



**LAKE WHATCOM  
WATER AND SEWER  
DISTRICT**

**2016  
ANNUAL BUDGET**



# FY 2016 Budget

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Lake Whatcom Water & Sewer District  
1220 Lakeway Drive  
Bellingham, Washington  
98229

Approved: December 9, 2015

## Board of Commissioners:

**Leslie McRoberts, President**

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**Todd Citron, Secretary**

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**Laura Weide, Commissioner**

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**John Millar, Commissioner**

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**Bruce Ford, Commissioner**

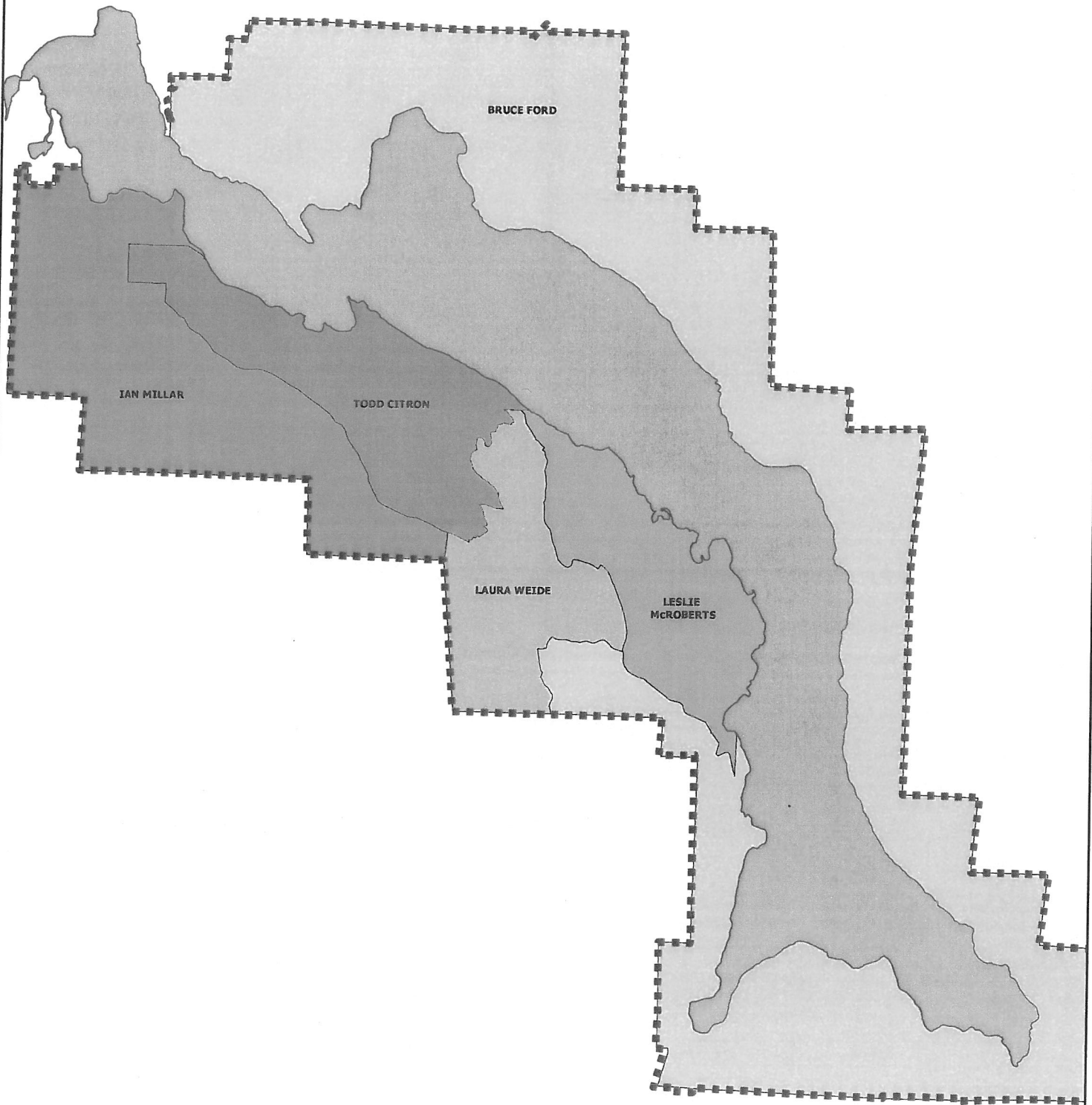
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General Manager  
Patrick Sorensen

December 9, 2015



# LAKE WHATCOM WATER & SEWER DISTRICT COMMISSIONER VOTING BOUNDARY



**UWSD COMMISSIONER VOTING BOUNDARY**

- LAURA WEIDE
- IAN MILLAR
- BRUCE FORD
- LESLIE MCROBERTS
- TODD CITRON
- DISTRICT BOUNDARY



LAKE WHATCOM WATER AND SEWER DISTRICT  
1220 LAKEWAY DRIVE  
BELLINGHAM, WASHINGTON 98229

(360) 734-9224  
FAX 738-8250

December 1, 2015

Board of Commissioners  
Lake Whatcom Water and Sewer District  
1220 Lakeway Drive  
Bellingham, WA 98229

Re: Proposed 2016 Budget

Dear Commissioners:

Attached is a copy of the proposed 2016 budget and a summary of related topical issues for your consideration and discussion:

**Expenditure & Revenue Highlights**

As illustrated within the Operations sections of the attached budget, overall net expenditures are proposed to increase by approximately 8.5% over last year's approved 2015 budget. There are a handful of major reasons for this proposed increase. This includes budgeting a cost of living and personnel benefits increase in January of 2% and step increases for those so qualified as recommended in the recently completed 2015 Salary Survey and as required through our labor agreement with AFSCME Local 114WD.

The District is entering into a new 3 year labor contract starting in January 2016 which includes various negotiated benefit increases. Other significant changes include higher fees for general liability insurance which increased by 14% as a consequence of adjusted rates that reflect actual liability costs. Previously the District's actual costs had not been properly reflected. In addition, the Washington Department of Revenue business and occupation taxes will increase by 4% in the new year.

Overall revenue for 2016 is projected to increase by approximately 4%. As called for within the District's adopted water and sewer rate plan, water rates will increase by 8.75% while sewer rates will increase by 2.5% in January. Like last year, we are conservatively budgeting for only 5 new connections in 2016. A total of 9 connections were realized in 2015. Remaining ULID No. 18 payments, which are decreasing each year, are unrestricted, and continue to be available for general operations as the original loan is paid off. Both projected revenue and expenditure figures are within 1% of the rate study recommendations.



