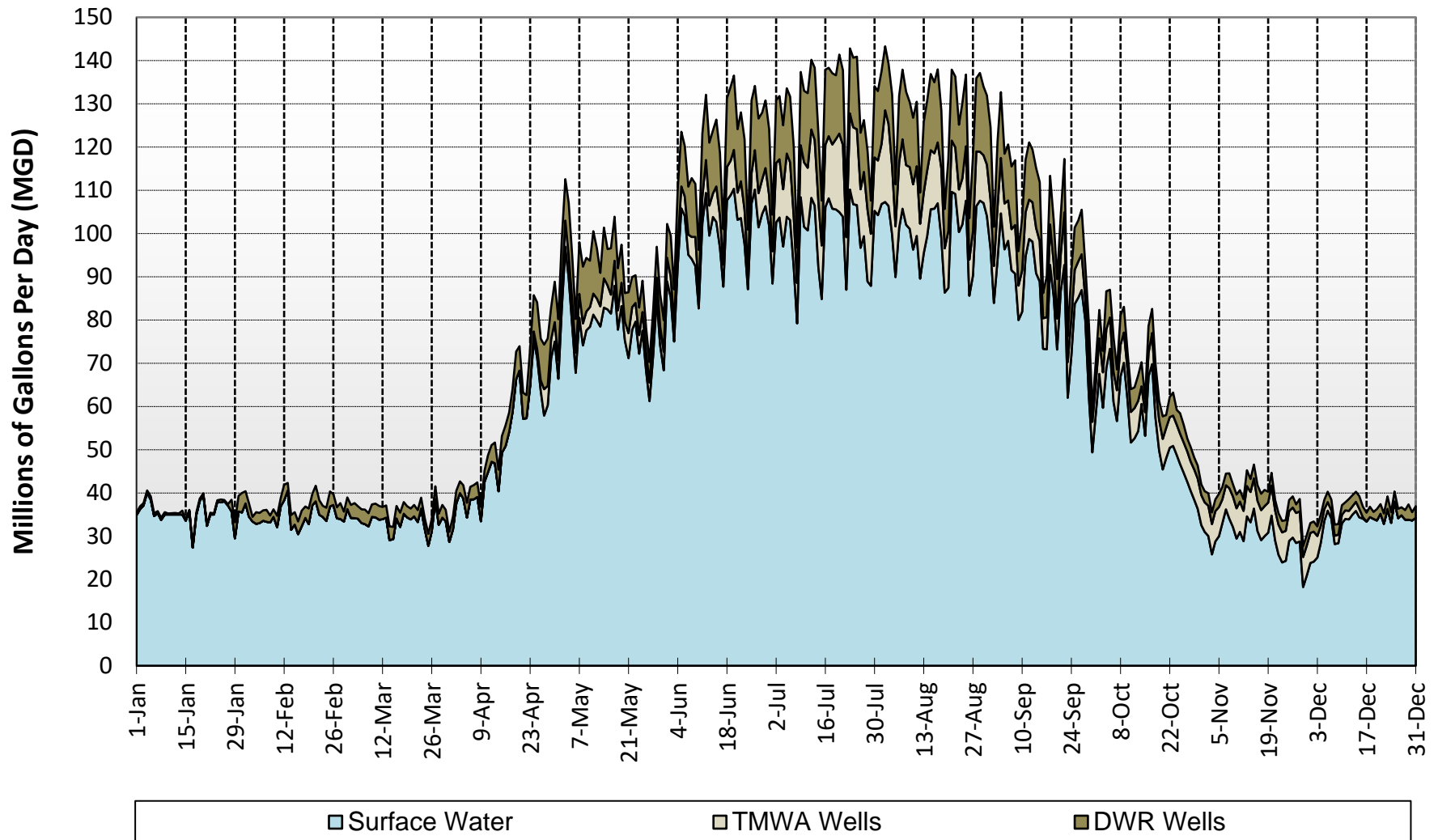
2017 TMWA Actual Sources of Supply



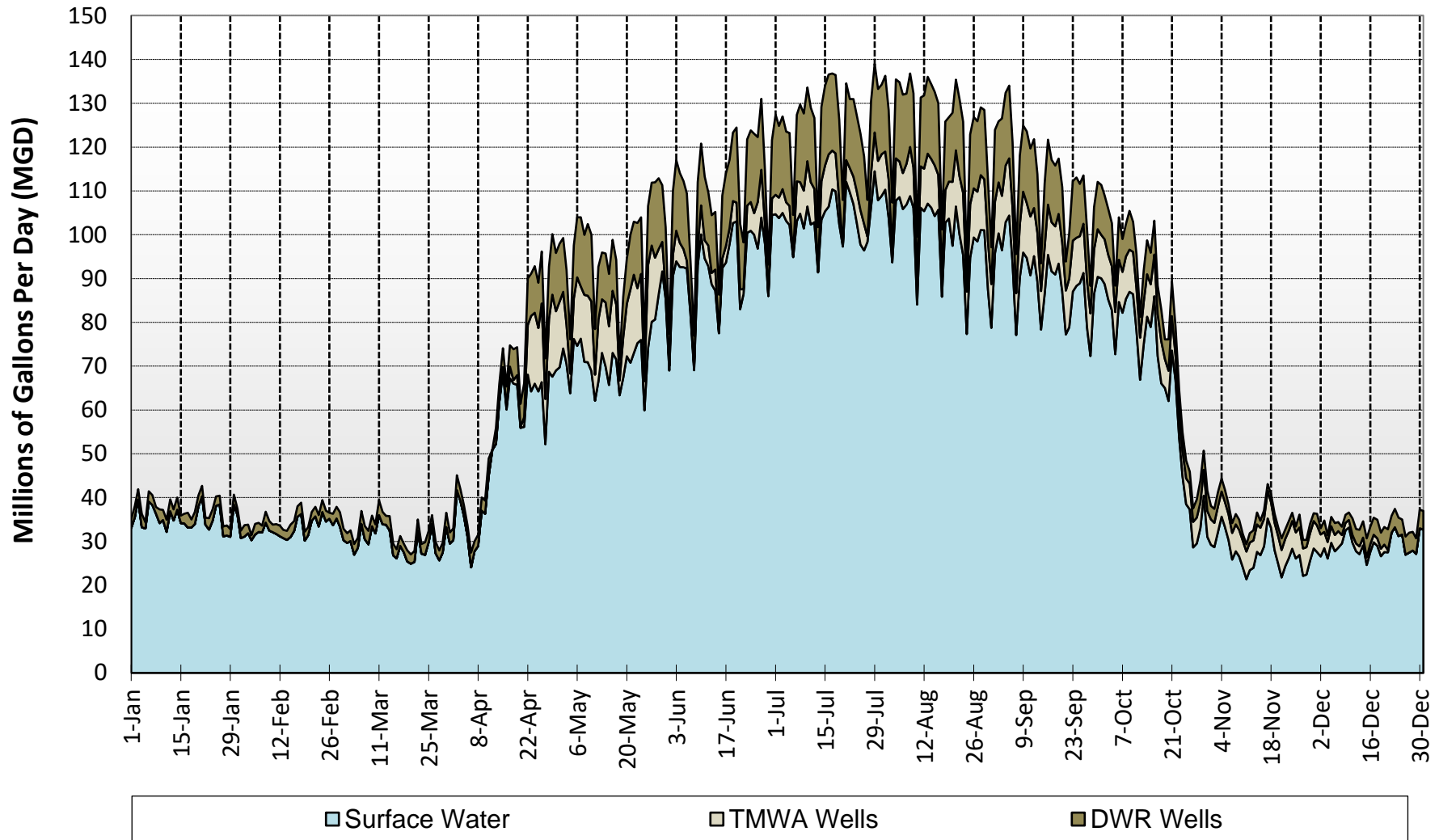
2018 TMWA Actual Sources of Supply



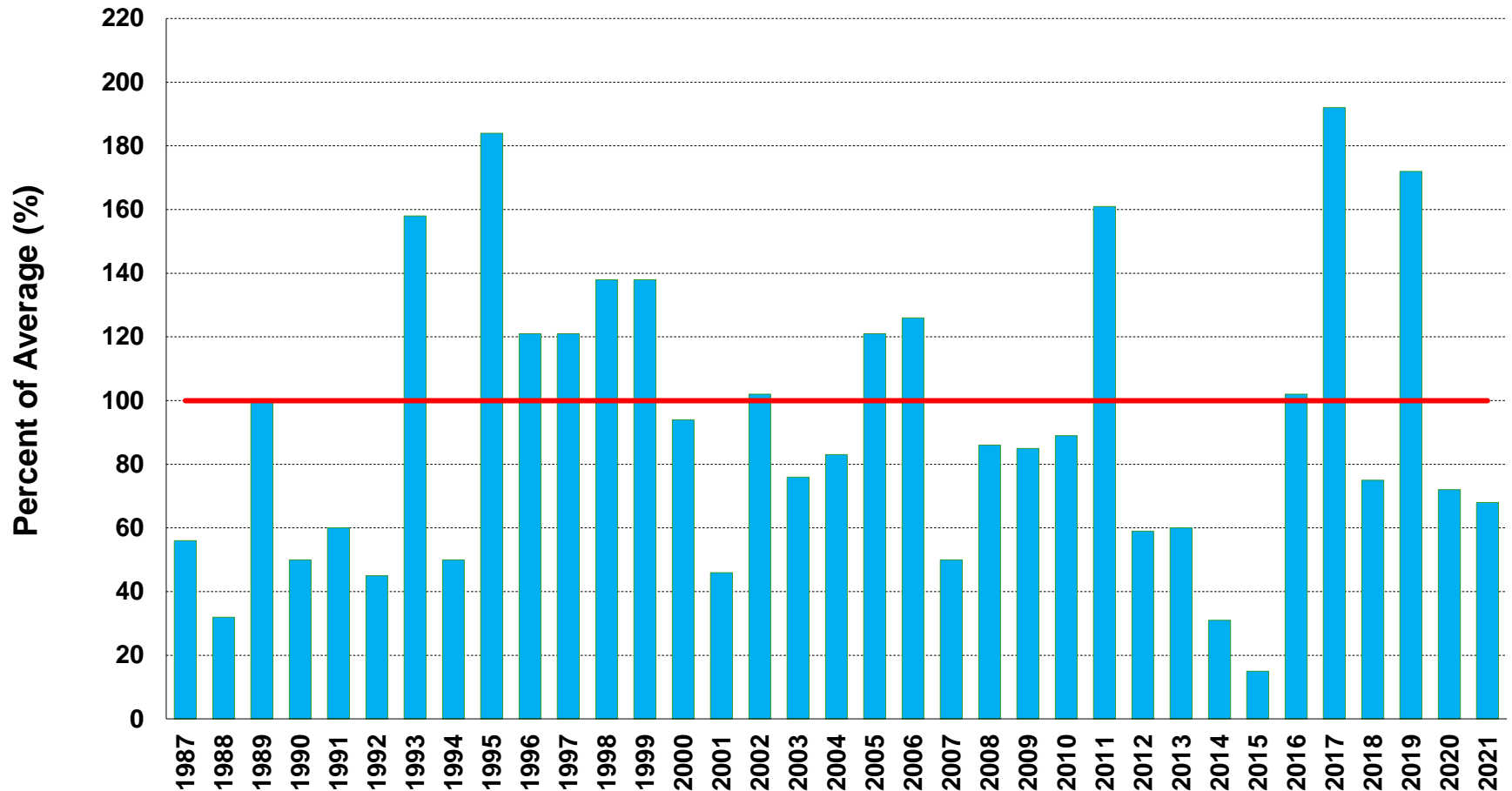
2019 TMWA Actual Sources of Supply



2020 TMWA Actual Sources of Supply



April 1 Truckee River Basin Snowpack (last 35 years)



U.S. Drought Monitor West

08-18-21 BOARD Agenda Item 7

August 10, 2021

(Released Thursday, Aug. 12, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	1.56	98.44	95.74	87.90	64.30	25.35
Last Week 08-03-2021	1.50	98.50	95.57	87.81	64.38	25.58
3 Months Ago 05-11-2021	3.75	96.25	86.39	71.90	52.99	25.29
Start of Calendar Year 12-29-2020	13.52	86.48	75.49	63.25	45.40	23.76
Start of Water Year 09-29-2020	9.96	90.04	73.14	51.29	32.19	2.50
One Year Ago 08-11-2020	26.82	73.18	59.69	30.52	7.01	0.00

Intensity:

 None	 D2 Severe Drought
 D0 Abnormally Dry	 D3 Extreme Drought
 D1 Moderate Drought	 D4 Exceptional Drought

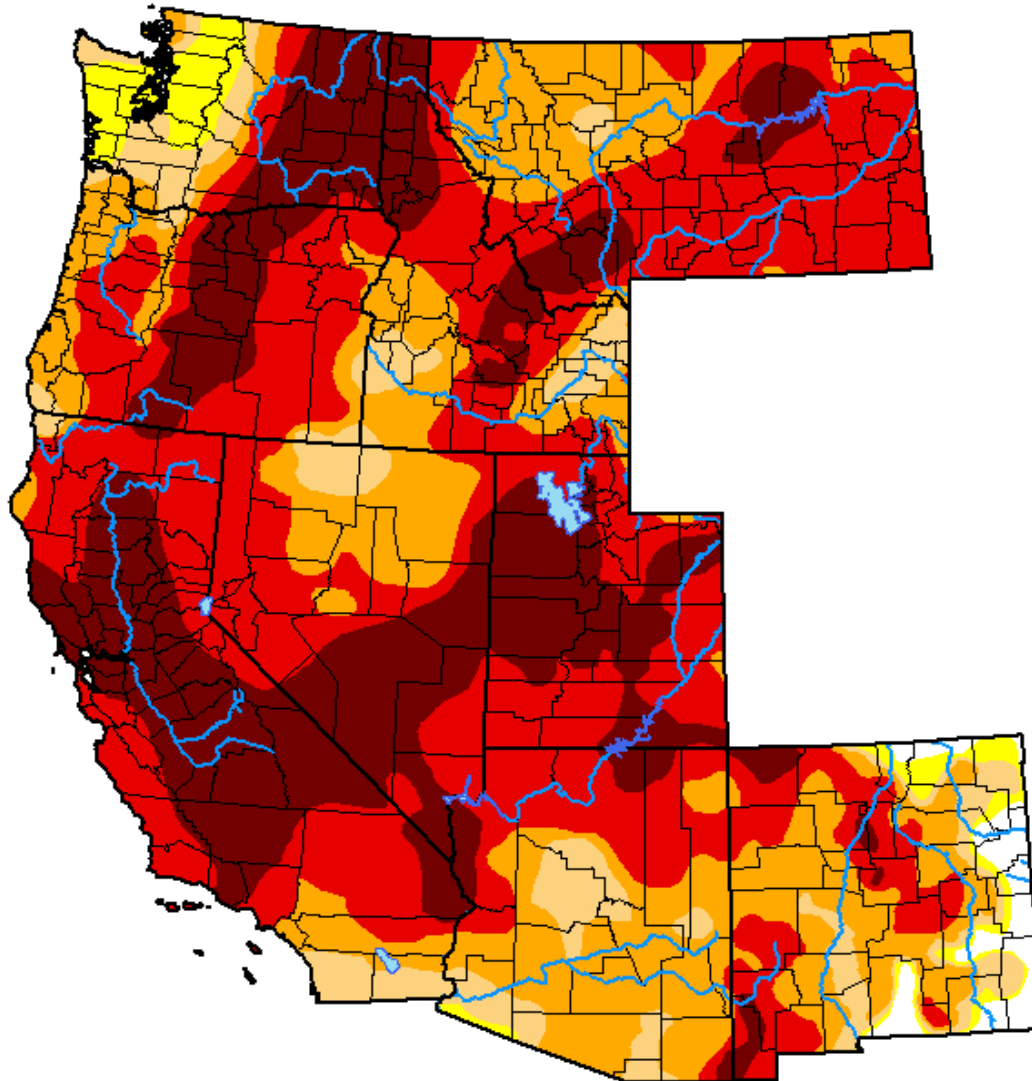
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Richard Tinker
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu



June 01, 2021 Final NRCS Streamflow Forecasts

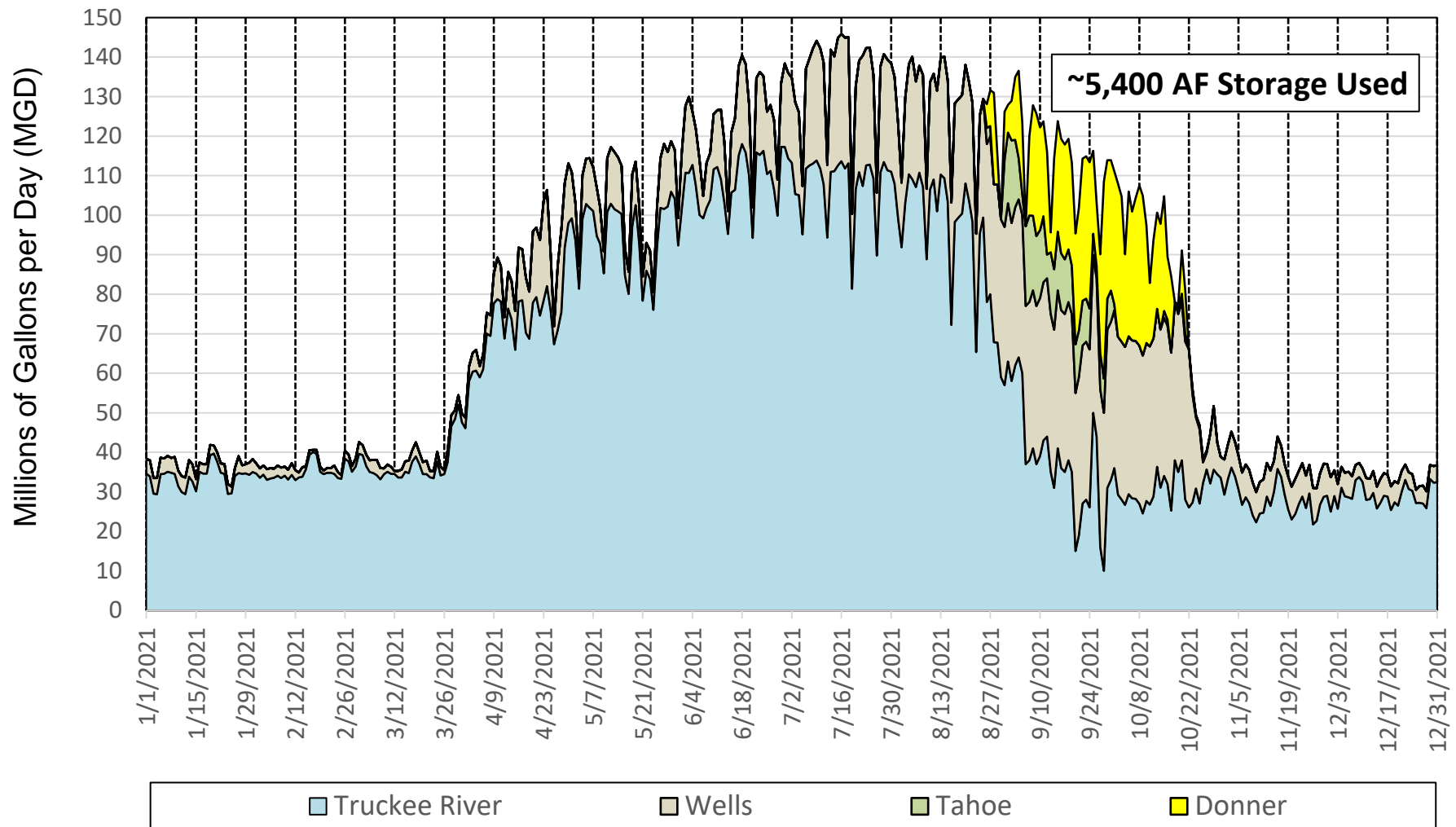
- Lake Tahoe Gates Closed Rise (GCR)

0.14' **(11% Avg.)** 50% COE (Apr-High)

