



STAFF REPORT

TO: Standing Advisory Committee
THRU: Mark Foree, General Manager
FROM: Bill Hauck, Senior Hydrologist
DATE: September 26, 2016
SUBJECT: Water Supply Update

Summary

- Lake Tahoe fell below its natural rim on 9/13
- As projected Floriston Rates could not be met after 9/8
- Releases of back-up supplies have been necessary to keep treatment plants on-line
- Reserves will be required into the first week of October
- TMWA will begin replenishing reserves again later this fall
- A record amount of upstream storage projected to be carried over into 2017
- Customer demand remains near last year's usage (year to date 102.3% of 2015) reflecting customers choosing to continue last year's conservation measures

(A) Water Supply

River Flows - As of September 8th the Floriston Rates (required flow at CA/NV state line) could no longer be met. Truckee River flows at the state line were 125 cubic feet per second (CFS) as of this morning. This is roughly 25% of average for this date as the required rate of flow for this time of the year is 500 CFS.

Reservoir Storage - The elevation of Lake Tahoe continues to decline. It has been below its natural rim of 6223.00 feet for two weeks. As such no releases have been possible in support of Floriston Rates. Donner Lake storage is at 41% of capacity and Independence Lake is at 93% of capacity. In addition to the privately owned water stored in Donner and Independence lakes (20,000 acre-feet), TMWA has an additional 16,000 acre-feet of water stored between Boca and Stampede Reservoirs under the terms of TROA. TMWA's combined upstream surface water storage is approximately 36,000 acre-feet at the time of this report. TMWA will begin credit storing water once again later this fall as conditions allow and will go into 2017 with more surface water in reserve than ever.

Outlook - Normal river flows were made through the first week of September, getting TMWA past its peak customer demand season. On September 9th however, TMWA had to begin making releases of upstream reserves in order to keep its surface water treatment plants on-line. Releases of back-up supplies will continue through September and into the first week of October until demands drop off sufficiently. Roughly 10% of the total surface water that TMWA has in reserve right now is projected to be used this fall. TMWA has more surface water in storage right now than at any point in time last year due to the acquisition of the other one-half of Donner Lake from TCID, and the implementation of TROA. Close to 40,000 acre-feet of upstream reservoir storage is projected to be carried over into 2017. These reserves may once again prove to be extremely valuable as it is far too early to make any kind of predictions regarding what type of winter the region will experience this next year.

(B) Water Production

Demand - Customer demand averaged 101 million gallons per day (MGD) last week. Fifty five (55) percent of that demand was met with surface water from the Chalk Bluff and Glendale water treatment plants, and the remaining forty five (45) percent from groundwater production wells located throughout TMWA's service area. For the year-to-date, customer consumption is now 102.3% of last year in the consolidated TMWA system.



