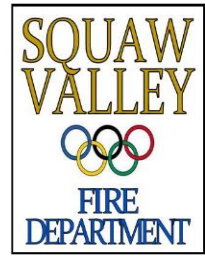




SQUAW VALLEY PUBLIC SERVICE DISTRICT



CAPITAL PROJECTS REPORT

DATE: September 30, 2014

TO: District Board Members

FROM: Jesse McGraw, Operations Manager

SUBJECT: Capital Projects Report – Information Only

BACKGROUND:

The following list provides a limited status regarding Capital Projects for the Utility and Administration Departments. Provided are budget figures, along with commitments for pending projects and actual expenditures for completed projects.

DISCUSSION:

1. Staff has completed the first 4.5 chapters of the Water Operations Plan; work on the plan will resume this fall.
2. Farr West Engineering and Sierra Controls have submitted the revised SCADA Master Plan. Staff and consultants are meeting the first week in October to discuss the Phase I work plan.
3. Aspen Developers Corp. has mobilized and begun work on the Aspens Sewer Realignment Project. Work is to be complete by October 2, 2014.
4. Farr West is working on inputting the TVI work from spring 2014 into VueWorks.
5. The next Sewer System TVI Project will begin with television of the Squaw Creek Siphon scheduled September 25, 2014.
6. Purchase of a 2014 Ford F-150 4x4 pickup truck was approved and the truck ordered.
7. Work on the Redundant Water Supply project is progressing with Farr West Engineering, a draft report on the feasibility of local water sources is nearly complete. Farr West is currently preparing the Phase II gap analysis.

8. Staff met with the Granite Chief Homeowners Association to work out details of a development agreement whereby the District will take the lead in getting the old sewer along the creek replaced. Auerbach Engineering who has submitted a proposal will perform the survey and design work.
9. Shaw Engineering has submitted 90% plans for the Mutual Intertie Project and began work on specifications. Staff has submitted a grant application to fund construction of the project with the Tahoe Sierra IRWM group through the States drought assistance program. Interties between community water systems are one of the strategies eligible for funding.
10. The Utility Crew completed work to replace approximately 120 feet of 8" Ductile Iron water main crossing Squaw Valley Road at Hidden Lake. The pipe was found to be badly corroded. A report is attached summarizing the work and associated cost.
11. Work began on the Indian Trail 2" Water Line Replacement project with request a construction easement sent to effected homeowners.

ATTACHMENTS:

2014-2015 Capital Budget Project Status Worksheet
Summary Report on the S-Turn Water Line Replacement Project

DATE PREPARED:

September 11, 2014

2014-2015 BUDGET CAPITAL PROJECTS STATUS
UTILITY DEPARTMENT
September 2014

PROJECT NAME **BUDGETED** **COMMITTED** **STATUS**

1	Water Operations Plan	\$ 25,000	\$	Work to Resume this fall
2	Water Master Plan	\$ 25,000	\$	On Hold
3	15" to 21" Olympic Estates	\$ 138,000	\$	Project Suspended
4	Intersection Manhole A29	\$ 10,000	\$	On Hold
5	VueWorks (Water & Sewer)	\$ 30,000	\$ 5,000	Inputting TVI Work
6	2" Water Main Indian Trail	\$ 50,000	\$	Owners Notified Requesting Easement
7	SCADA Upgrade (Water & Sewer)	\$ 50,000	\$	Revised Master Plan Received
8	Easement Abatement	\$ 25,000	\$	In Work
9	Design Creek View/Sierra Crest	\$ 26,000	\$	On Hold
10	Aspens Sewer Realignment	\$ 133,550	\$ 133,550	Contractor Mobilized
11	Sewer Bypass Crossing Hwy 89	\$ 25,000	\$	RFP for Design Farr West
12	Sewer Master Plan	\$ 50,000	\$	On Hold
13	SSMP Audit/ Update	\$ 7,500	\$	On Hold
14	In House Smoke Test I&I	\$ 46,239	\$	On Hold
15	TV Inspection 25% & Laterals	\$ 55,000	\$	Squaw Creek Siphon Sept. Schedule
16	1810 Parking Lot Sealing	\$ 8,000	\$	On Hold
17	1810 Painting	\$ 8,000	\$	September Schedule
18	1810 Carpet in Meeting Room	\$ 6,500	\$	On Hold
19	Ranger Truck Replacement	\$ 27,000	\$ 25,000	Truck on Order
20	Confined Space/ Fall Protection	\$ 6,500	\$	Researching Equipment
21	Computer Master Plan Barracuda Back Up	\$ 5,000	\$	On Hold
22	Replace Copier	\$ 12,000	\$	Copier Purchased
23	IT Master Plan/ Web Development	\$ 15,000	\$	On Hold
	Grant Funded Projects			
24	Redundant Water Supply	\$ 175,000	\$ 175,000	Phase II Work in Progress
25	Bike Trail Snow Removal	\$ 109,000		On Hold
26	Mutual Intertie Feasibility Study	\$ 5,000	\$ 5,000	IRWM-Grant Application Pending
	TOTALS	\$ 1,063,319	\$ 343,550	