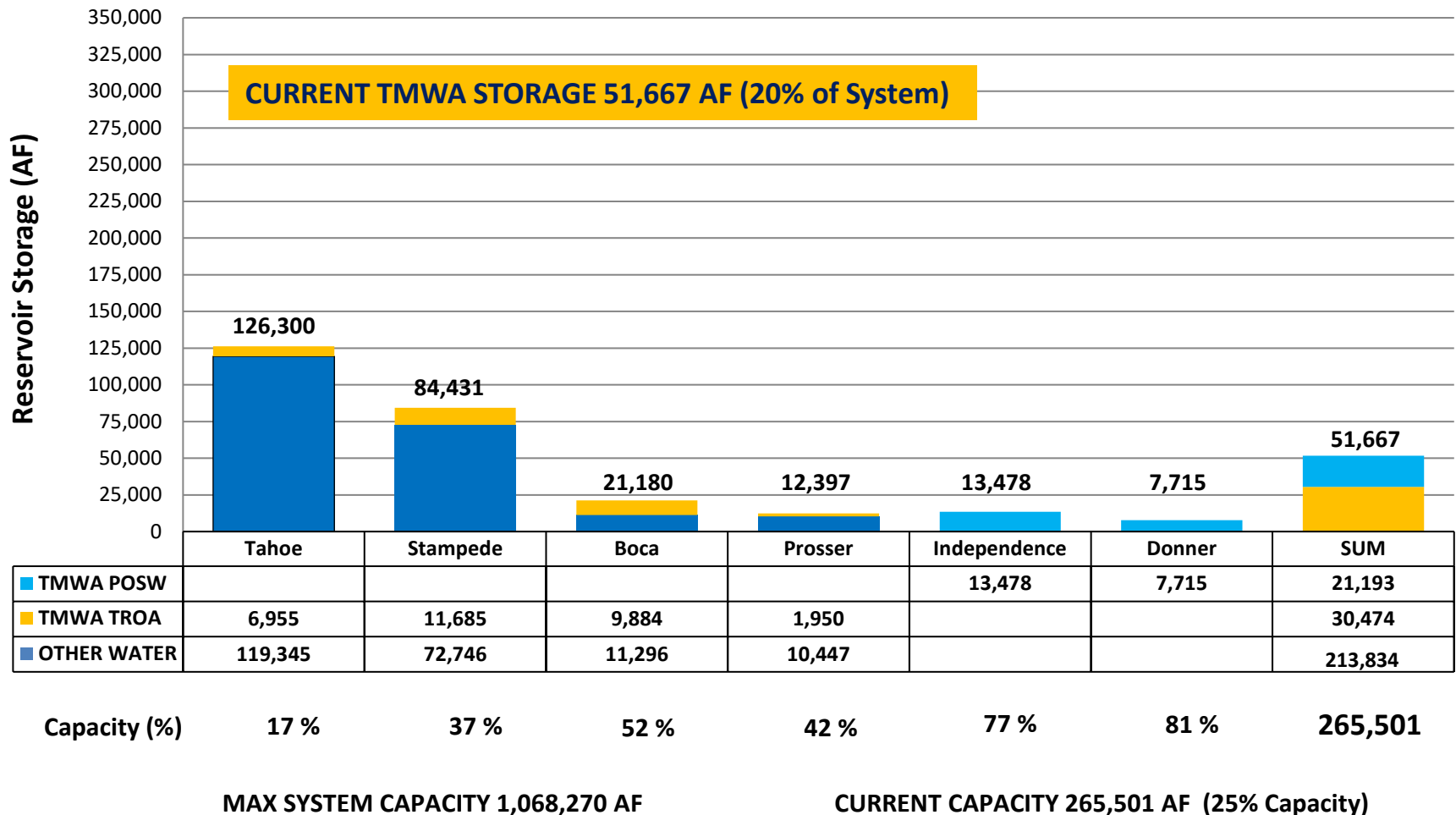
- Truckee River at Farad, CA (A-J)

85 KAF **(33% Avg.)** 50% COE (Apr-Jul)

2021 TMWA Projected and Actual Sources of Supply



Truckee River System Storage (08/17/2021)











Thank you!

Questions?

Bill Hauck, Water Supply Supervisor
Email: bhauck@tmwa.com
O: (775) 834-8111 M: (775) 250-1333



STAFF REPORT

TO: Chairman and Board Members
FROM: Andy Gebhardt, Director of Operations and Water Quality
DATE: August 12, 2021
SUBJECT: **Presentation of TMWA's communication regarding the drought situation in the region**

DISCUSSION

Due to another extremely dry year, early this spring TMWA staff anticipated that we would potentially be in drought conditions during the summer of 2021.

This update captures the public outreach for summer of 2021 and provides a high-level overview of all tactics executed and planned and offers performance captured to date. Performance is measured by visits to www.smartaboutwater.com, which is the redirect and call-to-action provided in all radio, TV, print and digital ads.

SUMMER OUTREACH OVERVIEW

Each summer, TMWA has clear direction regarding community outreach and messaging: Promote conservation, foster awareness regarding TMWA's exceptional water quality, and create engagement with customers through educational events. In recent years, additional messaging has broadened to include key principles of TMWA's water leadership through forward-looking resource management and planning.

This year, in April our campaign planning expanded to address anticipated public sentiment surrounding drought, and we expanded objectives to include the following extra requirements of our messaging:

1. Educate the public about TMWA's ability to ensure continuity of supply through record-number drought reserves stored and give context to expanding no-watering hours.
2. Address 2020 customer survey findings, reporting that customers were less aware of their specific assigned-day watering schedule than the previous year.
3. Shift approach for paid campaign to keep customers engaged into mid-August, when water flows on the Truckee River would noticeably get lower.

In addressing these requirements, the following tactics were developed to directly address the objectives added in April:

Education regarding drought supply and conservation outlook

A "Water Supply Update" was delivered to the public via media conference, a partners' webinar, and a speakers' bureau that was scheduled with several community organizations. This initial, early season push resulted in broad-spanning coverage, achieved before the summer campaign kicked off. It served to establish the resiliency of TMWA's drought reserves and offered context to why 'no-watering hours' were increasing. (See appendix to reference the sustained interaction with media on the topic of drought.)

Increase ADW awareness and relevancy

A shift regarding our creative approach to Assigned-Watering Days messaging was applied, to make ad content directly relevant to customers. This approach created three separate ads that ran on specific days on local radio and television outlets. A highly tailored ad buy ensured right delivery. For example:

- Odd Watering Days ads ran *only* on Wednesdays-Fridays-Sundays
- Even Watering Day ads ran *only* on Tuesdays-Thursdays-Saturdays.
- A third ad was also produced promoting a 'day of rest' on Mondays, which ran only on Mondays.

Keep Customers Engaged

The summer campaign was expanded into a three-phased messaging approach:

Phase 1: Assigned Watering Days for May-June

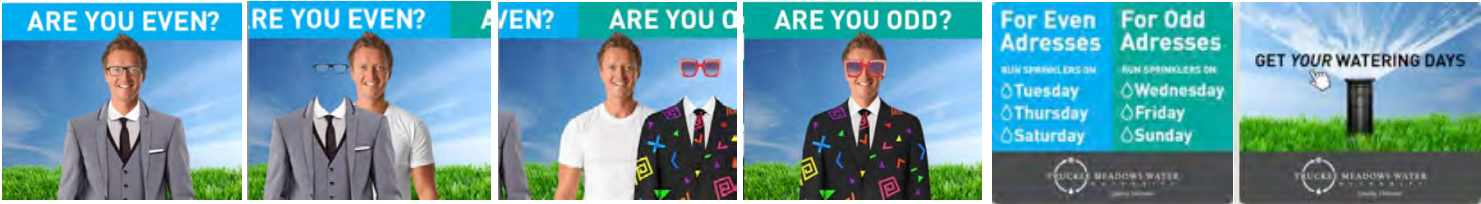
Phase 2: Keeping Yards Healthy (with less water) for July-August

Phase 3: Cool-Down Watering for late September-October.

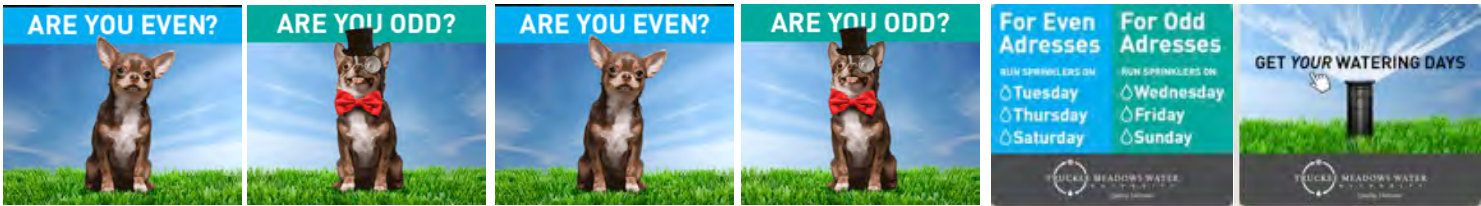
CREATIVE APPROACHES

2021 Phase 1 Ads:
May – June with Customized Rotations, Two Creative Approaches

Ad #1: Odd/Even Dude (frames to capture animation)



Ad #2: Odd/Even Dog



2021 Phase 2 Ads:
June - July with Two Creative Approaches

Ad #1: Wind or Rain (frames to capture animation)



Ad #2: Heat of Day (frames to capture animation)



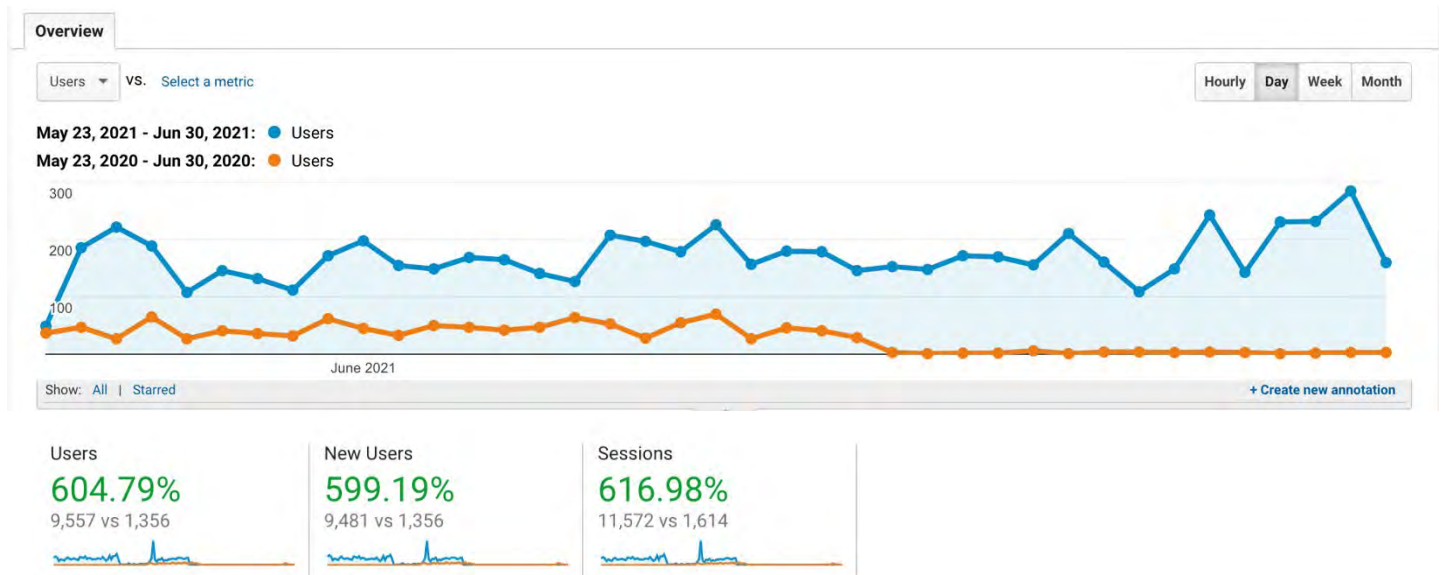
2021 Phase 3 Ads:
Late September – October (Pending weather patterns and demand levels)

PERFORMANCE METRICS

The redirect for all ads directed customers to SmartAboutWater.com. Leading people to this website serves many purposes:

- 1) Provides a primary source of data to measure the effectiveness TMWA's outreach investment.
- 2) Brings key topics to the forefront regarding the region's water resource management from TMWA and other water management partners in the Truckee Meadows.
- 3) Creates an avenue for redirects to explore content on tmwa.com, which is one of many contributing factors that keep TMWA's webpages at the top of search engine ranking.

Baselines: Comparison of 2020 to 2021 audience data for www.smartaboutwater.com. Same time period year-over-year performance **shows a 600% +/- increase** in many important audience engagement metrics:



So far this year, the Phases 1 and 2 of the ad campaign have also increased page views beyond the ad-linked landing pages. Here are the Top 5 page rankings during the 2020 and 2021 campaigns:

Smart About Water Visits During Ad Campaigns	2020	2021
Home Page	1,609	9,542
Conservation Matters Page	0	3,499
Managing the Supply Page	0	35
Protecting the River	0	27
Reclaiming What's Used	11	20

SUMMER OUTREACH OVERVIEW

ALL TACTICS BY CHANNEL	May	June	July	Aug	Sep
OWNED					
I. OUTREACH & EVENTS					
<i>Media & Partner Webinars: Water Year Review</i>	✓				
<i>Speakers Bureau: Water Year Review</i>	✓	✓	✓		
<i>Public Tour: Glendale Water Treatment Plant</i>			✓		
<i>Promotion: Water Quality Report</i>			✓		
<i>Promotion: Water Treatment Plant Tours</i>			✓		
<i>Public Tour: Chalk Bluff Water Treatment Plant</i>				✓	✓
II. DIRECT-TO-CUSTOMER					
<i>Bill Inserts</i>	✓	✓	✓	✓	✓
<i>Buck Slips</i>	✓	✓	✓	✓	✓
<i>Envelope Messaging</i>	✓	✓	✓	✓	✓
III. WEBSITES					
<i>TMWA.com: New Odd/Even Positioning</i>	✓				
<i>SmartAboutWater.com: New Odd/Even printout</i>	✓				
<i>SmartAboutWater.com: Ad landing page updates</i>	✓	✓	✓		✓
IV. SOCIAL MEDIA					
<i>Campaign Support: Assigned-Day Watering</i>	✓	✓	✓	✓	✓
<i>Campaign Support: Watering Hours</i>	✓	✓	✓	✓	✓
<i>Website Promo/Redirect: Smart About Water</i>	✓	✓	✓	✓	✓
<i>Conservation Program: Report Water Waste</i>	✓	✓	✓	✓	
<i>Conservation Program: Leak Detection</i>	✓	✓	✓	✓	
PAID					
V. CAMPAIGNS					
<i>Ad Campaign Phase 1: Odd/Even Rotations</i>	✓	✓			
<i>Ad Campaign Phase 2: Healthy Yard Rotations</i>			✓	✓	
<i>Ad Campaign Phase 3: Cool-down</i>					✓
<i>Water Quality: Annual Report</i>			✓		
VI. SPONSORED MESSAGING					
<i>Sponsored Reads: Phase 1 Odd/Even Watering</i>	✓	✓			
<i>Sponsored Reads: Phase 2 Healthy Yard</i>			✓	✓	
<i>Sponsored News: TMWA's drought resiliency</i>				✓	

EARNED MEDIA REPORT: DROUGHT 2021

01/22/21

What Will The Dry Winter Mean For Nevada's Water Supply?

KNPR

by Bert Johnson

Guests:

Jeff Anderson, hydrologist, U.S. Department of Agriculture; **Bill Hauck**, Water Supply Administrator, Truckee Meadows Water Authority; **Dan Bunk**, Chief, Boulder Canyon Operations Office, U.S. Bureau of Reclamation

With winter in full swing, the mountains of Nevada and Colorado should be seeing snowfall that will melt to form the state's water supply next year.

But early reports show we're seeing a dry winter – and that comes on the heels of a dry winter in 2020. Now, according to the U.S. Drought Monitor, more than 90 percent of Nevada is seeing severe to exceptional drought conditions. So what does that mean for the coming year? [recorded transcript follows]

###

02/29/21

March 1st snowpack sits at 65% of normal

KOLO TV

By Ben Deach

INCLINE VILLAGE, Nev. (KOLO) - It's a routine that hydrologist Jeff Anderson knows well. First he makes the trip to the SNOTEL site at Mount Rose summit. Then, he measures the snow depth. And finally, he weighs it to see how much water is in it.

"Right now 68 inches of snow depth with 21 inches of water content, and that is 65% of median for today," Anderson said.

Anderson also says while the snow isn't as deep as it was a month ago, there is 3 more inches of water in that snow, but also says a normal February should bring nine inches more.

Truckee Meadows Water Authority was on hand for today's measurement to try and get a sense of how or if our water supply will be affected.

"We take the numbers that Jeff produces and a runoff forecast is produced based on the water in the snowpack," said Bill Hauck of TMWA.

Hauck says the situation isn't ideal, but it's also not dire.

"We are not quite where we should be this time of year," he said. "Fortunately for TMWA customers we aren't dependent on one or two dry years." Hauck says that our reservoirs are currently at 42% capacity, and hopes for some march storms to add to them.

"It is a dry year," he stated. "But we are OK."

The final snow survey of the season will be the first week of April.

###

03/01/21

Nevada Utilities: Conservation & Creativity

Nevada Business Magazine
By Jennifer Rachel Baumer

Despite COVID-19 shutting down business as usual, Nevada utilities companies grew over the past year. New customers signed on. New pilot programs started up. New agreements between agencies were entered into. New sources for commodities and renewable resources were found. Disconnects for nonpayment were suspended in response to the pandemic.

“Utilities in Nevada have been very resilient over the past year, and we have continued to see strong growth,” said John Hester, president and CEO, [Southwest Gas](#). The utility has two million customers throughout the west in Arizona, Nevada and California, and in the past year, 37,000 new customers signed on.

“A lot of the growth that we’re seeing in Nevada is related to the booming housing industry,” Hester added. The majority of new homes use natural gas. “We’ve actually kept up with new growth,” said John Entsminger, general manager, [Southern Nevada Water Authority/Las Vegas Valley Water District \(SNWA/LVVWD\)](#). “Going into the pandemic we thought we would see a bit of a decline in new connections and new construction, similar to what we saw during the recession, and that hasn’t really materialized.”

New Sources and Resources

“Ninety percent of our water comes from the Colorado River via Lake Mead, and nothing is really going to change that,” Entsminger said. SNWA is the wholesaler that buys water; LVVWD delivers that water to customers.

But while the source hasn’t changed, availability has. SNWA entered into an agreement with the Metropolitan Water District of Southern California, helping that utility reuse wastewater currently being discharged into the Pacific. In return, SNWA can take more water out of Lake Mead.

In northern Nevada, water is allocated through TROA, the Truckee River Operating Agreement, which allocates water between Nevada and California, [Pyramid Lake Paiute Tribe](#) and [Truckee Meadows Water Authority \(TMWA\)](#). A system of upstream reservoirs and high elevation lakes make the area more drought-resistant than most people think.

“This is where Truckee Meadows is really different from other communities because people hear on the news ‘We’re in a drought, we don’t have enough water,’ and that’s where TROA comes into play,” said John Enloe, director of natural resources, TMWA. “Because even if it stopped snowing right now, we’d have enough water in the upstream reservoirs.” TROA dictates when and how much of that water is released into the Truckee River, not just for TMWA itself but for the Truckee-Carson Irrigation District, for Fallon, Fernley and the Pyramid Lake Paiute Tribe.

Enloe added, “There’s going to be sufficient water flows in the river again this year, all because of those upstream reservoirs and the storage they provide.”

However, that doesn’t mean there’s no need for more water. Only so much can be stored in the reservoirs by law; the rest goes downstream to Pyramid Lake. That’s not a bad thing, but it does mean conserving water today doesn’t mean it’s in the reservoir tomorrow.

That’s part of the reason for the new Mt. Rose Water Treatment Plant. The plant is taking water from Whites Creek to augment supplies at Arrowcreek, Montreux and St. James Village communities. That area has relied exclusively on groundwater, causing more pumping than the water table could handle.

The new plant won't divert all the water out of Whites Creek. Below the diversion, water will be left for wildlife and habitat maintenance. The plan was approved by the State of Nevada and the Department of Wildlife and received a letter of recommendation from the Nature Conservancy.

In northern Nevada, TMWA's new Water Resource Plan update did a deep dive into climate change scenario planning. Different climate change models predict the effects on water and some models fit the Northern Nevada, Northern California and Lake Tahoe area better than others.

"Basically, we looked at these different climate change models out to the year 2100, really trying to see under what conditions our water supply could have problems," said Enloe. Since one of the possible scenarios is less snow and more rain, TMWA is working to change restrictions on when water can be released from reservoirs. Currently the Corps of Engineers or Bureau of Reclamation establishes when water can be released.

