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

REGULAR MEETING
OF THE BOARD OF COMMISSIONERS

AGENDA

March 8, 2017

6:30 p.m. – Regular Session

1. CALL TO ORDER

2. PUBLIC COMMENT OPPORTUNITY
   At this time, members of the public may address the Commission. Please state your name prior to making comments.

3. ADDITIONS, DELETIONS, OR CHANGES TO THE AGENDA

4. CONSENT AGENDA

5. SPECIFIC ITEMS OF BUSINESS:

   A. North Shore Water Quality Testing
   B. Academy Road Water Service
   C. Monthly Budget Analysis
   D. Geneva/Pat Lane Sewage Pump Stations Upgrade – Engineering Scope of Work and Fee
   E. Abandoned Water Tank Update

6. OTHER BUSINESS

7. MANAGER'S REPORT

8. PUBLIC COMMENT OPPORTUNITY

9. ADJOURNMENT

LAKE WHATCOM WATER AND SEWER DISTRICT

AGENDA BILL

DATE SUBMITTED:	February 27, 2017		
TO BOARD OF COMMISSIONERS			
FROM: Patrick Sorensen	MANAGER APPROVAL		
MEETING AGENDA DATE:	March 8, 2017		
AGENDA ITEM NUMBER:	5.A.		
SUBJECT:	North Shore Water Quality Testing Update		
LIST DOCUMENTS PROVIDED ⇨ NUMBER OF PAGES INCLUDING AGENDA BILL: _____	1.		
	2.		
	3.		
TYPE OF ACTION REQUESTED	RESOLUTION ☐	FORMAL ACTION/ MOTION ☐	INFORMATIONAL/ OTHER ☒

BACKGROUND / EXPLANATION OF IMPACT
Rob Zisette from Herrera Environmental will give a verbal update at the meeting. He will be phoning in to report preliminary findings.

FISCAL IMPACT
Not applicable at this time.

RECOMMENDED BOARD ACTION
Listen to Zisette's report and discuss.

PROPOSED MOTION
No proposed motion at this time.

LAKE WHATCOM WATER AND SEWER DISTRICT

AGENDA BILL

DATE SUBMITTED:	February 27, 2017		
TO BOARD OF COMMISSIONERS			
FROM: Bill Hunter	MANAGER APPROVAL		
MEETING AGENDA DATE:	March 8, 2017		
AGENDA ITEM NUMBER:	5.B.		
SUBJECT:	Academy Road Water Service		
LIST DOCUMENTS PROVIDED ⇨ NUMBER OF PAGES INCLUDING AGENDA BILL: _____	1. Letter from Langabeer & Traxler, P.S. dated 2/15/17 2. Letter from Freeland & Associates dated 2/14/2017 3. District Administrative Code Section 3.4.3 and 3.4.4 4. District Sketch 5. Easement Exhibit "B"		
TYPE OF ACTION REQUESTED	RESOLUTION ☐	FORMAL ACTION/ MOTION ☒	INFORMATIONAL/ OTHER ☐

BACKGROUND / EXPLANATION OF IMPACT

The owners of the property located at 1915 Academy Road are requesting a waiver from the water connection requirements shown in Section 3.4.3 of the District's Administrative Code (attached).

The District's Administrative Code lists several criteria that the Board will evaluate during consideration of a Petition to Waive or Adjust Connection Requirements. Criteria per District Administrative Code section 3.4.4:

1. *Expansion of the system to serve the new development is considered part of the cost of the new development.*

   Staff Comments:

   For perspective, the South Geneva Developer Extension Agreement was completed in Lake Whatcom Water Sewer District in 2011. The South Geneva project included approximately 2,200 lineal feet of small diameter sewer force main, 2,300 lineal feet of 8" water main, and a water booster station. The total project cost was $753,600. Of the total spent, about 70% ($527,520) was related to water, and 30% ($226,080) was related to sewer. The facilities can serve up to 11 sewer connections and 14 water connections.

The developer's engineer for the Academy Road property estimates water improvements could cost around $600,000. Proposed improvements would pump water from the Upper Agate Heights Reservoir 500 lineal feet northwest to Academy Road within an existing District utility easement on Lake Whatcom Residential Treatment Center land, then 3,000 lineal feet west along the public road right of way to the nearest property corner of 1915 Academy Road. This adds up to about 3,500 lineal feet of piping and a new booster station.

It is important to note that the Agate Heights Water Treatment Plant has capacity for only 5 more connections. The treatment plant will need to be expanded to accommodate any more than 5 connections. The District's cost estimate for improvements to serve the full North Shore build-out is around $600,000.

2. *Costs for some developments will be more than others due to location and physical challenges.*

Staff Comments:

Location and physical challenges for 1915 Academy Road include: small number of potential connections on a 3,500 lineal foot distribution line can create stagnate water problems (taste, odor, low chlorine residual), 3,500 feet away from District water source (Upper Agate Height Reservoir), and topography that requires a booster station (no water service during power outages unless a generator is installed).

3. *Waiving connection requirements will make it increasingly more difficult and costly to serve the same development in the future.*

Staff Comments:

There are very few lots (both developed and undeveloped) on Academy Road. It is unlikely that there will be enough interest from enough properties to make it economically feasible for the Lake Whatcom Water and Sewer District to pursue extending water service to this area in the future.

4. *Some required improvements may not be immediately placed into service but will greatly reduce the costs and complexity to serve the development in the future (example, building a waterline across the parcel frontage hat remains dry until service is extended to the site.).*

Staff Comments:

It is unlikely that the District will extend service to this area. The chances of utilizing any "dry" improvements in the future are small.

5. *A distance of approximately ½ mile (2,640 lineal feet) is considered close enough to require connection. Longer distances to connect to the system may be appropriate for larger developments.*

Staff Comments:

The distribution line length from the Upper Agate Heights Reservoir to the nearest property corner of 1915 Academy Road is about 3,500 feet (0.66 miles). If the District were to require running the main across the lot frontage of Academy Road per District standards, it adds another 500 lineal feet for a total pipeline length of 4,000 lineal feet (0.76 miles).

FISCAL IMPACT

None.

RECOMMENDED BOARD ACTION

Due to the small number of potential connections and distance from District water sources and infrastructure, staff recommends that the developer's request to waive connection requirements is approved. Staff also recommends that a Covenant Binding Property Regarding Future Water and/or Sewer Service be recorded with Whatcom County Auditor.

PROPOSED MOTION

Approve the developer's request to waive the requirement to connect 1915 Academy Road (Gradual Valley Short Plat) to District water provided a Covenant Binding Property Regarding Future Water and/or Sewer Service is recorded for all lots in the short plat prior to issuance of the Denial of Service.

LANGABEER & TRAXLER, P.S.
Attorneys at Law

Richard J. Langabeer
Dannon C. Traxler

EMAIL: dtraxler@langabeertraxler.com

February 15, 2017

Board Members
Lake Whatcom Water & Sewer District
1220 Lakeway Drive
Bellingham, WA 98229

Re: 1915 Academy Road—Gradual Valley Short Plat
Petition for Waiver

Dear Board Members:

I am writing on behalf of my clients Neil and Lanna Ray to formally petition the Lake Whatcom Water & Sewer District's (the District) Board for a waiver from the requirements of the District's administrative code provision 3.4.3 which requires short plats to connect to the District's water system. Section 3.4.4 of the administrative code allows a property owner to petition the Board for a waiver of connection requirements if the parcel is located such that connection is unlikely within the next 20 years, as determined by the District.

Please see the attached petition from Freeland Engineers & Associates with engineering information that supports the Rays' petition for a waiver from the District's connection requirements. We request that the petition be placed on the Board's February 22, 2017 meeting agenda for consideration.

Please contact me with any questions and confirm that the Board will consider the petition on February 22, 2017.

Sincerely,
LANGABEER & TRAXLER, P.S.

Dannon C. Traxler

DCT: ao
cc: client
enclosure

06

FREELAND & ASSOCIATES
CIVIL ENGINEERS

220 W. Champion St.; Ste. 200
Bellingham, Washington
360.650.1408

February 14, 2017

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

Attention: Board of Commissioners

Re: Petition for a Waiver to Connection
Water Service – Lake Whatcom Water and Sewer District
Gradual Valley Short Plat
1915 Academy Road

Dear Board of Commissioners:

It is our understanding that the above referenced Plat is within the Service Area of Lake Whatcom Water and Sewer District. According to Section 3.4.3 of the Lake Whatcom Water and Sewer District (LWWSD) Administrative Code, all short plats outside the UGA require connection to the District water system.

> ***"Property located within District boundaries shall be deemed capable of being served by a public water system of the District when; (1) such property meets the criteria defined in Title 3.4 and Title 4.2 of this Code, (2) when zoning is appropriate, (3) a valid legal lot of record exists, and (4) the District has adequate water rights and system capacity to serve the property. Properties with water systems installed by Developer Extension Agreements shall normally transfer ownership of the water facilities to the District prior to being considered capable of being served. Appropriate connection and other chargers shall be required. [Resolution No. 242A]"***

LWWSD has two potential water sources to serve the proposed Gradual Valley Short Plat, each approximately ½ mile away. One is from Eagle Ridge and the other is from Agate Heights. The source from Eagle Ridge is supplied by the City of Bellingham and service may require the approval by the City under an interlocal agreement. The other is from Agate Heights which is supplied by LWWSD and its use does not require City approval. Service from Agate Heights would require the construction of a water booster pump station and the extension of over ½ mile of watermain under a Developer Extension Agreement.

We understand that the Owner intends to petition the Board of Commissioners to waive the connection requirements due to cost and location requirements to extend water service.

It is our understanding that the Board of Commissioners will evaluate the petition considering the following:

1. Expansion of the system to serve the new development is considered part of the cost of the new development.

   The lots within the short plat were recorded and intended to rely on a Group B water system with an exempt well as a source. A recent moratorium (Hirst Decision) on building permits that rely on exempt wells as a source potentially eliminates a Group B water system as a source of water supply.

2. Costs for some developments will be more than others due to location and physical challenges.

   The short plat is located over ½ mile from any existing District water distribution mains. Physical challenges include the presence of steep slopes, streams, elevation gains and absence of right of way to construct a watermain extension. The cost of construction to extend the watermain and install a water booster pump station is approximately $600,000.

3. Waiving connection requirements will make it increasingly more difficult and costly to serve the same development in the future.

   Waiving connection requirements will make connection to a public water system less difficult and less costly, for a waiver will allow service from an alternative source.

4. Some required improvements may not be immediately placed into service but will greatly reduce the costs and complexity to serve the development in the future (example, building a waterline across the parcel frontage that remains dry until service is extended to the site).

   Existing watermains extended to serve the subject Plat are over ½ mile from said Plat. The Plat is located on the District's Service Area boundary with no future development beyond its boundaries.

5. A distance of approximately ½ mile is considered close enough to require connection. Longer distances to connect the system may be appropriate for larger developments.

The short plat is located over ½ mile from any existing District water distribution mains. The development is small and limited to four lots. Based on proximity, infrastructure requirements, and probable costs it would be prohibitive to the Property Owner to require connection to the Agate Heights or Eagle Ridge sources. A waiver to connect is reasonable because it would be so burdensome on the Property Owner, they likely would not be able to develop their Plat.

6. It is considered a minimum requirement to construct the system across or through the development whether they are immediately used for service or are placed into service in the future.

The Plat is located on the District's Service Area boundary with no future development beyond its boundaries.

7. If the connection requirement is waived or the required system improvement cannot immediately be placed into service, the Owner may develop an alternate and temporary water supply and/or onsite sewage disposal system in accordance with Whatcom County and State regulations after executing a "Covenant Binding Property Regarding Future Water and/or Sewer Service. [Resolution No. 757]

The Owner intends to develop an alternate water supply and execute a "Covenant Binding Property Regarding Future Water and/or Sewer Service".

Please let us know if you have any questions regarding this response.