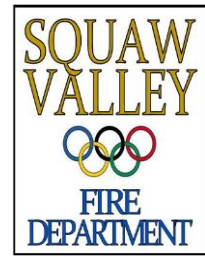
2014-2015 COMPLETED PROJECTS
UTILITY DEPARTMENT

PROJECT NAME **BUDGETED** **EXPENDED** **STATUS**

1				
2				
3				
4				
5				
6				
	TOTALS			



SQUAW VALLEY PUBLIC SERVICE DISTRICT



Incident Report SV Road S Turn Water Leak

The saga of the S-Turn leak began on Friday June 6, 2014. Water production was up and Brandon had informed me the West tank was draining fast overnight. John O'Neal and I were in the field and discussing the merits of doing a windshield survey when we passed 900 SV Road and noticed water near the south road shoulder. John mentioned it and I responded with the thought that it was near where the 8" line comes down from Hidden Lake. We turned around and pulled over; we noticed water flowing on the south side of the bike path in several locations at a rate near 75 GPM, the bulk of which was coming out next to a power company vault. We notified Brandon who met us on site and we formulated a plan to start work on Monday. Brandon called in a USA line locate and began preparing the crew for mobilizing.

Monday 6/9/14 Start 6:00 AM

Monday morning there was no longer any water coming up on SV Road but water had increased south of the bike trail such that the grass was floating, water was now coming up east and west of the 8" valve on the water line going up to Hidden Lake.

While waiting for power and phone locations we sent a truck to Reno to get a load of hay bales to build a sediment catch for pumping the trench (**PHOTO 1**). Bike trail signs were borrowed from TCPUD and traffic on the bike trail routed to the shoulder of SV Road. John and Brandon began work to switch the West tank onto the Resort transmission main so the leak could be isolated; they encountered problems with a Clay valve at the East Booster but were eventually successful. Brandon and Josh turned off a valve at Victor Dr., a valve on the 12" main west of the leak, and the 8" going up to Hidden Lake, and the leak continued; they turned a valve down at Hidden Lake and it was still flowing. When they double checked the 8" valve by the bike trail they found it to be broken.

We did not know at this time which pipe the leak was on but we needed to fix the 8" valve in order to continue. With up to 6 homes out of water we thought if we fixed the valve we could isolate the leak thought to be on the 12" line and get water back on to those homes.

The line locate guy from the power co. would not get close to the proposed excavation due to floating ground conditions. The power appeared to be in close proximity to the water line and very high voltage. I phoned the power co. and complained I needed a better locate; they responded by sending a crew to shut down the line for safety due to so much groundwater. To do so we needed to rent a generator for the SV Stables property, which we did from Truckee Rents. We cut a trench to get water away from the power vault and pumped the vault down so we could see the conduits and get a good locate (**PHOTO 2**).

With the power taken care of we began excavating at 3:00 PM. Given the conditions and the depth of pipe at 7 feet, John had ordered a load of 1 ½" drain rock; I spread a 5 yd. load of it so I could keep the backhoe from sinking. John also ordered a trench shield from United Rentals knowing the excavation

would be too wide for our own shoring. We excavated down 30" and began searching for the power lines (**PHOTO 3**) with the Vac-Con. We excavated as far as the bottom of the 12" over 7 feet and used a buried sump from the HL original tie in for groundwater control and never did find the power line. We installed the shoring box and went to work exposing the valve from inside the shield (**PHOTO 4**).