"Those reservoirs have an old science establishing when you can start releasing water," said Enloe. "So today you need to basically keep letting water pass through until April 15 before you can start storing water again." In a bad snowpack year when runoff starts in March rather than April, all that water passes through and goes downstream. So TMWA is drafting a new operating agreement with TROA entities to allow them to adapt to changing climate and store water earlier if necessary.

"It could greatly improve and maintain the water supply conditions in the event that the climate does change and we see more variable hydrology," said Enloe. Variable is important because the models aren't consistent. Some point to warmer, wetter winters and others to warmer and drier. The models do agree that more extremes will be seen, demonstrated by 2015—the driest year on record—and 2017, the wettest."

"So, that's what we keep looking at," explained Enloe. "How do we manage the community's water supply under these more variable conditions we can expect in the future?"

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03/20/21

Truckee Meadows Water Authority will implement enhanced conservation measures in response to drought

Sierra Nevada Ally

By Brian Bahouth

Today, during a year in review and water supply outlook press conference, Bill Hauck, water supply administrator at the Truckee Meadows Water Authority (TMWA) said that in January the Truckee watershed was on track for an average water year, but the last two months have been exceptionally dry, and the Natural Resources Conservation Service (NRCS) stream flow runoff projections are distinctly bleak.

"The NRCS forecast has been so dry, and we've all just been sitting there watching the forecast degrade. I don't think I've ever seen anything like this," said Hauck via Zoom.

TMWA gets most of its water from the Truckee River. Lake Tahoe, Boca Reservoir, Stampede Reservoir, Prosser Reservoir, Independence Lake, and Donner Lake are the primary storage basins on the Truckee River system. Water is captured to be released later to meet downstream flow requirements of the Truckee River Operating Agreement, but despite a good supply of water in storage this year, according to Hauck, later this summer, river flow will be low if projections are accurate.

"There still will be water in the Truckee, but after about the third week of August, river flows are going to look a little different, as all the stored water in Boca (reservoir) is exhausted and Lake Tahoe is in rim control,"

Hauck said during the meeting. “So with all 17 outlet gates open, you’re only going to be able to get out what you can get out. Consequently, flows are going to fall off pretty sharply around the third week of August.”

Explore the storage lakes/reservoirs on the Truckee River system with this interactive map.

The NRCS stream flow runoff projection for Lake Tahoe is 15 percent of normal. The projection for the Truckee River at the Farad gauging station is about 31 percent of normal, according to Hauck.

Hauck was sure to say that conservation measures are in effect all the time, but this year has formally been proclaimed a drought for planning purposes, which means enhanced conservation measures will be implemented.

Enhanced water conservation measures are enacted when drought conditions have been determined and upstream reserves are projected to be needed to meet customer demand. In addition to the typical odd/even watering schedule, enhanced demand and management practices include:

- Enhanced communications and messaging to heighten community awareness of water usage.
- No lawn watering between 11:00 AM and 7:00 PM.
- Additional “water watchers” have been hired to monitor for proper water usage.

Depending on the severity of the drought, TMWA has the ability to implement other conservation initiatives such as increased watering restrictions, and requests for reductions in water use.

The TMWA website has details for evaluating water usage and tips on how to make homes and businesses as water-efficient as possible.

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03/20/21

TMWA announces water conservation measures

Reno Gazette Journal

Amy Alonzo

RENO, Nev. (KOLO) - Despite today’s weather, we’ve got some hot, dry months ahead of us and during that time we’re going to hear a lot about water conservation.

The Truckee Meadows Water Authority held a water year forecast briefing this afternoon. They say the snowpack finished at 68 percent of normal after a second dry winter in a row. So they are declaring level 2 drought water conservation measures.

That means a public awareness campaign urging everyone to watch their water use. The standard odd-even address watering schedule remains, but we’ll also be asked *not* to water our lawns between the hours of 11 am to 7 pm.

And they’ve hired more water watchers to enforce that and other restrictions.

“We’ll have a bigger presence out in the community this year, says Bill Hauck, TMWA’s Water Supply Administrator. “They’ll be patrolling and responding to reports of waste, leaks and broken sprinkler heads.

Violators will get a notice and some advice, but Hauck says, citations have been rare. “More often than not it’s helping people save money on their water bills and helping them be more water conscious.”

The river itself should look normal until late august when upstream storage will likely no longer be able to sustain its legal flow rate. Then the drop should be quite noticeable.

Hauck is comparing--conditions this year to those we saw during the last serious drought in 2015, adding it would take an above-average snowfall next winter to lift us out of where we are now.

###

03/20/21

TMWA orders water restrictions in Washoe County due to drought conditions

KRNV and Fox 11

Jenee' Ryan

RENO, Nev. (News 4-Fox 11) — The [Truckee Meadows Water Authority](#) is declaring a level 2 drought which means water conservation measures are required this summer.

Here are the steps you are asked to take between Memorial Day (May 31) and Labor Day (September 6):

- Do not water between 11 a.m. and 7 p.m.
- Follow assigned watering days -
- Even addresses can run sprinklers Tuesday, Thursday, Saturday.
- Odd addresses can run sprinklers Wednesday, Friday, Sunday
- Do not water on Mondays (gives the system a day to recover)

To help make sure people are following these rules and reports are answered, TMWA has close to 20 Water Watchers working for them this year rather than the usual 14.

"They'll be patrolling and responding to reports of waste, leaks, broken sprinklers," said Bill Hauck, Water Supply Administrator for TMWA. "More often than not, it's helping people save money on their water bills and helping them to be more water conscious. Sometimes there's water waste they're not even aware of."

Hauck said the main goal of the Water Watchers is to educate customers, not ticket them.

They'll even show up to do water usage reviews if a customer asks for it.

TMWA expects water flow to drop noticeably come the third week of August.

It's because the Sierra Nevada has not gotten enough water for two years in a row.

Luckily, Hauck said, there is plenty of water stored up in reservoirs to help with this and it will be used to augment flow of the Truckee River system.

He also said the Lake Tahoe also has plenty of water from 2019 but the level will not rise this year. TMWA leaders are not too worried, they said it's just a year to take extra care. "The last 120 years it's always been like this," said Hauck.

"We have big snowpack years and drought years and this is more of the same. This boom and bust cycle is one of the reasons all the dams have been put in to help manage water supply. We have these extremes year to year and we capture in good snowpack years and release in years like this."

Attached to this article are slides from TMWA's forecast presentation.

You can also go to their website for more on the water plan.

###

03/23/21

TMWA to Impose Fines After Low Snowfall Results in Water Restrictions

The lack of snow on our local mountains has prompted enforcement on water restrictions in our area. Truckee Meadows Water Authority could impose fines on violators.

KTVN

Victor Park

The lack of snow on our local mountains has prompted enforcement on water restrictions in our area. Truckee Meadows Water Authority could impose fines on violators.

If you look to the Sierra, you'll see there is a noticeable amount of snow. But leaders with the TMWA say it is not enough to make up for the drought Northern Nevada is facing.

"Sierra Nevada just didn't get the big storms we needed. Consequently, we are in our second exceptionally or extremely dry year in a row," said Bill Hauck, a Senior Hydrologist with TMWA.

That has some like Lucinda Zurida of Sun Valley concerned. "[I] was kind of nervous about it, because we need water," Zurida said.

For quite some time, restrictions on when people can water their lawns have been in place. Like many, Zurida supports the rules.

"We're just not going to run our cooler or do anything with our pool," Zurida added.

As a reminder, even numbered addresses can water Tuesday, Thursday and Saturday. Odd numbered addresses can water Wednesday, Friday and Sunday. Watering is prohibited on Mondays.

Authorities say there are a few exceptions which include newly seeded lawns. As well as hand watering vegetable gardens, trees and lawns.

This year, TMWA will be enforcing the rules and going as far as imposing fines on violators beginning Memorial Day weekend and through Labor Day.

Beginning Memorial Day weekend, residents cannot water between 11 a.m. and 7:00 p.m.

The following fines will be enforced:

- First time violators will face a warning.
- The second violation will cost \$25 fine.
- Third time violators will face a \$75 fine.

Zurida does not support the move by TMWA. She believes their rules will only encourage people to do the opposite of what they're asking for.

"They're going to use the water the way they feel fit. And if [TMWA] enforce it, people are going to just rebel against Truckee Meadows Water. Because of that reason, because of the fact that we've been under a lot of restrictions the past year and a half," Zurida said.

###

03/24/21

TMWA to order water conservation measures for Reno-Sparks area following dry winter

Reno Gazette Journal

Amy Alonzo

Following a second consecutive dry winter, Reno water users will be asked to implement conservation measures over the summer.

“I have a bleak outlook for you. Over these last two months, drought conditions deteriorated significantly,” Bill Hauck, water supply administrator for the Truckee Meadows Water Authority, the municipal water supplier for the Reno-Sparks area, grimly stated at a Thursday meeting to discuss the coming water year.

TMWA is ordering enhanced conservation measures from Memorial Day to Labor Day for its more than 440,000 customers. The last time such restrictions was ordered was in 2016.

In a normal water year, TMWA assigns watering days – Tuesday, Thursday, Saturday for even-numbered properties and Wednesday, Friday, Sunday for odd-numbered properties – and prohibits watering on Mondays and on all days between noon and 6 p.m.

This year, no watering will be allowed between 11 a.m. and 7 p.m. and additional water watchers will patrol neighborhoods to monitor daytime watering, according to TMWA. TMWA typically employs about 14 water watchers each summer; this year, about 20 people will serve on the patrol.

The watchers will knock on doors, leave reminders to conserve water and mail notices. Additional conservation measures could be implemented, Hauck said.

“It’s a year to take a little extra care” said Andy Gebhardt, TMWA’s director of operations and water quality.

The announcement comes less than three months after Hauck told the RGJ that TMWA users could expect to see normal conditions and river flows.

“We’ve all been sitting there watching the forecast degrade. I don’t think I’ve seen anything like this,” he said.

Fisherman, kayakers and anyone walking along the downtown Riverwalk can expect to see flows in the Truckee River flows drop off noticeably in mid-August. The agency will be forced to pull water from its upstream reserves and expects to completely drain Boca Reservoir this summer.

The Tahoe, Truckee, Carson and Walker river basins saw their snowpacks come in at less than 75 percent of median, which varies by region, according to the Nevada Natural Resources Conservation Service.

The NRCS monitors snow levels and the snow’s water content at dozens of sites throughout the region. All but one of those sites are already completely melted out, Hauck said.

###

03/24/21

TMWA Plans To Implement Water Conservation Efforts

KUNR

Paul Boger

The Truckee Meadows Water Authority will, once again, institute water conservation measures this summer. According to water regulators, Northwestern Nevada is facing a level 2 drought after two consecutive dry winters.

Between Memorial Day and Labor Day, home owners will only be allowed to water lawns on alternating days. No watering will be allowed on Mondays.

TMWA expects water flow to drop noticeably come the third week of August.

###

03/26/21

Indy Environment: “It's really bad for us.” Water managers prepare for extreme drought across the state

Nevada Independent

I’ve heard variations of the same line: “This is one of the worst water years I’ve seen in a long time.” The drought is visible on the ground. There is less snow on the mountains and less water running off into streams. Soil is dry and reservoirs are far below full.

Exactly how challenging is this water year, and how is Nevada responding to it? For this week’s newsletter, we include perspectives from across the state.

It’s important to note That drought affects different parts of the state in different ways, depending on where water is coming from and how it’s being used. But with extreme to exceptional drought affecting about 75 percent of Nevada, arid conditions are not limited to only a few pockets of the state.

Live in Las Vegas, Reno or Carson City, and you might not always think about where your water is coming from when you turn on the tap. In many cases, it starts with the snowpack. The water that comes out of your sink and shower often comes from snow melting into rivers and streams.

And this year, across the state, the amount of water flowing through streams is projected to be far lower than average. The USDA’s Natural Resources Conservation Service (NRCS), which compiles statewide water supply reports, [expects that streamflow](#) will be 7 to 61 percent of average for May to July (the big range accounts for different conditions across the state).

Jeff Anderson, an NRCS water supply specialist, who helped compile and prepare the report, said the forecast has decreased each month, in part because Nevada saw little rain and snow during the spring. In the 12-month period between May 2020 through April 2021, Nevada and other Western states recorded their driest years since 1895. But that’s not the full story.

Snowpack was well-below normal, but the soil underneath it was also dry. When soils are dry, it reduces the amount of water that makes it into streams. Instead, more water is absorbed by the parched landscape, and with little precipitation last fall, soil moisture was below average. “The soil moisture is making the runoff different than it otherwise would be,” Anderson said.

With less water making it into streams and rivers, urban and rural water users across the state are closely watching the situation and implementing drought measures.

In Northern Nevada, the Truckee Meadows Water Authority (TMWA), which serves Reno and Sparks, held a press conference last week to [announce new conservation measures](#), including additional public outreach, lawn watering restrictions from 11:00 a.m. to 7:00 p.m.

###

03-29-21

Officials: Reno-Sparks area will have plenty of water, despite low snowpack

Reno Gazette Journal

Amy Alonzo

The Tahoe Basin's snowpack is substantially below average, but municipal water users can rest easy that they will have enough water going into the summer, according to Truckee Meadows Water Authority.

"Despite what's looking like our second dry year in a row, we're going to have normal river flows this year into the next. This means business as usual for TMWA customers," said Bill Hauck, water supply administrator for TMWA, municipal water supplier for the greater Reno/Sparks area.

TMWA serves more than 440,000 people. This is because upstream reservoirs that supply water to the Reno-Sparks region have not yet seen the impacts of the below-average snow years, Hauck said.

"One or two dry years doesn't define the water supply for TMWA customers," Hauck said.

For the second year in a row, the Tahoe Basin's snowpack is below average — it currently sits at about 71 percent of median, according to the Natural Resources Conservation Service's monthly measurement conducted Monday.

The region is likely headed into its second consecutive dry summer unless heavy precipitation hits the region in March and April, according to Jeff Anderson, hydrologist for the Natural Resources Conservation Service.

With only a 10 to 20 percent chance of that happening, there is potential for an active wildfire season and impacts to recreational activities such as skiing and rafting, he said.

"We had a below average winter last year and another one going this year," Anderson said. "Things like wildfire, when the forest starts to get stressed, you're more susceptible to bigger fires."

As of March 1, snow at the Mt. Rose area measured 68 inches deep, with 21 inches of water content, according to the SNOTEL measurement Monday. That's about 65 percent of normal.

The lack of precipitation has left soil under the snow at near to record dry levels for this time of year, Anderson said. In the spring, snowmelt will percolate into the soil before heading into rivers and streams, likely leading to less runoff.

Anderson said forecasters are hoping for a Miracle March such as those in 1991 and 2020. In March of 1991, the Lake Tahoe Basin received 257 percent.

It's going to be tough times'

Nevada receives an average annual precipitation of just 10 inches. It is the driest state in the nation.

According to the National Weather Service, Reno receives an average of 7.4 inches of precipitation per year. Each water year starts and ends in October. To hit its average, Reno should have received 5.07 inches of precipitation thus far. Instead, the city has received just 2.35 inches of precipitation since last October.

The city's water shortage is a microcosm of what the state is experiencing. According to the U.S. Drought Monitor, a joint effort of the National Drought Mitigation Center, National Oceanic and Atmospheric Administration and the U.S. Department of Agriculture, 100 percent of Nevada is in drought of moderate severity or worse.

The drought monitor issues five stages of drought warning – abnormally dry, moderate, severe, extreme and exceptional.

Washoe County is among the 92 percent of the state in a “severe drought.” During times of severe drought, residents can expect to see things such as increases in bear and other wildlife encroaching into residential areas and more dust.

The Carson River, which flows into Lahontan Reservoir, “will probably run dry by July 4,” said Truckee Meadows Water Authority Water Supply Administrator Bill Hauck. TMWA oversees the Truckee River, which has upstream reservoirs that have water in storage for the coming season. “It’s going to be tough times on the Carson system this year,” Hauck said.

How bad is Nevada's drought? It depends where you live

The Carson River usually dries up in August — about a month after Hauck predicts it will dry up this year — said Lahontan Reservoir Water Master Kelly Herwick.

The majority of southern and eastern Nevada are facing an even more dire situation, with 40 percent of land in an “exceptional drought.” Residents in those regions can expect to see impacts such as closed boat ramps, curtailed water allotments for farmers and ranchers, decreased alfalfa and hay yields, and extended fire season and activity.

Reno residents will still have enough water

But despite the lack of precipitation, Truckee River water users in the Reno area will still have plenty of water heading into the summer.

The difference lies in natural water, such as snowpack, versus managed water in reservoirs, according to McEvoy. In California and Nevada, the water supply is built on heavily managed reservoirs.

“We had a big water year in 2019 – we were able to fill all our upstream reservoirs,” Hauck said. “We’ve been living on that carryover from 2019.”

Truckee Meadows Water Authority has a slew of reservoirs up and down the Sierra that house water for the system, including the top several feet of Lake Tahoe and Donner Lake.

“I think this region wouldn’t be nearly as big as it is or as well-developed if it weren’t for the network of storage reservoirs that capture water in big years and meter it out for years like this,” Hauck said. “Many utilities in the west certainly don’t have such a redundant system.”

TMWA has 40,000-acre feet of water in storage that it can tap – over half a year’s supply, he said.

“It’s difficult for people to understand. We have normal river flows this year, but the talk of drought seems to be all around us, he said. “Living here in Reno, it’s a boom and bust cycle with the Sierra Nevada snowpack. This is nothing we haven’t seen before.”

He said TMWA customers shouldn't see any rations this summer, but that the agency "will expect our customers to continue to water responsibly."

McEvoy agrees that Truckee Meadows Water Authority customers shouldn't worry about having enough water this summer for residential needs. But "TMWA and the Truckee are kind of an anomaly," he said.

"It's conflicting and hard to put out the message for TMWA because they probably won't be putting in any restrictions this year. But that's not because we're not in a drought—it's because they have such a wonderfully managed system," McEvoy said.

"The natural systems are definitely feeling the impacts. The soil moisture in the Sierra Nevada is seeing near-record lows. Rangelands are reporting reduced forage. And this is before we are really even getting into the hot and dry season."

(Also published in Nevada Independent)

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04/06/21 & 04/07/21

[TMWA Holds Sprinkler Workshops](#)

KTVN

###

04/07/21

Drought Outlook and Impacts

After a lack luster snow season our region is still in a drought. This will cause some problems going forward.

KRNV

Angela Schilling

While we still have some snow up in the mountains it is also very dry in the valley. It's been a while since we've received any good precipitation and we usually see the bulk of our precipitation during the winter months. We only had one good atmospheric river event this year. Without it, our drought situation would be even worse.

"We're expecting very low runoff conditions this year. The outlook for spring does not look particularly promising," said hydrologist Tim Bardsley.

The lack of precipitation will have an impact on our recreation, stream flows, air quality, ranching, and fire threat this summer. Bardsley says roughly twenty percent of our snowpack has already melted.

"With the drier conditions we're more prone to air quality issues from blowing dust. We've seen a few of these dust events already," said Bardsley.

The drought monitor shows slightly worse conditions in the Great Basin eastward. It is still significant in the Sierra though.

"The fire hazard is an interesting complex this year. In the grass and brush area you may have slightly normal to lower fire hazard because we do not have a lot of carry over or a lot of grass growth. But the timber is another story up in the Sierra. Of course last year we were impacted by air quality and poor air and we could again," said Bardsley.

Some experts are not as concerned about Reno's water supply.

"In Reno itself we're in pretty good condition in terms of water supply because the Truckee Meadows water authority already has assigned a number of reservoirs and reservoir storage," said Bardsley. With that being

said, our vegetation is quite dry and more precipitation would be more than welcomed. What we don't want is dry lightning.

###

06/08/21

KTVN

[Face the State: TMWA on Drought Preparedness with Andy Gebhardt](#)

06/08/21

Whose water is it? Lake Tahoe water levels dropping quickly as demand increases

Tahoe Now

Paula Peterson

LAKE TAHOE, Calif./Nev. - Those watching the level of Lake Tahoe know it is dropping quickly, and it's not just because of a lack of snowfall this year and another year of drought.

Understanding why the lake drops, and who causes it to drop (yes, there is a person - the watermaster), is key to knowing why the lake should be at its natural rim of 6,223 feet above sea level by the beginning of August. As of June 8 the lake is two feet above that rim.