### Operating Reserves (Working Capital)

An operating reserve is designated to provide a liquidity cushion; it protects the utility from the risk of short-term variation in the timing of revenue collection or payment of expenses. Like other types of reserves, operating reserves also serve another purpose; they help smooth rate increases over time. In the 2016 budget our operating reserve goal is \$800,000 which is 45 days of sewer expenses and 90 days of water expenses which is within the industry standard of 40- 60 days for sewer utilities and 60 - 90 days for water utilities.

### Capital Reserves (Capital Contingency)

In addition to protecting against variations in the timing of operating costs and revenues, it is prudent to maintain a capital contingency reserve to meet unexpected emergency capital outlays. We have used replacement costs to derive the targeted reserve dollar amount which equates to .5% of the replacement cost of fixed assets. In the 2016 budget we have \$930,000 sewer reserve and \$600,000 water reserve; both exceed the minimum capital contingency.

### Rate Fund System Reinvestment

The District has a policy of setting aside a certain amount of rate revenue each year for system reinvestment. Funding depreciation expense meets several standards for responsible rates: financial integrity, rate equity, and adequacy of capital funding. For 2016 the District has budgeted system reinvestment at \$837,000.

### Looking Back: 2015 Capital Improvements and Other Projects

Each year the District initiates projects from its ongoing Capital Improvement Program that are critical to maintaining our existing water and sewer systems. The largest and most time consuming project in 2015 was the Geneva AC Water Main Replacement Project. Initiated in 2013, the bulk of the construction took place from the spring through the fall of 2015. Approximately 2.5 miles of water lines were replaced in the streets of the Geneva neighborhood. Most of this work has now been completed. All but some remaining contractor asphalt repairs are completed. The remaining work will be completed in the spring of 2016 before the project is closed out.

The District continued to move forward with the design work associated with the Strawberry Point Sewer Pump Station replacement project in Geneva. However, the final bidding and contract award was moved off to the winter of 2016. This was done in order to accommodate the Geneva AC project during the summer and its demands on staff time.

Design and pre-bid preparation work with the new Division 22 water tank in Sudden Valley continued throughout 2015. In addition, the District initiated a contract for a seismic

assessment of its other existing steel water reservoirs. The District also initiated the State required water use efficiency report. This is required every 5 years. In addition, a study to evaluate the possible extension of a sewer line to address 80 + homes served by sewer within the Northshore Road sewer service area was also started. These existing homes are adjacent to an existing District owned sewer line.

Because these older homes and septic systems are next to Lake Whatcom's north shore and the District's primary drinking water source, we are investigating possible septic related pollution in the Lake. Finally, we again invested resources into our continuing effort to rehabilitate aging sewer main lines throughout the District in order to reduce inflow and infiltration into the waste water system. Intern this reduces our wastewater treatment costs.

#### Looking Forward: On-Going & Capital Improvement Projects in 2016

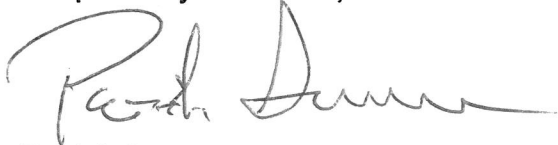
In 2016 the District will move forward on closing out asphalt paving issues associated with the Geneva AC Water Main Project. Likewise, we will be initiating the bidding and construction of the Division 22 Water Reservoir and the Strawberry Point Sewer Pump Station Replacement project. Likewise, investigation will continue on the Northshore Road sewer line extension issue, and the steel reservoir seismic review. In addition, we need to update the District's Water Comprehensive Plan. Coupled with our normal maintenance work, staff will be very busy in 2016 managing these efforts.

Each of these highlighted projects fall within the framework of the District's existing critical planning documents such as our Water and Sewer Comprehensive Plans and the previously adopted water and sewer rate schedule. Together these documents along with the policy direction provided by the Board of Commissioners serve the District in matching up needed resources to implement critical capital improvements and ongoing maintenance requirements.

#### In Conclusion

The District's financial condition remains healthy and solvent. We follow long established conservative financial budgeting practices. Debt service requirements continue to be met. Resources are being saved for future capital requirements and unforeseen emergencies. The on-going effort of planning and preparing for the future along with the operational maintenance requirements of the District are being met. This is a result of the dedication and diligence exhibited by the Board of Commissioners in establishing governing policies and by the commitment and efficiency of staff in carrying out these policies. Again, recognition needs to be given to the employees of the District who are responsible for doing a great job in managing the resources we are entrusted with on behalf of the ratepayers.

Respectively submitted,

A handwritten signature in dark ink, appearing to read "Patrick Sorensen", written in a cursive style.

Patrick Sorensen  
General Manager



## OPERATING FUND SUMMARY 401

This fund is maintained as the primary operating fund of the District. The majority of the revenue is derived from rates charged to water and sewer customers. Other revenue sources are interest income, late payment fees, recording fees, permit fees and miscellaneous charges and fees. All fees and charges are set by the Board of Commissioners. Funds collected are used to pay for operating and maintenance expenditures in accordance with the annual operating budget.



## SYSTEM REINVESTMENT FUND SUMMARY 420

The System Reinvestment Fund is a special fund intended to receive and disburse funds for capital construction projects. This fund is primarily funded through interfund income from the General Fund. It is additionally funded annually in an amount established through the rate study. Other income is in the form of grants, loans, latecomer fees and permits. The System Reinvestment Fund expenses are derived from the Capital Improvement and Maintenance Plan attached to the fiscal year 2016 budget.

## SEWER/STORM WATER CONTINGENCY FUND SUMMARY 425

The Sewer/Storm Water Contingency Fund was created to ensure that unforeseen projects related to sewer system and storm water system expenses will have funding, as approved by the Board. This fund was established with the remaining ULID 18 Fund balance after paying off all Public Works Trust Fund and Department of Ecology loans associated with the ULID.

## DWSRF PROJECTS FUND SUMMARY 440

### (DRINKING WATER STATE REVOLVING FUND)

The DWSRF Projects Fund is a special fund for the utilization of two Drinking Water State Revolving Fund loans. One project replaces aging water mains including all of the asbestos concrete (AC) water mains in the Geneva service area with ductile iron (DI) water mains. The other project constructs a new .5 MG (million gallon) reservoir to keep up with population growth primarily due to infilling in Geneva and Sudden Valley.



## **DEBT SERVICE FUNDS**

Debt Service describes all expenses in connection with the issuance and initial sale of evidences of debt, such as loans, the sale of revenue bonds, etc. The District has two debt service funds which are used to pay off loans and bonds. A Revenue Bonds and Loan Funds Summary is included in the budget document.

