SWEETWATER SPRINGS WATER DISTRICT

TO: Board of Directors **AGENDA NO. VI**

FROM: Steve Mack, General Manager

Meeting Date: November 5, 2015

Subject: GENERAL MANAGER'S REPORT

RECOMMENDED ACTION: Receive report from the General Manager.

FISCAL IMPACT: None

DISCUSSION:

1. **Laboratory Testing:** Water quality tests confirm that all SSWD water meets all known State and Federal water quality standards.

2. **Water Production and Sales:** Water sales in September were 24,606 units (56.5 AF, Guerneville cycle) and production was 58.5 AF. Compared to one year ago, sales and production were lower (63.6 AF and 62.5 AF, respectively). The water lost percentage was a little higher than the past couple months (22.4), and similar to last year in September (22.3). The reduction from September 2013, the State Board standard, was 27.4%; we are well below the State mandate of 16% and averaging approximately 29% for the summer (May-September). GPCD for September was 66.4. Figure 1 shows sales, production and % difference since 2008.

3. **Leaks:** In September we had 11 total leaks and spent 36 man-hours on them. Those are the same number of leaks and fewer man-hours compared to the prior month and more leaks (by one) and fewer man-hours compared to September one year ago (10 leaks, 58 man-hours). Figure 2 shows service and main leaks separately with a total breaks line as well.

4. **Guerneville Rainfall**: October is the start of the rain season. Figure 3 shows historical rainfall compared to this year's rain (which just started so not much there yet). My data show the long-term average is approximately 55 inches; the average since I arrived in September 2008 is approximately 40 inches, is even lower if one includes 2007 and 2008 (38 inches), and the last four years we've averaged 36 inches.

5. **2016 CIP:** Piazza Construction is nearly done with the 2016 CIP on Canyon 1 Road in Rio Nido. Everyone in the project area is connected to the new main. Some clean up and paving is all that is left for completion of the project.

6. **Toilet Rebate/Direct Install Program:** No toilet rebates reported for September.

7. **In-House Construction Projects:** In October eight in-house construction projects were reports: replacement of 135 feet of 2 inch galvanized with 2 inch HDPE and one service on Duncan Road (65.5 man-hours), replaced service on Neely Rd (19.5 man-hours), relocated meter and abandoned an old service line on Wright Drive (39 man-hours), relocated meter

on Canyon 6 (10 man-hours), 2 construction new services on Old Cazadero Rd and Santa Rosa Ave. (10 man-hours), installed new saddle, etc., on Riverside Rd. (24.5 man-hours), and abandoned 2 inch pipe of 6 inch main, removed saddle and valve on Redwood Dr. (22 man-hours).

8. **Water Audit Workshop:** On October 27 I attended a water audit workshop sponsored by the California Urban Water Conservation Coalition and the California Department of Water Resources. The workshop covered the American Water Works Association (AWWA) water audit software and the AWWA real loss component analysis software which is the next step in water audit analysis in attempting to place an economic value in the various components of water losses. The workshop stressed apparent versus real water losses (some water loss is not recoverable) and data validation - how good is the data used for the audits? I have attached a water audit for 2014 based on what I learned at the workshop - the workshop presenter did a good job in explaining the various components of the audit and water loss component software.

9. **Correlation Equipment Demonstration:** On October 21 we held a demonstration of the correlation equipment at Russian River Avenue and 2nd Street in Villa Grande. Sukey Robb-Wilder and Tim Lipinski were in attendance. We'll do another demonstration in November.

10. **Regional Flood Preparation Meeting:** On November 5 District staff will be attending a regional flood season preparation meeting at the Graton Firehouse. I'll give a verbal presentation at the Board Meeting.

11. **Gantt Chart:** The Gantt Chart for November has start of design for the 2017 CIP. John Wanger will be at the Board Meeting to discuss this.