The surface of Lake Tahoe is 22 miles long and 12 miles wide and 191 square miles. The shoreline length is 75 miles and with an average depth of 1,000 feet, there is a lot of water in this jewel of the Sierra, 36.15 cubic miles or 39,000,000,000 (trillion) gallons of it, in fact.

So much surface water that 360,000 acre-feet of water evaporate from Lake Tahoe in an average year - enough water to flood 360,000 acres of land to a depth of one foot or supply water to about 360-720 families for a full year (California households use between one-half and one acre-foot of water per year for indoor and outdoor use).

The lake fills every year from snow and precipitation that falls on its surface and comes through the streams in the Tahoe Basin watershed.

Water is let out at the one outlet at the dam at Tahoe City which is under the control of the Federal Watermaster. But how much, and why?

Every gallon that leaves Tahoe is spoken for and is divided up through court decrees with input through a consortium of sorts of those who have a piece of the water pot.

The Truckee River Operating Agreement (TROA) was implemented in 2015 that provides the management of the water and summarizes the water and hydrologic data needed to send the water from Tahoe on its way to those downstream. TROA meetings are held monthly with all partners, the Pyramid Lake Paiute Tribe, State of California, State of Nevada, Washoe County (Reno, Sparks), City of Fernley, Truckee Meadows Water Authority, and the federal government. They work out the water use for the region.

Things changed in the drought year 2015 as water recipients didn't want water stranded in Lake Tahoe since once the lake hits its natural rim, the dam won't flow. Prior to TROA, Tahoe water was stored for Nevada, and now California can store it in Tahoe. TROA was the culmination of decades of "deliberative and careful water resource planning designed to address concerns over future water supply. TROA replaces the rigid and inflexible water management system for the Truckee River," according to the Truckee Meadows Water Authority 20-year water plan. It replaced the decades-old court decrees originally designed to serve agriculture, small hydroelectric plants, now defunct paper mills, and a small, rural community. Now they can

adapt to future variability of climatic, hydrologic, and economic conditions while taking advantage of unused storage space in federal reservoirs.

2021 is a drought year, and all demand for water is coming from Lake Tahoe, according to Chief Deputy Water Master Dave Wathen. Reservoir levels are dropping across California and those who have rights to Tahoe water want it now before it's too late.

Parties of TROA can get credit for water they don't use in a year, and there has been accumulated water credit in Lake Tahoe over the last few years. Wathen said they don't want their water trapped in the Lake Tahoe Basin when the dam closes and they want it now. Plus, they'd like it before evaporation takes what they can use. More water is lost to evaporation than is released at the dam.

Release at the dam will remain high. Full demand is 500 cubic feet (CSF) per second and the release has been averaging at closer to 400 CSF. There will also be plenty of water left in Tahoe when you think about the average depth is 1,000 feet and the dam not functioning when the lake is below the natural rim.

There is not much water in other storage areas like Boca and Prosser reservoir. Wathen said a lot with credits want to move them to Boca and Prosser for the future so they don't have to only get water when the dam flow allows it.

The water rights through TROA are scheduled to change all the time just as the amount of water available changes. Wathen said everyone works together under an operating agreement where people have a right to establish credits and they also share expectations and work on the plans. In California, there is also another monthly meeting of the Truckee River Watershed Council that covers local interests including recreation, fisheries, and the environment through multi-agency collaboration.

###

06/20/21

Truckee River low flow no cause for concern, Water Authority says

KRNV

Brett Forrest

RENO, Nev. (News 4 & Fox 11) — To the casual onlooker, the Truckee River is low right now. Some might even worry it's incredibly low.

That's primarily due to a bad snowpack year in the Sierra and dry conditions across the state, like much of the western U.S.

(Many TMWA charts used)

A large swath of northern and western Nevada is facing [extreme drought conditions](#) this year, according to the National Weather Service and National Drought Mitigation Center.

As a result, the Truckee River's water is flowing at [500 cubic feet per second less](#) than this time last year.

The low water level is noticeable as the river flows through downtown Reno and the surrounding areas.

Scenes of people pushing their tubes through the river's downtown Reno river, wading through ankle deep water at times.

Despite the poor water levels, officials say there is no cause for concern.

"It's not the first time it's been this low. In fact, it's been a lot lower many more times," said Andy Gebhardt, director of operations for the Truckee Meadows Water Authority (TMWA). "In the last 35 years, it's been this way probably a dozen times. We live in a boom and bust cycle."

The TMWA is the primary water purveyor for the Reno-Sparks area. It serves roughly 440,000 customers.

Gebhardt recalled 2015 as a much drier year than now. It's the same year the [Truckee River Operating Agreement](#) was implemented.

Due to that agreement, TMWA is able to store water for the region upstream in several reservoirs like Boca, Donner, Stampede, and Prosser.

"In 2015, we had about 27,000 acre feet of storage and privately owned storage up in the upstream reservoirs," Gebhardt said. "Right now, we have 53,000 acre feet of storage. We have almost double what we had in 2015 so we're in fine shape."

He said the beauty of the agreement is in wet years, the water goes down river to other users. And in dry years, like this year, they get to store every ounce of water they can.

[According to the TMWA website](#), the Reno-Sparks community typically uses three percent of the Truckee River in a non-drought year. That number might bump up to eight percent during a drought year. Others might foresee a future problem as the population of the area continues to grow. That's another issue Gebhardt said warrants no concern.

"Tahoe is going to drop below the rim whether there's 400,000 people in this valley or 4000 people in the valley," said Gebhardt.

Tahoe is going to drop below the rim whether there's 400,000 people in this valley or 4000 people in the valley.

He said Mother Nature doesn't care about population and because of that, they've planned for years like this.

###

07/15/21

Lake Tahoe Could Drop Below Natural Rim This Fall

Lake Tahoe only rose about 1.5 inches from April 1 until the peak.

KTVN

Paul Nelson

Lake Tahoe is a very popular place during the summer months and that is no different this year. Sand Harbor is filling up with people from all over the country.

"Mid-80s, crystal blue water, family here, wind in your face, there's nothing better than Lake Tahoe. Especially, for us out-of-staters," Russ Larson, Highland, Utah resident said.

The lake is about 1.5 feet above its natural rim. It is dropping at approximately an inch per week in July but it has evaporation has increased by four times in the last couple of days.

"Over the past few years, it's just gotten hotter and hotter," Vincent Portocarrero, Novato, California said. "The sun beats down harder and it's just gotten lower and lower. When I was a kid, it was so much higher."

The forecast shows that the lake will drop below its natural rim by mid-October, mostly because of evaporation. 370 cubic feet per second are flowing through the Tahoe City Dam. At that rate, it would take 200 days for the lake level to drop one foot.

This year had the lowest increase in lake levels in recorded history. It usually rises 1.3 feet from April 1 until the peak. This year, it only rose 1.5 inches. Between October 1 and the peak, the lake will typically rise 2.25 feet but it actually dropped by about six inches this year.

People understand that the water levels fluctuate each year. The lake has been below its natural rim many times before.

"I've been in drought before at Lake Tahoe and the water level was much lower," Scott Portocarrero, Novato, California said. "It just seems like it's only dropped like two or three feet."

The Sand Harbor boat ramp will close for the season, Sunday at 8:00 p.m. Officials say the last time the ramp closed was in 2014.

"We had a guess that we were going to have a pretty lean year and the water wasn't going to rise like it normally would after a good year," Allen Wooldridge, Park Supervisor of Lake Tahoe Nevada State Park said.

One reason for the closure is to protect the lake's ecology. The water is so low that people have to back their trailers into the lake, past the end of the concrete ramp. The more of the trailer and truck that go into the water, the bigger impact it will have. The other reason is because boats and trailers are getting damaged in the process of loading or unloading.

"There's often times when they get out too far and they go off the ramp and they come back out," Wooldridge said. "Especially, at the end of the day when they're loaded, we've actually seen axles being ripped off." Most of northern Nevada is in an extreme drought, including Lake Tahoe. It will require a heavy snowpack this winter to fill the lake to capacity. That's what locals and visitors are hoping for.

"I've seen it worse but it's pretty bad and I'm pretty bummed that they're closing the boat ramp," Laura Haley, Reno resident said. "That has an effect. I like to jump off the rocks and stuff and so it's kind of sad when it's too low. You can't do any of that."

Other reservoirs are also low. Boca Reservoir can hold 40,000 acre-feet of water but it is currently holding nearly 24,000. Prosser Reservoir is right around 50 percent of capacity. Stamped Reservoir can hold 226,500 acre-feet but it is down to just 87,000.

Officials say the Truckee Meadows has plenty of drought reserves for day-to-day water use. The drought is having a much bigger impact on agriculture and power generation.

###

07/21/21

TMWA: Plenty Of Water Supply Despite Drought

The drought will cause Truckee River flows to drop in August but that will not effect daily water supply for TMWA customers.

KTVN

By Paul Nelson

The 2020-2021 winter brought a sub-par snowpack and an inefficient spring run-off. That is being felt in our reservoirs. Lake Tahoe is expected to drop below its natural rim by mid-October and other area reservoirs are right around half of capacity. Officials say that shouldn't affect our daily water supply though. There is still plenty of upstream drought reserves.

"From a drought perspective, this community is in great shape, right now," Bill Hauck, Water Supply Supervisor for the Truckee Meadows Water Authority said. "We have more drought reserves in storage upstream than ever."

Hauck says there are currently 50,000 acre feet of drought reserves. A big reason why is the Truckee River Operating Agreement. That took effect in late 2015. It gives TMWA already had water rights in Lake Tahoe and Boca Reservoir but now it has rights in Stampede, Donner, Independence and Prosser Lakes.

"We've basically been able to double our drought storage, pre-TROA to here we are now coming into this drought," Hauck said.

The Truckee River is expected to drop substantially in mid-August, when reservoir levels drop too low to supplement natural river flows. At that point, TMWA will release enough water to provide its customers with their normal supply.

"It's not a good situation to be in but from a drought supply perspective, again, this region couldn't be in better shape," Hauck said.

TMWA is used to dealing with fluctuations in water resources. The last time reservoirs fell short of supplying the river with 500 cubic feet per second during the summer was in 2015, when the Truckee River slowed to a trickle.

"We live in a desert," Hauck said. "We have this cyclical water supply cycle, big snowpack years, low snowpack years. It's just a fluctuation of living in this region."

TMWA has an idea of what the water outlook will be in the future.

"We've actually modeled 80 years into the future to the end of the century and we've looked at historical droughts and potential droughts under climate change," Hauck says.

Hauck says there will be plenty of water supply for the region even with population growth.

Water usage in the winter is about 35 million gallons per day in the Truckee Meadows. That jumps to 140 million gallons per day during the summer when people water their lawns. TMWA is not asking people to cut back on their water usage, despite the drought.

"We're just asking them to continue to water responsibly," Hauck says.

TMWA is sending more "water watchers" out into neighborhoods to keep an eye wasteful water use and to educate the public. Customers are encouraged to water their grass on their designated days but not between 11 a.m. and 7 p.m.

During normal years of precipitation, TMWA only uses about three percent of the river's water.

"On an annual basis, TMWA only uses about three percent of what's flowing down the river normally, so in a drought year we use a bigger portion of the pie, in a big water year a little bit less," Hauck says.

Along with the reservoirs, TMWA will also start pumping groundwater. During some years, it also diverts Truckee River water into the ground for future use.

###



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Sean Feeney, Control System Engineering Manager
DATE: August 12, 2021
SUBJECT: Presentation of TMWAs cybersecurity at its facilities

Summary

- Cybercrime is increasing dramatically with more attacks being focused on critical infrastructure globally.
- Cyberattacks in utility sectors are incentivized by potentially large financial extortion payouts and/or geopolitical interests of state sponsors.
- TMWA being a water purveyor could become a direct target for attack from a hacking group.
- While there could be significant financial loss from a successful attack, the loss of trust within the community and amongst TMWA customers would be immeasurable.
- Efforts to safeguard TMWA's vital technology systems within both Corporate and Control networks is jointly coordinated between TMWA's IT (Information Technology) and CSE (Control Systems Engineering) Departments.
- While IT and CSE have different mandates, they share the same security methods and means, like two sides of the same coin.
- IT and CSE both follow proven cybersecurity tenets and strategies to protect TMWA's ability to produce high-quality drinking water.
- TMWA (IT\CSE) employ the four **Ps** (principles) of cybersecurity
 - *Prepare:* Identify security risks and develop strategy to rectify concerns based on proven security frameworks and response guidelines
 - *Prevent:* Implement layered defenses to reduce or eliminate security risks
 - *Pinpoint:* Detect, understand, and contain a evolving security event
 - *Protect:* Ensure a appropriate response to an event enabling an expedient recovery
- Through keen foresight and proactive efforts the problems stemming from unpreparedness that have plagued other utilities have been avoided.
- TMWA's IT and CSE continue to monitor the current security trends and constantly look for new ways to improve security.

Background:

For TMWA, potential cybersecurity harm comes in the form of three distinct cyberthreats, that of cybercrime, cyberespionage, and cyberdestruction. Cybercrime seeks to use

unlawful digital means primarily for monetary gain. Cyberespionage seeks to gather sensitive information illegally, which could then be used to exploit an organization. Cyberdestruction is the wanton criminal act of digitally sabotaging critical systems and infrastructure of an organization to directly endanger the community.

Many cyberattack methods are shared across those persistent threat vectors and used to equal effect. However, the most common of them are on the rise globally, with incidents of malware having increased by 358% and ransomware by 435% in 2020 over the previous year (Help Net Security 2021). More concerning is that monitored dark web activity is beginning to see a shift toward critical infrastructure as prime targets for attack (Dragos, 2021). Critical infrastructure is often burdened by aged and vulnerable infrastructure coupled with ill prepared defenses making them particularly susceptible to penetration (Tripwire 2021). This increase in activity is fueled by the illicit monetary gains achieved through such attacks, but often by the geopolitical interests of nation states that are complicit in intelligence gathering, hacking, and encouraging destabilizing breaches (DHS 2019).

TMWA's online presence and our position within the community as a water utility and steward of critical infrastructure within the Truckee Meadows puts this organization into the position of being a real and plausible target. A successful cyberattack could have a significant negative fiscal impact to TMWA and its operations. Interim loss of systems and data, loss of general productivity, and the time and effort spent on containment, recovery, and clean up all attribute to a spiraling cost. In a survey sent to IT managers of leading companies in 2020 it was found that on average the cost to recover systems from a ransomware attack was \$732,520 and when organizations elected to pay the ransom the costs doubled to \$1.45 million, as the aforementioned losses and cleanup efforts were already absorbed in addition to the ransom paid. (Sophos 2021). While damages measured in dollars can be quantified and to some extent accounted for and covered, the greater harm can come from the implicit loss of trust from the community. The concern over the stewardship of the water supply and the ensuing doubt would be far more damaging. A tarnished reputation takes far longer to repair than any digital damage that would have otherwise been incurred.

Discussion:

Given the severity and the obvious concern, the burning question at the heart of this topic, has been put forth, what does TMWA do to safeguard its critical infrastructure and the community's water supply against cyberthreats. While there can be significant depth and breadth to the answer of what is done and why it is done to secure the organization, the complexity can be distilled down to the 4 Ps (Prepare, Prevent, Pinpoint, Protect). The facets of these principles are ones that a mature organization can align itself too and thereby minimize risk, which TMWA has done.

Prepare

To build up one's strengths one must know their weaknesses and this holds true for the Preparation principle as it is used to help create the foundations of a strong digital defense. Value must be derived for all systems and data within the organization. Confidentiality, integrity, and availability of those same systems and data must be determined. Security risk must be

continuously analyzed and assigned throughout a systems/data operational life. Appropriate responses need to be authored for dealing with specific at-risk scenarios. Properly profiling and documenting these aspects enables a strategy and approach to take shape. That strategy can then be merged into industry established frameworks such as the Center for Internet Security (CIS) Controls framework or the National Institute of Standards and Technologies (NIST) Cybersecurity framework. These frameworks allow an organization to more-easily define policies and procedures around the implementation and ongoing management of information security controls within its identified environment.

Prevent

Building a sound defense means addressing all the discovered forms of risk. The Prevention principle focuses on risk mitigation through the implementation of layered defenses. These barriers, placed at many points in the environment and often erected on top of one another, help to either eliminate said risk or significantly minimize its impact. That is why this principle is perhaps the most faceted, as the defensive layer takes many forms and is built in many places within an organization's digital domain. Key amongst them is the separation and isolation of vital systems, the logging of activity utilizing active/passive monitoring tools on specific computer system roles that are commonly targeted, like desktops and servers. Those systems and applications should only be from trusted sources, hardened to reduce the attack surface and continually updated to eliminate system and application vulnerabilities. Critical systems should be physically restricted to only the required staff that has to maintain them. Persons using any systems should be granted just enough permissions to use what is necessary to perform their job duties and no more. Multiple methods of authentication should be employed where applicable to protect the person and the organization and its systems and data. All important data should be fortified through encryption, when at rest or in transit. Above all, everything within the environment needs to be backed up to a safe location. While there are many more best practices gleaned from a good security framework, the above can form the core of a strong barrier and natural deterrent to attacks.

Pinpoint

"Know thyself" is an appropriate maxim to apply to the Pinpoint principle. With respect to a cyberdefense its more apt to restate it as "know thydata." The Pinpoint principle expounds on the idea that an organization must be intimately familiar with its systems, processes, and network within the context of its own environment. It cannot be reactionary; it must know what is occurring as it is occurring in a proactive manner. Speed in discovering developing threats as quickly as possible is the first step to containment and ultimately minimizing possible damage and potential loss. This is often achieved through appropriate training within technology staff and arming staff with the right set of tools. These monitoring tools specialize in analyzing and correlating occurrences in the environment to identify if an event is considered anomalous and determine if it is a potential threat that needs to be investigated in a in a timely manner.

Protect

A good defense often requires a good offense, the Protect principle soundly reflects this idea. It further highlights the need for expediency in a response to an identified incident and a holistic approach to combating a cyberthreat. To ensure quick resolution, identified incidents need to be reported both internally and externally to relevant bodies in short order. Full attention

and focus are given to containment, eradication, and recovery. Use of response playbooks is critical to ensure proper and comprehensive action in such stressful situations. Incident severity drives Business continuity and disaster recovery as needed. Ensuring an ongoing strong defense has to account for the human element and requires fostering cybersecurity awareness amongst all individual within an organization, through recurrent training, messaging, and establishing the idea that all employees in an organization have a vital role in the in its defense.

Establishing and following the 4Ps early on, along with exhaustive efforts and commitment to strong security initiatives by technology staff within TMWA's IT and CSE Departments, along with TMWA firm commitment to security in general, has enabled this organization to successfully defend against a myriad of attacks and probes on practically a daily basis.

Yet, it is necessary to acknowledge the fact that cyberthreats are never going to end and will continue to worsen as criminals deploy increasingly sophisticated methods. As such, TMWA recognizes the need for its own security defense posture to be fluid and evolve to face new persistent threats. As such, IT and CSE staff are constantly re-evaluating security measures, striving to improve and refining security process and procedures, employing new sensible security technologies, and growing our community network with similar agencies and security institutions to improve interaction and coordinated response.

Ultimately while specific departments such as IT and CSE may spearhead such protective measures it is truly an organization-wide effort, involving each TMWA employee. Through that collective resolve, TMWA has remained strong, secure, and free of a major cyber incident.