### **2009 BOND DEBT SERVICE FUND SUMMARY 450**

The 2009 Bond Debt Service Fund serves to provide redemption of the 2009 Bond issue. Interest is paid semi-annually, and the principal is paid annually from General Fund revenues.

### **2009 BOND RESERVE FUND SUMMARY 460**

This fund was established by the covenants of the 2009 bond sale and is restricted by definition. A reserve limitation is required to be held in the Reserve Fund until the outstanding 2009 bonds are paid in full. The bond reserve is fully funded.

### **WATER LOANS DEBT SERVICE FUND SUMMARY 470**

The Water Loans Debt Service Fund serves to provide redemption of two long term water project loans. Principal and interest are paid entirely from General Fund revenues.



## ULID 18 FUND SUMMARY

480

The ULID 18 Fund is to provide for the revenue which comes from assessments against the properties within the ULID service area, as well as the interest earned on assessments collected prior to bond payments. All debt has been satisfied for this project, and therefore funds are unrestricted. In 2013 the remaining fund balance was utilized to set up the 425 Sewer/Water Contingency Fund. This revenue source is transferred to the Operating Fund 401 monthly and will cease in 2023 upon satisfaction of all assessments by the customer base.





DESCRIPTION	FROM FUND	AMOUNT	TO FUND	AMOUNT
For System Reinvestment	401	837,000	420	837,000
For DWSRF Project Div 22 Reservoir	401	828,150	440	828,150
For DWSRF Geneva Mains Debt Service	401	139,700	440	139,700
For 2009 Bond Debt Service	401	443,050	450	443,050
For Water Loans Debt Service	401	53,870	470	53,870
From ULLID 18 payments	480	60,000	401	60,000

\$ 2,361,770	\$ 2,361,770
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	Description	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Adopted 2015	Projected 2015	Budget 2016
<b>OPERATING FUND - 401</b>								
<b>EXPENDITURES</b>								
401-53X-10-10	Admin Payroll (2% cola plus step increases - 2016)	1,210,935	1,370,178	1,437,609	1,437,711	580,500	542,005	629,284
401-53X-10-20	Admin Personnel Benefits (Medical, Retirement etc)	470,142	487,173	518,800	507,588	220,000	193,877	207,280
401-53X-10-31	Gen Admin Supplies	48,808	45,187	22,827	22,314	21,000	20,372	21,000
401-53X-10-31-01	Meetings/Team building	500	978	2,087	1,511	1,500	1,402	1,500
401-53X-10-40	Web pay/Bank Fees	5,269	9,432	11,203	17,405	18,000	27,864	20,000
	Interfocal - Lake Whatcom Management Program							
	Interfocal - Invasive Species							
	Interfocal - Lake Whatcom Tributary Monitor							
401-534-10-41-00	Water Quality Assurance Programs (TOTAL)				60,134	65,000	37,654	65,000
	County Auditor Filing Fees (Simplifile)							6,000
	Data Bar (Statement processing)							25,000
	Answering Service							2,000
	Data Pro (Time clock system)							1,500
	BIAS Financial Software							20,000
	Web Check services							3,500
	WA State Auditor							16,200
	CPA (Internal audit and Financial statements)							3,000
	Docuware/Web site maintenance and upgrade							5,000
	Legal Counsel							50,000
	3D - Computer support							20,000
	Watchguard							1,000
	Building security							1,500
	Building custodial							7,200
	Pest control							7,000
	Landscaping service							600
	Southern Whatcom Fire (hydrant maintenance)							4,500
	GE Scada System Software Maintenance - Operations							2,000
	Wilson Engineering							7,500
	Camera Van Software							1,500
	SCADA/PLC Support - Engineering/Operations							5,000
	Cartograph - Engineering/Operations							8,000
	Auto Desk - Engineering							1,000
	GIS Partnership							1,000
	Rockwell - Engineering/Operations							500
	IT Pipes							1,500
	ESRI - ARC GIS							1,500
	Invoice - Engineering							2,000
	Master Meter							2,000
	Generator Load Testing							2,000
	Cyberlock software							1,000
	Misc (Bid notices etc.)							1,000
401-53X-10-41-01	Professional Services (TOTAL)	285,389	206,315	340,633	300,258	230,000	236,713	231,500
401-53X-10-42	Communication	53,040	42,784	44,375	49,212	50,000	45,931	46,000
401-53X-10-43	Memberships/Dues	16,313	10,755	12,204	14,760	-	-	-
401-53X-10-44	WA State Dept of Revenue Taxes	138,971	146,410	164,049	166,468	-	-	-
401-53X-10-45	Admin Lease	3,031	2,850	2,287	2,310	2,000	1,471	2,000
401-53X-10-46	Property Insurance					110,000	121,322	125,000
401-53X-10-49	Admin Misc.	137,158	94,276	94,695	105,538	1,000	777	1,000
401-53X-10-49-01	Memberships/Dues	(3,484)	-	2,631	800	15,000	10,417	12,000
401-53X-10-49-02	WA State Dept of Revenue Taxes/Permits					25,000	184,548	191,500
401-53X-10-44	Training & Travel	27,518	28,136	26,707	20,118	1,000	30,767	35,000
401-53X-10-31	Tuition reimbursement	-	-	-	-	1,000	-	1,000
401-53X-10-48	Maintenance Supplies	94,592	96,068	90,632	140,958	125,000	141,535	145,000
401-53X-10-49	Operations Repair/Maint	68,496	78,807	44,345	65,735	65,000	64,006	65,000
401-53X-10-41	Insurance Claims	5,000	7,455	-	5,360	-	11,633	5,000
401-53X-10-47	Operations Contracted	14,416	25,883	9,111	10,485	10,000	9,192	10,000
401-53X-10-47	Water City of Beilingham	13,848	32,057	22,201	34,595	42,000	40,454	40,000
401-53S-60-47	Sewer City of Beilingham Treatment Fee	800,320	588,095	550,000	674,017	600,000	501,822	600,000

