PLWA Annual Members' Meeting

01 July 2023

Outline

- Opening
- System Description
- Minutes
- Treasurer's Report
- Asset Management
- Future Rates
- Salt Water Intrusion
- Water Chemistry
- Cross Connection / Backflow
- PFAS
- Water Conservation
- Communications
- Election of Board Members
- Meeting Close

PLWA

Annual Meeting

PLWA Board Members

- Bill Burnett (President)
- Karl Nielsen (Vice-President)
- Craig Abdelnoor (Secretary)
- John Romanski (Treasurer)

Board Goals

- Provide the Best Quality Water at a Fair Price
- Maintain Facilities and Well
- Efficiently Manage the System's Finances
- Plan for Future System Improvements

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PLWA is a Public Water System

- Group A system: 15 or more service connections
- Community system: regularly serves 15 or more connections year-round, or 25 or more year-round residents (for 180 or more days/year)

Some External Regulations

- U.S. Environmental Protection Agency:
  - 1974 Safe Drinking Water Act (amended 1986 and 1996)
    - Sets standards for public Group A water systems
    - Requires annual Consumer Confidence Reports
- WA Dept. of Health:
  - Group A water supplies Chapter 246-290 WAC
  - Water works operator certification Chapter 246-292 WAC
  - Water System Coordination Act Chapter 246-293 WAC
  - Drinking water operating permits Chapter 246-294 WAC
  - Satellite system management agencies Chapter 246-295 WAC
  - Drinking Water State Revolving Fund Loan Program Chapter 246-296 WA
- WA Dept. of Ecology: Water rights, wells, etc.

Some Internal Documents

- PLWA Bylaws (Updated 2022)
- PLWA Rules, Regulations and Procedures (New in 2023)
- Available at out website for review / download

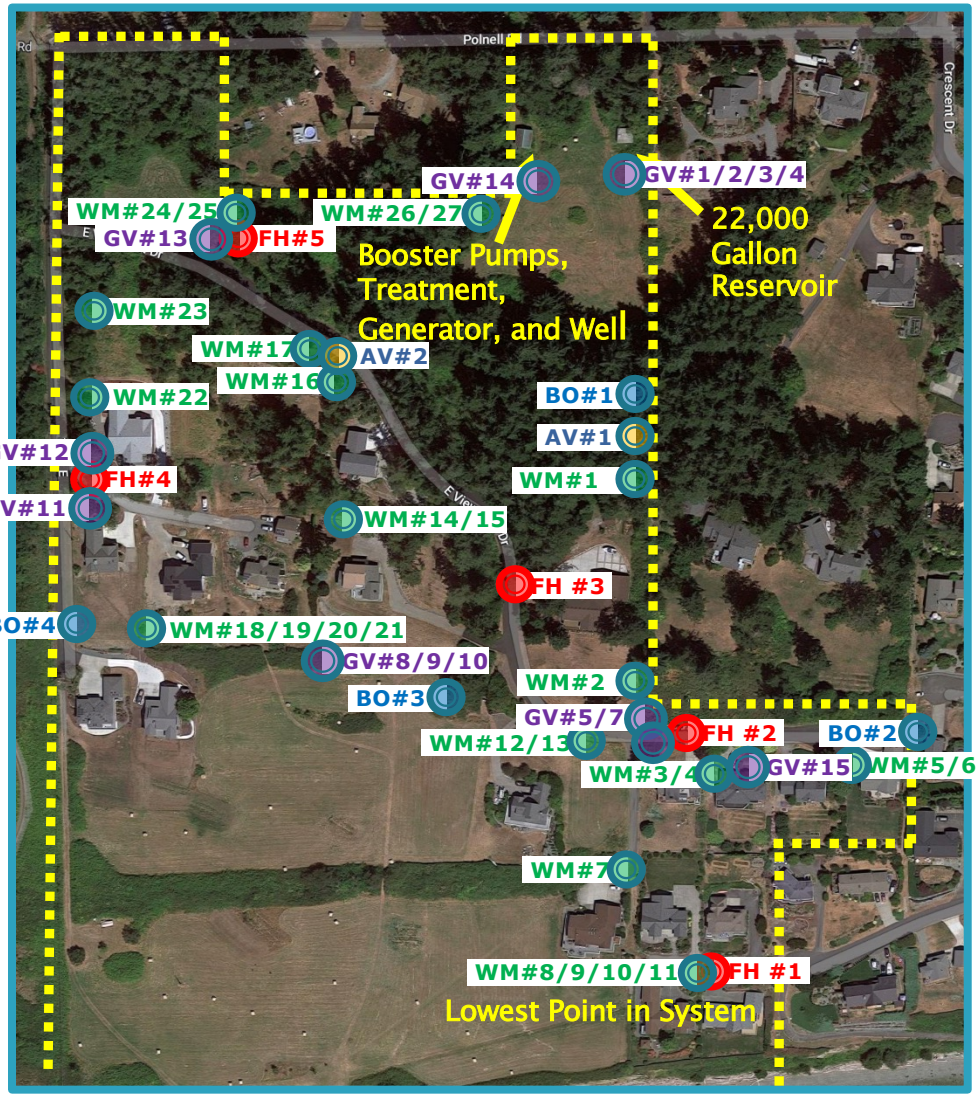
PLWA Membership

- System rated for 27 residential connections
  - 24 parcel certificates
  - 23 members
  - 20 parcels connected
  - 19 members currently drawing water

- Only members drawing water can be assessed dues: *Bylaws Article VIII "Assessment of Dues and Liens"*

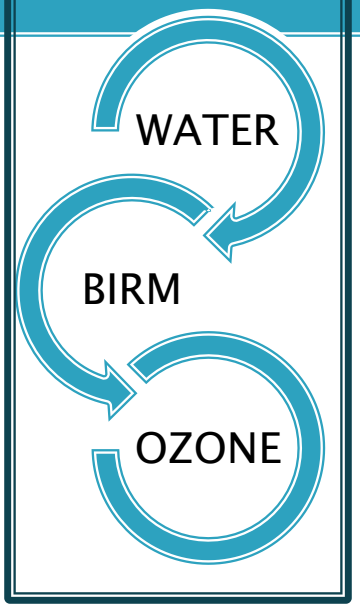
PLWA System Diagram

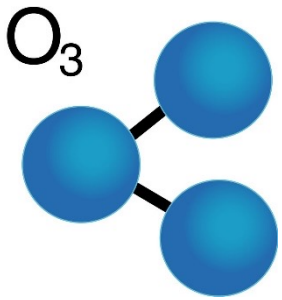
- About a mile's worth of 6" PVC pipe tying it all together