TMWA's CyberSecurity Posture

*Prepared by Control Systems Engineering Dept.
August 18, 2021*



General Cyber Crime Statistics

- By 2022, spending on cybersecurity is going to reach \$133.7 billion (Gartner)
- In 2021, 71% of breaches were financially motivated while 25% were motivated by espionage. (Verizon)
- In 2021, 52% of breaches featured hacking, 28% involved malware and 33% included phishing or social engineering. (Verizon)
- The average cost of a data breach in 2020 was \$3.86 million, in 2021 its risen to \$4.24 million. (IBM)
- The average lifecycle of a breach was 280 days from identification to containment. (IBM)



Critical Infrastructure Cyber Crime Statistics

- 67% of applications in the utility sector have at least one exploitable severe vulnerability open throughout the year (SiliconAngle)
- Utilities faced 1780 DDoS attacks between June and August last year, a 595% increase from the year prior. (Netscout)
- 70% of the world's critical infrastructure providers reported a breach in the past 2-3 years (Securityweek)
- 78% of providers expected a successful breach of their ICS/SCADA systems within the next 2 years (Securityweek)
- By 2025 its predicted that Cyber Attackers will have weaponized Operational Technology systems to successfully harm humans (Gartner)



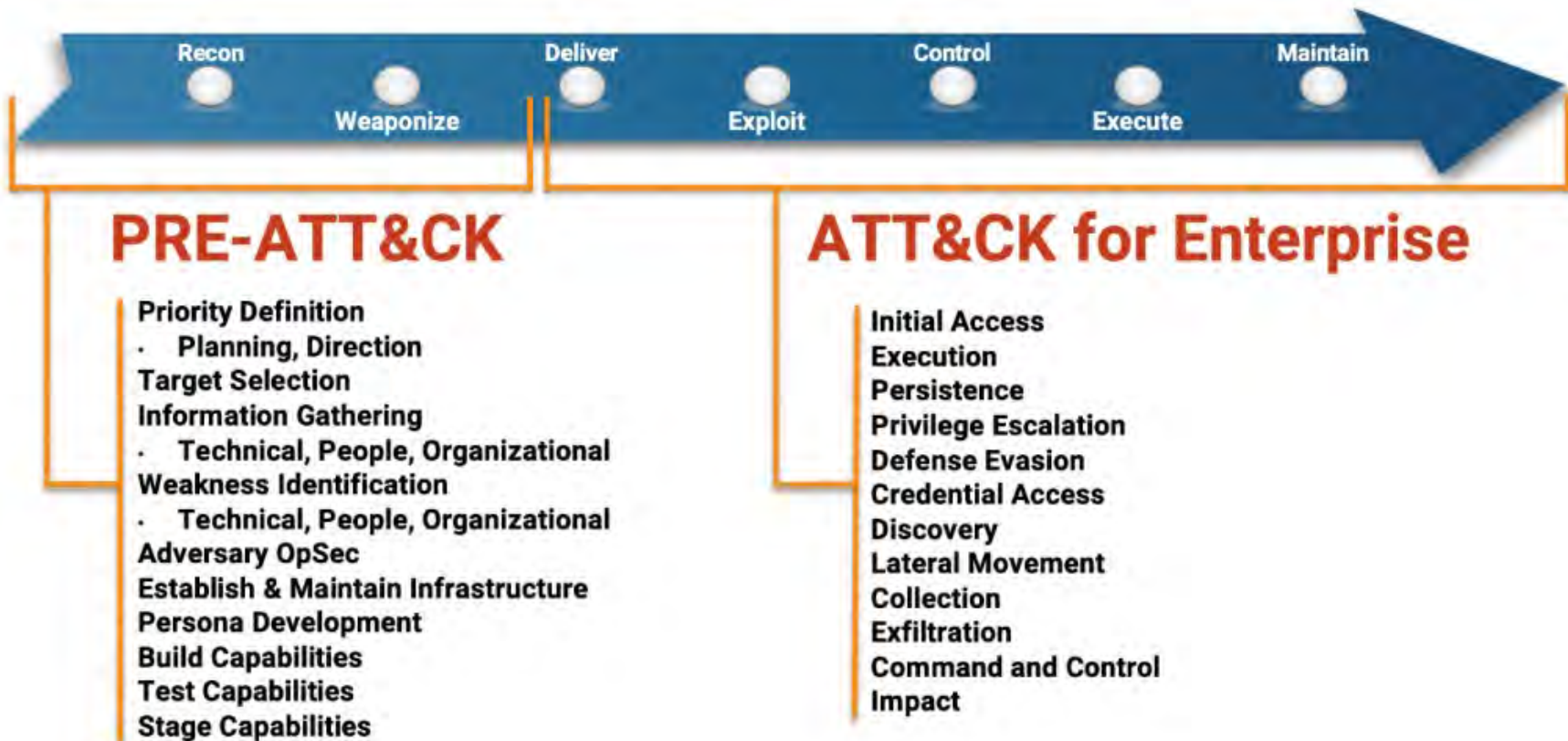
Current Threat Landscape

	Nuisance	Espionage	Cyber Crime	Hacktivism	Cyber Physical
Objective	 Access & Propagation	 Economic, Political Advantage	 Financial Gain	 Defamation, Press & Policy	 Escalation, Destruction
Example	Commodity Malware	Advanced Persistent Threat	Ransomware, PHI, and PII Theft	Website Defacements	Destroy Critical Infrastructure
Targeted	 		 		
Character	Automated	Persistent	Financially Motivated	Conspicuous	Conflict Driven

Source: Mandiant 2021

- TMWA most at risk from espionage, cyber crime, cyber physical threats
- Such threats imply direct targeting by a cyber attacker

MITRE ATT&CK Patterns



- Intrusions follow a predictable pattern and sequence of events
 - Patterns have been compiled into the MITRE Framework
- TMWA studies MITRE to help build its defenses

Source: Mitre 2021

IT\OT-Different Networks, Same Goal: Security



Business Priority	Confidentiality	Availability
Major Focus	Data integrity	Zero downtime for control processes
Protection Targets	Windows computers, servers	Legacy industrial devices (PLC, HMI, meters)
Environmental Conditions	Air-conditioned	Harsh environments (extreme temperatures, vibrations, shocks)

Source: Moxa 2021

IT

- Multi-facet focus: enterprise productivity
- Rapid lifecycles: to adopt new Tech
- Cyber threats: Myriad of new\old threats

OT

- Singular Focus: industrial production
- Slow lifecycles: emphasizing stability
- Cyber threats: targeted attack threats

IT/OT

- Follow the 4 **Ps** of cybersecurity

Securing TMWA's Digital Border – Applying 4 Ps (Principles) of Cybersecurity

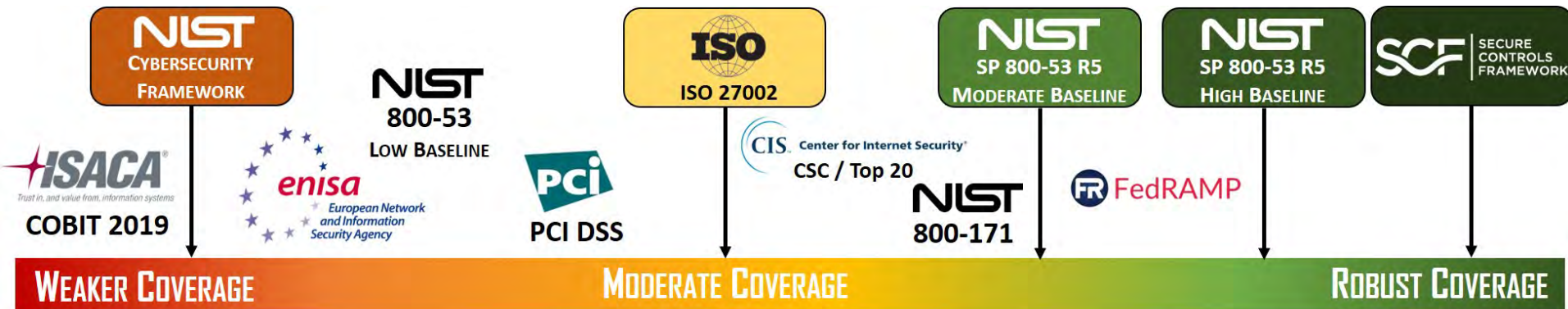


The Prepare Principle

Goal = Identifying and managing security risks

- Audit & Inventory all technology, systems, data
- Determine the confidentiality, integrity, and availability
- Assign value and risk
 - Record said risk into organizations larger risk mgmt. framework
- Documented risk scenarios then need an appropriate response plan developed
- Select and utilize an industry proven Security framework when building security controls

Prepare – Selecting a Framework



Source:
Complianceforge 2021

- Frameworks are roadmaps to building effective security process controls
- TMWA can and does Incorporate elements from different frameworks to build the strongest defense
- TMWA-IT primarily uses CIS Control version 8
- TMWA-OT primarily uses NIST Cybersecurity Framework & NIST ICS Framework

The Prevent Principle

Goal = Implementing security controls to reduce security risks.

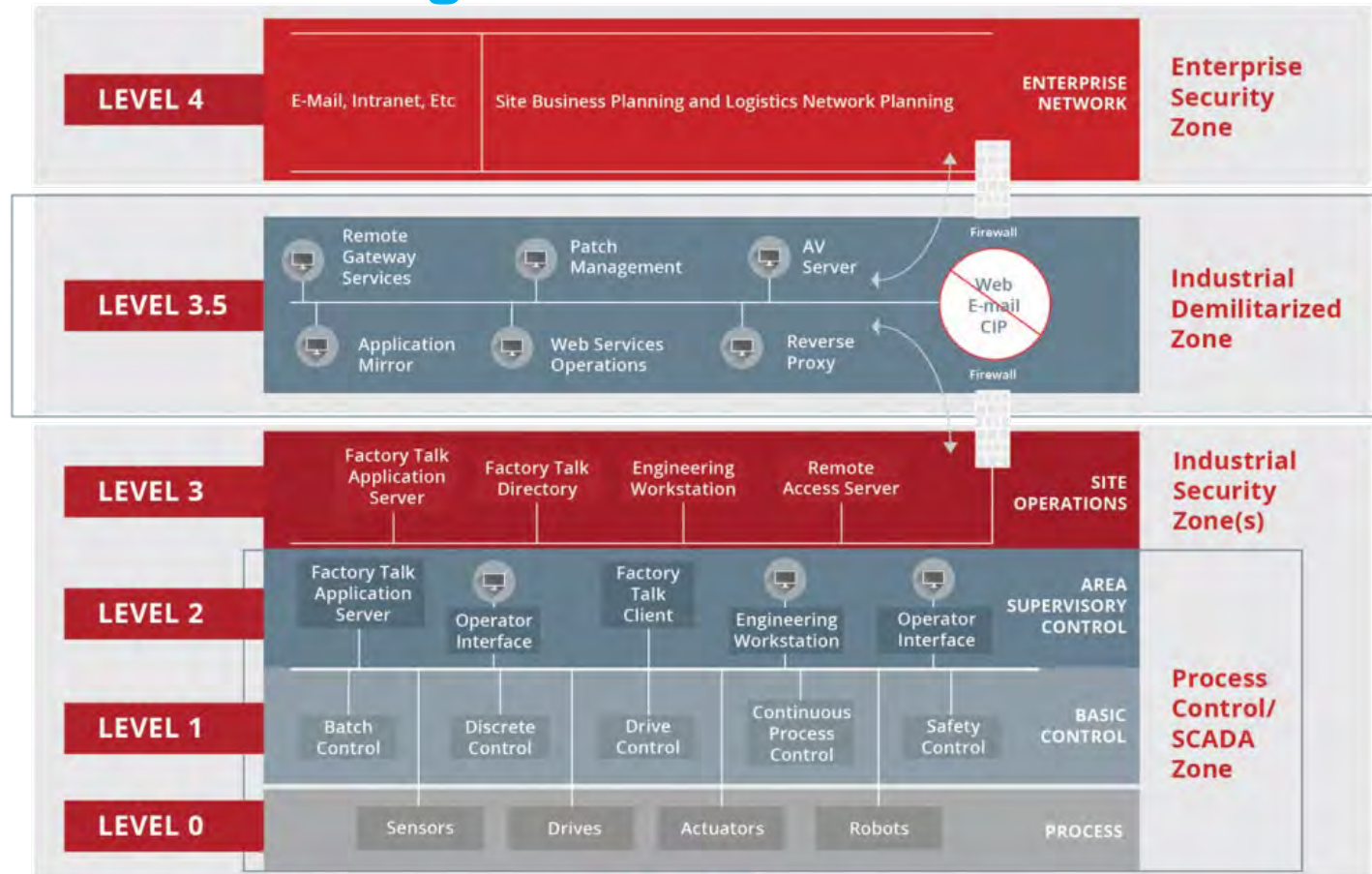
- Systems are appropriately segmented, security hardened, and administered in a manner that is secure/accountable/auditable
- Physical access to systems, supporting infrastructure, and facilities is restricted to authorized personnel
- Security vulnerabilities in systems are identified and mitigated in a timely manner through patching or security policy adjustment
- Only trusted and supported operating systems, applications and computer code can execute on systems.

The Prevent Principle, Continued

Goal = Implementing security controls to reduce security risks.

- Data communicated between different systems is controlled, inspectable, and auditable.
- Sensitive data is encrypted when at rest or in transit and backed up in a secure and proven manner.
- Employees are granted the minimum access to systems, applications and data repositories as required for their duties.
- Multiple methods are used to identify and authenticate employees to systems, applications and data repositories.

Prevent – Using Purdue Model to secure SCADA



PURDUE MODEL

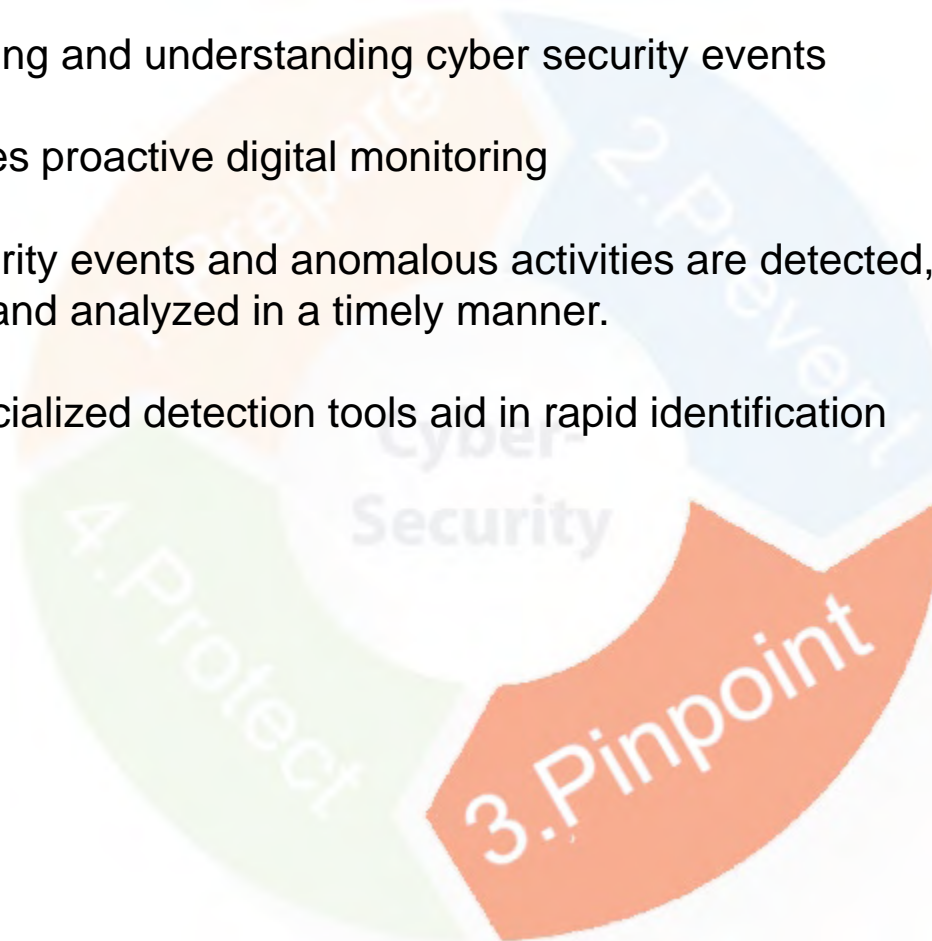
Source: Securicon 2021

- Prevents movement from IT to OT networks & vice versa
- Create strict “enforcement zones” to isolate critical systems\devices
- Restrictive lateral movement per increasingly secure zone

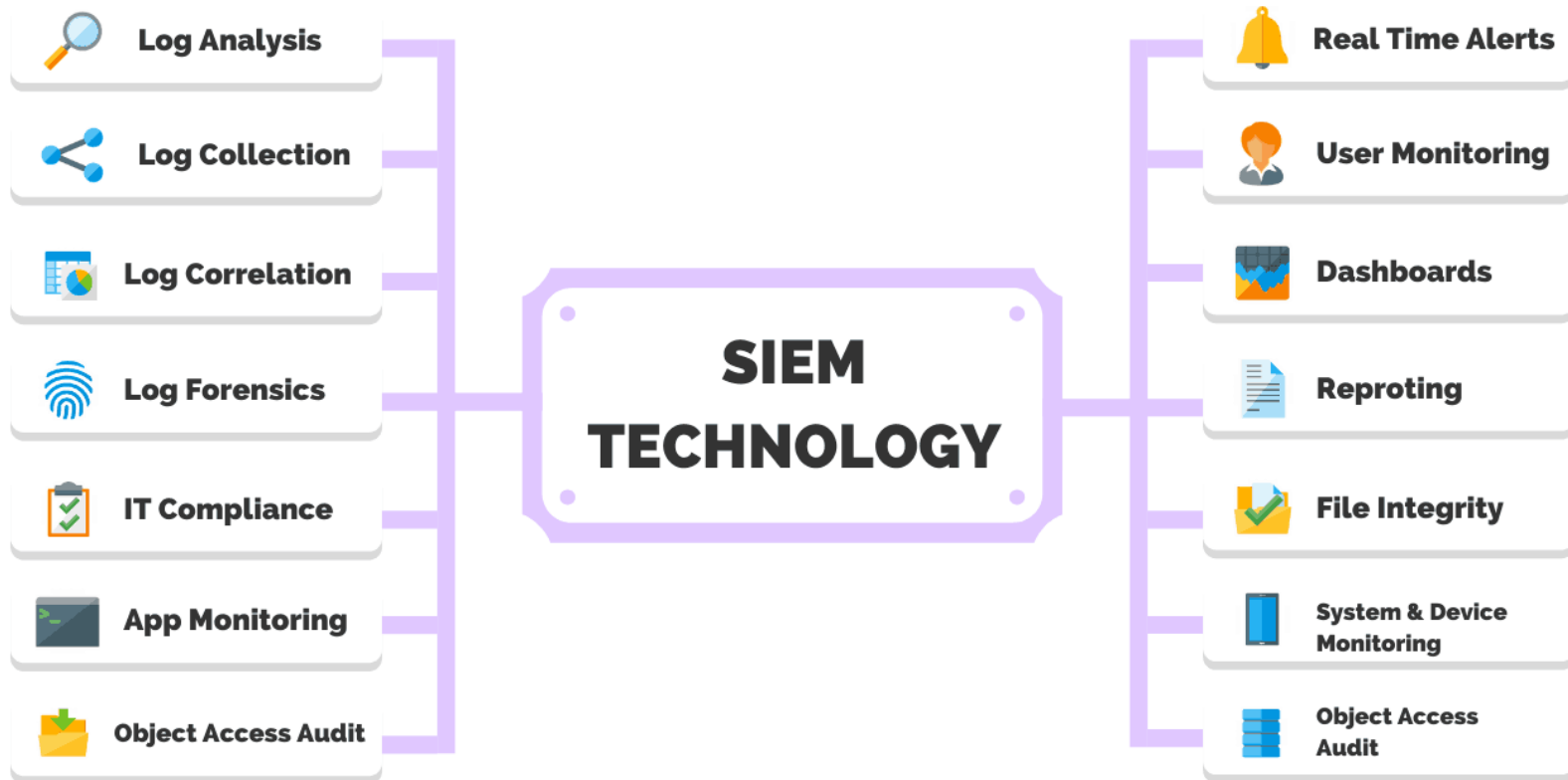
The Pinpoint Principle

Goal = Detecting and understanding cyber security events

- Necessitates proactive digital monitoring
- Cyber security events and anomalous activities are detected, collected, correlated and analyzed in a timely manner.
- Use of specialized detection tools aid in rapid identification



Pinpoint - SIEM, the right tool for the job



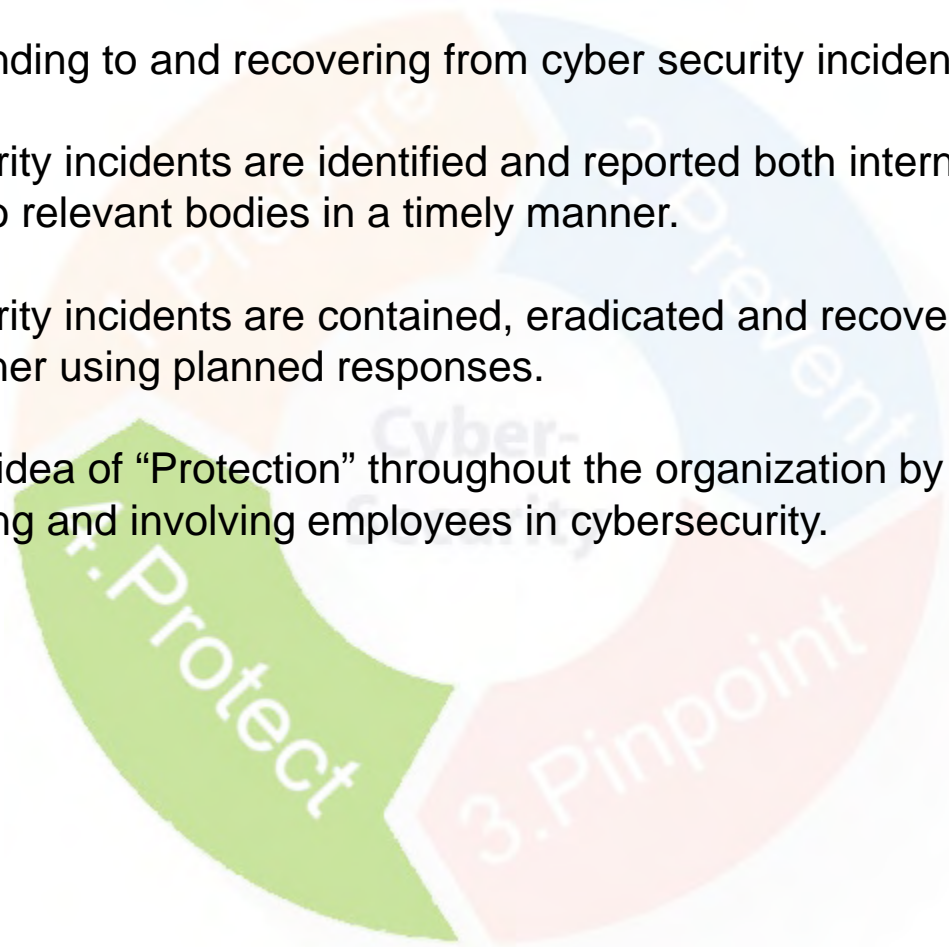
Source: PurpleSec 2021

- SIEM enables TMWA to actively locate threats as they occur
- The tool that allows TMWA to have a proactive rather than a reactive posture

The Protect Principle

Goal = Responding to and recovering from cyber security incidents.