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	Description	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Adopted 2015	Projected 2015	Budget 2016
<b>SYSTEM REINVESTMENT FUND - 420</b>								
420-369-90-20	Prior Year Reimbursement							
420-343-40-19	DEA Permits				38,642			
420-379-10-30	Permits Capital Portion (5 new connection permits)	2,250	59,996	-	-	-	-	-
420-379-10-40	Latecomer Fees	30,561	46,676	55,508	64,096	40,000	41,000	40,000
420-397-10-00	Transfers in from Operating Fund 401	10,389	19,074			-	-	-
	Transfers in from Geneva Reserve Fund 410	1,140,000	425,063	346,806	947,000	815,000	356,000	837,000
	Transfers in from System Replacement Fund 415	138,823		13,538			-	-
		100,000					-	-
	<b>TOTAL REVENUES</b>	<b>1,422,023</b>	<b>550,809</b>	<b>415,852</b>	<b>1,049,738</b>	<b>855,000</b>	<b>397,000</b>	<b>877,000</b>
420-534-10-41	DEA Contracted Services							
420-534-90-61	DEA Refunds	13,488	6,586	3,429		-	-	-
420-534-80-41	Contracted Professional Services	19,617	-	-			-	-
420-594-38-62	Capital Outlay - Structures							
420-594-38-63	Capital Outlay - Water/Sewer Systems	1,005,927	45,065	14,367	104,392		150,000	
420-594-38-64	Capital Outlay - Machinery/Equipment	240,881	465,860	167,684	750,766		250,000	
			106,158	282,785	194,215		20,000	
	Active Projects to be completed in 2016					90,000		657,000
	New 2016 Capital Projects (see CIP detail - 2016)					765,000		220,000
	<b>TOTAL EXPENDITURES</b>	<b>1,279,913</b>	<b>623,669</b>	<b>468,265</b>	<b>1,049,373</b>	<b>855,000</b>	<b>420,000</b>	<b>877,000</b>
<b>SYSTEM REINVESTMENT FUND</b>	<b>REVENUES</b>	<b>1,422,023</b>	<b>550,809</b>	<b>415,852</b>	<b>1,049,738</b>	<b>855,000</b>	<b>397,000</b>	<b>877,000</b>
	<b>EXPENDITURES</b>	<b>(1,279,913)</b>	<b>(623,669)</b>	<b>(468,265)</b>	<b>(1,049,373)</b>	<b>(855,000)</b>	<b>(420,000)</b>	<b>(877,000)</b>
	<b>CASH/INVESTMENTS BALANCE CARRYOVER</b>							
	<b>PROPOSED 2016 YEAR END BALANCE</b>							<b>-</b>

	Description	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Adopted 2015	Projected 2015	Budget 2016
<b>SEWER/STORM WATER CONTINGENCY FUND - 425</b>								
425-361-11-00	Investment Interest				869	5,020	5,000	5,020
425-367-10-00	Transfers In from ULID 18 Fund 480			1,000,000	-	-	-	-
	Transfers In from Bond Reserve Fund 490			178,202	-	-	-	-
	<b>TOTAL REVENUES</b>			1,178,202	869	5,020	5,000	5,020
425-535-10-41	Stormwater Comp Plan (See Active Projects C1315 PH2)			24,642	9,654	-	-	-
425-535-10-89	Investment Service Charges			120	190	200	200	200
425-594-38-63	Water/Sewer Systems			-	1,300	-	-	-
425-594-38-64	Machinery/Equipment			220,480	11,144	200	200	200
	<b>TOTAL EXPENDITURES</b>			245,242	11,144	200	200	200
<b>SEWER/STORM WATER CONTINGENCY FUND</b>								
	<b>REVENUES</b>			1,178,202	869	5,020	5,000	5,020
	<b>EXPENDITURES</b>			(245,242)	(11,144)	(200)	(200)	(200)
	<b>CASH/INVESTMENTS BALANCE CARRYOVER</b>							926,910
	<b>PROPOSED 2016 YEAR END BALANCE</b>							931,730



	Description	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Adopted 2015	Projected 2015	Budget 2016
<b>DWSRF PROJECTS FUND - 440</b>								
440-333-66-46-40	Division 22 Reservoir (Permits and Design)						44,718	994,850
440-333-66-46-41	Geneva AC Mains (Permits, Design and Construction)						2,398,750	-
440-397-10-40	Transfers In from Operating Fund 401						21,276	967,850
	<b>TOTAL REVENUES</b>						<b>2,464,744</b>	<b>1,962,700</b>
440-591-34-40	Principal Loan Division 22 Reservoir							
440-591-34-41	Principal Loan Geneva AC Mains							103,700
440-592-34-40	Interest Loan Division 22 Reservoir							-
440-592-34-41	Interest Loan Geneva AC Mains							36,000
440-594-34-62	Division 22 Reservoir (Permits and Design)						7,300	-
440-594-34-63	Geneva AC Mains (Permits, Design and Construction)						2,398,750	-
	<b>TOTAL EXPENDITURES</b>						<b>2,406,050</b>	<b>1,962,700</b>
<b>DWSRF PROJECTS FUND</b>								
	<b>REVENUES</b>							
	<b>EXPENDITURES</b>							
	<b>CASH/INVESTMENTS BALANCE CARRYOVER</b>						<b>2,464,744</b>	<b>1,962,700</b>
	<b>PROPOSED 2016 YEAR END BALANCE</b>						<b>(2,406,050)</b>	<b>(1,962,700)</b>
Expenditures offset by draws as projects progress.								-



## DWSRF Loan Funded Projects

Category	Project #	Project Title / Tasks	Original Budget for 2013 Loan Application	Projected Budget to Completion (adjusted 11/19/15)	Spent to Date (11/19/2015)	Amount Remaining
Water	C1401	Division 22 Reservoir				
		Design/Permitting/Bidding	\$ 160,000.00	\$ 166,624.00	\$ 44,717.54	\$ 96,906.46
		ADM - Admin, Permits, Fees, Etc	\$ 35,000.00	\$ 25,000.00		
		PH1 - Predesign Report, CUP	\$ 45,000.00	\$ 44,734.00	\$ 44,717.54	\$ 16.46
		PH2 - Design, Bidding	\$ 80,000.00	\$ 96,890.00	\$ -	\$ 96,890.00
		Construction	\$ 825,000.00	\$ 1,590,000.00	\$ -	\$ 1,590,000.00
		PH3 - Construction Admin/Testing/Inspection	\$ 100,000.00	\$ 100,000.00		\$ 100,000.00
		CON - Construction Contract	\$ 700,000.00	\$ 1,490,000.00		\$ 1,490,000.00
		Contingency	\$ 25,000.00	\$ -		\$ -
		Total	\$ 985,000.00	\$ 1,756,624.00	\$ 44,717.54	\$ 1,686,906.46
		Loan Fee (1% of the Total)	\$ 9,850.00	\$ 9,850.00	\$ 9,850.00	\$ -
		Grand Total	\$ 994,850.00	\$ 1,766,474.00	\$ 54,567.54	\$ 1,686,906.46
		Less DWSRF Loan Amount		\$ 994,850.00		
		2016 Capital Improvement Plan Funds Required		\$ 771,624.00		