Water Flow Process

Well → Filtration System → Reservoir → Distribution Lines → Water Meters → Homes



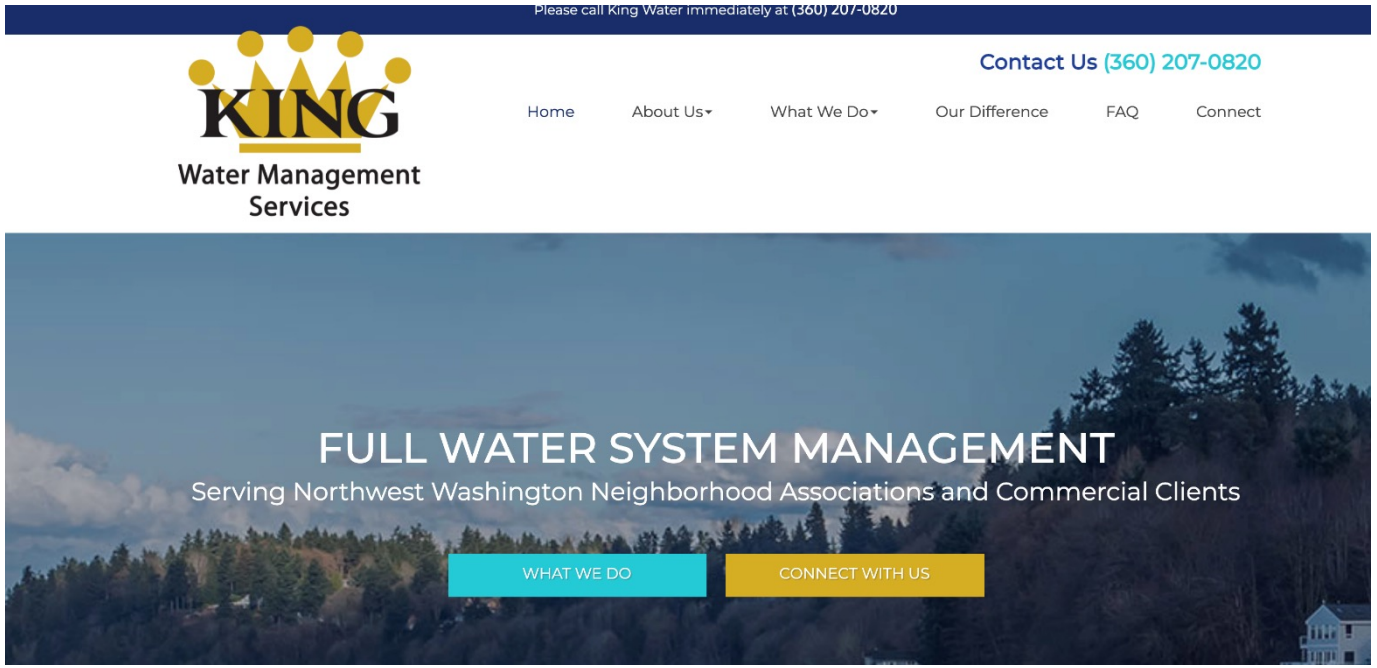


Power Outage

- Emergency generator powers:
  - Well
  - Booster pumps
- Single propane tank for fuel:
  - Should last a few days
  - Will need to call for propane for prolonged outage

King Water

- PLWA contracts with KING Water Company for repairs and maintenance



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Minutes from Previous Meeting

- Craig Abdelnoor- Secretary

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Treasurer's Report

- John Romanski- Treasurer

PLWA Treasure's Report: FY2022, Expenses

Budget Categories	Description	Sub Categories	Description	Sub-Category Total
OPER	**Operating Expense**			
		CONTR	Contract Payment to system operator	$4,349.87
		ELEC	Electricity+Fuel	$632.61
		TESTRU	Routine testing & water quality Monitoring	$645.00
		MNTLD	Mowing, landscaping expenses;	$1,900.00
		INSUR	Insurance	$2,195.00
		MNTXM	Transmission system maintenance: purging, flushing, etc., leak repair, & pipe location	$2,082.50
		MNTPH	Routine maintenance of pump house and well equipent	$476.95
		SLSTX	Seperately enumerated sales tax	$290.34
		OTHER	other routine or short term operating expenses;	$311.48
	Total Operating Expenses			**$12,883.75**
CAPT	**Capital Expense**			
		RESVR	Major repair, addition and/or improvement to resevoir structure	$747.76
	Total Capital Expenses			**$747.76**
			Total Expenses, all	**$13,631.51**

PLWA Treasure's Report: FY2022, Income & Account Status

			Account Balances at beginning of Period		
			CD 1 Balance	$40,491.86	
			CD Total		$40,491.86
			Beginning Checkbook Balance per Bank		$24,654.10
			Total Bank Accounts Balance		**$65,145.96**
			Items paid but not cleared from prior period		$0.00
			Total available Funds		**$65,145.96**
INCOME	**Income received during period**				
		DUES	Dues income; includes insurance & water fees	$10,840.00	
		INTEREST	Interest on accounts	$60.01	
		HOOKUP FEES	Hookup & meter installation fees	$7,500.00	
		OTHER	other	$0.00	
			Total Income	**$18,400.01**	
			Total Income Less Total Expenses	**$4,768.50**	**$4,768.50**
			Total available Funds at End of period		$69,914.46
			Adjustment for Items paid, but not cleared by period end		$1,060.00
			Bank Balances at End of Period		
			CD 1	$20,001.62	
			CD Total	**$20,001.62**	
			Check Book Balance, per Bank	**$50,972.84**	
			Total, All Bank Accounts (statements)		**$70,974.46**
			Mismatch		**$0.00**

PLWA Treasure's Report: FY2022, Operating Fund & Capital Reserve Fund Balances

OPERATING Fund	
Total at beginning of FY 2022	$7,145.96
Operating Income (Dues, Interest)	$10,846.64
Operating Expenses (Contract, flushing, etc.)	$12,883.75
Difference beteen Operating Income & expenses	**-$2,037.11**
Transfers to(-)/from(+) Capital Reserve	$0.00
Operating Fund Balance at end of FY2022	**$5,108.85**

Capital Reserve	
Capital Reserve Balance at FY 2022 Begining	$58,000.00
Capital Fund income (connect fees, interest)	$7,553.37
Capital expenses (major repairs, renovations)	$747.76
Difference	$6,805.61
Transfers to(-)/from(+) Operating Fund	$0.00
Capital Reserve Balance at end of FY2022	**$64,805.61**
Capital reserved for emergencies	$15,000.00
Available Capital for projects, renovations	$49,805.61

- The State now requires HOA's to have a capital Reserve Fund. This necessitates the segregation of operating & capital income & expenses.
- A capital reserve is essential for water associations due to the large investment of capital in wells, pumps, filtration equipment, etc.
- The PLWA operating fund covers everyday operational expenses, e.g.: King Water contract, routine testing & monitoring, periodic flushing & cleaning, mowing, blackberry control, electricity, generator fuel & maintenance, etc. Goal is to maintain balance of $7500 (~ ½ of annual operating costs). Annual Dues should cover annual operating expenses
- The operating fund's income is from dues & checking account interest (~1/2 %)
- Major expenses are charged to the capital reserve. These include improvements, major repairs (e.g., leaks), pump repair & replacement, connection costs
- The capital reserve fund's income consist of connection fees, CD interest (also small) & special assessments.
- A floor of $15,000 is recommended for the capital reserve fund. These monies are to cover the cost of emergencies which would cause shutdown of the system. These include well pump replacement and major leak repair. The treasurer's opinion is that this amount will cover 2 such events.

PLWA Treasure's Report: FY2023, Operating Budget vs. Prior Years

Budget Type:	2023 Estimated	Basis of estimate	2022 Actual	2021 Actual
Operating				
Income				
Interest on checking accounts	$7.50		$6.64	$86.87
Dues income, including usage fees	$15,700.00	800x19 drawing water; 5x100, insurance only	$10,840.00	$7,990.00
Other operating Income	$0.00		$0.00	$0.00
Total Operating Income	**$15,707.50**		**$10,846.64**	**$8,076.87**
Expenses				
Contract Payment to system operator	$4,600.00	Vendor has announced 5% increase in fees	$4,349.87	$3,850.00
Electricity	$675.00	PSE has anounced a rate increase	$632.31	$883.65
Routine testing & water quality Monitoring	$745.00	12 bacteria tests @ $35 ea, $325 for Pb,Cu etc.	$645.00	$365.00
Mowing, landscaping expenses;	$2,000.00	Looking to put Nate under annual contract.We increased his scope and had an extra reservoir clearing	$1,900.00	$691.26
Insurance	$2,300.00	last year + inflation	$2,195.00	$2,014.00
Transmission system maintenance: purging, flushing, etc.,minor leak repair, & pipe location	$2,650.00	$1450, reservoir cleaning, 4 flushes at $300 ea	$2,082.00	$745.00
Routine maintenance of pump house and well equipent	$1,000.00	$500 for generator maintenace; $500 well cover repair	$476.95	$250.00
Seperately enumerated sales tax	$325.00	inflation	$290.34	$584.05
other routine or short term operating expenses;	$350.00	inflation	$311.48	$1,739.77
Total Operating Expenses	**$14,645.00**		**$12,882.95**	**$11,122.73**
Difference, Operating Income-Expenses	**$1,062.50**		**-$2,036.31**	**-$3,045.86**