- Cyber security incidents are identified and reported both internally and externally to relevant bodies in a timely manner.
- Cyber security incidents are contained, eradicated and recovered from in a timely manner using planned responses.
- Extend the idea of “Protection” throughout the organization by utilizing on going training and involving employees in cybersecurity.



Protect - Partnerships in Critical Infrastructure



Nevada Department of
Public Safety
Office of Cyber Defense Coordination



Securing TMWA's Digital Border – Continued Vigilance



- TMWA Technology staff track trends and developments in the cybersecurity landscape
 - Continually adjust defenses based on trending information
- Continually look for ways to improve cybersecurity posture
 - Seek out and employ new technologies and tools to combat cyber threats
 - Confirm security readiness via in house exercises and contracted penetration testing
- Adapt and implement new Industry, State, Federal security guidelines
 - Continue to review & refine security processes/policies/procedures

Thank you!
Questions?



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Jessica Atkinson, HR Manager
Michele Sullivan, CFO
DATE: August 5, 2021
SUBJECT: **Presentation and discussion regarding consideration of adding a Risk Manager position, and possible direction to staff**

Recommendation

After review and consideration of TMWA's risk management strategies, resources and processes, staff recommends continuing with its current risk management approach and does not recommend increasing the budgeted FTE's to hire a Risk Manager at this time.

Summary

- TMWA uses a broker to market and purchase third-party insurance coverage for property, general liability, employment practices, professional & wrongful acts, crime, network security and privacy (cyber coverage), workers' compensation and employer's liability. Where recommended, TMWA also has umbrella/excess coverage policies.
- NRS 41.033 provides that no lawsuit may be brought against TMWA for:
 - Failure to inspect any building, structure, vehicle street, public highway or other public work, facility or improvement to determine any hazards, deficiencies or other matters, whether or not there is a duty to inspect; or
 - Failure to discover such a hazard, deficiency or other matter, whether or not an inspection is made.
- NRS 41.035 limits a person's recovery in a tort against a governmental entity to a maximum of \$150,000 (increasing to \$200,000 effective July 1, 2022), exclusive of interest computed from the date of judgment and may not include any amount as exemplary or punitive damages.
- TMWA continuously works internally and regularly engages external consultants to identify risk and mitigate or eliminate risk where possible and to the satisfaction of our insurance carriers.

Background

During the October 21, 2020, Board of Directors Meeting, Member Brekhuis requested staff consider adding a Risk Manager as a proposed goal objective for FY2021.

TMWA's approach to Risk Management is decentralized. This means there is not one person solely responsible for all aspects of Risk Management. Department heads, the CFO and the Human Resources Manager are all responsible for Risk Management with the guidance of our insurance broker, insurance carriers and our internal legal resource.

TMWA's Risk Management strategies include risk identification, risk transfer, risk reduction/risk control, risk avoidance and in some cases, risk acceptance/retention. These strategies are carried out at a departmental level. Finance works directly with department heads to make sure TMWA has insurance coverage sufficient for the current and prospective operating environment. Liability and workers' compensation claims are administered through the Human Resources (HR) department. TMWA is insured by outside insurance carriers for liability and workers' compensation coverage. When a claim under either liability or workers' compensation is received, the HR department works with the claimant as a liaison facilitating the submission and processing of claims and ensuring our insurance company has information necessary to adjudicate any claims.

Despite all appropriate and prudent efforts, based on the nature and scope of TMWA's business, there is always a likelihood that incidents will occur. When incidents occur, financial impacts to TMWA are mitigated through insurance. In addition, several state statutes limit TMWA's legal obligations and liability.

Discussion

Broadly, risk can be described as an uncertain outcome with the possibility of loss or reward, with loss exposures resulting from the assets and operations of an organization. The chance or likelihood of an event happening that will have an impact on organizational objectives combined with the financial, personnel and other consequences are driven by the frequency and severity of such losses.

Risk management is the systematic process of identifying, analyzing, planning, controlling, and responding to these risks and can be managed internally or externally using either a centralized or decentralized approach.

When determining how or who should manage risk in an organization some common considerations include the employment of:

1. Internal employees who manage risk for the entire organization;
2. Independent consultants who provide risk-management services for a fee; and
3. Insurance agents to provide risk assessment services and insurance advice, recommendations, and solutions.

Internal risk managers are often found in organizations that are larger in size than TMWA, have specific or increased risks and are self-insured and may only transfer high severity/catastrophic risk exposures. When risk is not transferred, the impact of adverse events is absorbed directly by the organization. This is not the case for TMWA as we are not self-insured.

Independent consultants are often used to centralize risk management in small organizations that lack internal resources or can be used to provide services related to a particular project, department or for a specific type of risk, as in the case of cyber security. The use of an independent consultant to perform a centralized risk management function for TMWA has been employed in the past and was determined to be unnecessary because TMWA is insured and has certain statutory liability limits. However, TMWA currently engages consultants such as those made available through our insurance broker, property insurer, liability insurer, workers' compensation insurer, Department of Homeland Security (DHS), Nevada Department of Public Safety (DPS) and others related to specific projects or operational disciplines such as cyber security and network infrastructure.

TMWA is insured for property, general liability, employment practices, professional & wrongful acts, theft/crime, network and cyber security, and workers' compensation claims through outside insurance carriers. In addition, TMWA has excess/umbrella policies which provide additional coverage beyond the primary policy limits. By electing to be insured by a third-party versus self-insured, TMWA transfers the potential liability associated with risk to our insurance carriers with appropriate deductibles.

In addition to transferring of risk, due to TMWA's status as a political subdivision of the state of Nevada, potential liability for TMWA is controlled under the following Nevada Revised Statutes due to statutory immunities and caps:

- NRS 41.033 provides immunity from actions being brought under NRS 41.031 or against an officer or employee of the state or any of its agencies or a political subdivision which is based upon:
 - Failure to inspect any building, structure, vehicle street, public highway or other public work, facility or improvement to determine any hazards, deficiencies or other matters, whether or not there is a duty to inspect; or
 - Failure to discover such a hazard, deficiency or other matter, whether or not an inspection is made.
- NRS 41.035 limits a person's recovery in a tort against a governmental entity to a maximum of \$150,000 (increasing to \$200,000 effective July 1, 2022), exclusive of interest computed from the date of judgment and may not include any amount as exemplary or punitive damages.

Finally, and most important, is TMWA's commitment and effort to avoid and reduce (mitigate) risk whenever possible. This is accomplished at the departmental level and is assessed any time a new facility, process or system is designed and installed and regularly thereafter through monitoring and evaluation of performance indicators. TMWA also leverages insurance resources available through our insurance broker and various carriers. Periodically, our carriers and insurance broker conduct site visits and formal loss control surveys. As an example, TMWA's insurance brokerage recently conducted facility visits to update current risk assessments and to assess the new Mt. Rose Water Treatment Plant. From these surveys, the brokerage or carrier consultants identify hazards (actual and potential) and make recommendations to mitigate or eliminate risk. These recommendations are reviewed with department heads and corrective action is taken as necessary. Additionally, TMWA regularly engages the DHS to conduct vulnerability assessments related to both physical and cyber/network security and the NV DPS to conduct vulnerability and physical security assessments. DHS and DPS also provide reports identifying hazards and threats and make recommendations, which are addressed and prioritized for correction.

TMWA uses a decentralized risk management approach with a focus on communication between departments and external resources, leveraging resources and consultants as necessary to assist with the different aspects of risk associated with our operations. Currently, there are sufficient processes and practices in place for the identification, measurement, and evaluation of the different types of risks that can occur and TMWA has processes in place to minimize the probability and consequences of adverse events. Therefore, adding a Risk Manager at this time is not recommended. If something were to change related to our insurance status or related to statutory immunities, then that would be an appropriate time to reevaluate the need for adding a Risk Manager.

Fiscal Impact

TMWA estimates an approximate total cost (wages and benefits) of \$190, 620 annually to add a Risk Manager to our payroll.

Truckee Meadows Water Authority

SENIOR LEADERSHIP SUCCESSION

Approach and Plan

Succession Planning - Phased Approach



Ensuring Stability & Continuity

Succession Goals:

- Ensure business continuity
- Continue to fulfill our vision
- Capture & Transfer Knowledge
- Encourage employee growth and development

Critical Position Identification

Definition: *A critical position is one, that if it were vacant, would have a significant impact on TMWA's ability to conduct normal business.*

MOST CRITICAL: ACTION PLAN REQUIRED

- General Manager
- Director of Engineering
- Director of Distribution

2022 Senior Leadership Retirements

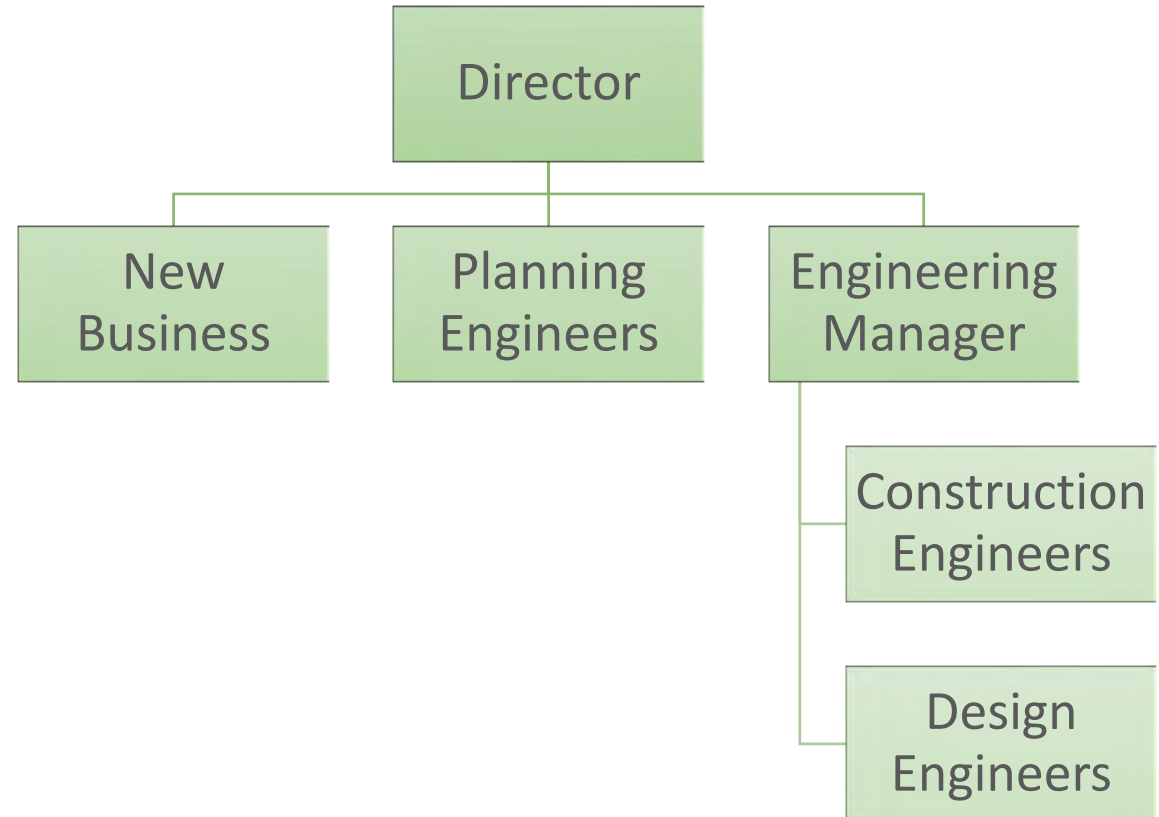
		
General Manager	Director of Engineering	Director of Distribution
		

Director of Engineering Pre-Succession Plan

35 Years Experience & Institutional Knowledge

Span of Control

- New Business
 - Project Coordinators & Engineers
- Planning
 - Engineers
- Construction
 - Engineers
- Design
 - Engineers
- CAD Analyst



Engineering Timeline

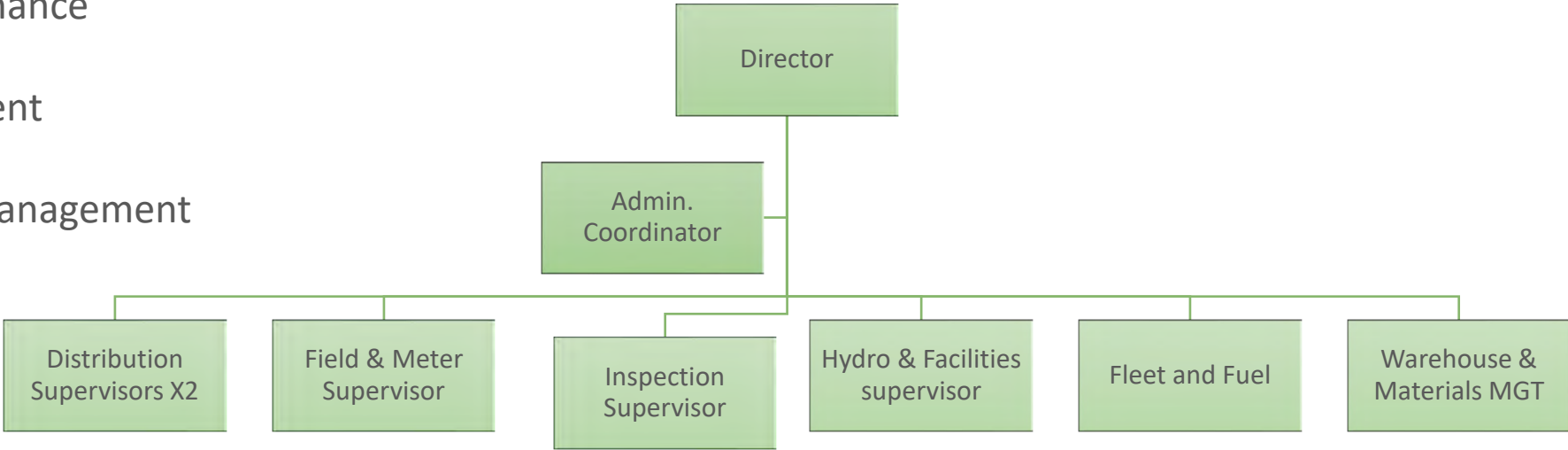


Director of Distribution Pre-Succession Plan

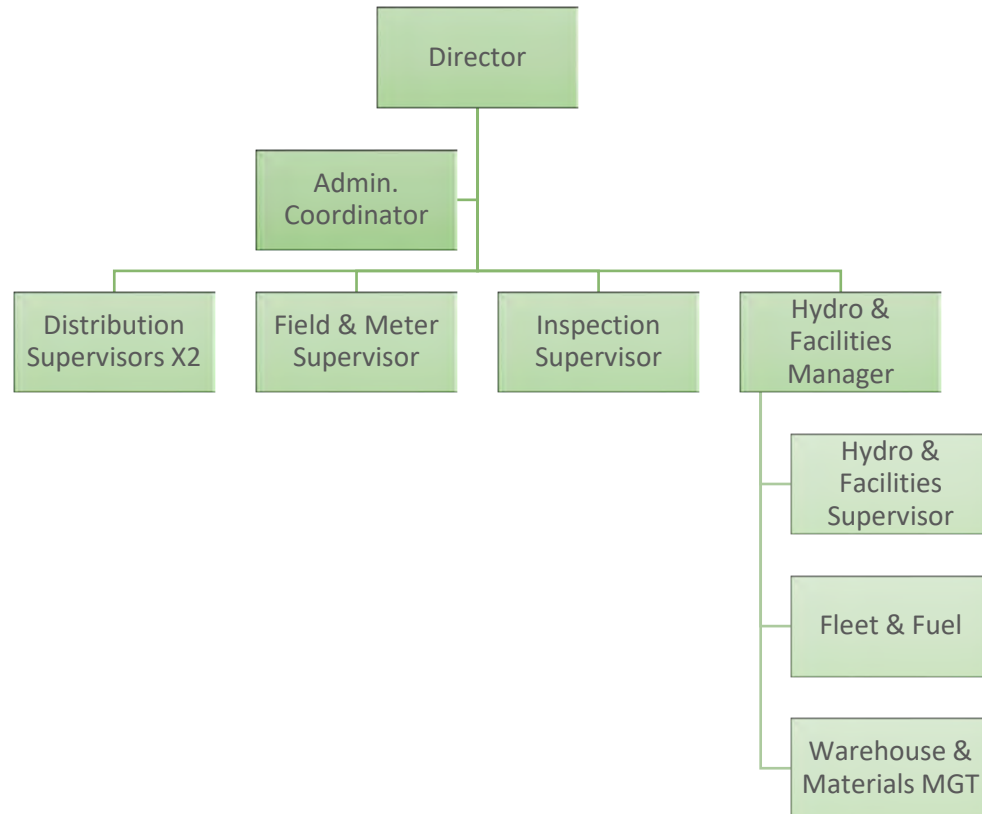
38 Years Experience & Institutional Knowledge

Span of Control

- Facilities & Property Maintenance
- Hydro Generation
- Fleet and Fueling Management
- Distribution Maintenance
- Warehouse and Materials Management
- Field and Metering Services
- Inspection