We exposed the 8" valve and John realized we had an identical valve in stock which we used to scab parts, replacing the valve guts in place and saving time. With the valve repaired we were able to turn water back on. However, water began spurting up in SV Road indicating the leak was on the 8" line. We secured the trench and work site at midnight.

Tuesday 6/10/14

We began the day by using garden hose to get water to the homes affected. We laid 600 feet of hose bringing water to 3 occupied homes of the 6 that were off. Excavation of pipe in the shoulder of SV Road resumed after USA line locations were completed. The pavement was found to be 8" to 10" thick taking several hours to jackhammer and remove. We exposed a bank of phone conduits at edge of pavement; exposed the 8" sewer several feet N. of the phone conduits. We found an unmarked 1.5" direct bury phone cable several feet N. of the sewer (**PHOTO 5**). The phone Company came out and put a wrap on the phone line even though it was not damaged it was scratched up a little; delaying work a couple of hours. We found we were to the east side of the water main the pipe crossing SV Road at an angle, widened the trench and began exposing and removing concrete slurry. We deck plated the road shoulder and secured job at 6:00 PM.

Wednesday 6/11/14

The water line was found to be below the sewer about 7 feet deep and the trench above it was concrete slurry; the slurry was encased around the sewer taking several hours to remove (**PHOTO 6**). Groundwater increased with depth and the gravel backfill around the sewer began sloughing in creating a problem with the sewer pipe (**PHOTO 7**), having to shore the sewer pipe with blocks. The leak was repaired about 4:00 PM with a full circle clamp (**PHOTO 8**) and water service restored. The trench was backfilled to surface and paved for traffic safety, the trench being too large for our deck plates, taking until 10:00 PM.

Thursday 6/12/14 and Friday 6/13/14

The crew mobilized to the site and found water emanating from the pavement (**PHOTO 9**). The water was shut down and hoses re-deployed. I purchased additional hose at Home Depot to increase flow for the additional 3 homes expected to be occupied for the weekend. We installed hose on Friday and undertook material and parts orders for another excavation the following week. Crew pumped down the trench which was full to surface and backfilled the trench at the 8" valve. John applied for a county encroachment permit for Squaw Valley Road.

Monday 6/16/2014 to Friday 6/20/14

I picked up traffic delineators at White Cap in Reno 6:00am Monday morning; borrowed 20 more from Squaw Valley Ski Holdings for a 2 lane closure on SV Road. Renew of line locations from USA. The crew

excavated to replace a pipe section **(PHOTO 10)**. They found a quarter size hole in the pipe near the repair clamp and found the entire section of pipe badly corroded. The crew installed a 20 foot section of class 200 PVC C-900 pipe **(PHOTO 11)**. Installed pump sump in south end of trench for groundwater control; ran pump hose through culvert to sediment control area. Trench shored and deck plated. 6/17/14 began work to remove concrete from trench and remove old pipe. Encountered problems with groundwater control and had to re-do pipe sump. Had to dig out additional area to get new pipe section installed due to angle getting under existing conduits, pipe installed **(PHOTO 11)** and deck plated for night. Upon inspection of pipe removed it was decided to replace the entire section under SV road so work was not done to tie in the pipe section, it was capped and backfilled using "burrito wrap" with filter fabric per county requirements **(PHOTO 12)**. 6/18/14 backfill operations underway H & K took compaction tests at 95%; road finished and paved. 6/19/14 demobilization and clean-up of site.

Monday 6/23/14 to Friday 6/27/14

With July 4th holiday and the Wanderlust event coming it was decided that to install a gate valve on the north side of SV Road would provide full water flow to residences and the hose could be picked up and not relied on for holiday use. Excavation began June 23rd when the 8" pipe was exposed at the 22° bend going uphill toward Hidden Lake **(PHOTO 13)**. The bend was encased in concrete, which was removed 6/24/14 and the pipe cut away **(PHOTO 14)** after installing another sump for groundwater control. The valve and new kicker were installed 6/25/14 **(PHOTO 15)** and the trench backfilled 6/26/15 **(PHOTO 16)**.