PLWA Treasure's Report: FY2023 Capital Budget vs. Prior Years

Budget Type:	2023 Estimated	Basis of estimate	2022 Actual	2021 Actual
Capital				
Income				
Interest on CD Accounts	$55.00		$53.37	N/A
Hook up fees	$7,500.00	Prepayment of connection fee, lot 208; $21000 maximum future connection fees	$7,500.00	$0.00
Special Assessments				$0.00
Other Capital Fund Income				$0.00
Total Capital Reserve Income	**$7,555.00**		**$7,553.37**	**$0.00**
Expenses				
Major repair, replacement, and/or addition to pumphouse equipment including pumps, piping between pumps & resevoir, purifiers etc.	$0.00		$0.00	$0.00
Major repair or replaceent to distribution lines	$0.00		$0.00	$4,516.13
Major repair or replacement to wells & below ground items (e.g screens, wiring)	$0.00		$0.00	$0.00
Major repair, addition and/or improvement to pump house building	$0.00		$0.00	$0.00
Major repair, addition and/or improvement to resevoir structure	$0.00		$747.76	$0.00
Engineering Services	$8,200.00	DCG Contract, Testing & Filter Plant Concept Design	$0.00	$0.00
Seperately enumerated sales tax	$0.00		$0.00	$0.00
Other capital expenses	$800.00	prior year	$0.00	$0.00
Total Capital Expenses	**$9,000.00**		**$747.76**	**$4,516.13**
Difference; Capital Reserve Income-Expenses	**-$1,445.00**		**$6,805.61**	**-$4,516.13**

PLWA Treasure's Report: FY2023 First Half Financial Summary & Highlights

Financial Summary		
Date	**By Bank Accounts**	**Amount**
6/1/2023	checking	$55,684.54
	CD's	$20,007.45
	Total	$75,691.99

Fund Allocation

Description	Income	Expenses	Operating Fund	Income	Expenses	Capital fund	Total
Start/ Balnce Forwarded			$5,108.85			$64,805.61	$69,914.46
1st Quarter	$8,614.63	$3,056.54	$10,666.94	$7,505.83	$2,605.50	$69,705.94	$80,372.88
2nd quarter	$1.93	$1,614.32	$9,054.55	$0.00	$3,068.50	$66,637.44	$75,691.99
(Insert rows above)							
Internal Fund Balances			**$9,054.55**			**$66,637.44**	**$75,691.99**

Income Highlights:

- Received Advance Connection Fee Deposit for Cheleek lot 8; $7500.
- ~$8600 dues income

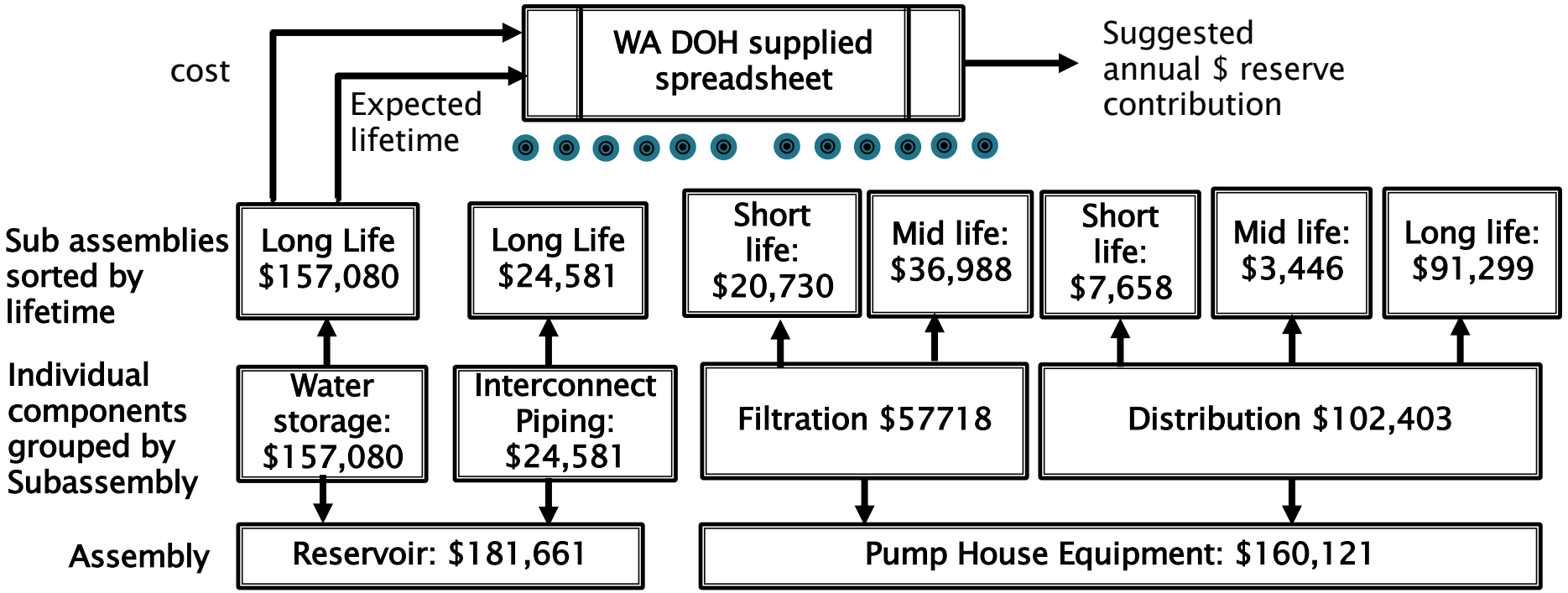
Expense Highlights:

- ~$5700 in capital expenses for engineering & related testing
- ~$4700 in operating expenses billed & paid
- ~$2500 for work performed but not yet invoiced nor paid: Management & testing for 3 months, flushing of lines, fix backwash problems, mowing
- Near term expense: ~ $2500 insurance