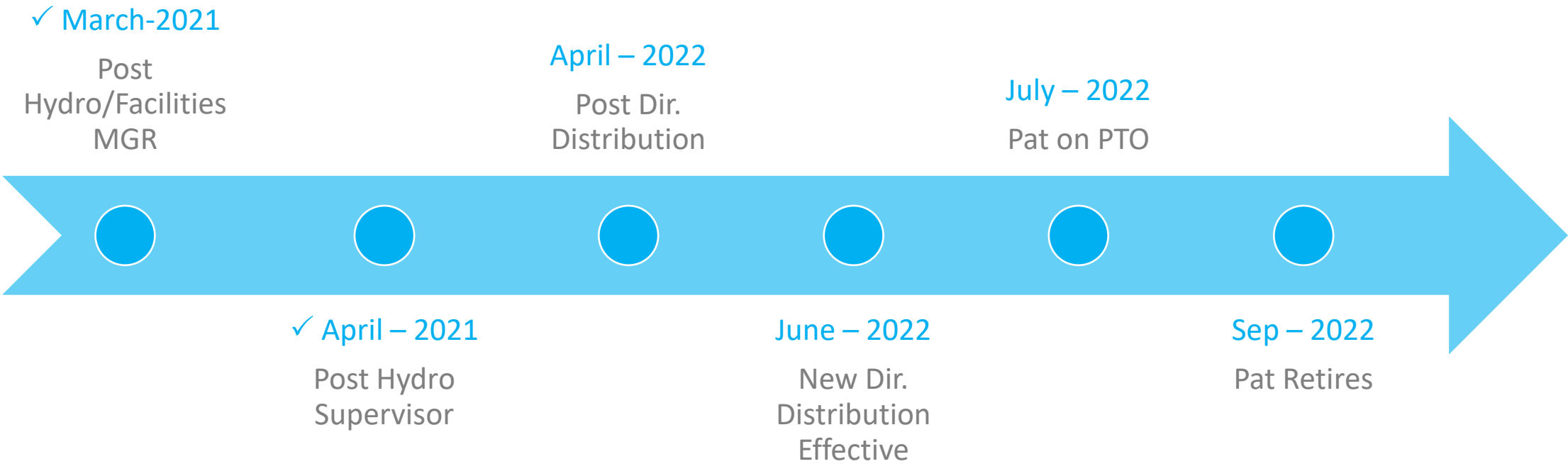


Director of Distribution Succession Plan

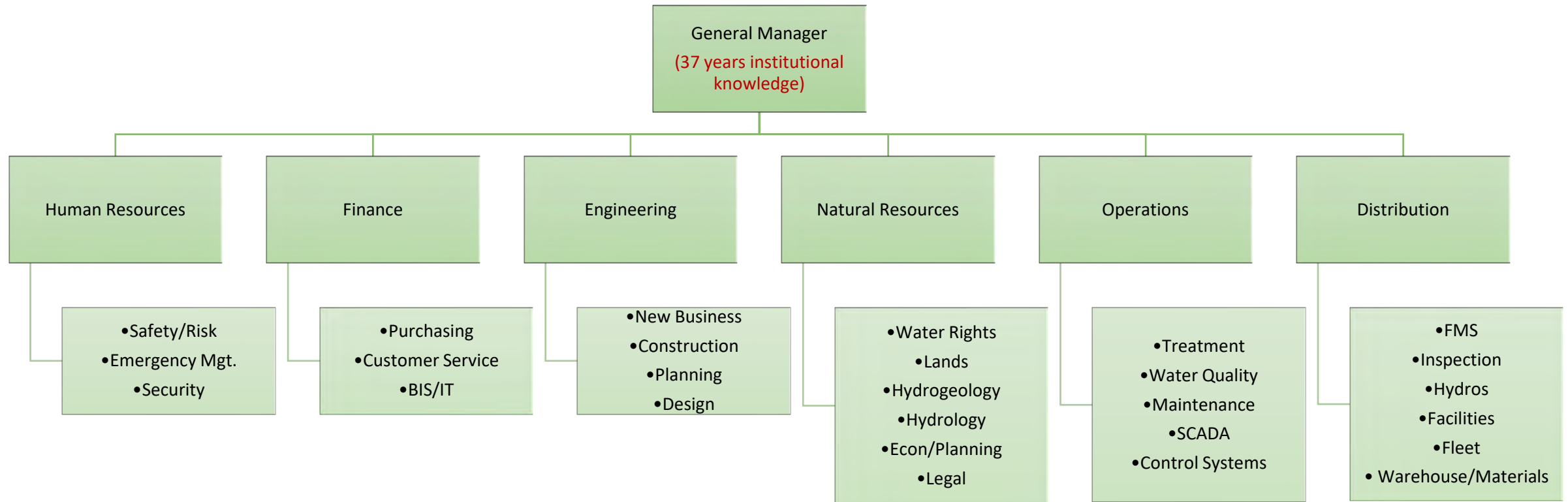


1. Department Reorganization
2. Identification of Succession Candidates
3. Transition Plan

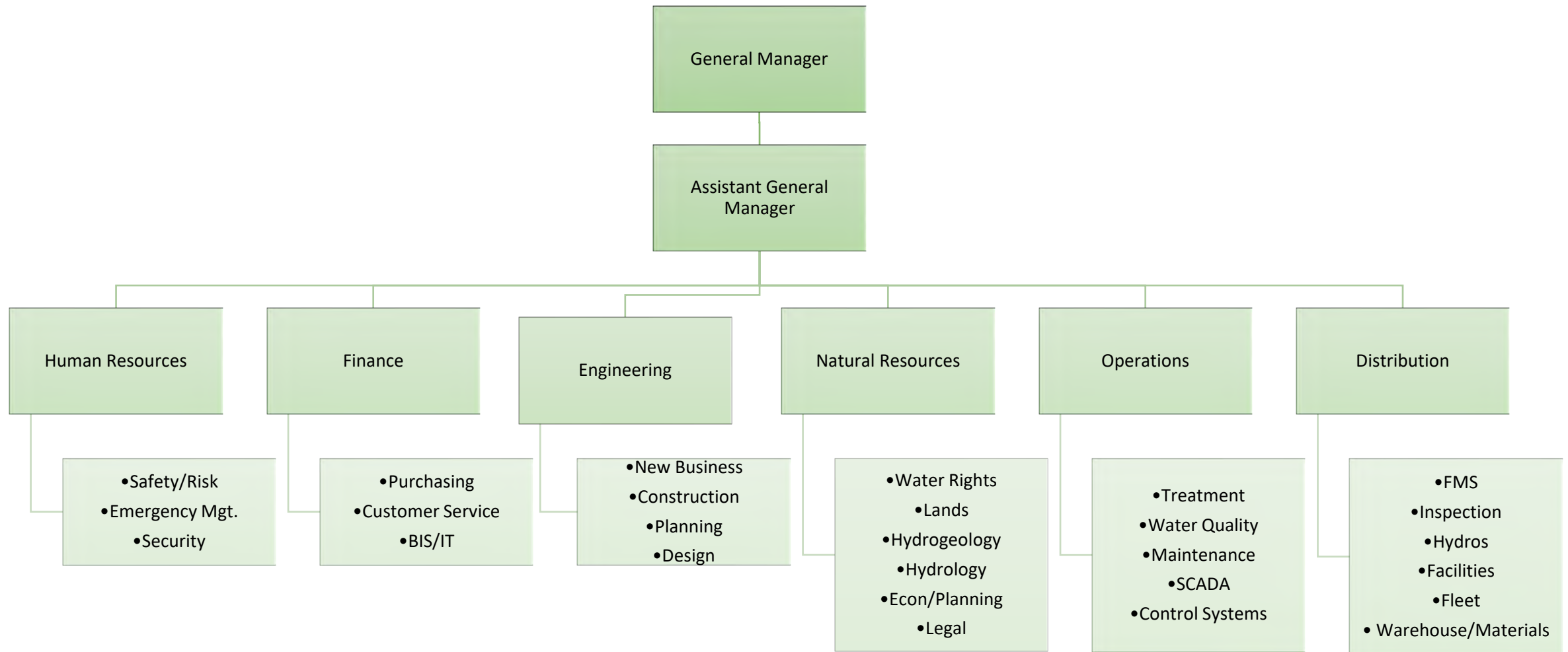
Distribution Timeline



TMWA Functional Organization – FY21



TMWA Functional Organization – FY22





General Manager - Internal Vs. External

Considerations:

- Cost/Time
- Community Impacts
- Culture
- Specific Knowledge, skills and abilities needed for position
- Employees



TMWA Board
to decide on
the right
direction

Questions?





STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Jessica Atkinson, Human Resources Manager
DATE: August 6, 2021
SUBJECT: Discussion and possible direction from Board regarding the evaluation process for conducting the General Manager's performance review

Recommendation

The Board consider implementing the updated GM Evaluation form (attached), approve the process and timelines below and provide direction regarding the same.

Discussion

In August of 2016, the Board agreed upon a formal evaluation process for the General Manager's annual performance review. A questionnaire regarding the General Manager's performance (and a report for the General Manager regarding his performance related to the goals and objectives previously set by the Board) is sent to all Board members and senior leadership at TMWA via SurveyMonkey, an online survey tool. The results are provided to the Board in the September Board Meeting packet relative to the evaluation of the General Manager's performance at the September Board Meeting.

The proposed changes to the GM performance evaluation condense and streamline the process by providing ratings at broader topic/category level as opposed to rating each subcategory separately. Prior versions had 29 rating fields (categories/subcategories) and 4 open comment fields. The proposed version has 7 rating fields (categories), each with an open comment field.

The categories for rating on the proposed form are:

- Organizational Leadership
- Relations with Board/Governance
- Communication Skills
- Relations with Community and Stakeholders
- Management of Staff
- Personal Effectiveness
- Overall Rating and General Comments

Proposed 2021 GM Performance Evaluation timelines:

- 08/23/2021 – Distribute GM Performance Evaluation Survey through SurveyMonkey.
- 09/07/2021 – Deadline to submit survey responses (16-day survey period).
- 09/15/2021 – Board presentation of survey responses and GM's report related to performance on goals adopted by the Board for the contract year 2020/2021.

Attachments

1. GM Evaluation Form for FY2021



General Manager Performance Evaluation for FY2021

Introduction

The General Manager's performance evaluation consists of an annual appraisal by the Board of Directors, as provided for in the General Manager's employment agreement.

The purpose of the evaluation process is to maintain a strong Board/Manager team by ensuring open and productive communication on an annual basis. During this formal review process, there is an opportunity to identify areas of satisfaction and areas for growth or needing change as identified by the Board.

The evaluation will be completed by each member of the Board.

The Executive Team and Department Heads reporting to the General Manager have been invited to participate in this performance review process.

The Human Resources Manager is the facilitator for this process, and will gather input from the confidential survey completed by each of the above-referenced individuals. A staff report and the summary results from the evaluation survey will be provided as supporting materials for the public meeting at which the TMWA Board reviews the annual performance of the General Manager.

Rating Criteria:

For each performance criteria, please use the following rating scale:

E – Exceeds your expectations

M – Meets your expectations

AG - Areas for growth

NA – Not applicable



General Manager Performance Evaluation for FY2021

Organizational Leadership

Consider the following when assessing the General Manager's organizational leadership performance:

- Anticipates and clearly communicates risks and changes in market conditions and other factors affecting TMWA's fulfillment of its Vision and Business Objectives;
- Participates with Board and Staff in strategic planning;
- Clearly articulates and advances the strategic priorities to be addressed over the next 3-5 years;
- Sets and communicates clear operational priorities for the organization;
- Implements new programs and services growing out of the strategic planning process;
- Creates and maintains a high performing culture in the organization including strong employee morale, accountability, and cohesiveness;
- Performs as the leading role model, setting high professional work standards and pursues goals with honesty, respect, determination, and initiative;
- Handles emergencies and crisis situations in an effective, efficient, and professional manner;
- Directs the utilization of TMWA resources effectively.

Organizational Leadership - Evaluation Rating:

☐ Exceeds your expectations

☐ Area for growth

☐ Meets your expectations

☐ Not Applicable

Use the space below to provide any additional comments you may have for this rating category.



General Manager Performance Evaluation for FY2021

Relations with Board/Governance

Consider the following when assessing the General Manager's relations with the Board:

- Communicates necessary information openly and honestly in a timely and organized fashion;
- Establishes and maintains positive and effective working relationships with each member of the Board;
- Has been consistently available to individual Board members whenever necessary;
- Conforms to Board policies and directives;
- Demonstrates a respectful understanding of the Board's governance role and has supported the Board in its oversight of the organization;
- Contributes significant information and important agenda topics for discussion at Board level;
- Synthesizes information and frames issues and questions in a manner for the Board to make appropriate decisions;
- Makes periodic reports to the Board regarding important aspects of TMWA's functions and operations, highlighting both achievements and areas of concern;

Relations with Board/Governance- Evaluation Rating:

- | | |
|---|---------------------------------------|
| <input type="radio"/> Exceeds your expectations | <input type="radio"/> Area for growth |
| <input type="radio"/> Meets your expectations | <input type="radio"/> Not Applicable |

Use the space below to provide any additional comments you may have for this rating category.



General Manager Performance Evaluation for FY2021

Communication Skills

Consider the following when assessing the General Manager's Communication skills:

- Negotiates effectively and is able to handle difficult situations;
- Is concise and persuasive orally and in writing;
- Listens to what is said and is sensitive to the impact on others;
- Demonstrates empathy regarding others and exhibits concern for everyone as individuals;
- Exercises good judgement in dealing with sensitive issues between individuals or between groups;
- Effectively delivers presentations and engages with the media;
- Communicates effectively with Board Leadership and Board Members;

Communication Skills- Evaluation Rating:

- | | |
|---|---------------------------------------|
| <input type="radio"/> Exceeds your expectations | <input type="radio"/> Area for growth |
| <input type="radio"/> Meets your expectations | <input type="radio"/> Not Applicable |

Use the space below to provide any additional comments you may have for this rating category.



General Manager Performance Evaluation for FY2021

Relations with Community and Stakeholders

Consider the following when assessing the General Manager's relations within the community and with stakeholders:

- Ability to relate well to others and to make people feel at ease, even in difficult situations;
- Ability to gain the trust and confidence of the public;
- Fosters contact and cooperation among citizens, community organizations and other government agencies;
- Understands and embraces the concept of inter-local cooperation when appropriate;
- Fosters cooperative communications and working relationships within the community to ensure that TMWA remains a significant partner within the community;
- Maintains affiliation with professional associations relevant and beneficial to the successful operation of TMWA.

Relations with Community/Stakeholders- Evaluation Rating:

- | | |
|---|---------------------------------------|
| <input type="radio"/> Exceeds your expectations | <input type="radio"/> Area for growth |
| <input type="radio"/> Meets your expectations | <input type="radio"/> Not Applicable |

Use the space below to provide any additional comments you may have for this rating category.



General Manager Performance Evaluation for FY2021

Management of Staff

Consider the following when assessing the General Manager's performance in management of staff:

- Establishes and maintains positive and effective working relationships with staff;
- Models behaviors and attitudes which promote individual responsibility, programmatic and professional excellence and creative initiative;
- Facilitates teamwork and collaboration;
- Encourages innovative thinking and solutions and effectively incorporates the ideas and contributions of others;
- Shares knowledge with others;
- Appropriately delegates authority, granting proper authority at proper times;
- Addresses employee issues promptly and effectively;
- Encourages and rewards initiative;
- Promotes cohesive teamwork with the TMWA Senior Management Team.

Management of Staff- Evaluation Rating:

- | | |
|---|---------------------------------------|
| <input type="radio"/> Exceeds your expectations | <input type="radio"/> Area for growth |
| <input type="radio"/> Meets your expectations | <input type="radio"/> Not Applicable |

Use the space below to provide any additional comments you may have for this rating category.



General Manager Performance Evaluation for FY2021

Personal Effectiveness

Consider the following when assessing the General Manager's personal effectiveness:

- Maintains a professional image that reflects positively on the organization and builds trust and support from all stakeholders;
- Demonstrates empathy regarding others and exhibits concern for everyone as individuals;
- Skillfully analyzes and addresses problems, challenges and conflicts while comfortably navigating ambiguity and complexity;
- Adapts quickly and is flexible to new demands and changes;
- Performs at a very high standard of ethics and integrity;
- Ensures that the organization, its staff and its programs operate in compliance with all applicable local, state, and federal laws and regulations;
- Pursued professional development resulting in increased capabilities and potential;

Personal Effectiveness - Evaluation Rating:

- | | |
|---|---------------------------------------|
| <input type="radio"/> Exceeds your expectations | <input type="radio"/> Area for growth |
| <input type="radio"/> Meets your expectations | <input type="radio"/> Not Applicable |

Use the space below to provide any additional comments you may have for this rating category.



General Manager Performance Evaluation for FY2021

Overall Rating and General Comments

Overall, and keeping unanticipated challenges and timeframes in mind, the General Manager has achieved the goals and business objectives outlined for this appraisal period.

- | | |
|---|---------------------------------------|
| <input type="radio"/> Exceeds your expectations | <input type="radio"/> Area for growth |
| <input type="radio"/> Meets your expectations | <input type="radio"/> Not Applicable |

Any additional comments?



STAFF REPORT

TO: Board of Directors
FROM: Mark Foree, General Manager
DATE: August 9, 2021
SUBJECT: General Manager's Report

Attached please find the written reports from the Management team including the Operations Report (*Attachment A*), the Water Resource and the Annexation Activity Report (*Attachment B*), and the Customer Services Report (*Attachment C*).

Included in your agenda packet are press clippings from June 10, 2021 through August 9, 2021.

Also, staff received *Tell the Board* submissions regarding: (1) the new customer portal and issues some customers were experiencing being unable to pay their water bill and requesting shut-offs be suspended during the heat wave. Staff replied that TMWA does not have any rules prohibiting disconnection during heat waves and customers are always encouraged to call TMWA directly for assistance in making payment arrangements; (2) a customer complaint about having their water shut off for non-payment. Staff replied their water was turned back on the same day once payment was received; and (3) a customer complaint regarding the 48-hour termination notice of service when TMWA's invoice is late due to postal service. Staff replied the notice was automatically generated from the new customer portal due to non-payment for over two months and offered digital payment options as well as the option for the customer to sign up for paperless billing to avoid mail delays in the future.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Scott Estes, Director of Engineering
BY: Bill Hauck, Water Supply Administrator
DATE: August 9, 2021
SUBJECT: August 2021 Operations Report

Summary

- Lake Tahoe storage is @ 18% of capacity
- Combined total upstream reservoir storage is 25% of maximum capacity
- Customer demands averaged 132 MGD last week
- Hydroelectric revenue for July 2021 is \$309,293

(A) Water Supply

- **River Flows** - Truckee River flows at the CA/NV state line were approximately 500 cubic feet per second (CFS) this morning. This is typical for this time of year as the 112-year average flow for this day at Farad is 530 CFS.
- **Reservoir Storage** - Truckee River reservoir storage is ~25% of capacity. The elevation of Lake Tahoe is 6224.08 feet (1.08' above the bottom of stored water). Storage values for each reservoir as of August 09th are as follows:

Reservoir	Current Storage (Acre-Feet)	% of Capacity (Percent)
Tahoe	131,200	18%
Boca	22,238	54%
Stampede	84,800	37%
Prosser	12,575	42%
Donner	7,782	82%
Independence	13,524	77%

In addition to approximately 23,300 acre-feet of storage in Donner and Independence reservoirs, TMWA has about 28,500 acre-feet of water stored between Lake Tahoe, Boca, Stampede and Prosser reservoirs under the terms of TROA. TMWA's total combined upstream reservoir storage is approximately 51,800 acre-feet (as of August 9th).

- **Flow Forecast** - Truckee River flows at Farad (CA/NV state line) are projected to fall off by 8/18 due to the lack of storage in both Boca Reservoir and Lake Tahoe. Floriston Rates will no longer be maintained after that point.
- **Outlook** - As the required rate of flow at the CA/NV state line is projected to be met only through August 17th, TMWA will have to begin making supplemental releases from upstream storage sometime the following week to keep the surface water treatment plants on-line and meet customer demand. Six or 7 weeks of these supplemental releases are projected to be needed into early October. Lake Tahoe is also expected to be at or below its natural rim by the end of October. So, with very little or no carry-over storage remaining in Tahoe by the end of the year, Truckee River flows for next summer will most certainly be dependent upon the outcome of next winter.

(B) Water Production

- **Demand** - TMWA's customer demand averaged 132 million gallons per day (MGD) last week. Overall, surface water comprises ~80% of our supply and groundwater the other 20% right now.

(C) Hydro Production

Generation - Truckee River flows at Farad (CA/NV state line) for the month of July 2021 averaged 490 CFS. The Fleish and Washoe power plants were both on-line and available the entire month (100% availability). The Verdi plant was on-line 29 out of 31 days (94% available). Statistics for the month as follows:

Hydro Plant	Days On-Line	Generation (Megawatt hours)	Revenue (Dollars)	Revenue (Dollars/Day)
Fleish	31	1,839	\$ 137,320	\$ 4,430
Verdi	29	1,525	\$ 112,881	\$ 3,641
Washoe	31	790	\$ 59,092	\$ 1,906
Totals	91	4,154	\$ 309,293	\$ 9,977



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: Stefanie Morris, Manager, Water Resources
DATE: August 10, 2021
SUBJECT: Report Water Resources and Annexation Activity

RULE 7

Rule 7 water resource purchases and will-serve commitment sales against purchased water resources through this reporting period:

Beginning Balance		3,639.96 AF
Purchases of water rights	4.22 AF	
Refunds	0.00 AF	
Sales	– 152.00 AF	
Adjustments	0.00 AF	
Ending Balance		3,492.18 AF

Price per acre foot at report date: \$7,700

FISH SPRINGS RANCH, LLC GROUNDWATER RESOURCES

Through the merger of Washoe County's water utility, TMWA assumed a Water Banking and Trust Agreement with Fish Springs Ranch, LLC, a subsidiary of Vidler. Under the Agreement, TMWA holds record title to the groundwater rights for the benefit of Fish Springs. Fish Springs may sell and assign its interest in these groundwater rights to third parties for dedication to TMWA for a will-serve commitment in Areas where TMWA can deliver groundwater from the Fish Springs groundwater basin. Currently, TMWA can deliver Fish Springs groundwater to Area 10 only (Stead-Silver Lake-Lemmon Valley). The following is a summary of Fish Springs' resources.