## Rate Funded Active Projects

Category	Project #	Project Title / Tasks	Original Project Budget	Projected Budget to Completion (adjusted 11/19/15)	Spent to Date (11/19/15)	Amount Remaining
Water	C1207	Reservoir Drains to Daylight				
		ENG - Engineering - Estimate	\$ -	\$ -	\$ -	\$ -
		CON - Construction - Estimate	\$ 13,000.00	\$ 13,000.00	\$ -	\$ 13,000.00
General	C1214-ADM	Water System Improvements	\$ 37,960.00			
		a. Blow-Off Parts, Valves, and Pipe		\$ 10,000.00	\$ -	\$ 10,000.00
		b. Stortz Adapters		\$ 1,000.00	\$ -	\$ 1,000.00
Sewer	C1405	Strawberry Point Sewer PS - PH1 Predesign				
		PH1 - RH2 Predesign	\$ 103,411.00	\$ 103,411.00	\$ 96,496.79	\$ 6,914.21
		PH2 - RH2 Design, Bidding	\$ 95,169.00	\$ 95,169.00	\$ 101,493.92	\$ (6,324.92)
		PH3 - RH2 Value Engineering, Rebid	\$ -	\$ 27,006.00	\$ 25,097.09	\$ 1,908.91
		PH4 - RH2 Services During Construction - Estimate	\$ 80,000.00	\$ 50,000.00	\$ -	\$ 50,000.00
		CON - Construction - Estimate	\$ 450,000.00	\$ 400,000.00	\$ -	\$ 400,000.00
General	C1412	Facility Improvements	\$ 10,000.00			
		a. 1220 LW - Irrigation conduits and boxes		\$ 2,000.00	\$ -	\$ 2,000.00
		b. SVWTP - Install Fixed VHF Radio		\$ 6,000.00	\$ -	\$ 6,000.00
		c. 1010 LV - Sliding glass door and concrete apron		\$ 2,000.00	\$ -	\$ 2,000.00
Water	C1502	SVWTP Chlorine Analyzer - Spare Acidification Unit	\$ 5,000.00	\$ 2,500.00	\$ -	\$ 2,500.00
Water	C1503	SVWTP Clearwell Overflow	\$ 5,000.00	\$ 10,000.00	\$ -	\$ 10,000.00
Water	C1504	Reservoir Site Security	\$ 5,000.00	\$ 5,000.00	\$ -	\$ 5,000.00
Water	C1505	Reservoir Condition Assessment	\$ 35,000.00	\$ 35,018.00	\$ -	\$ 35,018.00
Sewer	C1506A	2015 Smoke Testing	\$ 35,000.00	\$ 35,783.30	\$ 34,134.30	\$ 1,649.00
Sewer	C1506B	Whatcom Falls MH Repair				
		PH1 - Wilson Design	\$ 7,482.00	\$ 7,482.00	\$ -	\$ 7,482.00
		CON - Construction - Estimate	\$ 50,000.00	\$ 90,000.00	\$ -	\$ 90,000.00
Sewer	C1508	Northshore Road Sewer Service Area	\$ 10,000.00	\$ 13,000.00	\$ 10,050.00	\$ 2,950.00
Sewer	C1509	Water Use Efficiency Update	\$ 15,750.00	\$ 15,750.00	\$ -	\$ 15,750.00
Total for Active Projects			\$ 957,772.00	\$ 924,119.30	\$ 267,272.10	\$ 656,847.20

# Lake Whatcom Water and Sewer District - Capital Improvement Plan 2016 thru 2021

Program Area / CIP Project # / CIP Project Name		Fund	Total	2016	2017	2018	2019	2020	2021
Both Water and Sewer									
0129	Asset Mgmt Tools - Software Upgrade and Mobile Devices		30,000	30,000					
0131	Replace SCADA Computer Hardware - Move to Virtual Machines		20,000	20,000					
A0005	Accounting & Administration Server - Replace/Update Hardware, Network Security, & OS		41,200		20,600			20,600	
E0001	Replace Backhoe (budget estimate for new unit)	420	161,270					161,270	
V0001	Replace Tool Truck (6 tool trucks in fleet)		109,273		54,636			54,636	
V0002	Replace Administrative Staff Vehicle (3 cars in fleet)		25,000		25,000				
V0003	Replace Locator / Meter Reading Van		26,878		26,878				
V0004	Replace Light Truck		33,598		33,598				
Subtotal			447,219	50,000	160,713			236,506	
Sewer System									
0032	Agate Bay Pump Station Replacement		669,500						669,500
0038	Geneva Pump Station Replacement		669,500			669,500			
0049	Country Club Pump Station Replacement		669,500		669,500				
0050	Par Lane Pump Station Replacement		669,500				669,500		
0055	Rocky Ridge Pump Station Replacement		721,000					721,000	
0120	LW Interceptor Valve and Detention Basin Manual Valve Stem Extension		20,000	20,000					
0124	Rehabilitate Old Flat Car Sewer Pump Station - Construction		77,250			77,250			
0128a	Procure Additional Backup Generators - Stationary for Marina-Tomb		40,000	40,000					
0128b	Procure Additional Backup Generators - Strawberry Canyon Extension Cord		10,000		10,000				
0128c	Procure Additional Backup Generators - Portable Generator		60,000			60,000			
0132	Electrical Design for Fault Tolerant Control System Backup Power		10,000	10,000					
A0010	Update Sewer Comprehensive Plan (Current Plan Dated 6-14-2014)		66,950				66,950		
S0001	EPA Capacity, Management, Operations, & Maintenance (CMOM) Projects - Sewer I&I		824,000		164,800	164,800	164,800	164,800	164,800
Subtotal			4,507,200	70,000	844,300	971,550	901,250	885,800	834,300
Water System									
0060	Eagleridge Fire Pump Control Upgrade		51,500		51,500				
0108	Replace SVWTP Booster Station Roof		25,750		25,750				
0110	Security - Intrusion Alarms at Reservoirs, Cameras as SVWTP AHWTP		10,300		10,300				
0118	Leak Locator Equipment		9,709		9,709				
0125	Mechanical Staff Gauge for SVWTP Clearwell Reservoir		10,300		10,300				
0130	Eagleridge Booster Station Controls Reconfiguration and PLC Programming		50,000		50,000				
0134	SVCA Louise Creek Water Main Relocation (Need to develop cost)		50,000		50,000				
A0007	Water System Plan - Update (Current Plan Expires 3-15-2017)		100,000	100,000					
W0002	Water System Rehab and Replacement Projects	420	800,000			200,000	200,000	200,000	200,000
W0003	SVWTP Filter 3&4 Media - Replace		21,503						21,503

