

### Water Capital Projects Quarterly Status Report 2017-Q4

Project	2017			Status/Comments
	Budget	YTD Actual	Year-End Projection	
Source - Water Intakes & Filtration Plant	\$1,030,000	\$861,000	\$800,000	● Largest item was solids improvement project. Also included are costs incurred for treatment trailer equipment, a SCADA/Historian upgrade and close out work for the South Filter Upgrade.
Mains - Replacements, Improvements, & Trans.	\$4,378,000	\$4,264,000	\$4,485,000	● Largest component in this area is main replacements. Also included are main improvement projects. Projects in both these areas tracking well in 2017.
Services and Meters	\$1,803,000	\$2,381,000	\$2,000,000	● Includes both new services and meters as well as replacement of existing service lines. Costs exceeded budget as cost for precapitalized meters were added to the YTD actual. Without this adder, costs would have matched budget more closely.
Pump Stations	\$1,236,000	\$623,000	\$900,000	● Work this year included Upgrades at Santa Clara and Dillard 975 Pump Stations and design work for the new Crenshaw (reimbursable) and City View 1150 Pump Stations. Scaling back Laurel Hill Pump Station improvements significantly dropped year end projections.
Reservoirs	\$103,000	\$22,000	\$50,000	● 2017 work included design work for new hatch/vent and ladders at the Crest 800 and 975 Reservoirs. The required reservoir outages were pushed to 2018 Q1 for operational reasons which delayed the work.

*These categories will match the Capital Improvement Plans (CIPs) submitted by Water & Electric.*

*Type 1 - General Capital is budgeted Year-by-Year for recurring capital expenditures from January through December. Type 1 Capital includes categorized collections of projects of less than \$1 million. Typical examples include "main replacements". This work typically involves dozens of jobs that add up to \$3.5-4.5 million per year.*

*Type 2 projects have "discrete" scopes, schedules (launch through completion), and cost over \$1MM during the project life, and project life can span multiple years*

*Type 3 projects are large strategic programs with long term impacts.*

Project	2017			Project Total			Schedule			Status/Comments
	Budget	YTD Actual	Year-End Projection	Initial Plan	To-Date Actual	Project-End Projection	Start	Initial Planned Completion	Projected Completion	
Hayden Bridge Disinfection System Replacement	\$700,000	\$280,000	\$400,000	\$3,645,000	\$280,000	\$3,580,000	2017	YE-2018	Q1-2019	● Replacement of gas chlorine system with on-site liquid hypochlorite system. Project currently in design. (Initial Plan - 2015 CIP)
Hayden Bridge Seismic Upgrades	\$515,000	\$244,000	\$220,000	\$1,215,529	\$1,361,067	\$1,440,000	2014	YE-2015	Q1-2018	● Phase 1 (Basins and Filters) is complete. Phase 2 (Headhouse) deferred to 2017-2018. Phase 1 costs more expensive than anticipated while 2017 costs came in much less than anticipated. (Initial Plan - 2013 CIP)
Distribution System Scada/PLC Upgrades	\$412,000	\$110,000	\$400,000	\$3,079,780	\$591,109	\$1,300,000	2013	YE-2016	YE-2019	● Multi-Year upgrade project. Completed Crest System. Currently working on Dillard and Willamette systems. Project complexities and staffing limitations are affecting schedule (Initial Plan 2013 CIP)
Hayden Bridge Standby Power Improvements	\$1,030,000	\$85,000	\$450,000	\$1,728,000	\$111,666	\$1,360,000	2015	YE-2017	Q1-2018	● Design is complete along with prepurchase of two generators, one for Hayden Bridge Plant and one for Intakes along with electric equipment. Delays in design process have pushed purchase and construction to early 2018. (Initial Plan - 2015 CIP)
Hawkins Reservoir Improvements	\$300,000	\$154,000	\$125,000	\$2,067,000	\$154,000	\$2,110,000	2014	YE-2018	Q2-2019	● Structural evaluations identified significant deficiencies with the existing reservoir. Due to high cost for improvements, shifting focus to constructing new reservoir as part of the Water Utility's plan for distributed base level reservoir. Adjustments will be made in 2018 Capital Plan to reflect change in focus. (Initial Plan 2016 CIP)

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Second Source of Supply	\$1,830,000	\$1,615,000	\$1,700,000	Varied from \$52M to \$120M	\$2,495,000	\$67,000,000	2014 with Planning	YE-2021	YE-2030	● Project has been deferred to the later years of the ten year CIP. For 2018 this project will be replaced with the Emergency Water Supply Project