PLWA Treasure's Report: FY2023 First Half Expenses

Date	Description	Sub Category	Item Amount	Operating Fund Total	Capital Fund Total	Total Payment
12/4/2022	DCG Engineering, Services	C6ENGR	2,028.50		2,028.50	2,028.50
12/22/2022	PSE; Electric Bill	P2ELEC	130.24	130.24		130.24
12/19/2022	KW Invoice 25778 Item 1; Contract	P1CONTR	350.00	350.00		
12/19/2022	KW Invoice 25778 Item 2; testing	P3TESTRU	35.00	35.00		385.00
1/2/2023	Invoice for Bought Materials	P7MNTPH	170.78	170.78		
1/2/2023	Sales tax on above	P8SLSTX	15.37	15.37		
1/2/2023	Invoice for Bought Materials	P7MNTPH	29.00	29.00		
1/2/2023	Sales tax on above	P8SLSTX	2.61	2.61		217.76
1/18/2023	KW Invoice 25893 Item 1; Contract	P1CONTR	350.00	350.00		
1/18/2023	KW Invoice 25893 Item 2; testing	P3TESTRU	35.00	35.00		385.00
1/25/2023	KWInvc25893 rev A; additional testing	C6ENGR	337.00		337.00	337.00
1/31/2023	KW Invoice #26130, Item 1; Mngmt Svcs	P1CONTR	350.00	350.00		
1/31/2023	KW Invoice #26130, Item2; Bacteria Test	P3TESTRU	35.00	35.00		
1/31/2023	KW Invoice #26130, Item 3; Alpha/Beta radioactive Test	C6ENGR	120.00		120.00	
1/31/2023	KW Invoice #26130, Item 4, Radium 228 Test	C6ENGR	120.00		120.00	
1/31/2023	KW Invoice #26130, Item 5, WO 23837, Sys Flush	P6MNTXM	270.00	270.00		
1/31/2023	KW Invoice #26130, Item 6, mazzei for O3, Labor	P7MNTPH	180.00	180.00		
1/31/2023	KW Invoice #26130, Item 7 Mazzei Ozone Injector	P7MNTPH	156.00	156.00		
1/31/2023	KW Invoice #26130, Item 8, Sales tax	P8SLSTX	52.72	52.72		1,283.72
2/23/2023	PSE; Electric Bill	P2ELEC	156.82	156.82		156.82
3/3/2023	WIWSA Invc	P9OTHER	38.00	38.00		38.00
3/23/2023	Nathan Barnes, initial payment	P4MNTLD	700.00	700.00		700.00
4/20/2023	KW Invoice #26345, Item 1; Mngmt Svcs	P1CONTR	350.00	350.00		
4/20/2023	KW Invoice #26345, Item2; Bacteria Test	P3TESTRU	35.00	35.00		
4/20/2023	KW Invoice #26345, Item 3, WO 23905, ozone injector replacement labor	P7MNTPH	180.00	180.00		
4/20/2023	KW Invoice #26345, Item 4, Parts: Ozone Mazzie Injector	P7MNTPH	310.05	310.05		
4/20/2023	KW Invoice #26345, Item 5, Sales tax	P8SLSTX	42.63	42.63		
4/20/2023	KW Invoice #26569 Item 1; Water Mgt Services	P1CONTR	368.00	368.00		
4/20/2023	KW Invoice #26569 Item 2; Bacteria test	P3TESTRU	40.00	40.00		
4/20/2023	KW Invoice #26569 Item 3, Meter reading	P1CONTR	56.00	56.00		
4/20/2023	KW Invoice #26569 Item 4; copper lead letter	P9OTHER	1.00	1.00		
4/20/2023	KW Invoice #26569 Item 5, Sales tax	P8SLSTX	0.09	0.09		1,382.77
4/23/2023	PSE; Electric Bill	P2ELEC	231.55	231.55		231.55
4/24/2023	DCG Engineering, Services	C6ENGR	3,068.50		3,068.50	3,068.50
FY 2023 Summaries:						
1st Quarter			5,662.04	3,056.54	2,605.50	5,662.04
2nd Quarter			4,682.82	1,614.32	3,068.50	4,682.82
1st Half			10,344.86	4,670.86	5,674.00	10,344.86

PLWA Treasure's Report: Capital Replacement Plan, Process & Status



Other Assemblies: Pump House Building, Distribution Piping, Well, Generator

Status: Asset Inventory Complete, Need to put Data into Wa DOH spreadsheet.

PLWA Treasure's Report: Capital Replacement Plan, Sample Asset Inventory

DISTRIBUTION					$102,402.67		
didtribution, short life							
	3 HP booster pump	2	$2,557.00	$5,114.00		Granger catalog; matches pipe size & power; Goulds 3BF1H1C0	https://www.grainger.com/product/GOULDS-WATER-TECHNOLOGY-Centrifugal-Pump-3-hp-3CCT9
	well head buffer tank	1	$470.00	$470.00		Well Trol WX203 32 gal, well head buffer	https://www.supplyhouse.com/Amtrol-WX-203-WX-203-146S30-32-Gal-WELL-X-TROL-Well-Tank-Stand
	backwash Preassure buffer tank	1	$287.00	$287.00		Well Trol WX201, 14 gal	WX-201 - Amtrol WX-201 - WX-201 (143S29), 14 Gal WELL-X-TROL Well Tank (Stand) (supplyhouse.com)
	Sum of above items		$5,871.00				
	allowance for Misc & missed parts	0.1	$587.10	$587.10		10%	
	Sub Total			$6,458.10			
	Labor	8	$150.00	$1,200.00			
	distribution, short life						
	assembly subtotal				$7,658.10		
didtribution, mid life							
	Hydropneumatic tank controls						
	air volume control for Hydropneumatic tanks	1	$2,587.00	$2,587.00		This appears to be similar to the one there. Note the size of the tanks drive this up in price.	D610 Air Rite Air Compressor (Whitewater Mfg) - $2,576.87 : Water Softner Parts, Water Softner Parts (watersoftener-parts.com)
	misc. parts	0.1	$258.70	$258.70			
	sub total			$2,845.70			
	labor	4	$150.00	$600.00			
	didtribution, mid life						
	assembly sub total				$3,445.70		

PLWA Treasure's Report: Capital Replacement Plan, Asset Inventory Summary

Component	Category	Replacement cost estimate	Sunmmary Description	Expected lifetime, years
RESERVOIR		**$181,661**		
	Long Life	$157,080	Storasge Tank	60
	Mid life	$24,581	Piping & Valves at base	30
PUMP HOUSE EQUIPMENT		**$160,121**	Equipment inside the pump house	
Filtration		*$57,718*	Receive, filter & store in reservoir	
	Mid life	$36,988	Filter Tanks, Controllers,Piping	30
	short life	$20,730	Ozone generator, tank	12
Distribution		*$102,403*	Distribute from reservoir to Piping	
	Long Life	$91,299	Preassure tanks, valves, & Piping	60
	Mid Life	$3,446	Pressure tank controls	25
	Short Life	$20,730	Booster Pumps	15
PUMP HOUSE BUILDING		**$39,560**		
	Long life	$35,810	Building, less roof	60
	Mid Life	$3,750	roof	30
WELL		**$15,490**		
	Long life	$9,600	well drilling & casing	40
	Short Life	$5,890	pump & wiring	15
GENERATOR		**$12,903**		
	Mid Life	$12,903	Generator set, wiring & fuel storage	25
DISTRIBUTION PIPING		**$1,303,430**	~4800' of underground piping	
	Long Life	$1,224,143	pipes & installation	75
	Mid Life	$55,287	valves & Hydrants	30
	Short Life	$7,658	meters	15
SYSTEM ESTIMATED REPLACEMENT COST	**Grand Total**	**$1,713,165**		

Recent Maintenance / Capital Expenditures 2022 – 2023

- Contracted with DCG for engineering analysis (water treatment system replacement)
- Quarterly meter reading
- Quarterly system flushing
- Cleaned reservoir (February 2023) (3-year cycle?)
- Replaced ozone injector (February 2023)
- Repaired well head cover (Summer 2022)
- Installing three water meters – Viewpoint Drive (One in June 2023)

Upcoming Maintenance / Capital Expenditures

- Install two more water meters – Viewpoint Drive (One done in June 2023)
- Replace filtration system backwash valve
- Remove old / leaning trees near pump house
- Repair / replace hydrant #3 (Viewpoint Dr)
- Install taps / water meter boxes for Lots 9 & 12
- Repair gate valve at well head / pump house

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Three Ways to Evaluate PLWA Water System Value

- **Valuation for Accounting Purposes**
  - Value accounting for *depreciation* of assets per accounting and IRS rules
- **Valuation for Asset Management Program**
  - Establishes *replacement costs* and Life Expectancy of Assets
- **Valuation for Fair Market Value**
  - System assets, even depreciated and even in need of replacement, still have a value because they are *still functioning*