Sincerely yours,

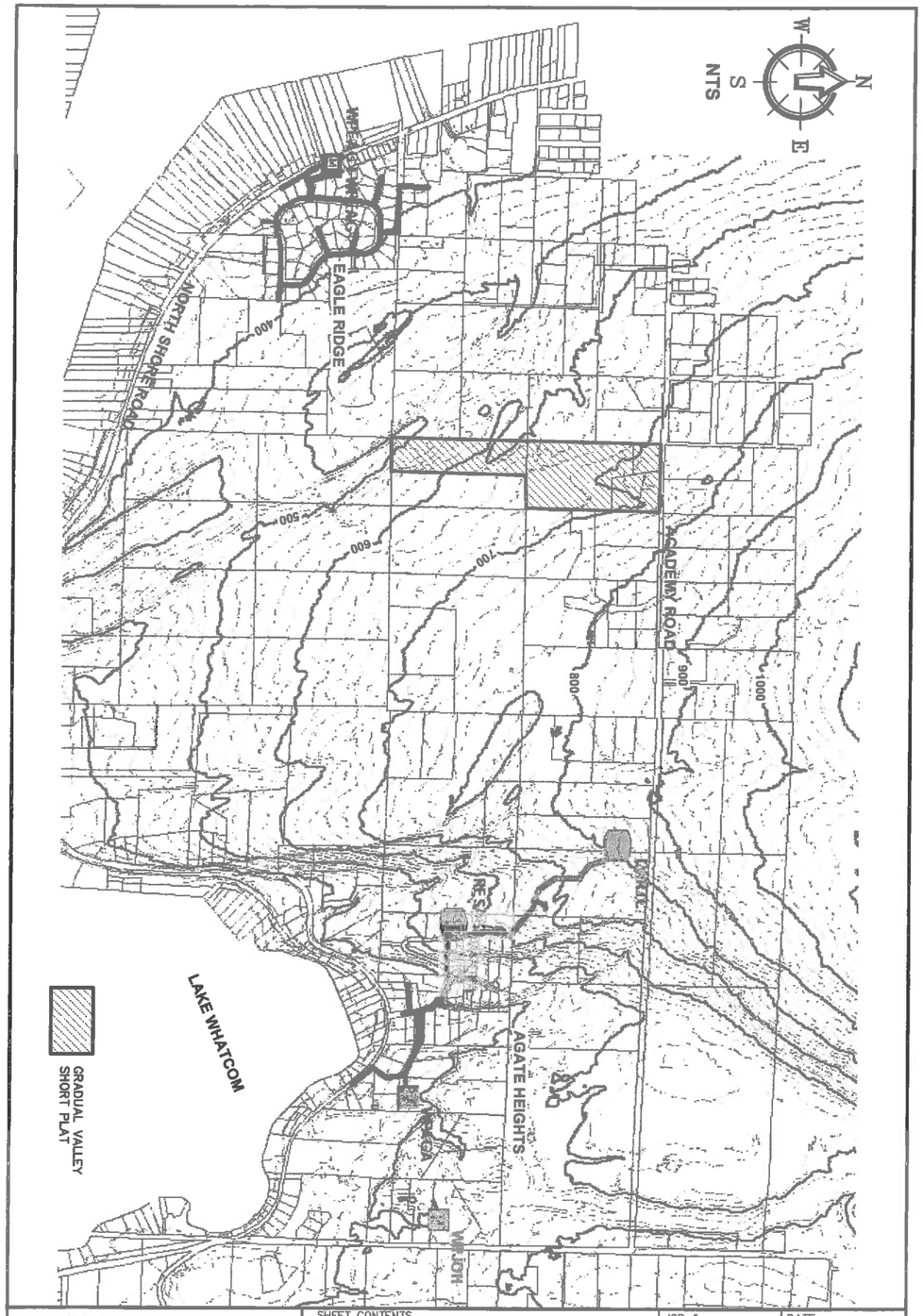
Tony Freeland

Tony Freeland, P.E

Encl. Figure W1

HARVILL A FREELAND III
STATE OF WASHINGTON
28519
REGISTERED
PROFESSIONAL ENGINEER

2-14-17



220 W. Champion Street, Suite 200 Bellingham, WA 98225 t: 360.650.1408 f: 360.650.1401 FREELAND & ASSOCIATES	SHEET CONTENTS: LAKE WHATCOM WATER & SEWER DISTRICT	JOB # 1614	DATE 2–13–2017
		DRAWING # 16146GIS1.DWG	SHEET NAME W1

If the parcel is located **outside** UGA or LAMIRD:

A. **Sufficient Sewer Main within 150-feet of Property**. Connection to the District system is required, and shall be in accordance with current District Standards.

B. **Sufficient Sewer Main more than 150-feet from Property**. The Owner may develop an onsite sewage disposal system in accordance with Whatcom County and State regulations after executing a "Covenant Binding Property Regarding Future Water and/or Sewer Service." The Owner also has the option of extending the main to and past the parcel provided Whatcom County determines the extension is consistent with the County's Comprehensive Plan and the District's Sewer Comprehensive Plan is amended to include the extension.

C. **Health Department Required Connection.** The Owner may connect even if more than 150 feet from a sufficient sewer main and outside a UGA or LAMIRD if connection is required by Whatcom County Health Department. The connection shall be made in accordance with current District Standards. [Resolution No. 757]

2. WATER SERVICE INSIDE OR OUTSIDE UGA OR LAMIRD:

A. **District Water System Adjacent to Property and Main is Sufficient**. Connection to District water system is required. The connection shall be made in accordance with current District Standards.

B. **Sufficient Water System within 200-feet of Property**. Connection to the District water system is required. Owner extends and/or replaces main past and/or through property and connects to the sufficient main by Developer Extension Agreement and in accordance with current District Standards.

If District determines that a public water main extension is not warranted, the District will install a water service from the main to meter. Meters will be set adjacent to the main near the edge of the public right-of-way or easement corridor in which the public water main is located. The property Owner installs the private water service line from the meter to the building. Properties not fronting the public water main such as those located beyond the end of the main or behind lots fronting the main will require a longer private water service line installed by the Owner from their property to the meter.

C. **Sufficient Water System more than 200-feet from Property**. District has the option of extending and/or replacing mains to within 200 feet of the property and then requiring the Owner to complete the extension and/or replacement past or through their property. The Owner extension and/or replacement of the main will be by Developer Extension Agreement and in accordance with current District Standards. If the District elects not to bring a sufficiently sized main in adequate condition within 200 feet of the property, the Owner may develop an alternate and temporary water supply in accordance with Whatcom County and State regulations after executing a "Covenant Binding Property Regarding Future Water and/or Sewer Service." [Resolution No. 757]

3.4.3 Other Development

All other developments (such as but not limited to subdivisions, plats, short plats, commercial, institutional, industrial, etc.) shall connect to the District's water and sewer system as follows:

1. SEWER SERVICE

Site is located **inside** UGA or LAMIRD:

A. Connection to District sewer system is required. The developer shall extend the sewer system past and/or through property by Developer Extension Agreement and in accordance with current District Standards. Improvements shall be sized, designed, and constructed per District Standards to serve full build-out of the area.

Site is located **outside** UGA or LAMIRD:

A. **Sufficient Sewer Main within 150-feet of Site.** Parcels within 150-feet of sufficient sewer main shall connect to the District sewer system in accordance with current District Standards.

B. **Sufficient Sewer Main more than 150-feet from Property.** The Owner may develop an onsite sewage disposal system in accordance with Whatcom County and State regulations after executing a "Covenant Binding Property Regarding Future Water and/or Sewer Service." The Owner also has the option of extending the main to and past the parcel provided Whatcom County determines the extension is consistent with its Comprehensive Plan and the extension is amended to the District's Sewer Comprehensive Plan. The sewer extension and connections shall be in accordance with current District Standards.

C. **Health Department Required Connection.** The Owner may connect even if more than 150 feet from a sufficient sewer main and outside a UGA or LAMIRD if connection is required by Whatcom County Health Department. The connection shall be made in accordance with current District Standards. [Resolution No. 757]

2. WATER SERVICE INSIDE OR OUTSIDE UGA OR LAMIRD:

A. Connection to the District water system is required. Owner extends and/or replaces main past and/or through property and connects to the sufficient main by Developer Extension Agreement per current District Standards. [Resolution No. 757]

3.4.4 Petition to Waive or Adjust Connection Requirements

The Owner may petition the Board of Commissioners to waive or adjust the connection requirements if the parcel is located such that service is unlikely to be extended to the parcel within the next 20 years as determined by the District. The Board of Commissioners will evaluate the petition considering:

1. Expansion of the system to serve the new development is considered part of the cost of the new development.
2. Costs for some developments will be more than others due to location and physical challenges.
3. Waiving connection requirements will make it increasingly more difficult and costly to serve the same development in the future.
4. Some required improvements may not be immediately placed into service but will greatly reduce the costs and complexity to serve the development in the future (example, building a waterline across the parcel frontage that remains dry until service is extended to the site).
5. A distance of approximately ½ mile is considered close enough to require connection. Longer distances to connect to the system may be appropriate for larger developments.

6. It is considered a minimum requirement to construct the system across or through the development whether they are immediately used for service or are placed into service in the future.

If the connection requirement is waived or the required system improvements cannot immediately be placed into service, the Owner may develop an alternate and temporary water supply and/or onsite sewage disposal systems in accordance with Whatcom County and State regulations after executing a "Covenant Binding Property Regarding Future Water and/or Sewer Service. [Resolution No. 757]

3.4.5 Covenant Binding Property Regarding Future Water and/or Sewer Service

The covenant runs with the land and is signed and notarized by the property owner and District General Manager. The owner records the document at the County Auditor's office and delivers the original to the District. The covenant allows the owner to develop a temporary water supply and/or onsite disposal system, restricts the owner from protesting the formation of a utility local improvement district to extend water and/or sewer to the parcel, and requires the owner to connect to the District system when service becomes available at such time as the District so determines. [Resolution No. 757]

3.5 Permits and Connection Charges

3.5.1 Permit Fees

At the time the Water and/or Sewer Permit is applied for, the applicant shall pay to the District, or its designated representative, the Permit Fee in accordance with the District's current Master Fees and Charges Schedule. The Permit Fee is a component of the connection charge. Water and/or Sewer Permits are not transferable, nor are the fees or charges paid for them refundable. [Resolution No. 757, 799]

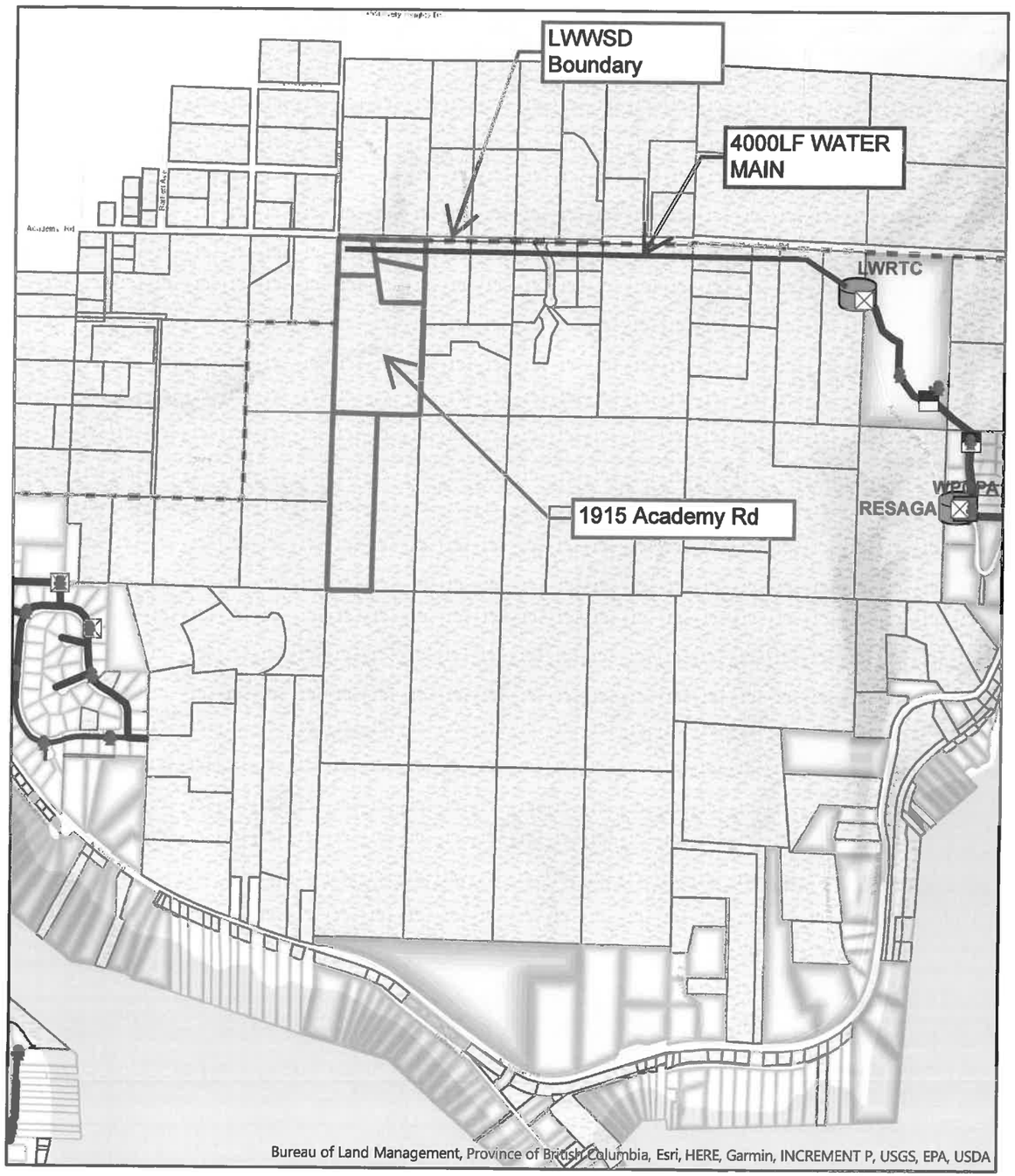
3.5.2 Connection Charges

Property owners seeking to connect serviceable properties to the District's water and/or sewer system will be charged a connection fee so that they will bear an equitable share of the cost of the existing system and the cost of facilities planned for construction within the next ten years. Connection charges shall be in accordance with the District's current Master Fees and Charges Schedule and shall be collected prior to the issuance of a permit for the connection. The connection charge is applicable for the calendar year issued. Thereafter shall be subject to such additional or higher fees as may thereafter be due, if such additional or higher fees are adopted by the District and the water and/or sewer connection(s) have not been inspected and accepted by the District. [Resolution Nos. 675, 778, 799]

3.5.3 Service Laterals

All costs and expenses incidental to the installation and connection of a side sewer shall be borne by the property owner. The property owner shall indemnify the District for any loss or damage to the District's facilities that may result directly or indirectly from the installation of a side sewer.

