Report to the membership at the April 14, 2018 Annual meeting

Water Committee Report April 14, 2018 Annual owners meeting

1. Financial performance 2017/18 water year (May 1, 2017 to April 13, 2018)

Approved budget versus actual costs– **see table**.

Approved operating budget	$12,200	(from line 8 below)
Actual spending	$16,807	(from line 8 below)
Net	$ -4,607	

Change in the account balance.

Balance on 4-13-2018	$ 8,010*
Balance on 5-1-2017	$ 7,076^
Change	$ +934*

^ After transfer of $2,600 (for two un-started 2016/17 projects) to the 2017/18 budget.

* Excludes a recent donation. Including donation, Balance and Change are $13,010 and $5,934.

Line item	Approved	Actual cost	Explanation
1. Install flushing hydrants on ends of legs east of Lostine River Road	$ 2,200	$ 2,790	Needed for maintenance flushing and for disinfecting after breaks or other contamination events.
2. Install two missing backflow prevention valves in meter box	$ 900	$ 1,358	Needed to protect against cross-contamination. Meter-setter has backflow prevention valve. Setters installed per policy (water system pays for setter).
3. Install 3 meter-setters at two new connections to water system	$ 1,500	$ 1,037	Setters installed per policy (water system pays for setter; owner pays for remainder of installation).
4. Install pump-saver	$ 500	$ 330	New pumping regime requires longer pumping intervals. Needed to protect impeller and motor under potential low water conditions.
5. Engineering review and letter report	$ 2,000	$ 1,927	Expertise needed to validate and improve the 30-year water system plan.
6. Base operations	$ 1,600	$ 2,359	• $1,318 electricity (11 months), $590 water analysis, $234 meter purchased for inventory, $83 OAWU, $57 chlorine strips, $77 insulation • Cost overrun due to extra water samples (~$400), meter for inventory, and more electricity than normal
7. Contingency - Unanticipated repairs - Operating cushion - Use of capital reserve funds	 $ 1,500 $ 2,000 $ 0	 $ 1,500 $ 2,000 $ 3,506 $ 7,006	$1,643 – broken meter (replace & relocate), add setter $ 470 – telemetry failure: temporary fix & later repair $ 290 – repair leaking joint $ 943 – repair leaking valve, add setter $3,660 – repair rupture (2,063 equip., 967 mater., 630 labor) $7,006 Total of 5 unanticipated repairs
8. Total operating budget	$12,200	$16,807	
9. Contribution to capital reserve	$ 6,000 (planned)	$ 1,393 (actual)	Only $1,393 contributed due to cost overruns.
10. Total, lines 8+9	$18,200	$18,200	

$342 overrun on group of planned projects, $759 overrun on base operations, $3,506 overrun on contingency.

2. 30-Year Water System Plan

- A draft plan was delivered to the Board one year ago. Revisions for a final plan have been made.
- The purpose of the Plan is to provide analysis and long-term planning that ensures the water system has adequate resources to maintain, operate, and improve the water system.

- The primary area of revision in the past year was further analysis of potential capital improvement projects that address water system vulnerabilities.

- Second well.
  - Risk: low/medium. Action status: purchase automated data collection system ($1,100) and continue to collect data.
  - A final report on adequacy of the well was submitted to the Board (attached).
  - ~ $35,000
- 10,000 gallon tank.
  - Risk: medium. Action status: wait and see what happens.
  - Reversed course of action due to cost estimate from J-U-B Engineers of $61,000 plus $14,000 for interest on 10-year $50,000 loan.
- Replace the remaining portion of the main from the well to the Tamarack-LRR intersection.
  - Risk: high. Action status: be prepared for another break and accumulate money for replacement.
  - At pump start-up there is 156 psi at the junction of the old 160 psi pipe and the 235 psi pipe installed in February.
  - ~$45,000 to replace ~1,700 feet with higher psi pipe so the maximum pressure at junctions of old and replaced pipe is ~140 psi.
  - As a first step, buy and store 300 feet of pipe ($2,000) to minimize the length of a water outage in the event of another break. When budget allows in future, install the pipe ($8,000).

3. Approved budget and rates for 2018/19 water year (April 14, 2018 to April 2019)

Line item	Budgeted cost	Justification
1. Complete repair of Feb. water main rupture	$ 1,600	Repair meter in well house and reconnect main to fire hydrant. Repairs were deferred to allow rapid re-establishment of water supply.
2. Water level sensor and automated data recording system	$ 1,100	Recommended by experts to record water level during twice monthly well drawdown and recovery tests.
3. Telemetry relay or better antennas	$ 1,000 prelimin. estimate	Have dealt with several years of 20+ telemetry system loss-of-communication events per year. Reservoir was nearly drained twice in the last 6 months due to loss of communication events.
4. Repair of valve at NW corner of Tamarack Road	$ 1,000	Broken valve mount causing difficulties.
5. Pipe purchase	$ 2,000	To minimize the length of a future water outage when the next break occurs on the leg between well and Tamarack-LRR intersection.
6. OAWU-recommended improvements	$ 200	From written report of 3-hour site visit by Oregon Association of Water Utilities.
7. Base operations	$ 2,000	Electricity, water analysis, OAWU dues, misc. supplies
8. Emergencies	$ 3,000	
9. Total operating budget, lines 1 to 8	$11,900	
10. Capital reserve annual contribution	$ 7,000	

11. Total budget, lines 9+10	$18,900	Annual income currently ~$16,450 = ~$2,450 shortfall

- Increase the water use rate from $7 per 1,000 gallons to $10 per 1,000 gallons beginning now; billing occurs a year from now.
- To match budget to income in 2018/19, the lot assessment is $375; to be billed soon.

4. Water main rupture and 4-day water outage

- A previous water leak in a meter box required disinfection of one leg of the water system. This was done by introducing disinfectant through a fire hydrant per the Operations and Maintenance Manual.
- The specific cause of the subsequent rupture was using the pump to move the slug of disinfectant through the last segment of the open leg … which would have been okay if the valve part way up Tamarack would have been re-opened. This caused excessive pressure at the lowest point of the system (where pressure under normal operating conditions nearly exceeds the rating of the pipe).
- The events were documented in the Water System Maintenance Records and in a 3-page "Summary of Jan/Feb 2018 Chlorination and Lessons Learned".
- Chlorination at the reservoir was performed four times between July 2016 and February 2018. Each event was performed in a different way by incorporating what was previously learned. The final chlorination was the first that was highly successful. The committee decided that in the future disinfectant will be introduced at the reservoir versus fire hydrant because (a) we now understand the dominant chemical and physical processes affecting chlorination in the reservoir and their rates, and (b) introduction at the reservoir is less prone to problems. The Operations and Maintenance Manual will be revised to reflect this change.