Monday 7/7/14 to Friday 7/11/14

Work began to replace the south section between the shoulder of SV Road and the 8" valve on 7/7/14. Groundwater increased due to combining trenches at utility crossings and could not be controlled so a second sump was installed **(PHOTO 17)**. Groundwater control continued to be a problem and the trench was plated for the night **(PHOTO 18)**. The pipe was fully exposed on 7/8/14 **(PHOTO 19)** although under water. Crews found the 22° bend north of the sewer was fully encased in concrete for a distance of about 12 feet; work progressed removing the concrete **(PHOTO 20)** after fully shoring the trench. A third sump was installed to control groundwater and two pumps run continually in tandem.

On 7/9/14 work progressed to remove the old pipe; however the pump had failed overnight allowing the trench to fill and causing the sides to cave. The lower end of the trench was excavated and sloped **(PHOTO 21)** as was the north end for worker safety; at the point where the road shoulder was excavated to the pipe in the trench it was 13 feet deep. Work progress was slowed due to failure of the cut off saw. A saw was rented from Truckee Rents and a new saw ordered. That night and the following night a watch was placed on the pumps with Brandon checking every 4 hours overnight to prevent further cave in. The new pipe was installed 7/10/14 **(PHOTO 22)** and the kicker was poured. On 7/11/14 **(PHOTO 23)** a 4" drain installed per county requirements from SV Road under the bike trail **(PHOTO 24)**. The trench was backfilled to 18" over the pipe with ¾" crushed rock and covered with a layer of filter cloth **(PHOTO 25)**. Backfill and compaction was completed using a 1,800 LB Bomag rolling compactor **(PHOTO 26)**.

Tuesday 7/22/14 to Friday 7/25/14

Work was delayed on Monday due to thunder storms; work on the N. side of SV Road required full traffic control and flagmen taking SV Road down to one lane. Extra help for traffic control was accomplished bringing in help from Alpine Springs CWD. Flagmen were given breaks every 40 minutes using a 3 man rotation. The road was saw cut the previous Friday to a depth of 4"; however the asphalt was 10" thick requiring 2 hours to remove with the small JCB backhoe. The trench was opened to accommodate installation of a 20 foot pipe section (**PHOTO 27**) progress was difficult do to concrete slurry backfill; the District's 70 LB jackhammer was not sufficient to make efficient progress and a 90 LB hammer and rock drill were rented to further the work. The slurry came out in 3 foot to 4 foot chunks taxing the limits of the JCB Backhoe's ability to lift. A 20 foot section (**PHOTO 28**) was installed and backfilled to surface including paving. Compaction tests were taken by H & K for verification of county requirements. Crews worked until 9:00 PM to close the hole so that a single lane of SV Road would not be required the following day. Work progress was slowed due to breakdown of the dump truck; a truck was borrowed from Northstar CSD.

On 7/23/14 work progressed to expose utility crossing of power and phone; a 2" direct bury phone line was found encased in concrete (**PHOTO 29**) and was slightly damaged. Repairs to the phone line took a couple hours (**PHOTO 30**) although no wires were broken the outer casing of the cable was removed and replaced. The trench was covered with 16 foot deck plates rented from United Rentals in order to open the road overnight. Approximately 30 feet of pipe was installed (**PHOTO 31**) and kicker poured on the 22° bend (**PHOTO 32**) completing the job on 7/24/14 and the trench deck plated overnight again. The trench was backfilled on 7/25/14 with compaction testing by H & K.

The crew spent several days the week of July 28th backfilling the hillside and installing BMP's and hauling debris from 1810 to the dump. Squaw Valley Resort accepted the left over soil saving on hauling and dump fees. The trench was paved by Advanced Asphalt on August 1, 2014 on a time and material contract; with traffic control provided by SVPSD personnel. The filter berm was removed the first week of August and the excavation area was topped with soil and seeded.

SUMMARY:

Although the project was difficult and time consuming it was a great opportunity for training. Efficiency could be improved with ownership of compaction equipment, shoring, and road plates all of which were rented for the project. Efficiency would also be improved having a larger stronger backhoe and another trash pump. Personnel noted that the 16 foot rental plates were too heavy and too large for our loader to handle safely.