Properties with service laterals that have been installed by the District may be assessed a service lateral charge. For those not assessed, the lateral shall be installed by a Bonded Side Sewer Contractor, as required, and all costs shall be borne by the property owner, including restoration of the public right of way. In the event that any property owner desires an additional lateral to be installed from the District's main to the property line, in addition to the single lateral installed by the District for the parcel, such additional laterals must be installed by a Bonded Side Sewer Contractor solely at the property owner's expense. [Resolution No. 785]

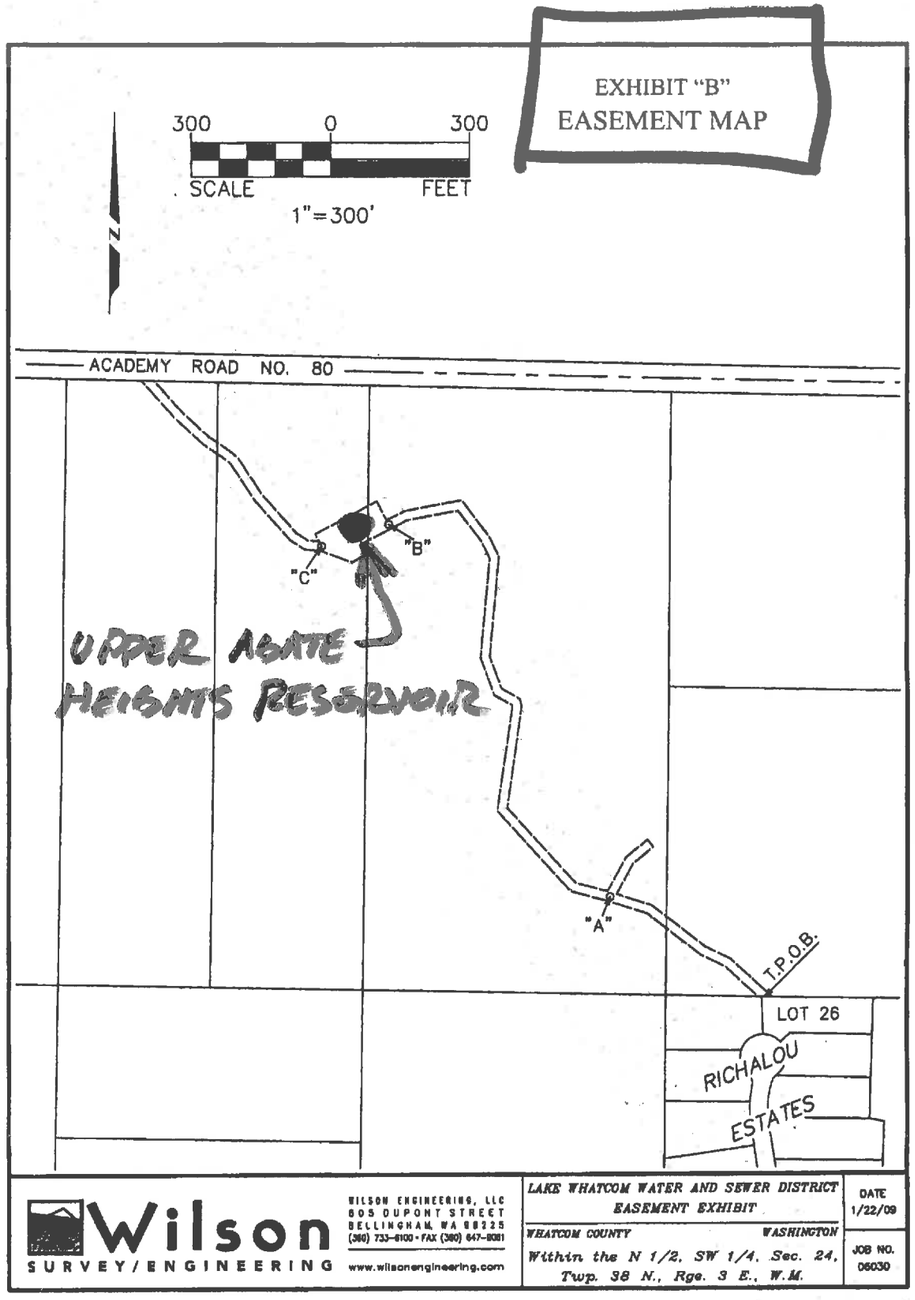


0 500 1,000 2,000 Feet

N

3/1/2017

EXHIBIT "B"
EASEMENT MAP



Wilson
SURVEY/ENGINEERING

WILSON ENGINEERING, LLC
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BELLINGHAM, WA 98225
(360) 733-6100 • FAX (360) 647-9081
www.wilsonengineering.com

LAKE WHATCOM WATER AND SEWER DISTRICT
EASEMENT EXHIBIT

WHATCOM COUNTY WASHINGTON

Within the N 1/2, SW 1/4, Sec. 24, Twp. 38 N., Rge. 3 E., W.M.

DATE 1/22/09

JOB NO. 06030

LAKE WHATCOM WATER AND SEWER DISTRICT

AGENDA BILL

DATE SUBMITTED:	February 27, 2017		
TO BOARD OF COMMISSIONERS			
FROM: Debi Denton	MANAGER APPROVAL		
MEETING AGENDA DATE:	March 8, 2017		
AGENDA ITEM NUMBER:	5.C.		
SUBJECT:	Monthly Budget Analysis		
LIST DOCUMENTS PROVIDED ⇨ NUMBER OF PAGES INCLUDING AGENDA BILL:	Monthly Budget Analysis through 2/28/2017		
TYPE OF ACTION REQUESTED	RESOLUTION ☐	FORMAL ACTION/ MOTION ☐	INFORMATIONAL/ OTHER ☒

BACKGROUND / EXPLANATION OF IMPACT
Information only

FISCAL IMPACT
n/a

RECOMMENDED BOARD ACTION
n/a

PROPOSED MOTION
n/a

LAKE WHATCOM WATER AND SEWER FUND SUMMARY 2017

	401 OPERATING	420 SYSTEM REINVESTMENT	425 SEWER/ STORM WATER CONTINGENCY	426 WATER CONTINGENCY	431 2016 BOND PROJECTS	440 DWSRF PROJECTS	450 DEBT SERVICE	460 2009 BOND RESERVE (RESTRICTED)	TOTAL
2017 REVENUES AND TRANSFERS IN	1,001,806	53,418	-	-	300,000	140,315	-	4,935	1,500,474
2017 EXPENDITURES AND TRANSFERS OUT	(794,983)	(53,240)	(5,786)	-	(1,763)	(441,912)	-	(28)	(1,297,712)
CASH/INVESTMENTS 2016 CARRYOVER	1,980,328	-	878,723	440,000	98,444	661,352	22,990	763,229	4,845,066
MONTH END BALANCE	**$2,187,151**	**$178**	**$872,937**	**$440,000**	**$396,681**	**$359,755**	**$22,990**	**$768,136**	**$5,047,828**
ALLOCATED TO OPERATING RESERVES	**-$800,000**								**-$800,000**
	$1,387,151								**$4,247,828**

MONTHLY BUDGET ANALYSIS

	Description	Budget 2017	YTD 2/28/2017 17%	
OPERATING FUND - 401				
REVENUES				
401-333-97-00	FEMA Aug 2015 Storm Assistance		14,280	
401-343-40-10	Water Sales Metered (8.75% base rate increase) *	2,279,985	335,256	15%
401-343-50-11	Sewer Service Residential (2.5% rate increase) *	3,844,032	636,084	17%
401-343-50-19	Sewer Service Other	5,000	627	13%
401-343-81-10	Combined Fees	30,000	5,325	18%
401-359-90-00	Late fees	50,000	9,434	19%
401-361-11-00	Investment Interest	1,500	2	0%
401-361-40-00-80	ULID #18 Interest	15,000		
401-368-10-00-80	ULID #18 Principal	40,000	656	
401-369-10-00	Sale of scrap metal and surplus	2,500	-	
401-369-10-01	Miscellaneous	-	27	
401-379-10-20	Permits Operation portion (10 new connection permits)	30,000	115	0%
	TOTAL REVENUES	**6,298,017**	**1,001,806**	**16%**

* Per Resolution 820 effective 11/9/2015
Scheduled annual rate increase

	Description	Budget	YTD
	MONTHLY BUDGET ANALYSIS	2017	2/28/2017
OPERATING FUND - 401			17%
EXPENDITURES			
401-53X-10-10	Admin Payroll (2.4% cola plus step increases - 2017)	639,252	97,782
401-53X-10-20	Admin Personnel Benefits (Medical,Retirement etc)	269,830	42,076
401-53X-10-31	Gen Admin Supplies	25,000	1,866
401-53X-10-31-01	Meetings/Team building	1,500	129
401-53X-10-40	Web pay/Bank Fees (WA Fed; Xpress, Chase)	20,000	2,036
	Interlocal - Lake Whatcom Management Program 5,000		
	Interlocal - Invasive Species 50,000		
	Interlocal - Lake Whatcom Tributary Monitor 10,000		
401-534-10-41-00	Water Quality Assurance Programs (TOTAL)	65,000	-
	County Auditor Filing Fees (Simplifile)	4,500	
	Data Bar (Statement processing)	21,000	
	Answering Service	1,700	
	Data Pro (Time clock system)	1,500	
	BIAS Financial Software	20,000	
	Web Check services	5,000	
	WA State Auditor	22,000	
	CPA (Internal audit and Financial statements)	6,000	
	Docuware/Web site maintenance and upgrade	5,000	
	Legal Counsel	60,000	
	3D - Computer support	20,000	
	Watchguard	1,000	
	Building security	1,500	
	Building custodial	7,700	
	Pest control	600	
	Landscaping service	5,500	
	South Whatcom Fire (hydrant maintenance)	2,000	
	GE Scada System Software Maintenance - Operations	7,500	
	Wilson Engineering	7,000	
	Camera Van Software	1,500	
	SCADA/PLC Support - Engineering/Operations	5,000	
	Cartegraph - Engineering/Operations	8,000	
	Auto Desk (DLT) - Engineering	1,000	
	GIS Partnership	1,000	
	Rockwell - Engineering/Operations	500	
	IT Pipes	1,500	
	ESRI - ARC GIS	1,500	
	Innovyze - Engineering	2,500	
	Master Meter	2,000	
	Generator Load Testing	22,000	
	Cyberlock software	1,000	
	Whatcom Co Emergency Management	20,000	
	Misc (Bid notices etc.)	3,000	
401-53X-10-41-01	Professional Services (TOTAL)	270,000	75,775

	Description	Budget	YTD
	MONTHLY BUDGET ANALYSIS	**2017**	**2/28/2017**
401-53X-10-42	Communication	50,000	8,312
401-53X-10-45	Admin Lease	2,000	-
401-53X-10-46	Property Insurance	138,000	-
401-53X-10-49	Admin Misc.	1,000	-
401-53X-10-49-01	Memberships/Dues	15,000	12,863
401-53X-10-49-02	WA State Dept of RevenueTaxes/Permits	208,000	28,440
401-53X-40-43	Training & Travel	35,000	1,664
401-53X-40-43-01	Tuition reimbursement	1,000	-
401-53X-50-31	Maintenance Supplies	180,000	11,533
401-53X-50-48	Operations Repair/Maint	130,000	61,566
401-53X-50-49	Insurance Claims	5,000	-
401-53X-60-41	Operations Contracted	9,000	554
401-534-60-47	Water City of Bellingham	40,000	4,824
401-535-60-47	Sewer City of Bellingham Treatment Fee	615,000	147,091
401-53X-80-10	Operations Payroll (2.4% cola plus step increases - 2017)	951,544	142,569
401-53X-80-20	Operations Personnel Benefits (Medical,Retirement etc)	414,930	63,726
401-53X-80-32	Fuel	20,000	5,238
401-53X-80-35	Safety Supplies	10,000	3,760
401-53X-80-35-01	Safety Supplies Boots	2,500	-
401-53X-80-35-02	Emergency Preparedness	10,000	
401-53X-80-47	General Utilities	208,000	41,645
401-53X-80-49	Laundry	4,000	534
	OPERATING EXPENDITURES	**4,340,556**	**753,983**
TRANSFERS	Transfers Out to System Reinvestment Fund 420	1,598,000	41,000
	Transfers Out to Sewer Contingency Reserve Fund 425	100,000	-
	Transfers Out to 2009 Bond Debt Service Fund 450	890,172	-
	TOTAL EXPENDITURES	**6,928,728**	**794,983**
OPERATING FUND	**OPERATING REVENUES**	**6,298,017**	**1,001,806**
	EXPENDITURES	**(6,928,728)**	**(794,983)**
	CASH/INVESTMENTS BALANCE CARRYOVER	**1,750,000**	**1,980,328**
	RATE STABILIZATION RESERVES	**(800,000)**	**(800,000)**
	CASH/INVESTMENTS BALANCE	**319,289**	**1,387,151**