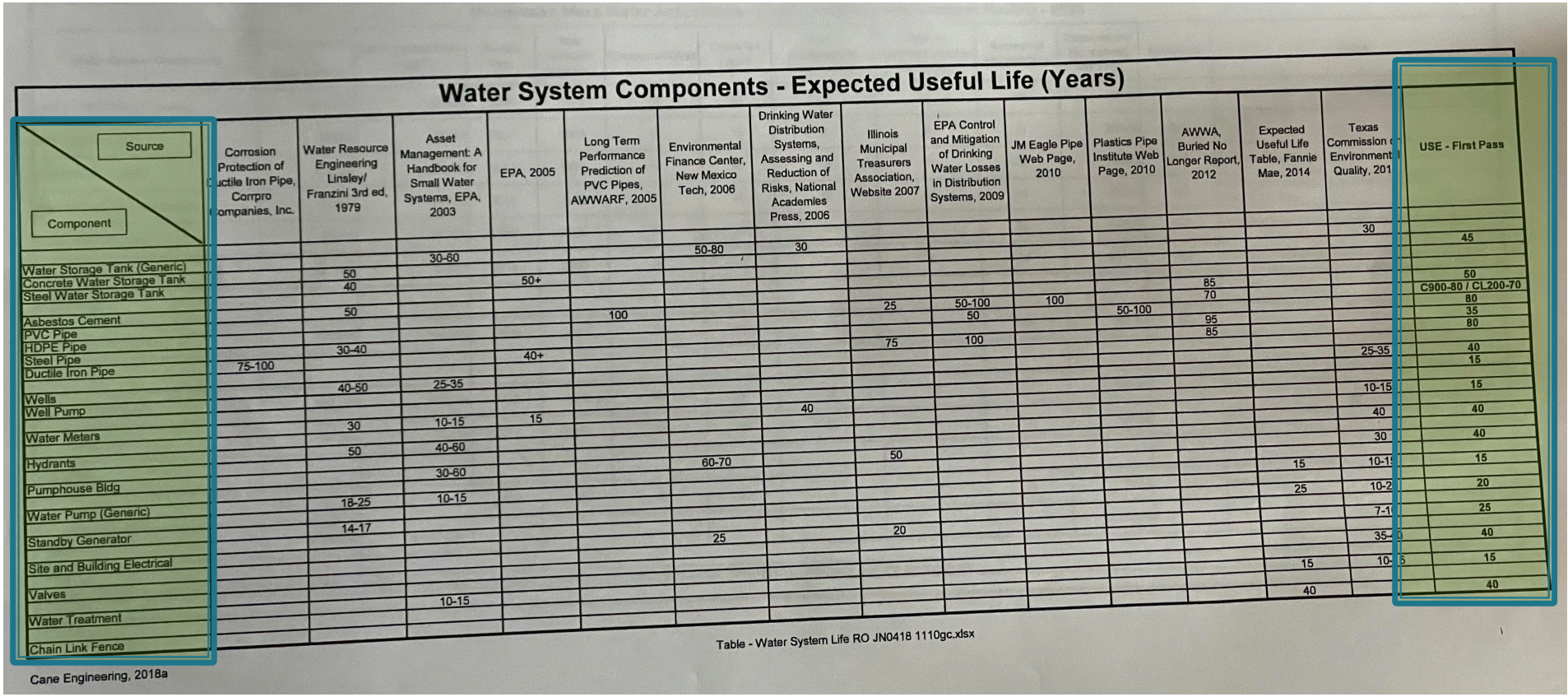
Asset Management

- **Asset management is a process water and wastewater utilities can use to make sure that planned maintenance can be conducted and capital assets (pumps, motors, pipes, etc.) can be repaired, replaced, or upgraded on time and that there is enough money to pay for it.**

Asset Management Process

- Identify/assess/document all PLWA assets
- Assign lifecycle management principals
- Identify projected gaps in operational infrastructure
- Plan for future financial and facilities' needs
- Provide membership transparency for managed resources:
  - Finance
  - Facilities
  - Maintenance
  - Compliance

Water System Expected Useful Life (Years)



Water System Components - Expected Useful Life (Years)

Component \ Source	Corrosion Protection of Ductile Iron Pipe, Corpro Companies, Inc.	Water Resource Engineering Linsley/ Franzini 3rd ed, 1979	Asset Management: A Handbook for Small Water Systems, EPA, 2003	EPA, 2005	Long Term Performance Prediction of PVC Pipes, AWWARF, 2005	Environmental Finance Center, New Mexico Tech, 2006	Drinking Water Distribution Systems, Assessing and Reduction of Risks, National Academies Press, 2006	Illinois Municipal Treasurers Association, Website 2007	EPA Control and Mitigation of Drinking Water Losses in Distribution Systems, 2009	JM Eagle Pipe Web Page, 2010	Plastics Pipe Institute Web Page, 2010	AWWA, Buried No Longer Report, 2012	Expected Useful Life Table, Fannie Mae, 2014	Texas Commission on Environmental Quality, 201	USE - First Pass
Water Storage Tank (Generic)			30-60			50-80	30							30	45
Concrete Water Storage Tank		50		50+											
Steel Water Storage Tank		40										85			50
Asbestos Cement		50			100			25	50-100	100	50-100	70			C900-80 / CL200-70
PVC Pipe									50			95			80
HDPE Pipe		30-40						75	100			85			35
Steel Pipe	75-100			40+										25-35	80
Ductile Iron Pipe		40-50	25-35												40
Wells															15
Well Pump		30	10-15	15			40							10-15	15
Water Meters		50	40-60											40	40
Hydrants			30-60			60-70		50					15	30	40
Pumphouse Bldg		18-25	10-15										25	10-15	15
Water Pump (Generic)		14-17												10-20	20
Standby Generator						25		20						7-10	25
Site and Building Electrical														35-40	40
Valves													15	10-15	15
Water Treatment			10-15										40		40
Chain Link Fence															

Table - Water System Life RO JN0418 1110gc.xlsx

Cane Engineering, 2018a

Water System Expected Useful Life (Years) (cont.)

Component	Average Life Expectancy (Years)
Water Storage Tank (Generic)	45
Concrete Water Storage Tank	
Steel Water Storage Tank	
Asbestos Cement	50
PVC Pipe	C-900: 80 / CL-200: 70
HDPE Pipe	80
Steel Pipe	35
Ductile Iron Pipe	80
Wells	40
Well Pump	15
Water Meters	15
Hydrants	40
Pumphouse Building	40
Water Pump (Generic)	15
Standby Generator	20
Site and Building Electrical	25
Valves	40
Water Treatment	15
Chain Link Fence	40

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Example Future Rate Structure

Maintenance and Operations		
	2023/2024	2025 forward
Annual Rate	$800	$800+
Tiered Billing Based on Quarterly Usage		
0 – 18,000 gallons		$0.0
18,001 – 54,000 gallons		$0.0X/gal
> 54,000 gallons		$0.0X/gal

Capital Fund			
	2025	2026	2027
Annual Assessment	$XXX	$XXX	$XXX

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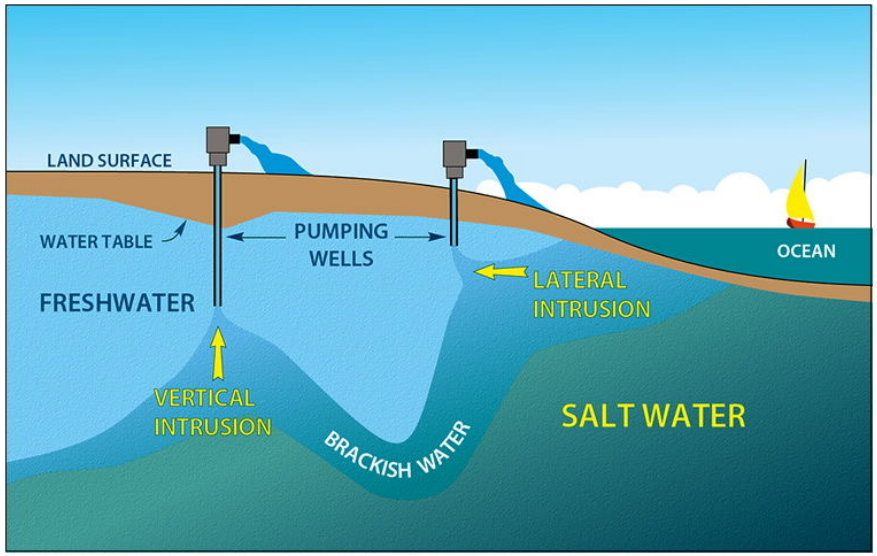
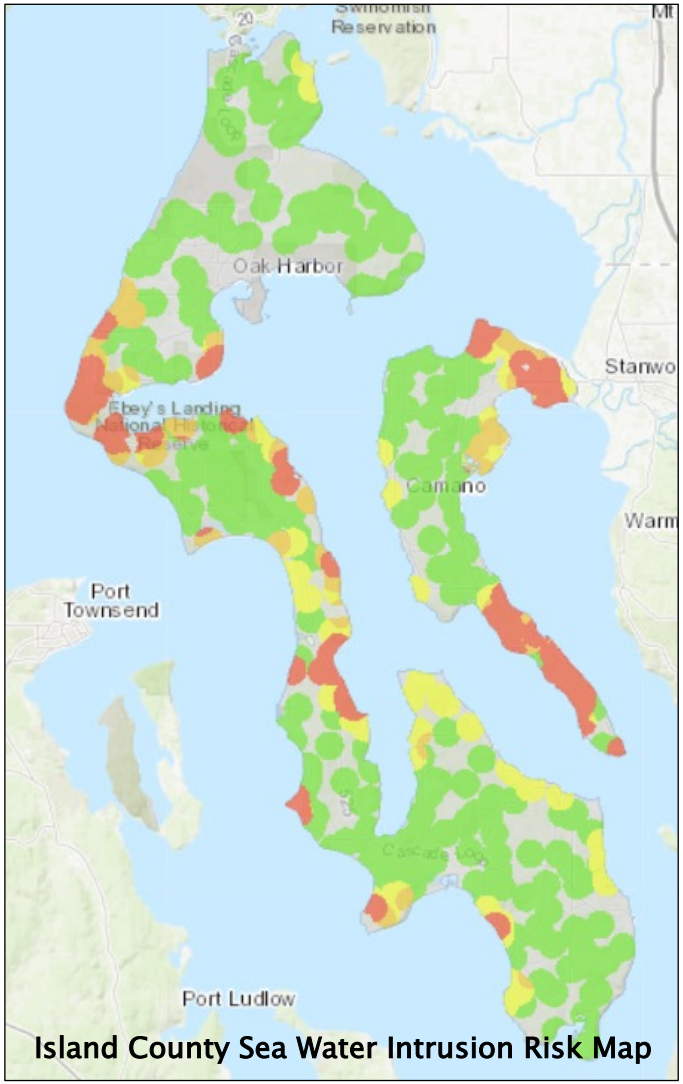
Well / Saltwater Intrusion Risk