Total Water Capital (Excluding Shared Services)	\$13,337,000	\$10,639,000	\$11,530,000	80%	year end actual to budget
Type 1, 2 Capital (Excluding Shared Services)	\$11,507,000	\$9,024,000	\$9,830,000	78%	year end actual to budget

Management Notes: Overall Water's larger Type 1 projects tracked well with budget. Our largest item in this area, Main Replacements and Improvements ended the year at approximately 97% of budget spent. Water did struggle with the Type 1 Pump Station work. The 2017 work included many communication and control projects and the associated complexities affected Water's ability to get the work done. We are taking a step back in 2018 to focus on standards and long term planning to prevent this issue from occurring in the future. On the Water Type 2 projects, we are tracking low as design issues have delayed the start of construction on a couple projects to 2018. In addition, completed structural evaluations have caused the Water Utility to change the focus on the Hawkins Reservoir Rehabilitation delaying expenditures in this area. Type 3 projects are marked yellow for EL1 report due to project deferral. This project will be replaced by the Emergency Water Supply program in 2018. Overall, water has \$13,337,000 budgeted for capital in 2017 (adjusted for the April True-Up) and spent approximately 80% of that amount. Engineering's target is attain at least 90% expenditures of the capital budget amounts which the Water Utility has exceeded for the past several years. In 2017 we were below target primarily due to the issues on the Type 2 projects noted and also the Type 1 Pump Station Work.

## Capital "EL1" Report: Electric, 2017 -Q4

### Type 1 - General Capital

Capital Category	2017 thru Q4		Status/Comments
	Budget	YTD Actual	
Electric Infrastructure - Generation	\$1,196,000 (Note 2)	\$491,537	● New canal flow meter/seepage collection improvements in WV operational. New rec trail at LB complete. Seismic early warning monitoring stations at LB and Carmen operational and pilot ShakeAlert automation bench testing underway. Emergent capital work at Stone Creek (failed generator relay) and delayed completion of LB roll gate punch list items (Type 2) more than offset by LB-WV Type 1 capital deferred to compensate. Combined Type 1/2 Generation spending at 75% of budget. -ZINNIKER
Electric Infrastructure - Substations	\$1,780,000	\$1,570,067	● Type 1 Projects ended at 88% of budget. Underspend due to transfer of funds for microgrid project from this sub project; this change was not accounted for in previous projection. Bertelsen 115kV breaker and switch replacement is completed and commissioned which maintains system reliability for 115kV system infrastructure. 15kV breaker replacements at three stations were completed as part of the feeder breaker replacement program to prevent outages to customers due to equipment failure. All remaining planned projects completed and closed out - RTU replacements, battery replacements. - NICE
Electric Infrastructure - Telecom	\$250,000	\$297,986	● No EWEB driven work was completed this year. 118% of planned spending was completed. \$200k of this years spending was transferred from the Downtown Fiber Project which consisted of installations at Broadway, 10th and Willamette. \$35k was for River Road Elementary and UoO laterals. - NICE
Electric Infrastructure - Transmission & Distribution	\$7,065,000	\$8,563,405	● Customer reimbursable work ended at approximately 50% (\$869k/\$1.6M) in part due to the change from smaller projects to larger projects which results in a lag in payments to EWEB due to extended project schedules. Renewal and replacement work was accelerated and additional scope was completed due to EWEB's capacity to complete more work via an EWEB hired contractor. This resulted in an overspend of \$1.8M and allowed for completion of the PUC Neutral extension program. Enhancements and Additions to the distribution system spending was as planned with a slight under spend of \$155k. The actual spend projection shown includes pre-capitalized transformers of which have spent to date (approximately \$1M). -BRECKENRIDGE

These categories match the Capital Improvement Plans (CIPs) submitted by Water & Electric.

Type 1 - General Capital is budgeted Year-by-Year for recurring capital expenditures from January through December. Type 1 Capital includes categorized collections of projects of less than \$1 million. Typical examples include "pole replacements" as part of Transmission & Distribution. This work typically involves many small projects that up to \$1.2-\$1.7 million per year.

Type 2 projects have "discrete" scopes, schedules (launch through completion), and cost over \$1MM during the project life.