	Description	Budget	YTD
	MONTHLY BUDGET ANALYSIS	**2017**	**2/28/2017**
SYSTEM REINVESTMENT FUND - 420			
420-333-66-00-00	North Shore Consolidatoin Feasibility Study		12,418
420-343-40-19-21	DEA Permits	-	-
420-343-40-19-22	DEA Permits		-
420-379-10-30	Permits Capital Portion (10 new connection permits)	70,000	-
420-379-10-40	Latecomer Fees	-	-
420-397-10-00	Transfers In from Operating Fund 401	1,598,000	41,000
	TOTAL REVENUES	**1,668,000**	**53,418**
	Active Projects to be completed in 2017	777,500	
C 14-07	Lowe Sewer PS VFD	3,450	-
C 15-04	Reservoir Site Security	5,000	1,217
C15-06B	Whatcom Falls Manhole Repair	17,350	
C16-03	Marina-Tomb Stationary Generator	6,785	343
C 16-05	Water System Plan Update	100,000	4,141
C 16-06	Replace SCADA Hardware	2,670	
C 16-10	Little Strawberry Water Leak on bridge	10,000	
C 16-11	Country Club Sewer Pump Station	632,245	7,576

		Description	Budget	YTD
		MONTHLY BUDGET ANALYSIS	**2017**	**2/28/2017**
		New 2017 Capital Projects (see CIP detail - 2017)	890,500	
	C 17-01	Tool truck	65,000	
	C 17-02	Admin staff vehicle	26,000	
	C 17-03	Locator/Meter reading van	28,000	
	C 17-04	New Admin Server	15,000	
	C 17-05	Geneva Pump Station pre-design and permits	100,000	
	C 17-05	Geneva Pump Station deisgn and bidding	100,000	
		Par Pump Station pre-design and permits	100,000	
		Par Pump Station design and bidding	100,000	
	C 17-06	Strawberry Canyon Back up Generator	20,000	
	C 17-07	Beaver and Flat Car Level Transmitter Replacement	50,000	
	C 17-08	Install Ball Check Valves	10,000	
	C 17-09	CMOM	25,000	
	C 17-10	Eagleridge Fire Pump Control Upgrade - Scope and estimate	5,000	
	C 17-10	Eagleridge Fire Pump Control Upgrade Construction	35,000	
	C 17-11	Replace SVWTP Booster Station Roof	30,000	
	C 17-12	Mechanical Staff gauge for SVWTP Clearwell	4,000	
	C 17-13	Eagleridge Booster station controls	50,000	
	C 17-14	SVWTP Floor coating	5,000	
	C 17-15	SVWTP pumps and turbidimeter	7,500	1,180
	C 17-16	Water System rehab and replacement projects	40,000	
		Water meter replacements	110,000	38,783
		TOTAL EXPENDITURES	**1,668,000**	**53,240**
SYSTEM REINVESTMENT FUND		**REVENUES**	**1,668,000**	**53,418**
		EXPENDITURES	**(1,668,000)**	**(53,240)**
		CASH/INVESTMENTS BALANCE CARRYOVER	**-**	**-**
		CASH/INVESTMENTS BALANCE	**-**	**178**

	Description	Budget	YTD
	MONTHLY BUDGET ANALYSIS	**2017**	**2/28/2017**
SEWER/STORM WATER CONTINGENCY FUND - 425			
425-361-11-00	Investment Interest	3,750	-
425-397-10-00	Transfers In from Operating Fund 401	100,000	-
		-	
	TOTAL REVENUES	**103,750**	**-**
425-535-10-89	Investment Service Charges	200	28
425-594-38-63			
C 16-07	North Shore Sampling	75,000	5,758
C 16-12	Cedar Hills Storm Drain Relocate (Wilson Eng)	135,000	-
	TOTAL EXPENDITURES	**210,200**	**5,786**
SEWER/STORM WATER CONTINGENCY FUND	**REVENUES**	**103,750**	**-**
	EXPENDITURES	**(210,200)**	**(5,786)**
	CASH/INVESTMENTS BALANCE CARRYOVER	**887,000**	**878,723**
	CASH/INVESTMENTS BALANCE (CAPITAL RESERVES SEWER)	**780,550**	**872,937**
WATER CONTINGENCY FUND - 426			
426-361-11-00	Investment Interest	2,500	
	TOTAL REVENUES	**2,500**	**-**
426-594-38-64	Machinery/Equipment		
	TOTAL EXPENDITURES	**-**	**-**
WATER CONTINGENCY FUND	**REVENUES**	**2,500**	**-**
	EXPENDITURES	**-**	**-**
	CASH/INVESTMENTS BALANCE CARRYOVER	**440,000**	**440,000**
	CASH/INVESTMENTS BALANCE (CAPITAL RESERVES WATER)	**442,500**	**440,000**

	Description MONTHLY BUDGET ANALYSIS	Budget 2017	YTD 2/28/2017
2016 CAPITAL BOND PROJECTS FUND (RESTRICTED) - 431			
	Transfers In from Fund 440		300,000
	TOTAL REVENUES	-	300,000
431-594-38-63	Strawberry Point Pump Station C14-05	156,923	1,763
	TOTAL EXPENDITURES	156,923	1,763
CAPITAL BOND PROJECTS FUND	**REVENUES**	-	300,000
	EXPENDITURES	(156,923)	(1,763)
	CASH/INVESTMENTS BALANCE CARRYOVER	156,923	98,444
	CASH/INVESTMENTS BALANCE	-	396,681
DWSRF PROJECTS FUND - 440			
440-333-66-46-41	Geneva AC Mains	-	
440-333-66-46-42	Division 22 Reservoir	229,950	140,315
440-397-10-41	Transfers In from Operating Fund 401	-	
	TOTAL REVENUES	229,950	140,315
440-594-34-62-40	Division 22 Reservoir	1,058,100	141,912
440-594-34-62-41	Geneva AC Mains		
	Transfers Out to Fund 431		300,000
	TOTAL EXPENDITURES	1,058,100	441,912
DWSRF PROJECTS FUND	**REVENUES**	229,950	140,315
	EXPENDITURES	(1,058,100)	(441,912)
	CASH/INVESTMENTS BALANCE CARRYOVER	828,150	661,352
	CASH/INVESTMENTS BALANCE	-	359,755
Expenditures offset by draws as projects progress.			

	Description	Budget	YTD
	MONTHLY BUDGET ANALYSIS	**2017**	**2/28/2017**
DEBT SERVICE FUND - 450			
450-397-10-00	Transfers In from Operating Fund 401	890,172	-
	TOTAL REVENUES	**890,172**	**-**
450-535-10-41-50	Bond Admin Fee	100	
450-591-34-77-41	Principal Geneva AC Mains	43,023	
450-591-34-77-42	Principal Div 22 Reservoir	119,937	
450-591-34-77-73	Principal Loan 064	47,252	
450-591-35-72-50	Principal Bond 2009	265,000	
450-591-35-72-51	Principal Bond 2016	125,000	
450-592-34-83-41	Interest Geneva AC Mains	14,923	
450-592-34-83-42	Interest Div 22 Reservoir	34,182	
450-592-34-83-73	Interest Loan 064	5,670	
450-592-35-83-50	Interest Bond 2009	30,900	
450-592-35-83-51	Interest Bond 2016	227,175	
	TOTAL EXPENDITURES	**913,162**	**-**
DEBT SERVICE FUND	**REVENUES**	**890,172**	**-**
	EXPENDITURES	**(913,162)**	**-**
	CASH/INVESTMENTS BALANCE CARRYOVER	**22,990**	**22,990**
	CASH/INVESTMENTS BALANCE	**-**	**22,990**
BONDS RESERVE FUND (RESTRICTED) - 460			
460-361-11-00	Investment Interest	3,850	4,935
	TOTAL REVENUES	**3,850**	**4,935**
460-535-10-89	Investment Service Charges	200	28
	TOTAL EXPENDITURES	**200**	**28**
BONDS RESERVE FUND (RESTRICTED)	**REVENUES**	**3,850**	**4,935**
	EXPENDITURES	**(200)**	**(28)**
	CASH/INVESTMENTS BALANCE CARRYOVER	**773,200**	**763,229**
	CASH/INVESTMENTS BALANCE	**776,850**	**768,136**

LAKE WHATCOM WATER AND SEWER

INVESTMENTS/CASH AS OF 02/28/2016

Cash		$ 2,728,771		0.30%
LGIP		$ 4,057		0.42%
		PAR VALUE	YIELD	
FHLB - Pro Equity	Non-Callable	$ 500,000	Mar-17	0.66%
FICO - ProEquity	Non-Callable	$ 440,000	Aug-18	0.91%
FICO - ProEquity	Non-Callable	$ 375,000	Dec-18	0.90%
FICO - ProEquity	Non-Callable	$ 250,000	Dec-18	0.90%
FFCB - ProEquity	Callable 8/2017	$ 750,000	Aug-20	1.10%
US Bank		$ 2,315,000		
TOTAL		**$ 5,047,828**		

LAKE WHATCOM WATER AND SEWER DISTRICT

AGENDA BILL

DATE SUBMITTED:	February 27, 2017		
TO BOARD OF COMMISSIONERS			
FROM: Bill Hunter	MANAGER APPROVAL		
MEETING AGENDA DATE:	March 8, 2017		
AGENDA ITEM NUMBER:	5.D.		
SUBJECT:	Geneva/Par Lane Sewage Pump Stations Upgrade – Engineering Scope of Work and Fees		
LIST DOCUMENTS PROVIDED ⇨ NUMBER OF PAGES INCLUDING AGENDA BILL: _____	1. Scope of Work and Fee Estimate		
	2.		
	3.		
TYPE OF ACTION REQUESTED	RESOLUTION ☐	FORMAL ACTION/ MOTION ☒	INFORMATIONAL/ OTHER ☐

BACKGROUND / EXPLANATION OF IMPACT

In coordination with District staff, RH2 has prepared a scope of work and fee estimate to begin work on the Geneva and Par Sewer Pump Station Improvements.

The initial scope includes topographic surveying, predesign that will evaluate alternative pumping solutions and costs estimates, Whatcom County Substantial Development Permitting, and a feasibility study to eliminate Par Sewer Pump Station and replace it with a gravity sewer line to the Afternoon Beach Sewer Pump Station gravity basin.

FISCAL IMPACT

The District's approved 2017 budget allocates $200,000 for Geneva and Par Predesign & Permitting. The proposed scope of work/fee from RH2 is within the District's approved budget amount.

RECOMMENDED BOARD ACTION

See proposed motion.

PROPOSED MOTION

Authorize the General Manager to execute an Architectural/Engineering Agreement with RH2 Engineering, Inc. for Geneva and Par Sewer Pump Stations Phase 1A Predesign and Feasibility for time and materials not to exceed $117,603.

EXHIBIT A
Scope of Work
Lake Whatcom Water and Sewer District
Geneva and Par Sewer Pump Stations
Phase 1A Predesign and Feasibility

March 2017

Background

The Lake Whatcom Water and Sewer District (LWWSD) has two sewer pump stations in need of rehabilitation. The Geneva Sewer Pump Station is located on Geneva Street and is constrained by Lake Whatcom to the north, a residential home to the west, and the Geneva Street and Firs Bible and Missionary Conference swim beach to the east. LWWSD requested RH2 Engineering, Inc., (RH2) provide alternatives analysis and design improvements to the sewer pump station.

Based on discussions with LWWSD personnel, the likely alternatives for the Geneva Sewer Pump Station will include converting the pump system to a submersible pump station, which will include new telemetry and controls, metering, and either a permanent emergency power generator or pig tail connection for LWWSD's portable generator. Other options will be considered before pursuing the final design, which will be based on LWWSD's decision and input from adjacent neighbors and Whatcom County (County).

The Par Sewer Pump Station is located on Par/Jubilee Lane and provides sewer service to approximately 28 homes in a low-lying area adjacent to the Tomb Sewer Pump Station basin. The site is adjacent to two homes and the Sudden Valley Golf Course to the northeast. Due to the size of the station, a gravity sewer line appears to be the least cost alternative crossing the golf course and Austin Creek to connect to a manhole in the Afternoon Beach basin. Open cut trench versus directional drilling methods will be evaluated to determine feasibility and probable costs with this phase. Subsequently, predesign and design will commence depending on the outcome of the feasibility of a gravity sewer line. If found infeasible, predesign efforts will include an analysis of the pump station for pump system replacement.

Major Scope Elements

The major elements of this Scope of Work are summarized as follows.

- Review existing equipment and facilities.
- Meet with LWWSD staff to review design criteria.
- Develop and review alternatives.
- Develop permitting criteria, including Shoreline Substantial Development Permit and Variance, Hydraulic Permit Approval; meet with the County for a pre-application meeting; submit shoreline permit forms to the County; and attend one (1) public hearing.
- Prepare a predesign report containing a decision on alternatives related to new pumps and controls, including metering for the Geneva Sewer Pump Station.
- Prepare a feasibility report for Par gravity sewer main, including gravity main replacement and comparison of costs utilizing the costs for Strawberry Point Pump Station (submersible pumps) and develop a cost estimate for a Smith & Loveless package station.
- Meet with the LWWSD Board of Commissioners and affected neighbors to review the predesign report and receive acceptance of the proposed alternatives.

Additional permitting, predesign, design, and services during bidding and construction will be accommodated by a subsequent scope of work. For the purposes of this analysis, RH2 will use as-is and rely upon the data and materials provided by LWWSD as listed in the Tasks below.