Beginning Balance		7,658.91 AF
Committed water rights	– 2.26 AF	
Ending Balance		7,656.65 AF

Price per acre foot at report date: \$43,575 (for SFR and MFR); \$37,800 (for all other services)¹

WATER SERVICE AREA ANNEXATIONS

Since the date of the last report there have been one commercial (mobile home park) and five single-family residential properties (totaling 14.12 acres) annexed into TMWA's service area. (See attachments.)

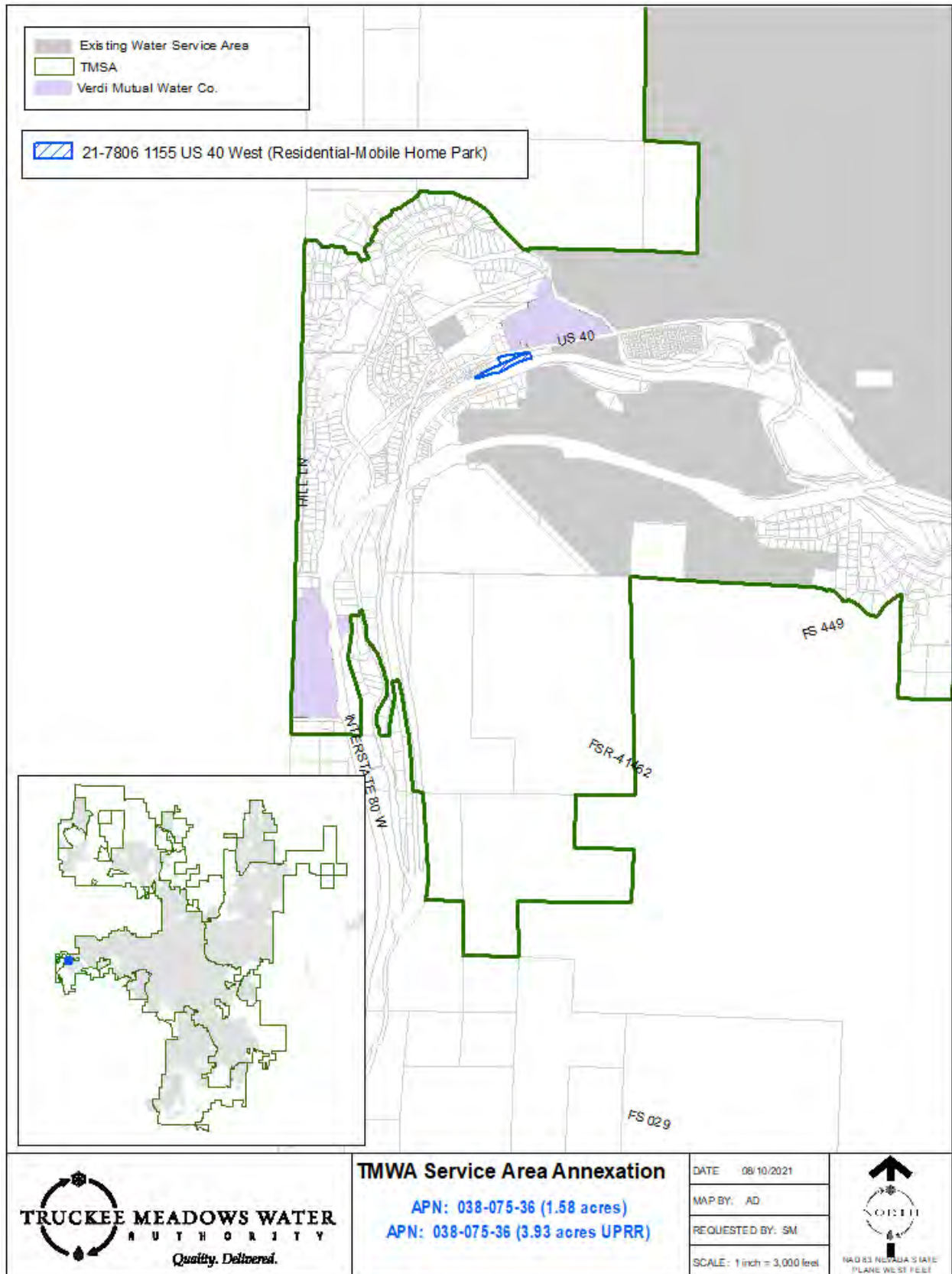
INTERRUPTIBLE LARGE VOLUME NON-POTABLE SERVICE

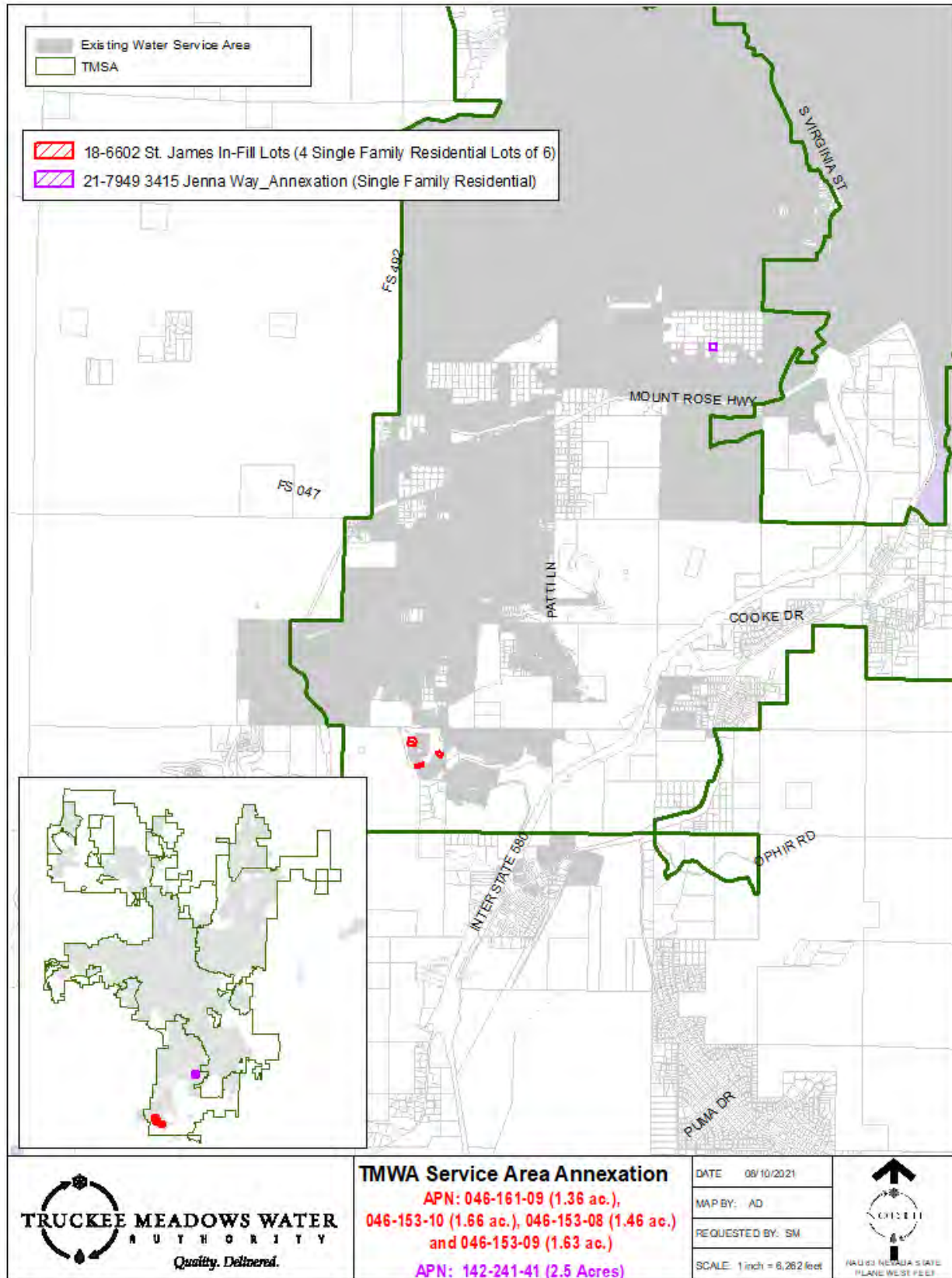
Two ILVNPS customers have been added during this reporting period.

First, TMWA allocated 100 acre-feet to Somerset in July for supplemental irrigation water from the Truckee River. The water was made available while Floriston Rates were still being met and no upstream storage releases were necessary. Somerset used its existing intake structure to divert the water from the river. Somerset is in the process of upgrading its groundwater pumping facilities based on a pump failure in 2020 and needed the river water to supplement its existing supply this year. Somerset expects to complete those facilities this year and does not anticipate needing supplemental water next irrigation season.

Second, NV Energy sought up to 350 acre-feet through October 2021 to supplement its water needs at the Tracy power plant, which is an approximate 100MW water-cooled plant. TMWA will allocate up to 350 acre-feet to NV Energy for this purpose and NV Energy will use its existing intake structure to divert the water from the river. As part of the agreement, NV Energy agreed to pay TMWA \$87,500 (\$250 an acre-foot) and to have good faith discussions to allow TMWA to purchase, lease, or otherwise use a portion of NV Energy's Truckee River water rights in future years and/or to provide future drought supply.

¹ Price reflects avoided cost of Truckee River water right related fees and TMWA Supply & Treatment WSF charge.







STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Marci Westlake, Manager Customer Service
DATE: August 18, 2021
SUBJECT: **June and July Customer Service Report**

The following is a summary of Customer Service activity for June and July 2021.

Ombudsman

- Customer called and wanted to discuss water usage and if they were overwatering or had a leak, conservation went out and helped the customer.
- Customer having a difficult time making a payment. Called customer and got them situated.

Communications

- June 16th Will Raymond, Bill Hauck, Kelli Burgess and Ryan Malkiewich did a Tahoe to Tap presentation at Glendale for 12 people.
- July 20th John Enloe, Lydia Peri and Robert Charpentier presented the Palomino Valley Water Banking Project to 40 people.

Conservation (2021 Calendar year)

- 2557 Water Watcher Contacts
- 549 Water Usage Reviews

Customer Calls –June and July

- 17,307 phone calls handled
- Average handling time -5 minutes, 29 seconds per call
- Average speed of answer –3 minutes 23 seconds per call

Billing –June and July

- 249,739 bills issued.
- N/A (0.00%) corrected bills.
- 8,873 customers (7%) have signed up for paperless billing to date.

Remittance –June and July

- 42,428 Mailed-in payments
- 52,436 Electronic payments
- 87,209 Payments via AutoPay (EFT)
- 115,145 One-time bank account payments
- 24,780 Credit card payments
- 280 Store payments
- 63 Pay by Text
- 10,224 IVR Payments

Collections –June and July

- 35,864 accounts received a late charge
- 7,187 Mailed delinquent notices, 0.03% of accounts
- 1,883 accounts eligible for disconnect
- 1,315 accounts were disconnected (including accounts that had been disconnected-for-non-payment that presented NSF checks for their reconnection)
- 0.07 % write-off to revenue

Meter Statistics – Fiscal Year to Date

- 0 Meter retrofits completed
- 929 Meter exchanges completed
- 1,981 New business meter sets completed
- 131,297 Meters currently installed

From: Westlake, Marci
Sent: Wednesday, July 07, 2021 3:34 PM
To: Christopher R Carson <ccarson@unr.edu>; __info <info@tmwa.com>
Cc: stanton.tang@kolotv.com; programming@kolotv.com; matt.eldredge@kolotv.com;
caldeirar@reno.gov
Subject: RE: Turning Off Water During a Heat Wave? - Truckee Meadows Water Authority

Hello Christopher-

Thank you for contacting us in regards to disconnecting water service during a heat wave. There currently are not any rules prohibiting the disconnection of water service during a heat wave. If there is an issue where a customer is concerned about the water service being disconnected, we encourage them to reach out to Truckee Meadows Water Authority Customer Service for assistance or to make payment arrangements. They would be more than happy to help.

As an aside, as they deal with excessive heat issues on a regular basis, I reached out to both Las Vegas Valley Water District and the City of Phoenix to see if they had any provisions in place that would prohibit the disconnection of water service during excessive heat, and neither of those utilities have such a policy in place.

As you requested, I will forward this concern on to our Board of Directors. If you would like to discuss this further, or to discuss the details of your individual account, please contact me directly at 834-8074.

Thank you.

Respectfully-

Marci Westlake
Customer Service Manager
Truckee Meadows Water Authority
1355 Capital Blvd. | Reno, NV 89502
O: (775) 834-8074
mwestlake@tmwa.com | www.tmwa.com



From: Christopher R Carson <ccarson@unr.edu>
Sent: Wednesday, July 07, 2021 1:24 PM
To: __info <info@tmwa.com>
Cc: stanton.tang@kolotv.com; programming@kolotv.com; matt.eldredge@kolotv.com;
caldeirar@reno.gov
Subject: Turning Off Water During a Heat Wave? - Truckee Meadows Water Authority

Hello,

This message is intended for Marcy Westlake, Director of Customer Service at TMWA. I would also like this message forwarded to all Board Members at TMWA.

My name is Christopher Carson, a member of the Mid-Town Reno community. I wanted to contact you regarding the TMWA Operational Procedures, and why they are in-place as they are.

I am aware that TMWA just recently updates it's online portal/system. This portal quickly gets the customers caught in an endless loop of errors that do not make any sense. We (customers) are then unable to pay our bills, leaving us writing this email to you.

My question to Marcy, and the Board of Directors at-large is: Why is it the policy of TMWA to allow ANYONE'S water service to be shut off during temperature spikes in excess of 100 degrees F?

You make a website that does not function as designed, and then you turn off customers water service during record breaking heat waves?

For Example: In case you are not aware, there are laws in place to help protect helpless humans and animals from the deadly impacts of heat exhaustion while in automobiles.

But for some reason, TMWA has no problem shutting off water service to entire homes when we are experiencing record-breaking heat waves?

Has anyone on the Board of Directors ever thought of the possibility that if you turn off water service to a residence, that it may place its occupants in danger?

Heat stroke, heat exhaustion, dehydration, hypoxia, and respiratory arrest are just a few of the medical complications that can result from our recent temperature spikes.

I would like someone with the authority of TMWA policy changes to contact me and explain on what grounds you are enacting policies, and choosing to endanger our children, our elderly, and out pets by shutting off water during heat waves.

I look forward to your prompt reply to this email.

Thank you for your time,

Christopher Carson

Chemistry Department

University of Nevada Reno

1664 N Virginia St

MS 216 CB 017

Reno NV 89557

Office: (775) 784-6706

Cell: (775) 544-9935

Fax: (775) 784-1092

ccarson@unr.edu

From: Denise Martinez [REDACTED]
Sent: Thursday, July 08, 2021 4:26 PM
To: Customer Service TMWA <TMWACustomerService@tmwa.com>
Cc: __info <info@tmwa.com>
Subject: Re: New submission from Contact Us Submission

Hello April,
Thank you but I'm quite well aware of when the water was turned on. Not only is your response lacking respect and empathy, it does not address the fact that:

You (and me since this is a company owned "by the people") wasted resources by sending an employee out to turn off water on a \$135 past due bill of a long time customer who has always paid their bill— action that most likely resulting in my entire payment (and more) going towards paying this employee to perform this action when something like a courtesy call could have sufficed (and saved money and goodwill)

You showed carelessness and disregard toward your customers' and their family's (not to mention a garden we depend on for food and animals who depend on us for everything) health and safety by turning off water over an unpaid \$135 balance during an unprecedented heatwave

I want this to be submitted to the board of directors to consider addressing these negative customer-experience-impacting business practices or I will find another more social way to make sure these complaints are conveyed, acknowledged and hopefully, helps to positively change the way you do business.

Best,
Denise

Sent from my iPhone

On Jul 8, 2021, at 3:11 PM, Customer Service TMWA <TMWACustomerService@tmwa.com> wrote:

Good afternoon,
I see that your water was turned back on as of 1:25 this afternoon.
Thank you and have a good day.

April
Customer Service Representative
Truckee Meadows Water Authority
1355 Capital Blvd. | Reno, NV 89502
O:(775) 834-8080 | Fax: (775) 834-8282
<image001.png>

From: Contact Us Submitted <info@waterforms.net>
Sent: Thursday, July 8, 2021 11:06 AM
To: __info <info@tmwa.com>
Subject: New submission from Contact Us Submission

Name

Denise Martinez

Mailing Address

[REDACTED]

Email

[REDACTED]

Phone

[REDACTED]

Account Number

[REDACTED]

Please explain your question

This is a complaint. I have been a customer for over 20 years and have *always* paid my bill--it may be paid late but it is always paid. Today, I found my water had been shut off. Come to find out, the notice had been sent, but I had not received it. I immediately paid the balance via phone and then requested to speak to customer service who informed me my water *may* be turned back on today but *will* be turned back on by close of business tomorrow. This is unacceptable. The temperature is expected to reach 100 today and I have animals to water.

While I accept responsibility for the past due amount (I acknowledge it's my responsibility to keep track of and pay my bills on time), I'm shocked that water would be shut off over a \$135 past due bill of a long-time customer who has demonstrated that they always pay the bill, especially with life threatening weather.

Truckee Meadows Water Authority has demonstrated carelessness with and lack of concern over their customers health and safety.

<image003.jpg>

Our vision is to enhance the quality of life in the Truckee Meadows by delivering exceptional, customer-focused water services.

From: Westlake, Marci

Sent: Tuesday, August 10, 2021 10:15 AM

To: 'Contact Us Submitted' <info@waterforms.net>; __info <info@tmwa.com>; [REDACTED]

Subject: RE: New submission from Contact Us Submission

Hello Mario-

I am sorry that you feel that the notice was intimidating, unreasonable, and unjustified. That is never our intention. I understand that you pay your bills in a timely manner and are rarely late, in this case we had not received a payment from you since June 4th and the notice was system generated. We work with people daily that are struggling to make their payments during this difficult time of Covid and unemployment. I will forward this email to be put in our Board Report at the next Board meeting.

We do have a payment portal with many options for alternative payments at www.tmwa.com . You can sign up for paperless billing that can be emailed to you monthly to avoid any mail delays.

Thank you.

Marci Westlake

Customer Service Manager

Truckee Meadows Water Authority

1355 Capital Blvd. | Reno, NV 89502

O: (775) 834-8074

mwestlake@tmwa.com | www.tmwa.com



From: Contact Us Submitted <info@waterforms.net>

Sent: Tuesday, August 10, 2021 9:51 AM

To: __info <info@tmwa.com>

Subject: New submission from Contact Us Submission

Name
Mario Pietrangelo
Mailing Address
[REDACTED]
Email
[REDACTED]
Phone

██████████
Account Number

██████████
Please explain your question

I recently received a 48 termination notice of service and frankly I find the whole process intimidating, unreasonable, and unjustified. First, let me say that I never get my invoice in a timely manner and sometimes receive it only a couple of days before the payment is due. Second, I think it is appalling that you would threaten termination of service when I am only behind one payment. I have a 840 credit rating, I pay my bills promptly and I find you process of termination and requiring a security deposit insulting. Third, Is this the way you treat people in this world of Covid and unemployment. You actually discontinue service for people that are having hard times with water being the most important thing to live.

I really would like to speak or write to someone in senior management to discuss my complaint. In addition, I would like to know how I can communicate with your board and specifically the chairman. I am planning to take this up with my Reno council person and the mayor to find out how your payment process works and how to become an activist to stop this practice.

I was also told that the reason my invoice was late is because of the postal service so that means someone can have their service discontinued when they receive a late notice because of the postal slow delivery. I don't understand why an electronic invoice can't be generated for both my bank and me personally like all of my other service providers. Truckee Meadows Water Authority needs to automate their systems procedures and it is their fault if customers do not remit payments timely because of primitive invoicing procedures.

Mario Pietrangelo

Our vision is to enhance the quality of life in the Truckee Meadows by delivering exceptional, customer-focused water services.