Figure 1. Water Production and Sales 12 Month Moving Averages
Sweetwater Springs Water District Since September 2008

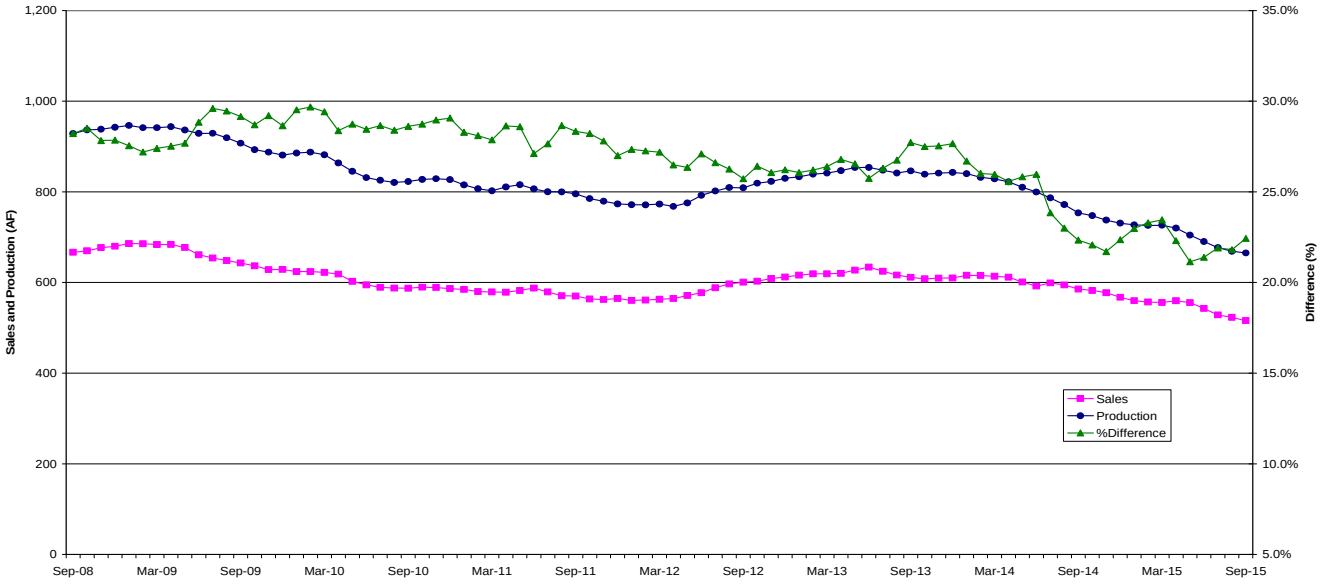

Figure 2. Sweetwater Springs Water District Main and Service Pipeline Breaks
Moving Annual Average Since September 2008