- ALT194 (GM3) – Low Risk
- 1160 Old Polnell Rd
- Effective Date 01/01/1970
  - LS Elevation 203'
  - Well Depth 158'
  - TD Elevation 45' MSL
  - Maximum capacity 35 gpm





Saltwater Intrusion Data

- Conductivity measures total dissolved solids
- Chloride is the primary indicator

Year	ALT 194 (GM3) Well	
	Conductivity MCL=700 Umhos/cm	Chloride MCL=250 mg/L
1991	310 / 320 / 310	13 / 14 / 14
1997	318	20
2015	260 / 330	20 / 20
2017	323	13.9
2018	326	13.4
2019	329	13.1

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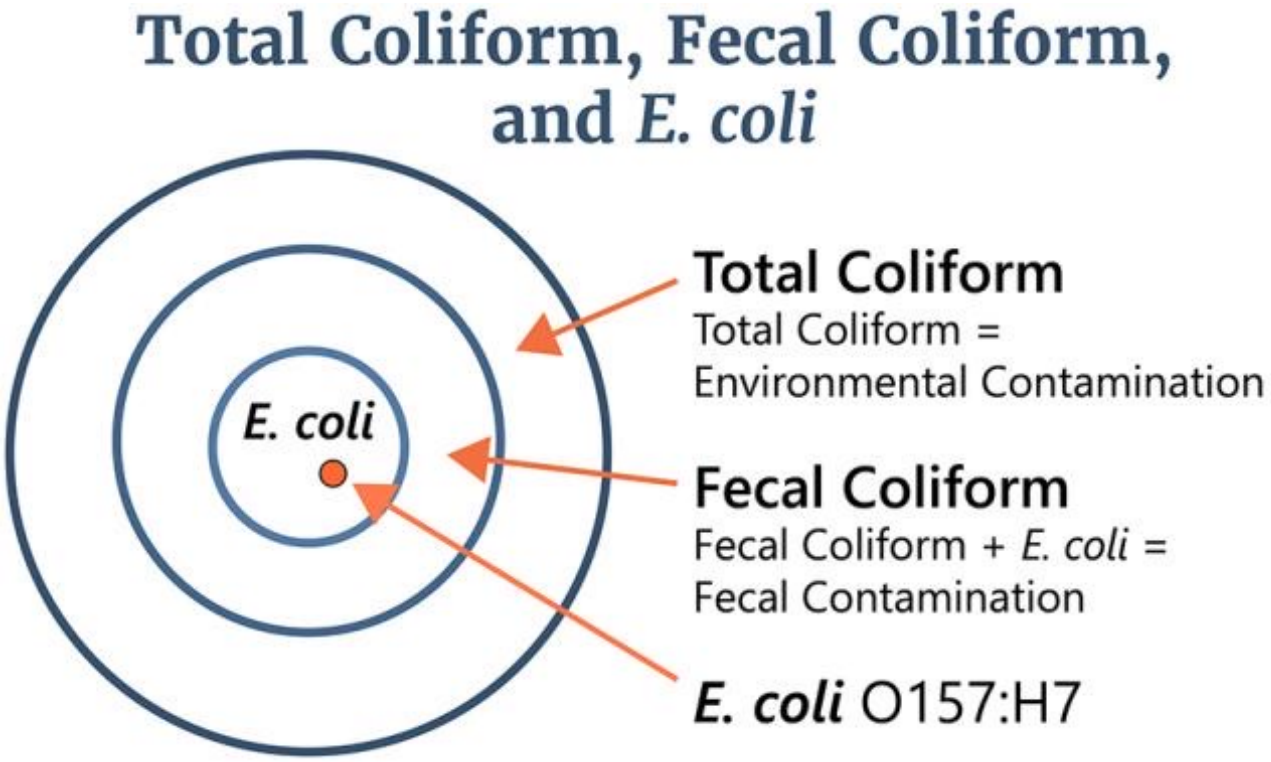
Water Quality Monitoring Schedule

Monthly	Quarterly	Six Months	One Year	Three Year	Nine Year
Coliform	Gross Alpha	Lead (5 Samples)	Total Trihalomethane (THM/TTHM)*	Complete Inorganic (IOC)	Asbestos
	Radium 228	Copper (5 Samples)	Halo-Acetic Acids (HAA5)*	Volatile Organics (VOC)	
			Bromate*	Herbicides	
			Nitrate	Pesticides	
				PFAS	
				Soil Fumigants	

* Disinfectant Byproducts from Water Treatment

Total Coliform

- Tested Positive 27 May 2023 (Five Samples)
- Tested Negative for E. Coli



Disinfectant Byproduct (DBP) Mitigation

- DBPs are not known to be a current issue for PLWA
- TTHM / HAA5: created by Chlorine as a disinfectant
- Bromate: created by Ozone as a disinfectant

Inorganic Concentrations

Contaminant	Results	MCL / Reporting Limit
Iron*	.26 / .09/ .05 / .24 / .10	0.3 mg/L
Hardness*	127.9 / 150 / 140 / 110	10.0 mg/L
Manganese*	.49 / .35 / .64 / .44 / .876	0.05 mg/L
Lead (2022)	.001/.22/.0031/.0226/ .0707/.204	0.0010 mg/L
Copper (2022)	.02/.001/.061/.001/ .001/.010	0.02 mg/L
Radionuclides:		
Radium 228 (2022)	0.2	1.0 pCi/L
Gross Alpha (1993 /2022)	4 / 3	3.0 pCi/L
Gross Beta (1993)	6	50.0 pCi/L
Nitrates	11 tests <MCL 2002 – 2020	10.0 mg/L

* Data from 1997 / 1989 / 1991 / 2015 / 2020

Inorganics Contaminants Mitigation

- Our filtration system removes as much iron and manganese as possible
- Quarterly system flushes aid in water main buildup
- Your home softener and filter remove the rest

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Cross Connection

- A cross connection is any physical connection between a public or consumer's water system and any source of non-potable liquid, solid or gas that could contaminate the water supply by backflow.