Water Supply Update

Bill Hauck, Senior Hydrologist

Standing Advisory Committee Meeting

October 4, 2016

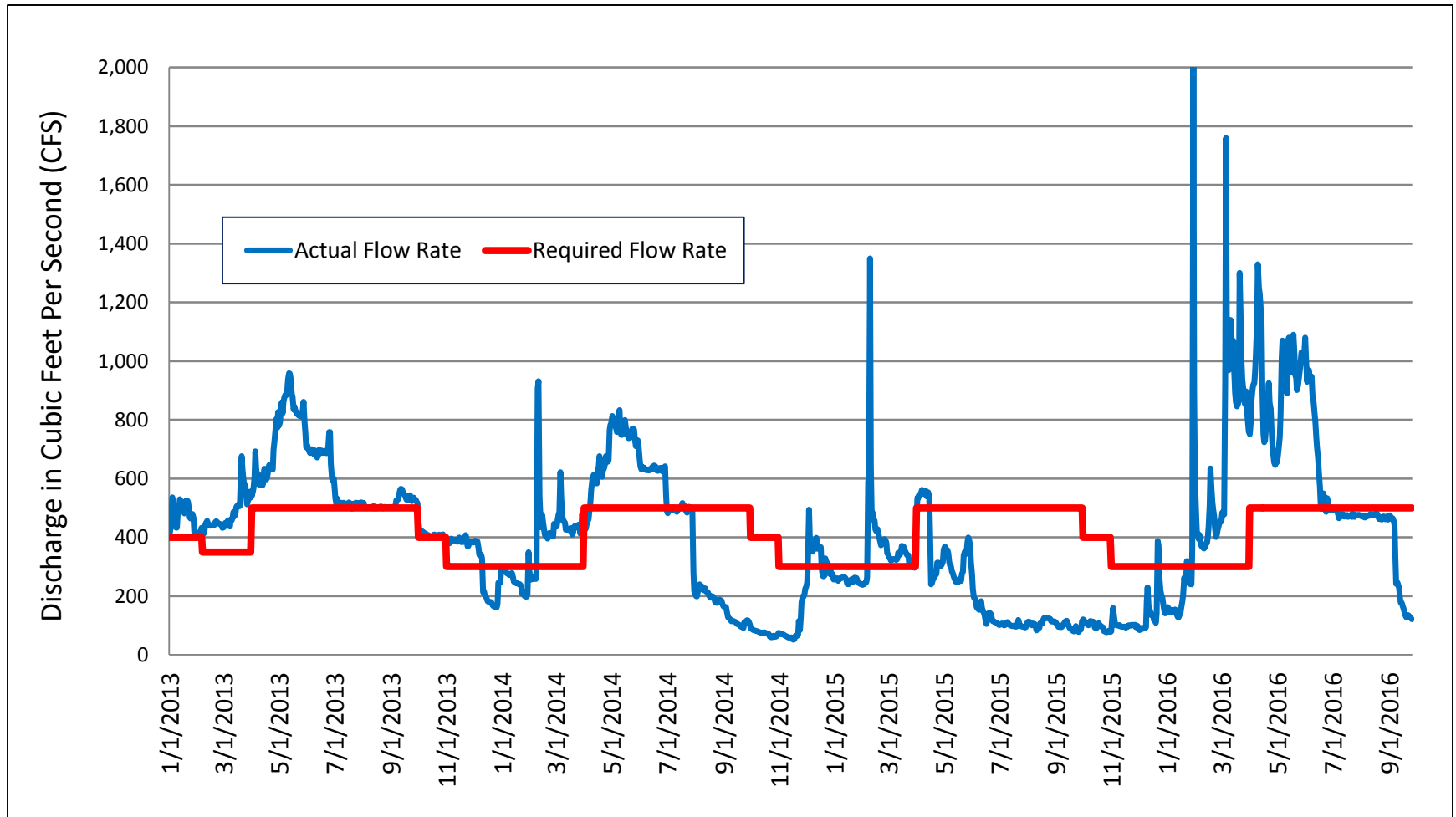
Lake Tahoe Elevation 2010-2016



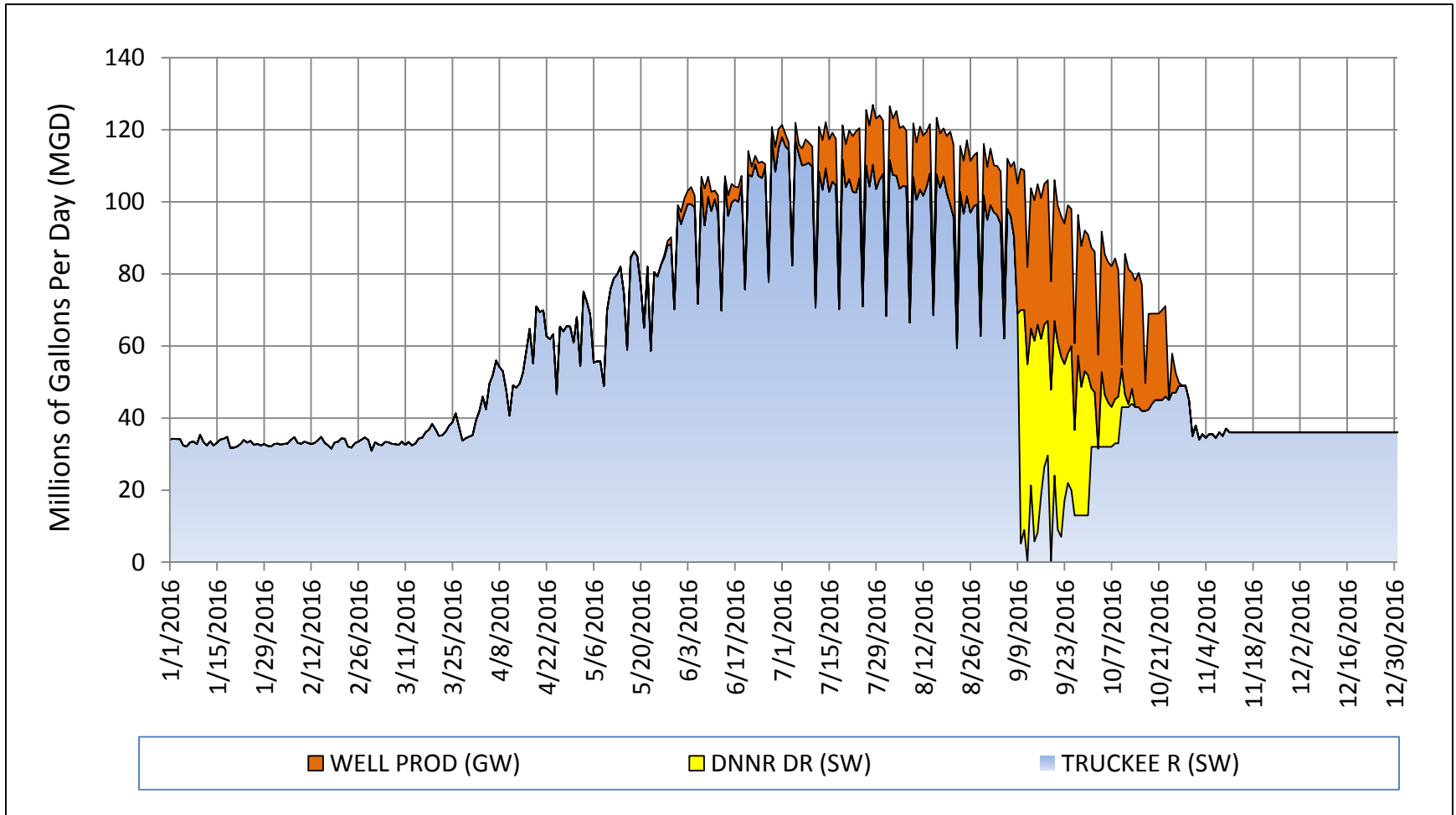
Lake Tahoe Falls Below