Phase 1A – Geneva Predesign and Shoreline Permitting, Par Gravity Sewer Feasibility

Task 1 – Project Management Services

Objective: Organize, manage, and coordinate engineering disciplines to help complete the Scope of Work on schedule and in close coordination with LWWSD staff.

Approach:

1.1 Prepare meeting agendas for meetings with LWWSD staff described in this Scope of Work.

1.2 Prepare meeting minutes for meetings with LWWSD staff described in this Scope of Work.

1.3 Prepare monthly invoices and provide ongoing progress updates.

1.4 Maintain ongoing client communications, including phone calls and emails.

1.5 Prepare and update project schedule.

RH2 Products:

- Meeting agendas and minutes for meetings as listed in this Scope of Work.
- Monthly invoices.
- Ongoing correspondence.

Task 2 – Topographic Survey

Objective: Obtain current electronic survey data, including invert piping elevations, existing manhole, and wet well piping elevations to develop predesign and future design elements. Determine if new utility easements are required for a possible new gravity sewer line across the Sudden Valley Golf Course.

Approach:

2.1 Coordinate with Larry Steele and Associates (LSA) to survey the two (2) sites, including an alignment (swath) from nearest upstream manholes for temporary pumping system design. *Survey costs are included in this Scope of Work for the Geneva Pump Station site and force main alignment from Lake Whatcom to Lakeway Drive on Geneva Street and the Par Pump Station site. The Par gravity line survey will include spot checking elevations for the Austin Creek section along with manhole and pipe locations to help determine feasibility for a gravity sewer main. Horizontal datum NAD 83/91, vertical datum City of Bellingham Vertical Datum. Title Reports may be required to verify survey information. A budget of $2,600 for title reports is included. Prices for title reports will be billed as required by available information. If more than $2,600 is required for title reports, an amendment to this scope of work will be required.*

2.2 Review topographic survey information on-site and update survey drawings based on site review, if applicable. In particular, review upstream inlet manholes for temporary pumping needs.

RH2 Products:

- Provide AutoCAD and PDF electronic survey files to LWWSD (LSA will provide AutoCAD® and PDF electronic survey data on a CD to RH2).

Task 3 – Information Gathering – Geneva Sewer Pump Station

Objective: Document existing pump station information, review temporary bypass locations, develop alternatives, and evaluate alternatives for replacement of the sewer pump station to accommodate LWWSD's goals and to meet neighborhood and permit review criteria.

Approach:

3.1 Review as-builts provided by LWWSD and integrate into 3D AutoCAD models.

3.2 Conduct one (1) site visit and document existing conditions, including digital photographs, and measurements of pumps, intakes, and wet well.

3.3 Conduct one (1) meeting with LWWSD staff to review LWWSD needs for improvements.

3.4 Document peak and average day flows, and historical growth rates from available LWWSD data for the site (pump run times and the *2014 Comprehensive Sewer Plan*). *It is assumed LWWSD will provide this data via PDF or hard copy mailing to RH2.*

3.5 Perform drawdown test at Geneva Sewer Pump Station to document influent flow and discharge capacity. *It is assumed that LWWSD will provide all equipment and maintenance personnel for the drawdown test.*

3.6 Review basins and percentage of developed and undeveloped parcels to determine growth rates within the pump station basin and identify projections for future connections to the sewer pump station. *It is assumed that geographical information system (GIS) data will be provided by LWWSD.*

3.7 Compare sewer connections with average and high flows to assess flow rates and percentage of infiltration and inflow (I&I) for the pump station basin.

3.8 Attend one (1) meeting with LWWSD staff to develop up to three (3) pumping alternatives for the pump station site.

3.9 Develop design criteria checklist from alternatives chosen in order to evaluate alternatives.

3.10 Provide a preliminary construction cost estimate for the Geneva Sewer Pump Station Improvements (up to three (3) alternatives).

RH2 Products:

- Preliminary construction cost estimates and operations and maintenance (O&M) cost comparisons of alternatives as electronic pdf file.

Task 4 – Information Gathering – Geneva Sewer Pump Station Force Main

Objective: Document existing force main information, develop alternatives, and evaluate alternatives for replacement of the force main to accommodate LWWSD's goals, and meet neighborhood and permit review criteria.

4.1 Review as-builts to determine sewer force main construction, piping, and potential for replacement.

4.2 Determine cost estimates for replacement by parallel force main and pipe bursting.

4.3 Develop schematics for force main construction.

RH2 Products:

- Cost estimates for force main construction using two (2) alternatives in PDF format.
- Construction schematics in PDF format which may be used in the predesign report.

Task 5 – Information Gathering – Geneva Sewer Pump Station Power and Telemetry

Objective: Document existing pump station electrical, power, and telemetry information. Evaluate alternatives for replacement of the generator pig tail connection, possible permanent generator location, and telemetry equipment to accommodate LWWSD's goals and meet neighborhood and permit review criteria.

Approach:

5.1 Review emergency power generator conditions from as-built data and maintenance records available from LWWSD. Conduct one (1) site visit to document and photograph existing systems.

5.2 Review telemetry conditions from as-built data and records made available by LWWSD and visit the project site to document and photograph existing systems.

5.3 Develop power and telemetry control design criteria for the site based on proposed pump-sizing criteria developed in Task 3 and design criteria for control systems.

5.4 Determine physical dimensions, required electrical capacity, and cost estimate of adding a permanent standby generator.

5.5 Attend one (1) meeting with the Firs and LWWSD staff to discuss the potential to share a small building that would provide space for generator and controls and house Firs beach equipment.

RH2 Products:

- Electrical, stationary generator, and telemetry design criteria.

Task 6 – Geneva Pump Station Permit Identification and Submission

Objective: Review permit requirements for preferred alternatives. Prepare 20-percent plans for permit submittal. Prepare permit forms and coordinate with the County.

6.1 Develop permit criteria for each alternative to present to the County. *It is assumed a Shorelines Substantial Development Permit and Variance will be required for the alternatives chosen. Any other required permits shall be prepared under an amendment to this Scope of Work. Draft building permit submittal will be completed via a future scope of work during the design phase.*

6.2 Meet with LWWSD staff to review alternatives and confirm permit criteria and permit review timelines. Provide a memorandum summarizing required permits and documenting why the permit is required.

6.3 Prepare for and attend a pre-application conference with County staff to review permit memorandum. *Any County fees required shall be paid for directly by LWWSD and are not included in this Scope of Work. It is assumed one (1) meeting will be required to address permitting at the Geneva Sewer Pump Station site.*

6.4 Prepare permit forms and plans as required assuming Shoreline Substantial Development Permits and Variance. *Building permits and revocable encroachment, if needed, will be applied for during the design phase of this project and accommodated by a subsequent scope of work.*

6.5 Attend one (1) Public Hearing for the shorelines permit process.

RH2 Products:

- A memorandum detailing required permits for chosen alternatives to be submitted via e-mail to LWWSD.
- Pre-application form and background information to submit to the County for "buy-in" on permitting approach.
- Pre-application meeting minutes.

- Shoreline Permit forms and plans for the Geneva Pump Station permit submittal.

Task 7 – Geneva Predesign Report

Objective: Provide written report of existing conditions, alternatives, costs, and chosen alternative based on design criteria, LWWSD, and neighborhood involvement.

7.1 Prepare project background for the Geneva Sewer Pump Station site and describe up to three (3) alternatives.

7.2 Prepare schematic figures of the improvement alternatives.

7.3 Develop ranking system to include cost, neighborhood input, and LWWSD staff input to decide preferred alternative.

7.4 Prepare draft predesign report and deliver to LWWSD for review.

7.5 Prepare neighborhood flyers for affected people within 200 feet of the project sites and provide PDF copy for LWWSD to produce. *It is assumed LWWSD will produce and mail the flyers.*

7.6 Attend and present alternatives at one (1) special public meeting with the neighborhood. *Neighbors will review the alternatives via full-size posters provided by RH2.* Recommend an alternative and request input from neighbors.

7.7 Finalize predesign report with comments provided during the special public meeting. *It is assumed the report finalization will be minor, as shown in the Fee Estimate.*

7.8 Attend and present alternatives, including comments received during the special public meeting, to the LWWSD Board of Commissioners. This will include review of the predesign report and the chosen alternative. Pursue Board of Commissioners input and acceptance of recommended alternative for the site.

7.9 Update final predesign report based on the Board of Commissioners meeting comments. *It is assumed the report finalization will be minor, as shown in the Fee Estimate.*

RH2 Products:

- Two (2) copies of a draft predesign report.
- Draft of the finalized predesign report as a PDF on a CD, including three (3) full-size (24-inch by 36-inch) figures for the special public meeting and Board meeting.
- Final predesign report – one (1) hard copy, one (1) additional hard copy for RH2 files, and (1) CD containing a PDF of the full report. All figures will be 11-inch by 17-inch format (ANSI B).

Task 8 – Par Gravity Sewer Feasibility

Objective: Review survey information, pump information, and cost information to determine feasibility of replacing the Par Station with a gravity sewer main from the existing Par wet well to manholes located northeast and across the golf course and in the Afternoon Beach sewer basin.

Approach:

8.1 Develop a plan and profile of the Par Pump Station wet well invert elevations, Austin Creek bed elevations, and manholes and inverts located northeast. Assess gravity main feasibility.

8.2 Review Washington State Department of Natural Resources and Washington State Department of Ecology well logs to determine the underground geotechnical conditions for the gravity sewer

construction, including soil type, variability, groundwater conditions, and feasibility of open trench cut and directional drill type pipeline construction.

8.3 Investigate potential Sudden Valley Golf Course requirements, any special golf tournament/event coordination during construction, and if any new utility easements are required for installation of a gravity sewer line.

8.4 Review costs for a pig tail connection point on Jubilee lane and permanent generator at the Par pump station to determine least cost for the improvement.

8.5 Develop project and construction cost estimate, including permitting costs, creek crossing, and gravity line construction. Compare costs with Strawberry Point Pump Station costs (roughly comparable to Par in size and complexity), and Smith & Loveless package pump station, and operational costs.

8.6 Attend one (1) meeting with LWWSD staff to review gravity sewer vs. pump station rehabilitation and confirm permit criteria and permit review timelines. Provide a memorandum summarizing project approach, costs, and required permits, and documenting why the permit is required.

Note: Predesign Report will be completed per a subsequent scope of work depending on the outcome of feasibility of the gravity sewer approach.

RH2 Products:

- Memorandum in PDF format.

Provided by LWWSD:

1. All as-built data for the sewer pump station sites. Existing as-built review documentation, including historic flow and pump run times, and average day flows incorporating growth rates.
2. Equipment and personnel for the drawdown test.
3. All flow meter and pump run and stop data available for the site for the last three (3) years. Information shall include previous drawdown testing information, and pump run times.
4. GIS data of pump station basins, piping, and manholes, force mains, customers presently connected to the system, and lots presently vacant.
5. Production and mailing of flyers for public attendance at special public meeting.
6. All permit fees.
7. Attendance at the following:
    - Site visits as described in Tasks 3 and 5
    - Meeting regarding Geneva improvement needs.
    - Meeting regarding alternatives development for Geneva Pump Station.
    - Firs meeting to discuss generator building.
    - Meeting with the County to confirm Geneva Pump Station permitting criteria.
    - Meeting with Sudden Valley Community Association and Sudden Valley Golf Course.
    - Special public meeting to review alternatives with affected neighbors.
    - Board meeting to review predesign report.
    - Par Gravity Sewer feasibility meeting.
    - Scoping meeting for design phase.

EXHIBIT C RH2 ENGINEERING, INC. 2017 SCHEDULE OF RATES AND CHARGES		
RATE LIST	**RATE**	**UNIT**
Professional I	$142	$/hr
Professional II	$155	$/hr
Professional III	$167	$/hr
Professional IV	$177	$/hr
Professional V	$191	$/hr
Professional VI	$203	$/hr
Professional VII	$220	$/hr
Professional VIII	$229	$/hr
Professional IX	$229	$/hr
Technician I	$101	$/hr
Technician II	$107	$/hr
Technician III	$136	$/hr
Technician IV	$145	$/hr
Administrative I	$69	$/hr
Administrative II	$81	$/hr
Administrative III	$97	$/hr
Administrative IV	$114	$/hr
Administrative V	$135	$/hr
CAD/GIS System	$27.50	$/hr
CAD Plots - Half Size	$2.50	price per plot
CAD Plots - Full Size	$10.00	price per plot
CAD Plots - Large	$25.00	price per plot
Copies (bw) 8.5" X 11"	$0.09	price per copy
Copies (bw) 8.5" X 14"	$0.14	price per copy
Copies (bw) 11" X 17"	$0.20	price per copy
Copies (color) 8.5" X 11"	$0.90	price per copy
Copies (color) 8.5" X 14"	$1.20	price per copy
Copies (color) 11" X 17"	$2.00	price per copy
Technology Charge	2.50%	% of Direct Labor
Mileage	$0.535	price per mile (or Current IRS Rate)
Subconsultants	15%	Cost +
Outside Services	at cost	

Rates listed are adjusted annually.