This job was particularly difficult due to depth of pipe at 7 feet, groundwater intrusion requiring significant dewatering effort, shoring requirements for worker safety, and concrete removal. There were a total of 7 utility crossings with the phone being crossed in 4 locations, 2 sewer crossings and power making it difficult to install the new pipe; due to the low angle needed to get under the utilities an additional 20 yards of material was excavated just to get the pipe into the trench. Many man hours were expended setting up and taking down the extensive traffic control required in one of the most difficult locations in Squaw Valley.

Our thanks go out to Alpine Springs CWD for the loan of Miguel, he was a huge help on the heavy traffic control day, Northstar CSD for the loan of a dump truck, Squaw Valley Resort for taking our extra soil and the loan of the delineators, and Placer County for fast tracking a solution on backfill requirements and encroachment permit. I would also like to thank Holdrege and Kull for their field assistance on compaction testing and our sub-contractor Advanced Asphalt for the timely assistance paving the road along with United Rentals and Al Pombo Excavation for their timely support delivering materials and equipment.

Cost Summary:

The cost to repair the 8" valve, repair the 8" pipe, re-excavate and repair the pipe again and to install the valve on the North side of SV Road was: Materials = \$16,275 Labor= \$25,062 for a total repair cost of \$41,337.

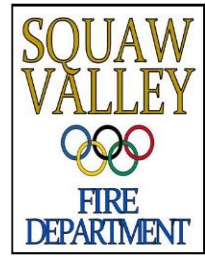
The total cost to replace the remaining 100 feet of pipeline across SV Road was: Materials= \$28,126 Labor=\$69,373 Total cost \$97,499

The out-of-pocket cost for the entire job was summarized as the material cost which includes paving and the overtime cost. This is the cost that would be transferred from Capital to backfill the operating budget and is from both the repair and replacement cost together:

Materials = \$44,401 Overtime = \$20,163.43 **total capital cost = \$64,564.43**



SQUAW VALLEY PUBLIC SERVICE DISTRICT



OPERATIONS & MAINTENANCE REPORT

DATE: September 30, 2014

TO: District Board Members

FROM: Brandon Burks, Operations Specialist III

SUBJECT: Operations & Maintenance Report for August 2014 – Information Only

BACKGROUND: The discussion section below provides information on the District's operations from the month noted above. It also includes the maintenance activities performed by the Operations Department that are not the subject of a separate report. This report is formatted to provide new information and recent progress only.

DISCUSSION:

1. Flow Report – August 2014

a. Water Production:	13.94	MG
	Comparison:	3.04 MG Less than 2013
b. Sewer Collection:	6.67	MG
	Comparison:	0.10 MG Less than 2013
c. Aquifer Level:	August 31, 2014	= 6,181.5'
	August 31, 2013	= 6,183.0'
	Highest Recorded	= 6,192.0'
	Lowest Recorded	= 6,174.0'
d. Creek Bed Elevation:	Well 2	= 6,186.9'
e. Precipitation:	August 2014	= 1.41"
	Season Total	= 29.95"***
	48 Yr. Season Avg., Old Fire Station	= 50.70"
	Season Total of 48 Year Average	= 59.07%

Flow Report Notes:

- The *Highest Recorded Aquifer Level* represents a rough average of the highest levels measured in the aquifer during spring melt period.
- The *Lowest Recorded Aquifer Level* is the lowest level recorded in the aquifer at 6,174.0 feet above mean sea level on October 5, 2001. This level is not necessarily indicative of the total capacity of the aquifer.
- The *Creek Bed Elevation* (per Kenneth Loy, West Yost Associates) near Well 2 is 6,186.9 feet.
- *Precipitation Season Total* is calculated from October 2013 through September 2014.
- The true *Season Total of 47 Year Average* could be higher or lower than the reported value due to the uncertainty of the Old Fire Station precipitation measurement during the period 1994 to 2004.
- In October 2011 the data acquisition point for the aquifer was changed from Well 2 to Well 2R.
- **Rain data for April and May 2014 was estimated using available data

2. Leaks and Repairs

a. Water

1. The District issued twenty one leak/high usage notifications.
2. Responded to zero after-hours customer service call.
3. Replaced Well 1R's pump and motor.
4. Brought Well 3 back online after repair.

b. Sewer

1. Responded to zero after-hours customer service calls.

3. Vehicles and Equipment

a. Vehicles

1. None.

b. Equipment

1. None.

4. Operations and Maintenance Projects

a. 1810 Squaw Valley Road (Old Fire Station).