Natural Rim 9/13



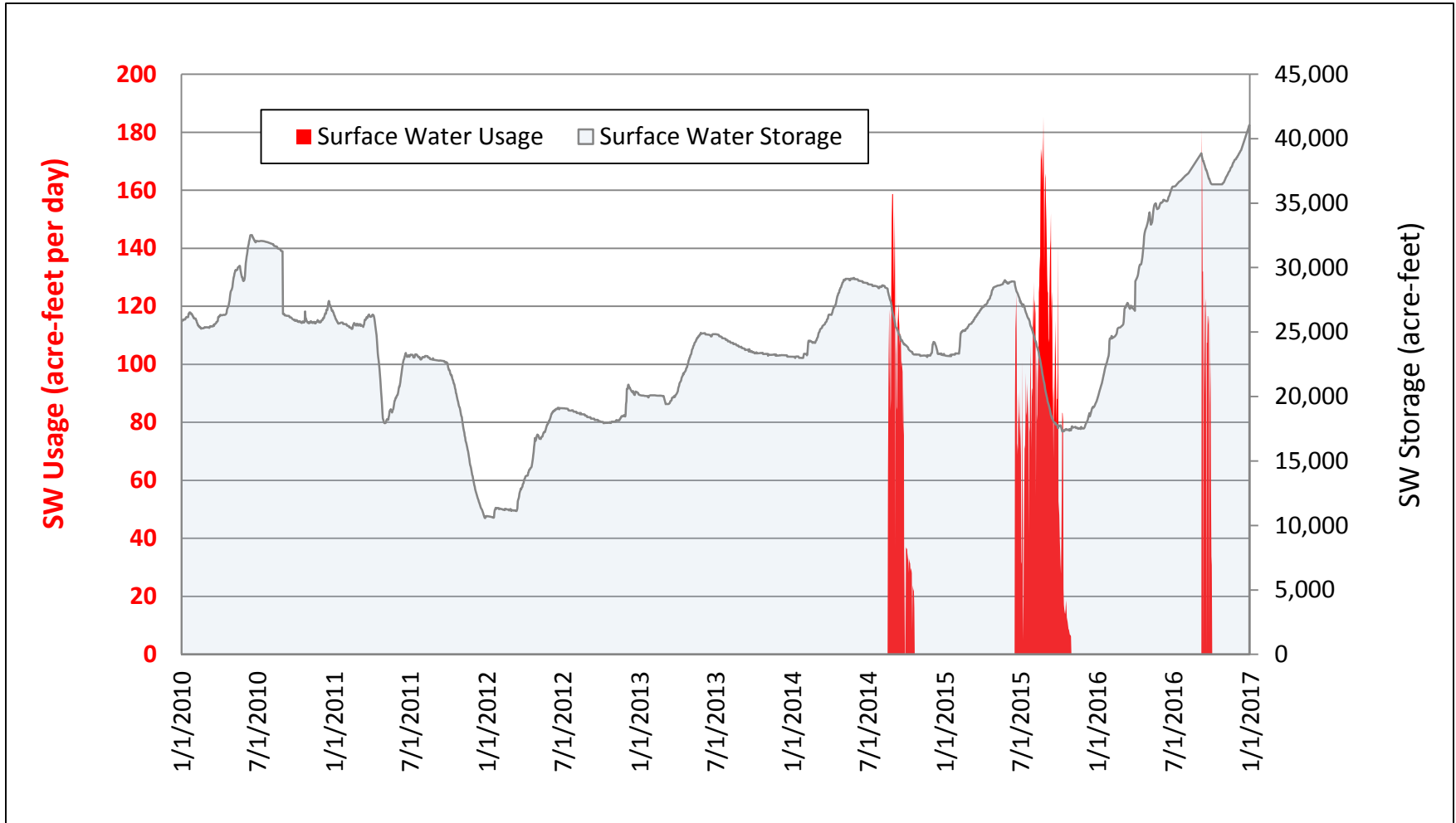
Actual vs. Required Truckee River Flows (CA/NV State Line)