Program Area / CIP Project # / CIP Project Name		Fund	Total	2016	2017	2018	2019	2020	2021
W0005	Reservoirs - Inspection & Maintenance		25,750		25,750				
W0007	SVWTP Filter 1&2 Media - Replace		21,503						21,503
Subtotal			1,176,314	100,000	233,309	200,000	200,000	221,503	221,503
Grand Total			6,130,733	220,000	1,238,321	1,171,550	1,101,250	1,343,809	1,055,803

\* Note: Cost Estimates in 2016 Dollars

## CAPITAL PROJECT NARRATIVE

<b>Project Name:</b>	LWB Interceptor Valve and Detention Basin Manual Valve Stem Extension
<b>CIP #:</b>	0120

Asset Register:	LWWSD → Sewer → Pump Stations → Marina and Tomb				
Failure Mode:	<u>Capacity</u>	Level of Service	Mortality	Efficiency	
Business Risk Exposure:	6	= 2 x 3 x 1 (PoF x CoF x Redundancy)			
Remaining Life:	N/A	Consumed Life:	N/A	Effective Life:	60

### PURPOSE and DESCRIPTION OF THE PROJECT

This project improves the District's ability to control and divert high sewer flows during wet weather events.

LWB Interceptor Valve. During extreme wet weather events Airport and North Point sewer pump stations routinely compete for capacity in the Lake Whatcom Boulevard (LWB) Sewer Interceptor that flows north to the Cable Street sewer pump station. LWB Interceptor flow is maximized by District crews by manually diverting flow to the detention basin. An additional valve on the LWB Interceptor between the tie-in points for Airport and North Point would allow the District better control of flow direction. Airport flow could manually be isolated from North Point allowing Airport to utilize more of the LWB Interceptor capacity. North Point flow could be throttled to flow both directions: northerly via LWB Interceptor or southerly to the detention basin. The additional valve provides more control possibilities for District crews to maximum system capacity and control flow during wet weather events.

Detention Basin Manual Valve Stem Extension. An automatic pinch valve regulates flow from the detention basin to the Sudden Valley sewer pump station wet well. There is an isolation gate valve that can be used as a redundant means of throttling flow and for maintenance of the pinch valve. The gate valve is located at the bottom of a very deep manhole. This project is to install a valve stem extension to allow operation of the gate valve at the surface. This will reduce the number of confined space entries by crew as well as provide a redundant means to regulate flow to the wet well should the pinch valve fail.

#### Budget Estimate

LWB Interceptor Valve:	\$15,000
<u>Detention Basin Manual Valve Stem Extension:</u>	<u>\$5,000</u>
<b>Total Estimate</b>	<b>\$20,000</b>

Assumes installation by District crews. Cost estimate in 2016 dollars.

For further information about this project call Bill Hunter

#### Revision History

- Created 12/2/2015 by BH.

## CAPITAL PROJECT NARRATIVE

<b>Project Name:</b>	Procure Additional Backup Generators
<b>CIP #:</b>	0128

Asset Register:	LWWSD → Sewer → Pump Stations				
Failure Mode:	Capacity	Level of Service	Mortality	Efficiency	
Business Risk Exposure:	9	= 3 x 3 x 1 (PoF x CoF x Redundancy)			
Remaining Life:	N/A	Consumed Life:	N/A	Effective Life:	30

### PURPOSE and DESCRIPTION OF THE PROJECT

Several recent wind storm and wide spread power outage events (August 29<sup>th</sup> storm and a couple in October/November 2015) highlighted a challenge and urgency for District crews to get portable generators to several smaller but critical sewer pump stations.

Staff recommends procuring an additional generator, installing a permanent extension cord at Strawberry Canyon, and installing a stationary generator to serve both Marin and Tomb.

Phase 1 (2016): Install a single sound enclosed stationary generator at Marina to serve both Marina and Tomb sewer pump stations.

Phase 2 (2017): Install permanent extension cord at Strawberry Canyon sewer pump station. The station is situated at the end of a long narrow dead end cul-de-sac in Sudden Valley. Maneuvering a generator into position is difficult. The intent is to position the extension cord plug at a location that simplifies and expedites portable generator hookup. The extension is a conceptual idea that will need to develop into a plan with a cost estimate.

Phase 3 (2018): Procure an additional portable generator.

#### Budget Estimate

Phase 1 (2016):	
\$35,000	Sound enclosed stationary generator
<u>\$ 5,000</u>	Slab, site work, field wiring
\$40,000	Total estimate
Phase 2 (2017):	\$10,000 (conceptual estimate)
Phase 3 (2018):	\$60,000 (82KW trailered generator from GSA)

Assumes site prep and installation by District crews. Cost estimate in 2016 dollars. For further information about this project call Bill Hunter

#### Revision History

- Created 12/2/2015 by BH.

## CAPITAL PROJECT NARRATIVE

<b>Project Name:</b>	Asset Management Tools - Software Upgrade and Mobile Devices
<b>CIP #:</b>	0129

Asset Register:	LWWSD → Administration				
Failure Mode:	Capacity	Level of Service	Mortality	<u>Efficiency</u>	
Business Risk Exposure:	N/A	= _ x _ x _1 (PoF x CoF x Redundancy)			
Remaining Life:	N/A	Consumed Life:	N/A	Effective Life:	N/A

### PURPOSE and DESCRIPTION OF THE PROJECT

The District utilizes Cartegraph as its operations management software and database tool to track assets, depreciation, events, inspections, work order history, and capital improvements. Cartegraph has been utilized by the District for more than 15 years. The software has been upgraded routinely during that time as part of the annual maintenance/support subscription. The existing platform is an application-based SQL database with a license for 5 concurrent users.

Cartegraph has developed a modern web-based platform that can be accessed anywhere including the District office, shop, and mobile devices in the field. The new platform is called Cartegraph OMS (short for Operations Maintenance System). Cartegraph OMS adds new capabilities for field maintenance workers to utilize asset data, maps, and perform data entry in the field.

This project upgrades Cartegraph to the new web-based platform, migrates existing data to the new database, increases the concurrent user license from 5 to 15, and adds 15 new ArcGIS online licenses. Also included in the budget are 3 new iPads for mobile access by field maintenance workers to access Cartegraph out in the field. Cartegraph provides in-depth online video training for its new system. The annual maintenance & support subscription is about the same cost as the current system.

#### Budget Estimate

Cartegraph OMS Upgrade:	\$26,000
IT Consultant Assistance:	\$1,500
<u>3 iPad Mobile Devices:</u>	<u>\$2,500</u>

Total Estimate      \$30,000

Cost estimate in 2016 dollars.