EXHIBIT B - 3/2/17

Lake Whatcom Water and Sewer District
Geneva and Par Sewer Pump Stations –
Phase 1A Predesign and Feasibility
Fee Estimate

Description	Staff Engineer	Staff Engineer	Project Engineer	Project Engineer	Project Manager	Electrical PM	Engineering Geologist	Principal	Administrative Support	Total Hours	Total Labor	Total Subconsultant	Total Expense	Total Cost
Classification	Professional II	Professional I	Professional IV	Professional IV	Professional V	Professional VI	Professional VII	Professional IX	Administrative III					
Task 1 Project Management Services	4	-	2	-	48	1	-	1	8	64	$ 11,350	$ -	$ 566	$ 11,916
Task 2 Topographic Survey	8	-	-	-	4	-	-	-	-	12	$ 2,004	$ 17,250	$ 295	$ 19,549
Task 3 Information Gathering - Geneva Sewer Pump Station	48	6	4	-	22	2	-	-	-	82	$ 13,608	$ -	$ 1,915	$ 15,523
Task 4 Information Gathering - Geneva Sewer Pump Station Force Main	22	-	-	-	9	-	-	-	-	31	$ 5,129	$ -	$ 749	$ 5,878
Task 5 Information Gathering - Geneva Sewer Pump Station Power and Telemetry	-	14	13	-	5	4	-	-	-	36	$ 6,056	$ -	$ 600	$ 6,656
Task 6 Geneva Pump Station Permit Identification and Submission	36	-	-	20	32	-	-	-	5	93	$ 15,717	$ -	$ 1,753	$ 17,470
Task 7 Geneva Predesign Report	72	12	12	-	28	5	-	-	7	136	$ 22,030	$ -	$ 3,067	$ 25,097
Task 8 Par Gravity Sewer Feasibility	44	-	4	-	24	2	4	1	2	81	$ 13,821	$ -	$ 1,694	$ 15,515
PHASE 1A TOTAL	234	32	35	20	172	14	4	2	22	535	$ 89,715	$ 17,250	$ 10,638	$ 117,603

LAKE WHATCOM WATER AND SEWER DISTRICT

AGENDA BILL

DATE SUBMITTED:	February 28, 2017		
TO BOARD OF COMMISSIONERS			
FROM: Patrick Sorensen	MANAGER APPROVAL _____		
MEETING AGENDA DATE:	March 8, 2017		
AGENDA ITEM NUMBER:	5.E.		
SUBJECT:	Abandoned Lakeview Water Tank Update – COB Intertie Capability		
LIST DOCUMENTS PROVIDED ⇨ NUMBER OF PAGES INCLUDING AGENDA BILL: _____	1. Wilson Engineering Evaluation		
	2.		
	3.		
TYPE OF ACTION REQUESTED	RESOLUTION ☐	FORMAL ACTION/ MOTION ☐	INFORMATIONAL/ OTHER ☒

BACKGROUND / EXPLANATION OF IMPACT

Following an earlier discussion regarding the potential removal of the old unused Lakeview water tank the District requested additional information on the capacity of our emergency intertie with the City of Bellingham (COB), as to whether the changed conditions on the City side (higher pressures) would enable the District to replace the Geneva pump station with pressure reducing valves (PRVs), and abandon the 70,000 gallon concrete storage tank. Wilson Engineering prepared the attached report for discussion. Melanie Mankamyer will present her findings and address any questions. Based upon Wilson's investigation it appears that the tank can be eliminated without negatively impacting the concerns raised earlier.

FISCAL IMPACT

Not available at this time.

RECOMMENDED BOARD ACTION

None at this time; for discussion purposes only.

PROPOSED MOTION

None at this time.

Consulting Engineer's Brief Sheet
(Melanie Mankamyer)
Prepared February 27, 2017, for March 8, 2017 Commissioner's Meeting

Evaluation of COB Intertie Capability to Serve Geneva Without Storage Capacity

Background

The District requested additional information on the capacity of the emergency intertie with the City of Bellingham (COB), in particular whether the changed conditions on the City side (higher pressures) would enable the District to replace the Geneva pump station with pressure reducing valves (PRVs), and abandon the 70,000 gallon concrete storage tank by the District shop.

The Geneva pump station was originally designed to deliver COB water to the Geneva reservoir which then supplied water to the Geneva service area. As noted in the December 14, 2016 Agenda Bill B, the current 500,000 gallon tank is the third reservoir. The first steel tank was removed and the second concrete tank was decommissioned but left in place.

In 2004 the District completed its intertie between the Sudden Valley water system and the Geneva service area. This enabled water from the Sudden Valley water treatment plant to be distributed to Geneva, and a new pump station was installed to fill the Geneva reservoir from the lower pressure zone in Geneva. The connection to the City was turned into an emergency intertie, and staff periodically operates the pumps to ensure they will work in an emergency.

Previous analyses of the need for the 70,000 gallon concrete tank determined that it could be useful when the large Geneva reservoir would be taken out of service for repairs or recoating. The concrete tank would provide a nominal amount of operating storage for the fixed speed pumps in the new pump station.

Hydraulic Analysis:

It recently became known that the City has changed its operational parameters and the system pressure at the emergency intertie is significantly higher than before. We were asked to analyze whether this higher pressure on the City side of the intertie is sufficient to meet the District's water system needs in an emergency or during scheduled maintenance of the Geneva reservoir.

We confirmed that the static pressure of the City water system at the intertie is 160 psi, which translates to a hydraulic grade line of 800 ft. Entering that value into the hydraulic model of the District's water system as the source pressure at the intertie, it was apparent that a pressure reducing valve (PRV) would be needed to match the water pressure (125 psi) on the District side. This pressure is primarily due to the elevation of water in the reservoir.

For an emergency intertie, the PRV should be set below the normal District system pressure. When the pressure drops, the PRV would open and restore pressure. For the first analysis, we assumed a PRV setting of 120 psi and calculated the available fire flow. This analysis did not evaluate whether the system would have pressure fluctuations greater than 5 psi due to the daily demand cycle. At the 120 psi setting, available fire flows exceeded 500 gallons per minute (gpm) at all locations (Whatcom County Coordinated Water System Plan minimum), but certain locations at higher elevations were not able to reach 750 gpm, which is the District standard for Geneva (to match the COB requirement, as required by the Coordinated Water System Plan). The minimum fire flow available in this scenario was 630 gpm.

For a situation involving scheduled maintenance of the reservoir, the District could opt to set the intertie PRV to a higher pressure for the duration of the maintenance activity (such as recoating the 500,000 gallon reservoir). When we ran the model with the PRV set to 130 psi and the available fire flows exceeded 750 gallons per minute (gpm) at all locations.

We contacted a local manufacturer's representative for recommendations on a proposed configuration for replacing the existing pumps with a PRV system. His recommendation is attached, along with a product cut-sheet and can be summarized as follows:

- Main Valve - 4" Pressure Reducing Valve Model #90G-01BCSYVKC
- Bypass Valve - 2" Pressure Reducing Valve Model #90G-01BCSYVKC

The main valve typically handles higher flows like fire flows, while the bypass valve handles lower, residential demands.

Given that service (e.g. fire flows) are only moderately degraded in an emergency with the reservoir off-line, and the ability to provide full service during scheduled maintenance, it appears that the usefulness of the concrete tank has been eliminated and the pumps at the City emergency intertie can be replaced with pressure reducing valve(s).

Wilson
SURVEY/ENGINEERING

Melanie Mankamyer <mmankamyer@wilsonengineering.com>

LWWSD Emergency Intertie

2 messages

Melanie Mankamyer <mmankamyer@wilsonengineering.com> Wed, Feb 1, 2017 at 12:40 PM
To: John Okoneski <johngcsys@msn.com>

Hi John:

New project - Lake Whatcom WSD wants to install a couple of PRVs on their emergency intertie with the City of Bellingham (the pressure on the City side is now high enough that the old pumps are not needed).
Coinditions:

- City-side pressure is 160 psi
- District-side pressure is 120 psi
- Average day flow is 140 gpm
- Max day plus fire flow is about 1,030 gpm (280 gpm + 750 gpm)
- Peak hour demand is 550 gpm

What sizes of PRVs would you recommend?

Thanks,
–
Melanie Mankamyer, PE
Wilson Engineering, LLC
805 Dupont Street, Suite 7
Bellingham, WA 98225
Ph: (360) 733-6100 x227
www.wilsonengineering.com
Civil Engineering and Surveying Services Since 1967

John Okoneski <johngcsys@msn.com> Thu, Feb 2, 2017 at 2:29 PM
To: Melanie Mankamyer <mmankamyer@wilsonengineering.com>

Melanie,

I've looked at this and would recommend the following:

Main Valve - 4" Pressure Reducing Valve Model #90G-01BCSYVKC: ductile iron body and cover, globe pattern, bronze trim, 150 lb. flanged, isolation ball valves on pilot system, closing and opening speed controls, wye strainer on pilot system, valve position indicator, fusion bonded epoxy coated, 30-300 spring

Bypass Valve - 2" Pressure Reducing Valve Model #90G-01BCSYVKC: ductile iron body and cover, globe pattern, bronze trim, 150 lb. flanged, isolation ball valves on pilot system, closing and opening speed controls, wye strainer on pilot system, valve position indicator, fusion bonded epoxy coated, 30-300 spring

Please let me know if you have any questions.

John Okoneski

GC Systems

1-800-525-9425

From: Melanie Mankamyer [mailto:mmankamyer@wilsonengineering.com]
Sent: Wednesday, February 01, 2017 12:41 PM
To: John Okoneski
Subject: LWWSD Emergency Intertie

[Quoted text hidden]

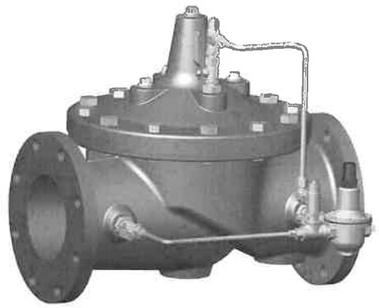
www.wilsonengineering.com

E-90-01.pdf
997K

CLA-VAL™

— MODEL — 90-01

Pressure Reducing Valve



- **Sensitive and Accurate Pressure Control**
- **Easy Adjustment and Maintenance**
- **Tamper Resistant**
- **Optional Check Feature**
- **Fully Supported Frictionless Diaphragm**
- **Meets National Lead Reduction Mandate**

The Cla-Val Model 90-01 Pressure Reducing Valve automatically reduces a higher inlet pressure to a steady lower downstream pressure, regardless of changing flow rate and/or varying inlet pressure. This valve is an accurate, pilot-operated regulator capable of holding downstream pressure to a pre-determined limit. When downstream pressure exceeds the pressure setting of the control pilot, the main valve and pilot valve close drip-tight.

If a check feature is added, and a pressure reversal occurs, the downstream pressure is admitted in the main valve cover chamber, closing the valve to prevent return flow.

Schematic Diagram

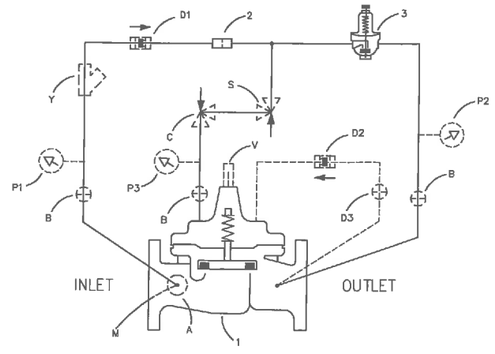
Item	Description
1	Hytrol (Main Valve Model 100-01)
2	X58 Restriction Fitting
3	CRD Pressure Reducing Control

Optional Features

Item	Description
A	X46A Flow Clean Strainer
B	CK2 (Isolation Valve)
C	CV Flow Control (Closing)*
D	Check Valves with Isolation Valve
M	X144 e-FlowMeter
P	X141 Pressure Gauge
S	CV Flow Control (Opening)
V	X101 Valve Position Indicator
Y	X43 "Y" Strainer
H	X43H Style Strainer

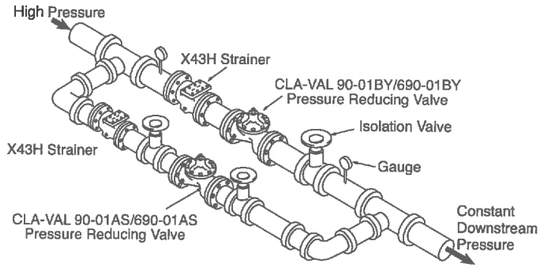
*The closing speed control (optional) on this valve should always be open at least three (3) turns off its seat.

see page 3 for approvals

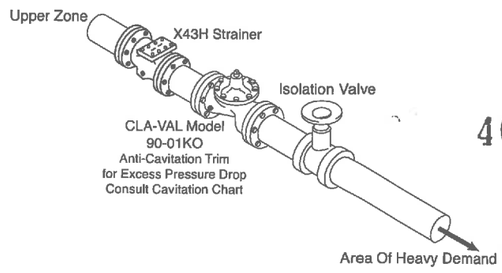


Typical Applications

Typical applications include pressure reducing valve station using Model 90-01BY and Model 90-01AS in parallel to handle wide range of flow rates. Larger Model 90-01BY valve meets requirements of peak loads and smaller Model 90-01AS handles low flows.



Cla-Val Model 90-01KO Pressure Reducing Valve with Anti-Cavitation Trim provides for optimum downstream pressure control while reducing noise and eliminating damage associated with cavitation. See Cavitation Guide to determine if the valve is a candidate for the KO Anti-Cavitation Trim.