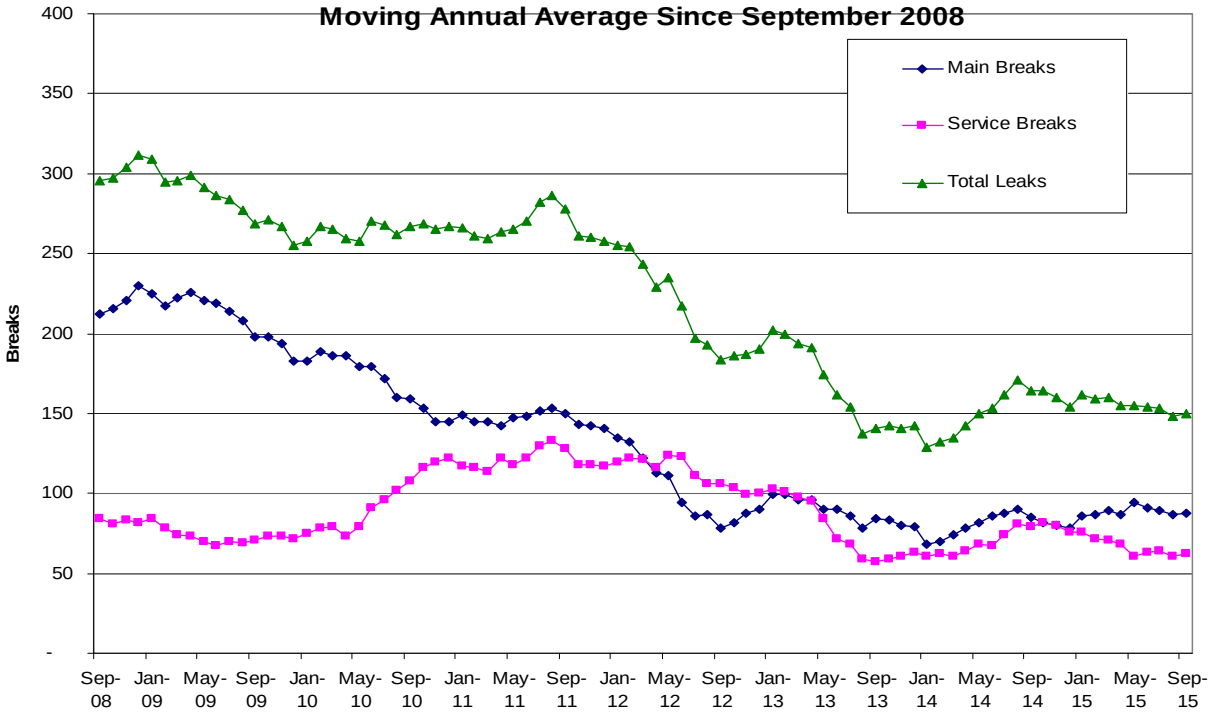

Figure 3. Guerneville Cumulative Monthly Rainfall

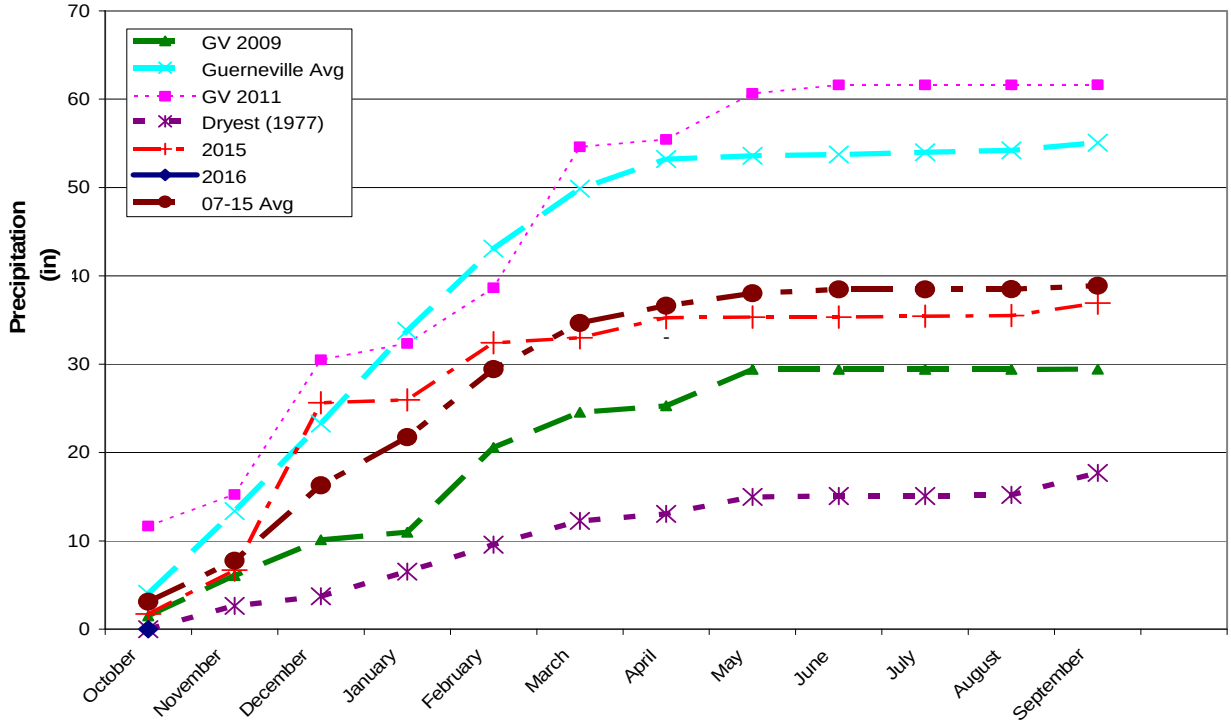

Figure 4. Sweetwater Springs WD Calendar Gantt Chart		Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	FY17+
Ongoing Activity																				
Board Action																				
Other Milestone																				
Current Month																				
By Activity																				
Action Item/Milestone	**Projected Completion / Milestone Date**																			
Crystal Communications Lease																				
2014-15 Budget Preparation																				
• Capital Improvement Program Board Discussion																				
• Staff Budget Preparation Begins																				
• Ad Hoc Budget Committee Reviews Draft Budget																				
• Draft Budget to Board for Discussion/Action																				
• Approve Budget																				
Capital Projects																				
• Update/Review District CIP																				
• 2016 CIP Design																				
• 2016 CIP Award of Contract																				
• 2016 CIP Construction Starts																				
• 2017 CIP Design																				
• 2017 CIP Award of Contract																				
• 2017 CIP Construction Starts																				
Urban Water Management Plan	Jul-16																			
Water Rights	SCWA Protest												??							
Emergency Response Plan Review																				
Building Lease																				
• Lease Renewal	July-17																			
Policies and Procedures																				
• Other Policy																				
• Overall Review																				
Board and General Manager Annual Review																				

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.
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? Click to access definition
+ Click to add a comment

Water Audit Report for: Sweetwater Springs Water District (4910004/0028)
Reporting Year: 2014 | 1/2014 - 12/2014

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

<---------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

WATER SUPPLIED

							Pcnt:	Value:	
Volume from own sources:	+ ?	8	731.000	acre-ft/yr	+ ?	7			acre-ft/yr
Water imported:	+ ?			acre-ft/yr	+ ?				acre-ft/yr
Water exported:	+ ?			acre-ft/yr	+ ?				acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 731.000 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

					Pcnt:	Value:	
Billed metered:	+ ?	7	567.000	acre-ft/yr			
Billed unmetered:	+ ?			acre-ft/yr			
Unbilled metered:	+ ?			acre-ft/yr			
Unbilled unmetered:	+ ?		9.138	acre-ft/yr	1.25%		acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: ? 576.138 acre-ft/yr

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption) 154.863 acre-ft/yr