For further information about this project call Bill Hunter

#### Revision History

- Created 12/2/2015 by BH.



## CAPITAL PROJECT NARRATIVE

<b>Project Name:</b>	Replace SCADA Computer Hardware – Move to Virtual Machines
<b>CIP #:</b>	0131

Asset Register:	LWWSD → Administration				
Failure Mode:	Capacity	Level of Service	Mortality	Efficiency	
Business Risk Exposure:	N/A	= _ x _ x _1 (PoF x CoF x Redundancy)			
Remaining Life:	N/A	Consumed Life:	N/A	Effective Life:	N/A

### PURPOSE and DESCRIPTION OF THE PROJECT

The District's existing SCADA computers were placed into service approximate 5 years ago. This hardware is mission-critical for both daily and emergency operations.

This project replaces desktop-grade hardware with server-grade hardware running VMware ESXi bare-metal hypervisor. ESXi allows operating systems running SCADA software to run as virtual machines. Virtual machines allow easier system backup, restoration, and fail-over redundancy.

3 servers will be procured. One will be installed at the Sudden Valley Water Treatment Plant, another at the District Shop. This will leave one extra unit as a hardware redundant backup.

#### Budget Estimate

Server Hardware:	\$15,000
IT Consultant Assistance:	\$2,000
<u>SCADA Software Consultant Assistance:</u>	<u>\$3,000</u>
<b>Total Estimate</b>	<b>\$20,000</b>

Cost estimate in 2016 dollars.

For further information about this project call Bill Hunter

#### Revision History

- Created 12/2/2015 by BH.

## CAPITAL PROJECT NARRATIVE

<b>Project Name:</b>	Electrical Design for Fault Tolerant Control System Backup Power
<b>CIP #:</b>	0132

Asset Register:	LWWSD → Sewer → Pump Stations → Beaver				
Failure Mode:	Capacity	Level of Service	Mortality	Efficiency	
Business Risk Exposure:	N/A	= _ x _ x _1 (PoF x CoF x Redundancy)			
Remaining Life:	N/A	Consumed Life:	N/A	Effective Life:	N/A

### PURPOSE and DESCRIPTION OF THE PROJECT

On October 30, 2015 the District experienced a control system failure at Beaver sewer pump station that resulted in a wastewater spill to the county road-side ditch. The battery backup power conditioning device failed causing the station's controls to lose power – even hand controls.

The District is currently looking into solution alternatives via its vendors and electrical consultants. If a readily available solution is not found in this cursory process, staff will conduct a more formal electrical engineering review of the existing control system panel by utilizing a consultant to perform a study.

The budget estimate is a place holder until a solution or better defined scope of work is developed.

#### Budget Estimate

Solution or Electrical Engineering Study:      \$10,000

Cost estimate in 2016 dollars.

For further information about this project call Bill Hunter

#### Revision History

- Created 12/2/2015 by BH.



## CAPITAL PROJECT NARRATIVE

<b>Project Name:</b>	Water System Plan - Update
<b>CIP #:</b>	A0007

Asset Register:	LWWSD → Water				
Failure Mode:	Capacity	Level of Service	Mortality	Efficiency	
Business Risk Exposure:	8	= 1 x 8 x 1 (PoF x CoF x Redundancy)			
Remaining Life:	1 year	Consumed Life:	5 years	Effective Life:	6 years

### PURPOSE and DESCRIPTION OF THE PROJECT

The District's current Water System Plan was approved by Washington State Department of Health on March 15, 2011. An approved updated is required on or before March 15, 2017 pursuant to WAC 246-290-100(9). This project includes updating the plan with current data and long term planning assumptions for submittal and approval by the state Department of Health.

A current Water System Plan is required to:

- Demonstrate the system's operational, technical, managerial, and financial capability to achieve and maintain compliance with relevant local, state, and federal plans and regulations;
- Demonstrate how the system will address present and future needs in a manner consistent with other relevant plans and local, state, and federal laws, including applicable land use plans;
- Establish eligibility for funding under chapter 246-296 WAC (Drinking water state revolving fund loan program).

A Water System Plan is required for the following categories of community public water systems:

- Systems having one thousand or more services;
- Systems required to develop water system plans under the Public Water System Coordination Act of 1977 (chapter 70.116 RCW);
- Any system experiencing problems related to planning, operation, and/or management as determined by the department;
- All new systems;
- Any expanding system; and
- Any system proposing to use the document submittal exception process in WAC 246-290-125 (Project report and construction document submittal exceptions).

Budget Estimate:      \$100,000 (cost in 2016 dollars)

For further information about this project call Bill Hunter

#### Revision History

- Updated project description and budget estimate 12/2/2015 by BH.

# REVENUE BONDS AND LOANS SUMMARY

The District has obtained publicly funded loans to construct projects. The project title, loan remaining, funding source, agency and interest rates are noted as follows:

Project Title	Balance Remaining 1/1/2016	Funding Source	Agency	End Date	Rate
Geneva/Sudden Valley Water Distribution Construction	\$ 330,764	Rates	Public Works Trust Fund	2022	2.0%
Geneva AC Mains	\$ 2,398,750	Rates	Drinking Water State Revolving Fund	2037	1.5%
Division 22 Reservoir	\$ 994,850	Rates	Drinking Water State Revolving Fund	2037	1.5%
Post Point Improvements - City of Bellingham	\$ 2,292,804	Rates	Inter-local agreement	2034	5.13%
2009 Revenue Bonds Outstanding	\$ 4,365,000	Rates		2029	4.0%
<b>Total Debt Outstanding - 1/1/2016</b>	<b>\$ 10,382,168</b>				