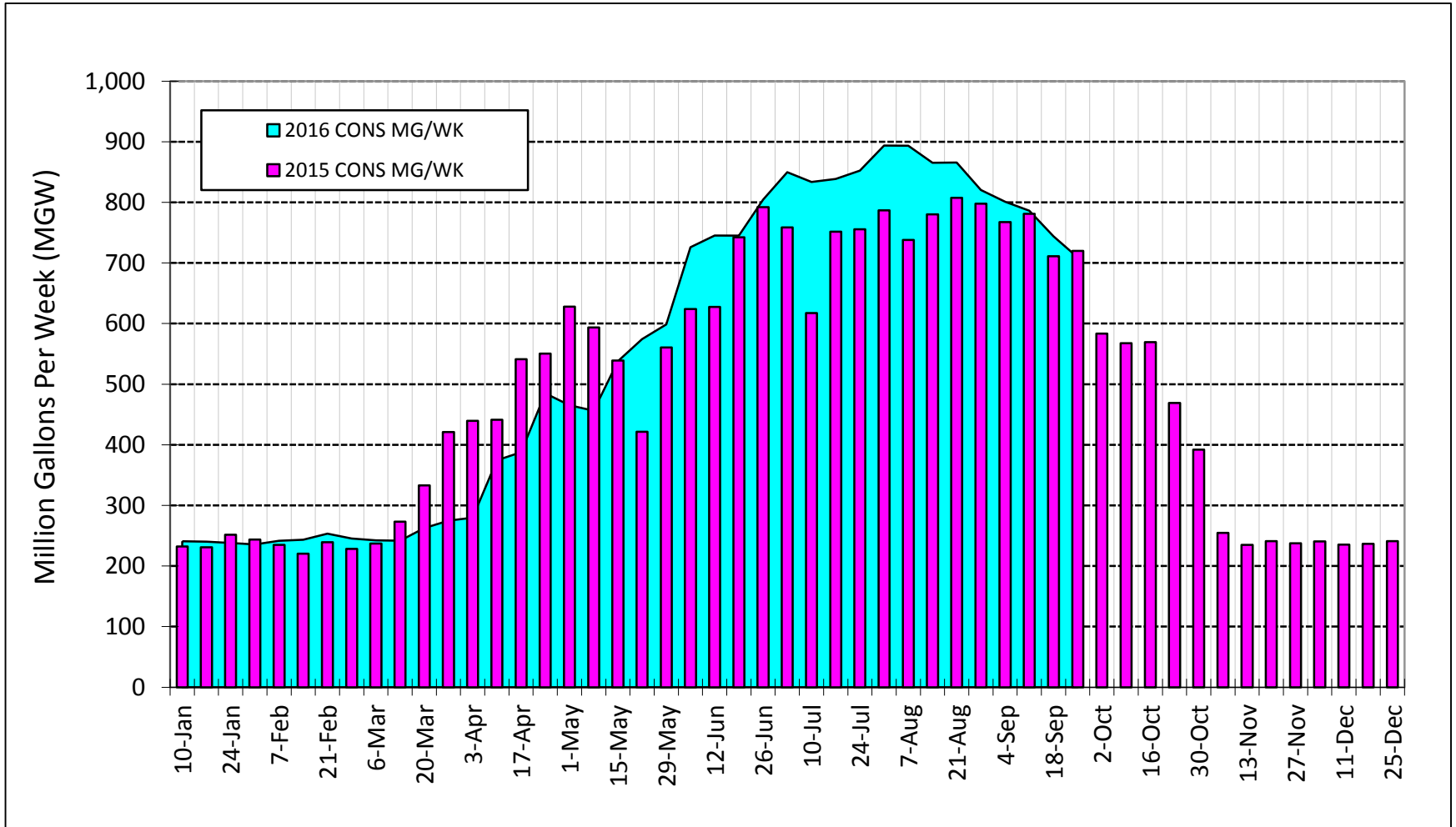
TMWA 2016 Actual and Projected Sources of Supply



TMWA Surface Water Storage and Usage (2010-2016)



TMWA System Consumption Comparison (2015 vs 2016 to date)



TMWA Surface Water Storage Account Summary

DATE: <u>9/27/2016</u>	
RESERVOIR	TOTAL STORAGE (acre-feet)
Tahoe	0
Donner	3,835
Martis	0
Prosser	0
Boca	3,969
Stampede	11,728
Independence	16,238
Total	35,770
Nov 30 Value	17,521
Percent of Nov 30 Value	204.2%

Water Supply Summary

- A normal winter last year provided normal river flows beyond TMWA's peak demand period
- Lake Tahoe is now below natural rim once again
- Normal river flows could not be maintained after 9/8
- Back-up supplies are being released to keep treatment plants on-line
- Overall, a small amount of POSW will be used to meet demand (< 10% of current reserves)
- More storage than ever still able to be carried over into 2017 despite use in September
- Projected 40,000 acre-feet in storage at end of year
- Customers continuing to conserve water (demand just slightly higher than last year @102%)

Forecast for Winter 2016/2017?