Model 90-01 (Uses Basic Valve Model 100-01)

Pressure Ratings (Recommended Maximum Pressure - psi)

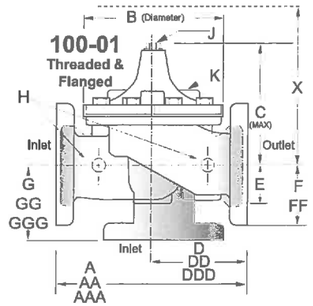
Valve Body & Cover		Pressure Class				
		Flanged			Grooved	Threaded
Grade	Material	ANSI Standards*	150 Class	300 Class	300 Class	End‡ Details
ASTM A536	Ductile Iron	B16.42	250	400	400	400
ASTM A216-WCB	Cast Steel	B16.5	285	400	400	400
UNS 87850	Bronze	B16.24	225	400	400	400

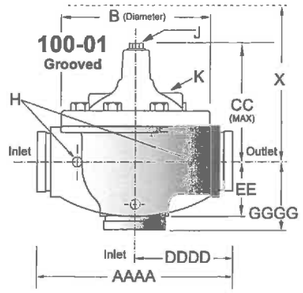
Note: * ANSI standards are for flange dimensions only.
Flanged valves are available faced but not drilled.
‡ End Details machined to ANSI B2.1 specifications.
Valves for higher pressure are available; consult factory for details

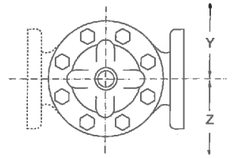
Materials

Component	Standard Material Combinations		
Body & Cover	Ductile Iron	Cast Steel	Bronze
Available Sizes	1" - 36"	1" - 16"	1" - 16"
Disc Retainer & Diaphragm Washer	Cast Iron	Cast Steel	Bronze
Trim: Disc Guide, Seat & Cover Bearing	Bronze is Standard Stainless Steel is Optional		
Disc	Buna-N® Rubber		
Diaphragm	Nylon Reinforced Buna-N® Rubber		
Stem, Nut & Spring	Stainless Steel		

For material options not listed, consult factory.
Cla-Val manufactures valves in more than 50 different alloys.







Model 90-01 Dimensions (In Inches)

Valve Size (Inches)	1	1¼	1½	2	2½	3	4	6	8	10	12	14	16	18	20	24	30	36
A Threaded	7.25	7.25	7.25	9.38	11.00	12.50	—	—	—	—	—	—	—	—	—	—	—	—
AA 150 ANSI	—	—	8.50	9.38	11.00	12.00	15.00	20.00	25.38	29.75	34.00	39.00	41.38	46.00	52.00	61.50	63.00	72.75
AAA 300 ANSI	—	—	9.00	10.00	11.62	13.25	15.62	21.00	26.38	31.12	35.50	40.50	43.50	47.64	53.62	63.24	64.50	74.75
AAAA Grooved End	—	—	8.50	9.00	11.00	12.50	15.00	20.00	25.38	—	—	—	—	—	—	—	—	—
B Diameter	5.62	5.62	5.62	6.62	8.00	9.12	11.50	15.75	20.00	23.62	28.00	32.75	35.50	41.50	45.00	53.16	56.00	66.00
C Maximum	5.50	5.50	5.50	6.50	7.56	8.19	10.62	13.38	16.00	17.12	20.88	24.19	25.00	39.06	41.90	43.93	54.60	59.00
CC Maximum Grooved End	—	—	4.75	5.75	6.88	7.25	9.31	12.12	14.62	—	—	—	—	—	—	—	—	—
D Threaded	3.25	3.25	3.25	4.75	5.50	6.25	—	—	—	—	—	—	—	—	—	—	—	—
DD 150 ANSI	—	—	4.00	4.75	5.50	6.00	7.50	10.00	12.69	14.88	17.00	19.50	20.81	—	—	30.75	—	—
DDD 300 ANSI	—	—	4.25	5.00	5.88	6.38	7.88	10.50	13.25	15.56	17.75	20.25	21.62	—	—	31.62	—	—
DDDD Grooved End	—	—	—	4.75	—	6.00	7.50	—	—	—	—	—	—	—	—	—	—	—
E	1.12	1.12	1.12	1.50	1.69	2.06	3.19	4.31	5.31	9.25	10.75	12.62	15.50	12.95	15.00	17.75	21.31	24.56
EE Grooved End	—	—	2.00	2.50	2.88	3.12	4.25	6.00	7.56	—	—	—	—	—	—	—	—	—
F 150 ANSI	—	—	2.50	3.00	3.50	3.75	4.50	5.50	6.75	8.00	9.50	10.50	11.75	15.00	16.50	19.25	22.50	28.50
FF 300 ANSI	—	—	3.06	3.25	3.75	4.13	5.00	6.25	7.50	8.75	10.25	11.50	12.75	15.00	16.50	19.25	24.00	30.00
G Threaded	1.88	1.88	1.88	3.25	4.00	4.50	—	—	—	—	—	—	—	—	—	—	—	—
GG 150 ANSI	—	—	4.00	3.25	4.00	4.00	5.00	6.00	8.00	8.62	13.75	14.88	15.69	—	—	22.06	—	—
GGG 300 ANSI	—	—	4.25	3.50	4.31	4.38	5.31	6.50	8.50	9.31	14.50	15.62	16.50	—	—	22.90	—	—
GGGG Grooved End	—	—	—	3.25	—	4.25	5.00	—	—	—	—	—	—	—	—	—	—	—
H NPT Body Tapping	0.375	0.375	0.375	0.375	0.50	0.50	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
J NPT Cover Center Plug	0.25	0.25	0.25	0.50	0.50	0.50	0.75	0.75	1.00	1.00	1.25	1.50	2.00	1.00	1.00	1.00	2.00	2.00
K NPT Cover Tapping	0.375	0.375	0.375	0.375	0.50	0.50	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Stem Travel	0.40	0.40	0.40	0.60	0.70	0.80	1.10	1.70	2.30	2.80	3.40	4.00	4.50	5.10	5.63	6.75	7.50	8.50
Approx. Ship Weight (lbs)	15	15	15	35	50	70	140	285	500	780	1165	1600	2265	2982	3900	6200	7703	11720
Approx. **X** Pilot System	11	11	11	13	14	15	17	29	31	33	36	40	40	43	47	68	79	85
Approx. **Y** Pilot System	9	9	9	9	10	11	12	20	22	24	26	29	30	32	34	39	40	45
Approx. **Z** Pilot System	9	9	9	9	10	11	12	20	22	24	26	29	30	32	34	39	42	47

For sizes 18 through 36-inches, use 90-66 E-Sheet

90-01 Valve Selection	100-01 Pattern: Globe (G), Angle (A), End Connections: Threaded (T), Grooved (GR), Flanged (F) Indicate Available Sizes																		
	Inches	1	1¼	1½	2	2½	3	4	6	8	10	12	14	16	18	20	24	30	36
	mm	25	32	40	50	65	80	100	150	200	250	300	350	400	450	500	600	750	900
Basic Valve 100-01	Pattern	G, A	G, A	G, A	G, A	G, A	G, A	G, A	G, A	G, A	G, A	G, A	G, A	G, A	G	G	G, A	G	G
	End Detail	T	T	T, F, Gr*	T, F, Gr	T, F, Gr*	T, F, Gr	F, Gr	F, Gr*	F, Gr*	F	F	F	F	F	F	F	F	F
Suggested Flow (gpm)	Maximum	55	93	125	210	300	460	800	1800	3100	4900	7000	8400	11000	14000	17000	25000	42000	50000
	Maximum Intermittent	68	120	160	260	370	580	990	2250	3900	6150	8720	10540	13700	17500	21700	31300	48000	62500
	Minimum	1	1	1	1	2	2	4	10	15	35	50	70	95	120	150	275	450	650

100-01 Series is the full internal port Hytrol. **For Lower Flows Consult Factory** *Globe Grooved Only

Notes:

- For sizes 18 through 36-inches, use 90-66 E-Sheet
- Many factors should be considered in sizing pressure reducing valves including inlet pressure, outlet pressure and flow rates.
- For sizing questions or cavitation analysis, consult Cla-Val with system details.

Pilot System Specifications

Adjustment Ranges

2	to	30 psi
15	to	75 psi
20	to	105 psi
30	to	300 psi

Temperature Range

Water: to 180°F

Materials

Standard Pilot System Materials

Pilot Control: Low Lead Bronze
Trim: Stainless Steel Type 303
Rubber: Buna-N® Synthetic Rubber

Optional Pilot System Materials

Pilot Systems are available with optional Stainless Steel or Monel materials.

Note: Available with remote sensing control.

When Ordering, Please Specify:

1. Catalog No. 90-01
2. Valve Size
3. Pattern - Globe or Angle
4. Pressure Class
5. Threaded, Flanged or Grooved
6. Trim Material
7. Adjustment Range
8. Desired Options
9. When Vertically Installed
10. Stainless Steel Pilot
11. Epoxy Coating

Approvals

NSF/ANSI 372: National Lead Free Mandate "Reduction of Lead in Drinking Water Act"

NSF International recognizes Cla-Val as complying with NSF/ANSI 61 and all applicable requirements.

Cla-Val fulfils the requirements described in the American Water Works Association's (AWWA) Standard for Pilot-Operated Control Valves: C530:12

Valve Options

X141 Pressure Gauge

X101 Valve Position Indicator

X144 e-FlowMeter

X43 H-Strainer

Epoxy Coating

NSF

Stainless Steel Pilot

Model 90-01 Purchase Specifications

Function
The Pressure Reducing Valve shall maintain a constant downstream pressure regardless of changing flow rate and/or inlet pressure.

"Tying" of equipment into packages for the purpose of thwarting competition shall be considered to be in non-compliance with these specifications. Manufacturers shall price items under different subsections or sections separately.

Main Valve
The valve shall be hydraulically operated, single diaphragm-actuated, globe or angle pattern. The valve shall consist of three major components: the body, with seat installed; the cover, with bearings installed; and the diaphragm assembly. The diaphragm assembly shall be the only moving part and shall form a sealed chamber in the upper portion of the valve, separating operating pressure from line pressure. Packing glands and/or stuffing boxes are not permitted and there shall be no pistons operating the main valve or pilot controls.

Main Valve Body
No separate chambers shall be allowed between the main valve cover and body. Valve body and cover shall be of cast material. Ductile Iron is standard and other materials shall be available. No fabrication or welding shall be used in the manufacturing process. Total shipping weight shall be equal or greater in all respects to the Hytrol 100-01 body.

The valve shall contain a resilient, synthetic rubber disc, with a rectangular cross-section contained on three and one-half sides by a disc retainer and forming a tight seal against a single removable seat insert. No O-ring type discs (circular, square, or quad type) shall be permitted as the seating surface. The disc guide shall be of the contoured type to permit smooth transition of flow and shall hold the disc firmly in place.

The disc retainer shall be of a sturdy one-piece design capable of withstanding opening and closing shocks. It must have straight edge sides and a radius at the top edge to prevent excessive diaphragm wear as the diaphragm flexes across this surface. No hourglass-shaped disc retainers shall be permitted and no V-type or slotted type disc guides shall be used.

The diaphragm assembly containing a non-magnetic 303 stainless steel stem with sufficient diameter to withstand high hydraulic pressures shall be fully guided at both ends by a bearing in the valve cover and an integral bearing in the valve seat. No center guides shall be permitted. The stem shall be drilled and tapped in the cover end to receive and affix such accessories as may be deemed necessary. The diaphragm assembly shall be the only moving part and shall form a sealed chamber in the upper portion of the valve, separating operating pressure from line pressure.

The flexible, non-wicking, FDA approved diaphragm shall consist of nylon fabric bonded with synthetic rubber compatible with the operating fluid. The center hole for the main valve stem must be sealed by the vulcanized process or a rubber grommet sealing the center stem hole from the operating pressure. The diaphragm must withstand a Mullins Burst Test of a minimum of 600 psi per layer of nylon fabric and shall be cycle tested 100,000 times to ensure longevity.

The diaphragm shall not be used as the seating surface. The diaphragm shall be fully supported in the valve body and cover by machined surfaces which support no less than one-half of the total surface area of the diaphragm in either the fully opened or fully closed position.

Bellofram type rolling diaphragms shall not be permitted.

The main valve seat and the stem bearing in the valve cover shall be removable. The cover bearing and seat in 6" and smaller size valves shall be threaded into the cover and body. The valve seat in 8" and larger size valves shall be retained by flat head machine screws for ease of maintenance. The lower bearing of the valve stem shall be contained concentrically within the seat and shall be exposed to the flow on all sides to avoid deposits. To insure proper alignment of the valve stem, the valve body and cover shall be machined with a locating lip. No "pinned" covers to the valve body shall be permitted. Cover bearing, disc retainer, and seat shall be made of the same material.

All necessary repairs and/or modifications other than replacement of the main valve body shall be possible without removing the valve from the pipeline. Packing glands and/or stuffing boxes shall not be permitted.

The valve manufacturer shall warrant the valve to be free of defects in material and workmanship for a period of three years from date of shipment, provided the valve is installed and used in accordance with all applicable instructions. Electrical components shall have a one year warranty.