1. Inspected and tested the generator.
2. General housekeeping.

b. 305 Squaw Valley Road (Administration and Fire Station Building)

1. Inspected and tested the generator.

c. Water System Maintenance

1. Two bacteriological tests taken: one at 1810 Squaw Valley Road and one at Zone Three Booster Station; both samples were reported absent.
2. Leak detection services performed: two

3. Customer service turn water service on: zero
 4. Customer service turn water service off: zero
 5. Responded to zero customer service call with no water.
 6. Replaced zero failed water meters.
 7. Continued operation and maintenance of Squaw Valley Mutual Water Company's water system.
- d. Sewer System Maintenance
1. Worked on some I and I sources.
 2. Prepped for Aspen Sewer Line Replacement Project
- e. Telemetry
1. The rainfall measurements for the month of August were as follows: Nova Lynx 1.41", Carl Gustafson: 1.64", Squaw Valley Snotel: 0.70".
- f. Administration
1. Monthly California Dept. of Public Health (CDPH) report.
 2. Worked on implementation of VUE Works
5. Services Rendered
- | | |
|--|------|
| a. Underground Service Alerts | (26) |
| b. Pre-remodel inspections | (4) |
| c. Final inspections | (1) |
| d. Fixture count inspections | (0) |
| e. Water service line inspections | (0) |
| f. Sewer service line inspections | (0) |
| g. Sewer main line inspections | (0) |
| h. Water quality complaint investigation | (0) |
| i. Water Backflow Inspections | (0) |
| j. FOG inspections | (0) |

Other Items of Interest

- K. Training – SDRMA Online class, SDRMA Safety Booklet.

6. Drought Preparedness

Squaw Valley has received 59% of its average precipitation for the rain year which runs from October 2013 to September 2014. The aquifer level is in its seasonal decline and on August 31, 2014 the static level reached 6181.5 feet ASL. The aquifer is 1.5 feet lower than last year at this time.

The District staff continues to monitor the aquifer and precipitation levels and will continue to advise the Board of changes in conditions that may warrant action. Staff continues to meet to discuss current drought conditions.

ATTACHMENTS: Monthly Water Audit Report

DATE PREPARED: September 19, 2014

Squaw Valley Public Service District - Monthly Water Audit Report

Audit Month: August
Year: 2014

Report Date: September 2, 2014

Performed By: Brandon Burks

Meter Reader: Josh Wilson

Reading begin Date & Time: 8/29/14 8:30 AM

Reading end Date & Time: 8/29/14 12:00 PM

Total lag time: 3:30:00

Begin Audit Period: 7/31/14 12:00 AM

End Audit Period: 8/29/14 12:00 AM

Total Metered Consumption for audit period specified (including hydrant meters): 10,735,234

Additional Consumption - Unmetered

Fire Department Use: _____

Hydrant Flushing: 10,000

Blow-Off Flushing: _____

Sewer Cleaning: _____

Street Cleaning: _____

Well Flushing: _____

Tank Overflows: _____

Unread Meter Estimated Reads: _____

Other:Hydrant meters 6,500

Total Unmetered Consumption (for audit period specified): 16,500

Estimated Unknown Loss - Unmetered

Known Theft: _____

Known Illegal Connections: _____

Total Estimated leaks that have been repaired: _____

Total Estimated Unmetered (for audit period specified): _____

Total Production for audit period specified: 13,065,492

Total Metered/Unmetered Consumption for audit period specified: 10,751,734

Total Water Loss (Production - Consumption): 2,313,758

Comments: The production totals are different than the monthly report due to a different time frame being used. The District continues to look for leaks. A leak detection service was used in September. One new leak was found and is being repaired.

* Note - All Production & Consumption Totals In U.S. Gallons *