	Description	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Adopted 2015	Projected 2015	Budget 2016
<b>2009 BOND DEBT SERVICE FUND - 450</b>								
450-361-11-00	Investment Interest							
450-397-10-00	Transfers In from Operating Fund 401							
	Transfers In from Bond Capital Projects Fund 430	447,250	295,500	443,875	447,450	448,050	447,827	443,050
			150,000				-	-
	<b>TOTAL REVENUES</b>	<b>447,250</b>	<b>445,500</b>	<b>443,875</b>	<b>447,450</b>	<b>448,050</b>	<b>447,827</b>	<b>443,050</b>
450-535-10-41	Bond Admin Fee	303	-	-	300	300	100	100
450-591-35-72	Redemption of Long Term Debt	215,000	220,000	225,000	235,000	245,000	245,000	250,000
450-592-35-83	Bond Interest Payments	231,950	225,500	218,800	212,150	202,750	202,750	192,950
	<b>TOTAL EXPENDITURES</b>	<b>447,253</b>	<b>445,500</b>	<b>443,900</b>	<b>447,450</b>	<b>448,050</b>	<b>447,850</b>	<b>443,050</b>
<b>2009 BOND DEBT SERVICE FUND</b>								
	<b>REVENUES</b>	<b>447,250</b>	<b>445,500</b>	<b>443,875</b>	<b>447,450</b>	<b>448,050</b>	<b>447,827</b>	<b>443,050</b>
	<b>EXPENDITURES</b>	<b>(447,253)</b>	<b>(445,500)</b>	<b>(443,900)</b>	<b>(447,450)</b>	<b>(448,050)</b>	<b>(447,850)</b>	<b>(443,050)</b>
	<b>CASH/INVESTMENTS BALANCE CARRYOVER</b>							
	<b>PROPOSED 2016 YEAR END BALANCE</b>							<b>-</b>

	Description	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Adopted 2015	Projected 2015	Budget 2016
<b>2009 BOND RESERVE FUND (RESTRICTED) - 460</b>								
460-361-11-00	Investment Interest	6,677	3,369	-	2,860	2,860	9,813	10,000
	<b>TOTAL REVENUES</b>	6,677	3,369	-	2,860	2,860	9,813	10,000
460-535-10-89	Investment Service Charges			24	205	200	200	200
	<b>TOTAL EXPENDITURES</b>	0	0	24	205	200	200	200
	<b>REVENUES</b>	6,677	3,369	-	2,860	2,860	9,813	10,000
	<b>EXPENDITURES</b>	-	-	(24)	(205)	(200)	(200)	(200)
	<b>CASH/INVESTMENTS BALANCE CARRYOVER</b>							513,400
	<b>PROPOSED 2016 YEAR END BALANCE</b>							523,200



	Description	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Adopted 2015	Projected 2015	Budget 2016
<b>ULID 18 FUND - 480</b>								
480-361-11-00	Investment Interest							
480-361-40-00	ULID 18 Interest/Penalties	59,793	50,356	18,136	-	-	-	-
480-368-10-00	Current ULID 18 Principal Payments	47,834	39,218	39,475	31,314	23,000	22,000	20,000
480-379-10-30	Latecomers Fee	66,417	53,041	75,197	58,262	50,000	45,000	40,000
480-397-10-00	Transfers In from Operating Fund 401 (re-payment)	5,181	5,446	5,711	-	-	5,445	-
		113,335	113,335	-	-	-	-	-
	<b>TOTAL REVENUES</b>	<b>292,560</b>	<b>261,396</b>	<b>138,519</b>	<b>89,576</b>	<b>73,000</b>	<b>72,445</b>	<b>60,000</b>
480-535-10-89	Sewer Debt Service Charges							
480-591-35-73	Redemption of Long Term Debt Loan 063	400	1,221	158	-	-	-	-
480-592-35-81	Debt Service Interest Loan 44A	236,683	241,383	2,663,577	294	-	-	-
480-592-35-82	Debt Service Interest Loan 44B	7,029	6,396	1,449	-	-	-	-
480-592-35-83	Debt Service Interest Loan 063	60,212	58,227	8,372	-	-	-	-
480-597-10-00	Transfers Out to Sewer/Storm Water Contingency Fund 425	7,938	7,276	6,321	1	-	-	-
	Transfers Out to Operating Fund 401			1,000,000	-	-	-	-
				177,364	89,280	73,000	72,445	60,000
	<b>TOTAL EXPENDITURES</b>	<b>312,262</b>	<b>314,503</b>	<b>3,857,241</b>	<b>89,575</b>	<b>73,000</b>	<b>72,445</b>	<b>60,000</b>
<b>ULID 18 LOAN DEBT SERVICE</b>	<b>REVENUES</b>	<b>292,560</b>	<b>261,396</b>	<b>138,519</b>	<b>89,576</b>	<b>73,000</b>	<b>72,445</b>	<b>60,000</b>
	<b>EXPENDITURES</b>	<b>(312,262)</b>	<b>(314,503)</b>	<b>(3,857,241)</b>	<b>(89,575)</b>	<b>(73,000)</b>	<b>(72,445)</b>	<b>(60,000)</b>
	<b>CASH/INVESTMENTS BALANCE CARRYOVER</b>							
	<b>PROPOSED 2016 YEAR END BALANCE</b>							

**Lake Whatcom Water & Sewer District  
Organization Chart**



# LAKE WHATCOM WATER AND SEWER DISTRICT

## PERSONNEL SUMMARY

2016 BUDGET DATA

POSITION	NO. OF EMPLOYEES	ANNUAL GROSS	ADMINISTRATION	OPERATIONS
General Manager	1	\$ 146,899	\$ 146,899	
Asst. Manager/Engineer	1	125,832	125,832	
Finance Manager/Treasurer	1	105,846	105,846	
Administrative Assistant	1	75,211	75,211	
Accounts Receivable	1	61,887	61,887	
Accounts Payable/Payroll	1	61,887	61,887	
Accounting Clerk	0.5	26,732	26,732	
Commissioners		25,000	25,000	
Construction Engineer	1	84,552		\$ 84,552
Engineering Tech/Safety Officer	1	72,304		72,304
Utility Systems Specialist	1	68,231		68,231
Water Treatment Plant Operator	1	78,978		78,978
Maintenance Supervisor	1	96,002		96,002
Maintenance Worker 2	5	341,155		341,155
Maintenance Worker 1	0	-		-
Maintenance Electrician	1	87,048		87,048
Overtime		40,000		40,000
Stand-By		40,000		40,000
Sub-Totals	17.5	<u>\$1,537,564</u>	<u>\$ 629,294</u>	<u>\$ 908,270</u>
Social Security		\$ 117,624	\$ 48,141	\$ 69,483
PERS		139,307	55,655	83,652
Unemployment		5,850	2,275	3,575
Worker's Comp (L&I)		26,309	5,246	21,063
Medical/Dental Benefits		249,214	83,857	165,357
Def Comp Match		21,164	8,058	13,106
Sick Leave Buy Out		3,672	2,098	1,574
Longevity		2,040		2,040
HRA VEBA		<u>5,250</u>	<u>1,950</u>	<u>3,300</u>
Sub-Totals		<u>\$ 570,430</u>	<u>\$ 207,280</u>	<u>\$ 363,149</u>
GRAND TOTALS		<u><u>\$2,107,994</u></u>	<u><u>\$ 836,574</u></u>	<u><u>\$ 1,271,419</u></u>