Backflow

- Backflow is the undesirable reversal of the flow of water from its intended direction in a pipeline or plumbing system.
- It can result from a loss of pressure in the public water system (for example, due to a large leak), which can in turn draw non-potable water from the customer's property (fire sprinkler systems, irrigation systems, hot tubs, etc.) into the water system at unprotected cross connections.
- Prevention of backflow at cross connections ("cross connection control") is critical to protecting public health.

What Am I Responsible For?

- **WAC# 246-290-490** delineates that property owners are required to install and maintain backflow prevention assemblies where they are needed and also speaks to water purveyors' (i.e. PLWA's) responsibilities.

What is the Water System Responsible For?

- PLWA's responsibilities are more specifically delineated in **DOH PUB. #331-234**, and include:
  - Hazard surveys
  - Installation of backflow preventers to protect the public water system
  - Establishing a record-keeping system
  - Public education

Where is a Backflow Assembly Required?

- A backflow assembly is required wherever there is a possibility of a cross connection between the public water system and a non-potable water source.

- Examples include, but are not limited to:
  - Irrigation systems
  - Boilers
  - Hot tubs
  - Other water-using equipment

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PFAS (Perfluoroalkyl and Polyfluoroalkyl Substances)

- PFAS are common chemicals in carpet, food packaging, clothing, and fire fighting foam
- WA State has established "State Action Levels" (SALs) ⇢ in the parts-per-trillion range
- PLWA water will be tested for PFAS starting 2023

PFAS CHEMICALS	State Action Levels (SALs) *Parts per trillion (ppt) is the same as nanograms per liter (ng/L). Sometimes shown in micrograms per liter (µg/L) or parts per billion (ppb).*
PFOA	*10 ppt (equal to 10 ng/L, 0.010 µg/L or 0.010 ppb)*
PFOS	*15 ppt (equal to 15 ng/L, 0.015 µg/L or 0.015 ppb)*
PFNA	*9 ppt (equal to 9 ng/L, 0.009 µg/L or 0.009 ppb)*
PFHxS	*65 ppt (equal to 65 ng/L, 0.065 µg/L or 0.065 ppb)*
PFBS	*345 ppt (equal to 345 ng/L, 0.345 µg/L or 0.345 ppb)*

EPA Proposed PFAS Limits (as of Mach 2023)

- For six PFAS chemicals:
  - Perfluorooctanoic acid (PFOA)
  - Perfluorooctane sulfonic acid (PFOS)
  - Perfluorononanoic acid (PFNA)
  - Perfluorohexane sulfonic acid (PFHxS)
  - Perfluorobutane sulfonic acid (PFBS)
  - Hexafluoropropylene oxide dimer acid (HFPO-DA, commonly known as GenX Chemicals)

EPA Proposed PFAS Limits (as of Mach 2023) (cont.)

- Non-enforceable Maximum Contaminant Level Goals (MCLGs)
- Proposed MCLs (enforceable levels)

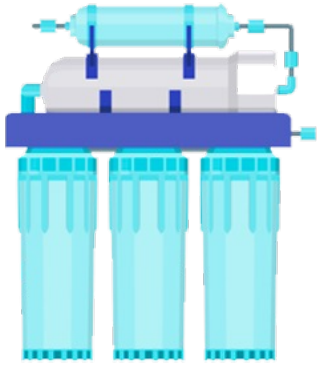
Compound	Proposed MCLG	Proposed MCL (enforceable levels)
PFOA	Zero	4.0 parts per trillion (ppt) (also expressed as ng/L)
PFOS	Zero	4.0 ppt
PFNA	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index
PFHxS		
PFBS		
HFPO-DA (commonly referred to as GenX Chemicals)		

EPA Proposed PFAS Limits (cont.)

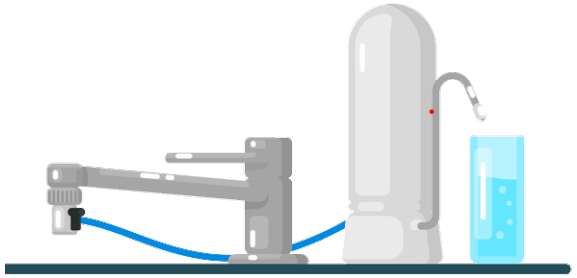
- The proposed rule would also require public water systems to:
  - Monitor for these PFAS
  - Notify the public of the levels of these PFAS
  - Reduce the levels of these PFAS in drinking water if they exceed the proposed standards

PFAS (cont.)

- PFAS-reducing point-of-use (POU) filters are usually granular activated carbon filters certified by the National Standards Federation to reduce PFOA and PFOS (NSF/ANSI Standard 53, must include claim of PFOA/PFOS reduction), or reverse osmosis filters



"Under the Sink" Style Filter



"Countertop" Style Filter

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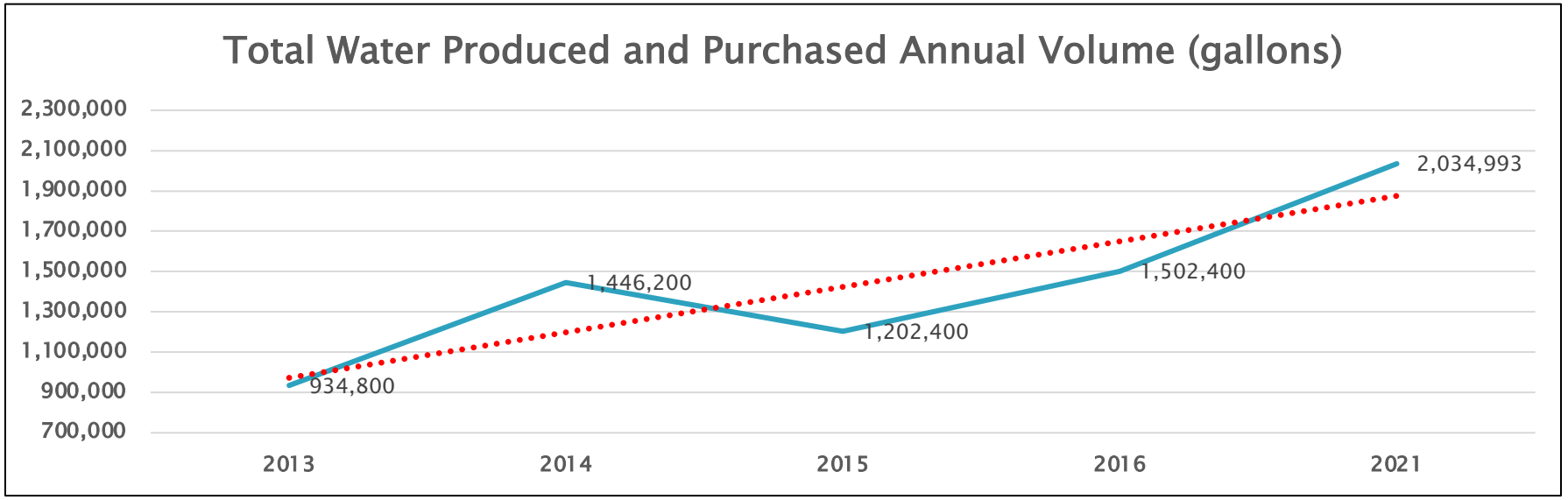
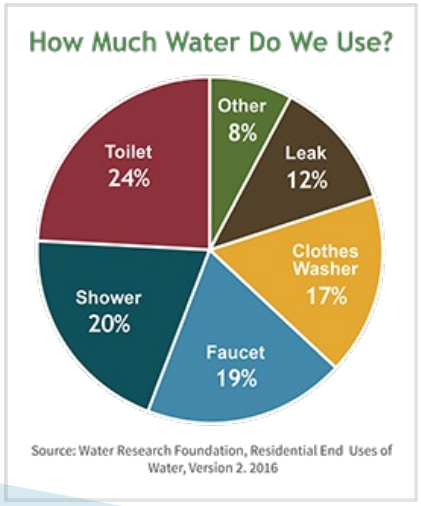
PLWA Water Rights