The valve manufacturer shall be able to supply a complete line of equipment from 1 1/4" through 36" sizes and a complete selection of complementary equipment. The valve manufacturer shall also provide a computerized cavitation chart which show flow rate, differential pressure, percentage of valve opening, Cv factor, system velocity, and if there will be cavitation damage.

Pilot Control System
The pressure reducing pilot control shall be a direct-acting, adjustable, spring-loaded, normally open, diaphragm valve designed to permit flow when controlled pressure is less than the spring setting. The pilot control is held open by the force of the compression on the spring above the diaphragm, and it closes when the delivery pressure acting on the underside of the diaphragm exceeds the spring setting. The pilot control system shall include a fixed orifice. No variable orifices shall be permitted. The pilot system shall include an opening speed control on all valves 3" and smaller for the model 90-01 as standard equipment.

The pilot control shall have a second downstream sensing port which can be utilized to install a pressure gauge. A full range of spring settings shall be available in ranges of 0 to 450 psi.

A direct factory representative shall be made available for start-up service, inspection and necessary adjustments.

This valve shall be a Cla-Val Co. Model No. 90-01 Pressure Reducing Valve. As manufactured by Cla-Val Co. Costa Mesa, CA 92627.

CLA-VAL 1701 Placentia Ave • Costa Mesa CA 92627 • Phone: 949-722-4800 • Fax: 949-548-5441 • E-mail: info@cla-val.com • www.cla-val.com

LAKE WHATCOM WATER AND SEWER DISTRICT

AGENDA BILL

DATE SUBMITTED:	February 27, 2017		
TO BOARD OF COMMISSIONERS			
FROM: Patrick Sorensen	MANAGER APPROVAL		
MEETING AGENDA DATE:	March 8, 2017		
AGENDA ITEM NUMBER:	7.0		
SUBJECT:	Manager's Report		
LIST DOCUMENTS PROVIDED ⇨ NUMBER OF PAGES INCLUDING AGENDA BILL: _____	1. Manager's Report		
	2.		
	3.		
TYPE OF ACTION REQUESTED	RESOLUTION ☐	FORMAL ACTION/ MOTION ☐	INFORMATIONAL/ OTHER ☒

BACKGROUND / EXPLANATION OF IMPACT

Updated information from the General Manager in advance of the Board meeting.

FISCAL IMPACT

None

RECOMMENDED BOARD ACTION

None required.

PROPOSED MOTION

None

General Manager Comments

March 8, 2017

Board Meeting

6:30 p.m.

Important Upcoming Dates:

- **Meetings Associated with the Lake Whatcom Management Program:**
  - **Policy Group Meeting:** The next meeting is scheduled for May 15, 2017 at 3:00 p.m. downstairs at the Municipal Court Building in the conference room (same location as last year).
  - **Management Meeting:** There is not a meeting scheduled at this time.
- **Next Regular Board Meeting:** The next meeting will be designated a Special Meeting" and will be held on **Tuesday, March 28, 2017** at 8:00 a.m.
- **Employee Staff Meeting**: The next staff meeting is set for **Thursday, March 9, 2017 at 8:00 a.m.** in the Board Room. Commissioner Ford is scheduled to attend this meeting.
- **Employee Safety Committee Meeting**: The next meeting is set for **March 9, 2017 at 9:00 a.m.** in the small conference room.

Washington Association of Sewer & Water Districts (WASWD) Section III Meeting: The next Section III meeting will be held at Bob's Burger & Brew in Tulalip off I-5 at **6:15 p.m. on March 14, 2017**.

- **Whatcom Water District's Caucus Meeting**: The next Caucus meeting is set for **March 15, 2017** at 1:00 p.m. in the Board Room.

Other:

- **Committee Meeting Reports as Needed**: This is a place holder for Board and staff members to report on recent committee meetings, such as the Lake Whatcom Policy Group, since the last Board Meeting.
- **Dates for Spring & Fall 2017 WASWD Conferences**: Reminder, the Spring Conference will be in Yakima April 13 - 14. The Fall Conference will be September 27 - 29 in Wenatchee. The conference's end on Fridays at noon. Note: The spring Conference is now available. It was sent to you recently. Attached is a registration form for your use.
- **Annual Councils/Commission Lake Whatcom Meeting**: Reminder. The annual meeting with the City Council and County Council is scheduled to be held on Wednesday, March 29 at 6:30 p.m. in the Bellingham City Council Chambers. All available Council and Board members try and attend this meeting.
- **March Changed Meeting Date**: Reminder. The second meeting in March was changed to Tuesday, the 28th at 8:00 a.m.

- **Water & Sewer Association/State Legislative Update**: FYI. Attached is a copy of the latest Sewer and Water Association's Legislative Update for February 22. These are the bills most closely monitored by WASWD this week.

Washington Association of Sewer & Water Districts
EDUCATE ■ ADVOCATE ■ COLLABORATE

2017 Spring Conference & Trade Show

CONFERENCE REGISTRATION

April 12, 13 & 14, 2017
Yakima Convention Center
10 North 8th Street
Yakima, Washington 98901

Early Registration Deadline March 17, 2017*

Name:
Title:
Organization: Lake Whatcom Water & Sewer
Address: 1220 Lakeway Dr.
City, ST, Zip: Bellingham, WA 98229
Phone: (360) 734-9224
Email: general.inbox@lwwsd.org
(Please provide attendee's email; confirmations will be sent directly to attendee via email)

Conference Fees:

Full Registration:
- ☑ **WASWD MEMBER** $475.00
- ☐ **After March 17, 2017** $510.00
- ☐ **NON MEMBER** $675.00
- ☐ **After March 17, 2017** $725.00

One Day Registration:
- ☐ **WASWD MEMBER** $275.00
- ☐ **After March 17, 2017** $310.00
- ☐ **NON MEMBER** $445.00
- ☐ **After March 17, 2017** $465.00

Thursday ☐ **Friday** ☐

Spouse / Guest Information:

Will you be bringing a spouse or guest? **YES** ☐ **NO** ☑

If YES, Please provide name:
_____

Will your guest be attending the **Hospitality Luncheon** on Thursday? *(see reverse side for details)*
YES ☐ **NO** ☐

Will your guest be attending the Self Walking Tour on Thursday? *(see reverse side for details)*
YES ☐ **NO** ☐

CONTINUING EDUCATION WORKSHOPS

Professional Development Classes are being offered on Thursday, April 13, 2017 and Friday April 14, 2017 and are designed to help utility employees prepare for advancing into management level positions. Participants will receive CEU credit at a rate of .1 CEU per hour of training as awarded by DOE & DOH. Many of these workshops are geared towards employees of utilities. CEU credit has been requested through DOE & DOH for all workshops.

****PLEASE NOTE CONFERENCE FORMAT CHANGE****

The conference begins on Wednesday afternoon at 1:45 p.m. and ends at the close of the Semi-Annual Business meeting on Friday at 12:00 noon. No lunch is provided.

Please enclose check made payable to:
WASWD
12720 Gateway Drive, Suite 204
Tukwila, WA 98168-3333

Credit cards are not accepted for conference registration. Districts may use purchase orders. Registrations accompanied by purchase orders may be faxed to (206) 246-1323 or emailed to staff@waswd.org

For Office Use Only
P.O. _____ Date paid: _____, 2017
Invoice #: _____ Amount: _____
C.L.: _____ DB: _____ Check # : _____
Cancelled: _____

Washington Association of Sewer & Water Districts

EDUCATE ▪ ADVOCATE ▪ COLLABORATE

Legislative Update

February 22, 2017

INTRODUCTION: The first milestone of the legislative session has been reached as non-fiscal bills had to be out of committee by February 17th.

The status of bills WASWD is closely monitoring is discussed below. In addition to this report, we're providing one other report showing all bills we are watching on behalf of members. [1]

LEGISLATIVE PRIORITIES UPDATE:

WASWD Omnibus Bill: HB 1187 and SB 5119

The House and Senate Local Government Committees passed our Omnibus Bill. They are now in the rules committees in each chamber. In the House, the Speaker has a hold on our bill. He is requesting changes to our surplus property provisions. He wants public agencies to have the first chance to buy surplus property when sewer/water districts surplus property (real as opposed to personal property). We are working on a proposed amendment to address his concerns. Any amendment would likely extend the process it takes for our districts to sell surplus property and could create issues with appraisal or broker price opinions which are only valid for six months. Our simple cleanup language of the surplus property statute has now become complicated. The Speaker has an agenda to try to get surplus public property for affordable housing. Once we have a better feel for what the proposed amendment looks like, we will need to make a decision if we can live with it or simply take the surplus property provisions out of our bill in its entirety. The remainder of our bill including the issuance of warrants for smaller districts, water storage maintenance contracts, and pollution control facilities authority have not attracted any concerns at this point.

Public Works Trust Fund: The Governor's budget has proposed transferring $250 million out of the PWTF into the state general fund. It appears this transfer will happen and the focus is now on some type of bond-funded legislation trying to secure low interest rates for public borrowers. Key bills to watch are the following: **HB 1051** (DeBolt), **HB 1324** (OFM) and **HB 1677** (AWC). The challenge with some of these bills is the very broad list of eligible projects, designated funding for rural areas and priority for borrowers facing financial challenges. The biggest unknown is the effective interest rate to borrow money. Not sure it will be different then what many of our districts can borrow money for today. As this concept moves forward, it would be helpful to know what interest rates your district can borrow money in today's debt market. We need to put pressure on our legislators to come up with a program that actually lowers our borrowing costs.

Water- Hirst Decision: The Washington Supreme Court in what is referred to as the Hirst Decision has effectively limited the use of exempt wells across the state. The development community and realtors want a legislative fix. Key bills to watch are **SSB 5239** and **HB 1885**.

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[1] *This report is based upon the best available knowledge as of the time of distribution. WASWD will attempt to keep members apprised of details and changes as soon as possible. Bills may be followed by clicking on the blue links below or on the links shown in the attached detailed reports.*

They both stipulate cities and counties can rely on Ecology rules when carrying out duties under GMA. They allow a well report as sufficient evidence of water availability for an exempt well, and when said wells create a cumulative impact to an established instream flow, Ecology, not the county, will develop mitigation. Importantly, mitigation can address flows or fisheries and aquatic resources. Discussions are ongoing with these bills. It is too early to tell if there is enough legislative support for a fix to the Hirst Decision.

Lead in Drinking Water: Thank you to all the districts that contacted your legislators on the bills dealing with lead. It appears **SB 5745** is the one bill that is moving forward. It requires a public water system to replace lead-containing service lines to schools and early childhood programs by 2020 and replace all other lead-containing service lines by 2030. This bill remains a work in progress. WASWD has problems with the definition of what a service line is and questions around funding as the public works assistant account is likely not a viable funding source.

Public Records Act - HB 1594 and HB 1595: Both of these bills passed out of committee. There is some guarded optimism that some incremental reforms are possible. WASWD will continue to support both bills.

Homeless Lien Legislation - HB 1570 and **SB 5254**: WASWD is working on getting sewer & water districts exempted from the recording fee surcharge just like the state, county and cities are currently. In the Senate, we had an amendment adopted by the Local Government Committee and included in the substitute bill that unfortunately exempted us only to the filing of the lien and not the satisfaction of the lien. Senator Ann Rivers has agreed to offer an amendment in Ways & Means to correct this oversight. The House Bill has passed the policy committee and we have not been able to get any amendments to date.

Contractors Claims Bill – HB 1574 and **SB 5788**: The utility contractors have pushed these bills which would change how construction claims are processed. Currently, claim clauses generally require contractors to follow specific notice requirements when seeking additional payment for extra work done or increased expenses incurred. These bills would allow contractors after the job has been completed to file a claim. It is bad public policy. Thanks to our districts contacting their members, the House Bill did not make it out of committee. Unfortunately, the Senate Bill did pass out of committee. WASWD is working with a host of trade associations in opposing this bill.

ACTION ALERTS: Please be prepared to contact your legislators personally if you receive a WASWD Action Alert.

DETAILED REPORT: For those of you interested in delving deeper into this session's pending legislation, please see the attached reports for active bills. You'll find details about various bills affecting our industry and their status. Please let us know if you have any questions. We are also listing the dead bills as every once in a while they reappear in another bill.

Washington Association of Sewer & Water Districts

EDUCATE ▪ ADVOCATE ▪ COLLABORATE

Legislative Update

February 22, 2017

2017 Session Cutoff Calendar

February 17, 2017	Last day to read in committee reports in house of origin, except House fiscal committees and Senate Ways & Means and Transportation committees.
February 24, 2017	Last day to read in committee reports from House fiscal committees and Senate Ways & Means and Transportation committees in house of origin.
March 8, 2017	Last day to consider bills in house of origin (5 p.m.).
March 29, 2017	Last day to read in committee reports from opposite house, except House fiscal committees and Senate Ways & Means and Transportation committees.
April 4, 2016	Last day to read in opposite house committee reports from House fiscal committees and Senate Ways & Means and Transportation committees.
April 12, 2017*	Last day to consider opposite house bills (5 p.m.) (except initiatives and alternatives to initiatives, budgets and matters necessary to implement budgets, differences between the houses, and matters incident to the interim and closing of the session).
April 23, 2017	Last day allowed for regular session under state constitution.

* After the 94th day, only initiatives, alternatives to initiatives, budgets and matters necessary to implement budgets, matters that affect state revenue, messages pertaining to amendments, differences between the houses, and matters incident to the interim and closing of the session may be considered.