### Type 2 Rehabilitation & Expansion Projects

Project	2017 thru Q4		Project Total			Schedule			Status/Comments
	Budget	YTD Actual	Initial Plan	To-Date Actual	Project-End Projection	Start	Initial Planned Completion	Projected Completion	
Leaburg Dam Roll Gate Hoists	\$0	\$411,419	\$5,150,000	\$6,699,554	\$6,900,000	Jul-2012	Nov-2014	Oct-2018	● All three hoist systems released for full automatic operation in Q1. Final payments to contractors pending delivery of record drawings and final O&M manuals. -ZINNIKER
Downtown Fiber Network	\$600,000	\$70,556	\$2,100,000	\$520,103	\$2,100,000	Mar-2017	Dec-2018	Dec-2018	● Crews have begun installing fiber microduct for the Downtown Network. Grant with City of Eugene has been cancelled. Funding started in Capital and moved to O&M because the City will retain ownership of the installed equipment. EWEB will proceed with the remainder of the project in 2018. -NICE
Advanced Meters	\$688,000	\$673,033	\$6,638,000	\$957,000	\$12,000,000	Oct-2013	Dec-2025	Dec-2025	● Approximately 4,000 Electric Meters have been replaced in total on an opt in basis. These included strategic deployments where meter locations pose a high safety risk to meter readers, and locations with numerous services (i.e.: apartment buildings). Additional installations include new services and retrofitted services with communication turned off where applicable per existing deployment guidelines. Deployments have been tracking at approximately 500 per month commissioned. - NICE
Electric Master Plan	\$925,000	\$129,212	\$1,250,000	\$129,213	\$600,000	Jul-2016	Dec-2016	May-2019	● This land is for the purpose of the future Thurston Substation reconfiguration and source protection. A portion of the acquired property is not needed for utility purposes and, therefore, the intent is to divide this parcel for use only for the substation expansion and source protection where Cedar Creek enters the McKenzie. The partitioning of the parcel is resulting in delay of the purchase until early 2019, and a cost decrease to \$600k. This purchase delay does not pose a critical path impact to the overall project at this time (2024 planned substation expansion). -NICE
Upriver Re-Configuration/Holden Ck. Substation	\$4,457,000 (Note 1)	\$4,814,018	\$3,000,000	\$5,392,735	\$5,830,000	Jan-2014	Oct-2015	Sep-2018	● Holden Creek substation is now substantially complete and internal crews have completed offline system commissioning. The over budget of \$400k was due to an prepayment for BPA design and construction which was planned for 2018 payment. In April 2018 the station will be tied into the Cougar-Thurston line, energizing the 115kV bus work. Transformer and switchgear energization as well as transferring distribution feeder load from the Leaburg Substation to Holden Creek will occur in June following BPA's execution of line impairment work comprised mainly of shrub and dirt removal to allow for adequate clearance. Downsizing of Leaburg Substation, and full commissioning of Holden Creek is planned for the end of Q3 2018. This outage is coordinated with generator outages in the low water period. -NICE
Downtown Distribution Network	\$1,000,000 (Note 1)	\$961,733	\$15,000,000	\$5,668,118	\$20,000,000	Sep-2010	Dec-2015	Dec-2028	● 2017 Total shown includes Pre-capped materials (network protectors & transformers); spending ended at 96% of budgeted. Downtown Network protector replacements have been completed in 2017 at vaults which supply the following loads: Lane County Building, Hilton, US Bank, Hult Center, U of O Baker Building, Eugene Library, Federal Building. -NICE
Grid Edge Demonstration Project	\$837,000 (Note 1)	\$140,988	\$1,200,000	\$140,988	\$1,200,000	May-2016	Jun-2017	Oct-2018	● Project direction finalized to include an installation at one 4J site in 2018 instead of 2017 as planned. Electric division and Water division are coordinating to deploy an additional 5 schools in next 5 years. Design-build RFP for turn key installation at Howard Elementary is planned for March board approval. Procurement and delivery of materials scheduled for end of Q2 of 2018 with installation and commissioning planned for Q3 of 2018. -NICE
Jessen Substation Reconfiguration	\$0	\$0	\$125,000	\$0	\$0	Mar-2017	Dec-2018	Dec-2019	● Initially planned to do design work in 2017 and construction in 2018 however project execution pushed out to 2020 to focus on the resilient spine. -NICE