Apparent Losses

					Pcnt:	Value:	
Unauthorized consumption:	+ ?		1.828	acre-ft/yr	0.25%		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	+ ?	5	11.571	acre-ft/yr	2.00%		acre-ft/yr
Systematic data handling errors:	+ ?		1.418	acre-ft/yr	0.25%		acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: ? 14.816 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 140.046 acre-ft/yr

WATER LOSSES: 154.863 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 164.000 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+ ?	9	68.0	miles
Number of active AND inactive service connections:	+ ?	9	3,605	
Service connection density:	?		53	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: + ? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 7 70.0 psi

COST DATA

Total annual cost of operating water system:	+ ?	9	$1,728,000	$/Year	
Customer retail unit cost (applied to Apparent Losses):	+ ?	10	$2.65	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	+ ?	7	$300.00	$/acre-ft	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 75 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Customer metering inaccuracies
3: Billed metered

AWWA Free Water Audit Software:
System Attributes and Performance Indicators

WAS v5.0
American Water Works Association.
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Water Audit Report for: Sweetwater Springs Water District (4910004/0028)
Reporting Year: 2014 | 1/2014 - 12/2014

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 75 out of 100 ***

System Attributes:

Apparent Losses:	14.816	acre-ft/yr
+ Real Losses:	140.046	acre-ft/yr
= Water Losses:	154.863	acre-ft/yr
? Unavoidable Annual Real Losses (UARL):	71.25	acre-ft/yr
Annual cost of Apparent Losses:	$17,103	
Annual cost of Real Losses:	$42,014	Valued at Variable Production Cost

Return to Reporting Worksheet to change this assumpiton

Performance Indicators:

Financial:	Non-revenue water as percent by volume of Water Supplied:	22.4%	
	Non-revenue water as percent by cost of operating system:	3.6%	Real Losses valued at Variable Production Cost
Operational Efficiency:	Apparent Losses per service connection per day:	3.67	gallons/connection/day
	Real Losses per service connection per day:	34.68	gallons/connection/day
	Real Losses per length of main per day*:	N/A	
	Real Losses per service connection per day per psi pressure:	0.50	gallons/connection/day/psi

From Above, Real Losses = Current Annual Real Losses (CARL):	140.05	acre-feet/year
? Infrastructure Leakage Index (ILI) [CARL/UARL]:	1.97	

* This performance indicator applies for systems with a low service connection density of less than 32 service connections/mile of pipeline