- Instantaneous draw rate of 30 gallons per minute from our well
- 17.5 acre-feet (5,702,392 gallons) per year
- *"Waters of the state belong to the public and can't be owned by any individual or group. Instead, a person or group may be granted a right to use a volume of water, for a defined purpose, in a specific place."* – quote from Dept. of Ecology website

Total Gallons Pumped

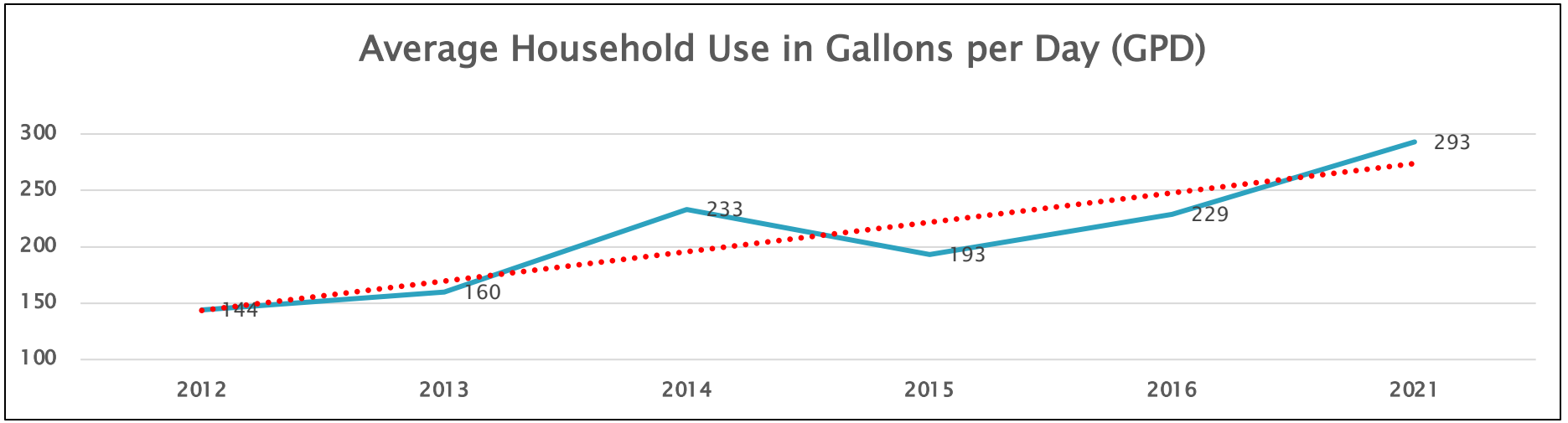




Year	Total Water
2012	790,100
2013	934,800
2014	1,446,200
2015	1,202,400
2016	1,502,400
2021	2,034,993

Average Household use in gallons per day (GPD)

- Average person uses 80-100 GPD for indoor home uses: Source: US Geological Survey
- Average American family uses >300 GPD at home. Roughly 70 percent is indoors: Source: EPA



Year	GPD	~Connections
2012	144	15
2013	160	16
2014	233	17
2015	193	17
2016	229	18
2021	293	19

Water Use Efficiency (Leaks)

- We must report our WUE annually to the state of WA
- PLWA responsible for all leaks up to and including the water meter
- Member responsible for all leaks on their side of the water meter
- Unless all connections are metered and all meters are being read, water use efficiency cannot be measured accurately

Year	Estimated % of Metered Connections	System Leakage (Gallons)	Leak %
2012	< 50%	0	0%
2013	<50%	0	0%
2014	50% to 75%	0	0%
2015	100%	0	0%
2016	100%	0	0%
2017	No Report	No Report	No Report
2018	No Report	No Report	No Report
2019	100%	0%	0%
2020	No Report	No Report	No Report
2021	>75%	0	0%
2022	Expect in July 2023		

Water Meters

- **WAC 480-110-305**
- **Access to premises.**
  - Authorized personnel of a water company have the right to enter a customer's property during reasonable hours to perform meter reading, maintenance, testing, installation or removal of the company's property. Customers may ask to see the identification of the water company personnel before allowing entry to the customer's property.

What Can We Do To Conserve?

- Check for leaks:
  - Hose bib
  - Toilet
  - Faucets
- Check for proper operation
  - Irrigation system
  - Dishwasher
  - Clothes washer
  - Water softener
  - Pressure pumps

Our GOALS

Gallons Per Day Per Unit

20XX	???	
20XX	???	
20XX	???	

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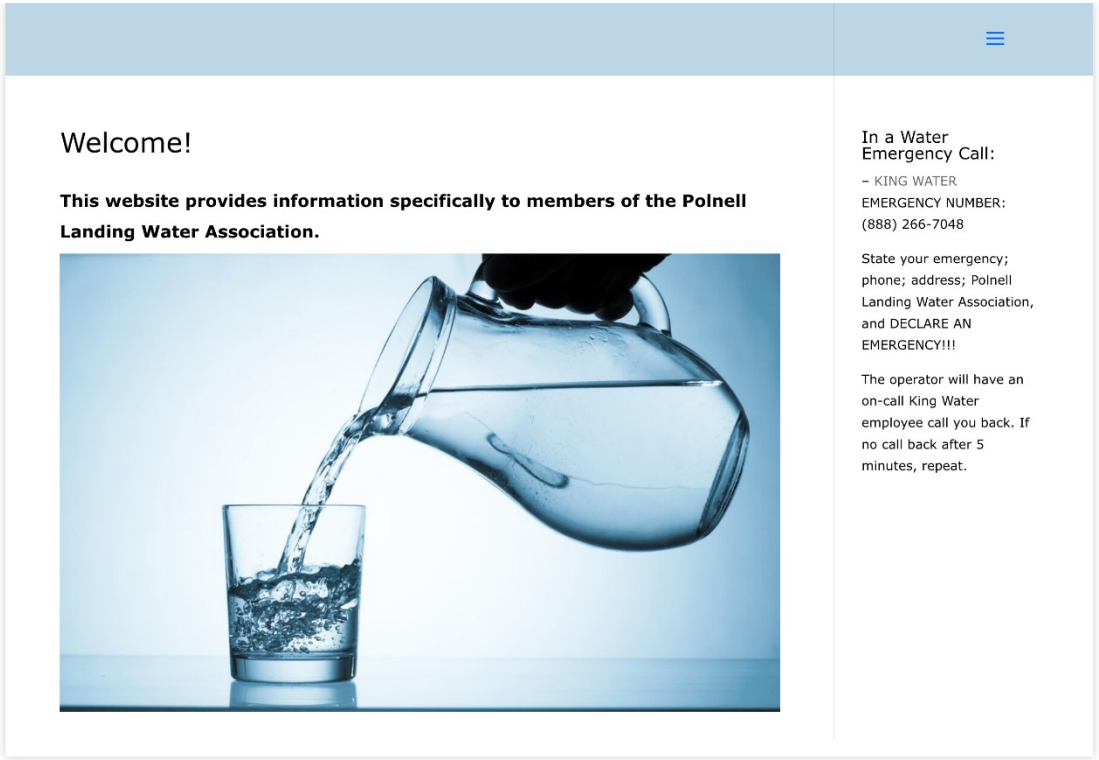
Website

- https://polnellwater.org
- A communications vehicle
- A Board resource



Website email

- Comes from “info@polnellwater.org”:
  - Informational emails (Annual meeting)
  - Emergency alert information
  - Ongoing project information (system flush, well cleaning, other maintenance)

- ***Please keep your email address current with PLWA and change your privacy settings to receive email from PLWA***

Emergency Response Plan

- Our emergency response goal is to protect and inform WWWA members regarding water system emergencies

Major Emergencies

- Pump malfunctions or major line breaks
- Water system or well contamination
- Long term (24+ hours) power outage
- Boil water notice

Emergency Communications

- Initial actions:
  - Water: King Water (1-888-266-7048)
  - Other: 911

- Communications plan:
  - Group Email (ONLY if your email is listed with us)
  - Emergency notices of need to boil water distributed by King Water to each residence

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Election of Board Members

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Meeting Close