### Type 3 - Strategic Projects & Programs

Project	2017 thru Q4		Project Total			Schedule			Status/Comments
	Budget	YTD Actual	Initial Plan	To-Date Actual	Project-End Projection	Start	Initial Planned Completion	Projected Completion	
Carmen Smith License Implementation	\$11,700,000	\$5,278,126	\$135,000,000	\$43,139,282	\$129,500,000	May-2009	Dec-2021	Dec-2025	● The Project End Projection has been updated to reflect the 2016 Settlement Agreement that has been filed with the FERC. Staff has completed and filed the revisions to the FERC exhibits and the Biological Assessment. We expect the license to be issued no earlier than Q3 of 2018. Implementation of 5-year plan to address aging infrastructure at Carmen Powerhouse underway. The Carmen Power Tunnel was successfully dewatered and inspected in October with minor repairs required in 2018 outage. The turbine shutoff valves were delivered late, so installation was re-scheduled to begin in May 2018 with intent to complete by the end of October 2018. Design and procurement of equipment for rebuilding the substation in 2019 and first unit rehab in 2020 has also begun. -(ZINNIKER, BOYLE)

### Total Electric Capital (Excluding Shared Services)

\$29,810,000      \$23,402,080      77%

1. Budget amounts are adjusted to reflect changes presented and approved by the Board on April 4, 2017 (April True Up)

Management Notes: Year end total expenditures vs. budget for Type 1 & Type 2 work combined was 98% excluding Shared Services and Type 3, and 77% including Type 3 (Carmen) for the overall Electric Division budget (with precap materials included). Type I expenditures year end is at 118% of budget vs. actual (\$10.3M). Type II spending ended at 85% of budgeted..

# Capital "EL1" Report: Shared Services, 2017-Q4

## Type 1 - General Capital

Capital Category	2017- Q4		Status/Comments
	Budget	YTD Actual	
General Plant - Information Technology (I.T.)	\$1,185,355	<b>\$1,860,732</b>	● Telecom, Core Switch, LB/WV Edge Switch Replacement, and Wireless Infrastructure Project work underway. POs created and not yet paid against. (Bach)
General Plant - Buildings & Land Management	\$1,322,000	<b>\$646,926</b>	● The HQ Elevator work is complete. Waiting for final close out documentation from Kone in order to pay final invoices. (Wahto) Work completed on the ROC Communications Tower as of EOY 2017 includes fence modifications and gate installations, racking relocation and completion of new racking foundations temporary fencing installation, site prep (grubbing and leveling), shelter and tower foundations, as well as some conduit and trench work. (Wolfe)
General Plant - Electric& Water Fleet Capital	\$610,000	<b>\$285,292</b>	● As part of our Affordability Initiative, we were able to reassign underutilized fleet assets to areas in the utility that were needing vehicles and equipment replaced. By extending the life cycles of some of the fleet, we were able to deferring several projects in 2017. (Lentsch)

Note - Changes from previous report(s) are in **BOLD**

In the future, these categories will match the Capital Improvement Plans (CIPs) submitted by Water & Electric.

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## Type 2 Rehabilitation & Expansion Projects

Project	2017 - Q4		Project Total			Schedule			Status/Comments
	Budget	YTD Actual	Initial Plan	To-Date Actual	Project-End Projection	Start	Initial Planned Completion	Projected Completion	
AMI Information Technology & Integration	\$1,930,000	<b>\$2,338,152</b>	\$6,475,700	\$5,370,059	<b>\$6,475,700</b>	May-2015	Dec-2017	May-2018	● Q4 2017 - Automated meter-to-bill process is in place for 2% of customer meters, and eight-year full deployment has begun. Additional software integration work is expected to continue through the end of Q2 2018. (Jones)
Customer Information System (CIS) Replacement	\$1,500,000	<b>\$238,200</b>	\$9.7M	\$238,200	<b>\$11,150,000</b>	Sep-2016	Aug-2018	mid to late-2019	● Projected spending lower than anticipated due to availability delay in third party resources. (Moe)

## Total Shared Services Capital (This Report)

**\$6,547,355**      **\$5,369,302**      **74.85%**

Note(s) 1) April 2017 true-up budget numbers are reflected as Budget, as approved by Board on April 4, 2017.

Management Notes: Type I IT Projects are on track and on schedule. This is good news since in the past these projects have lagged for various reasons. As per the April True Up, Fleet Capital was reduced significantly due to a re-assessment of future fleet needs and strategy. AMI is progressing forward in current Opt In Strategy. Projected spending is in the 82% range for end of year, largely driven by the cancelation of HQ Fire Alarm System Upgrade and the shift to O&M from Capital by Facilities.