

Water Use Efficiency Program

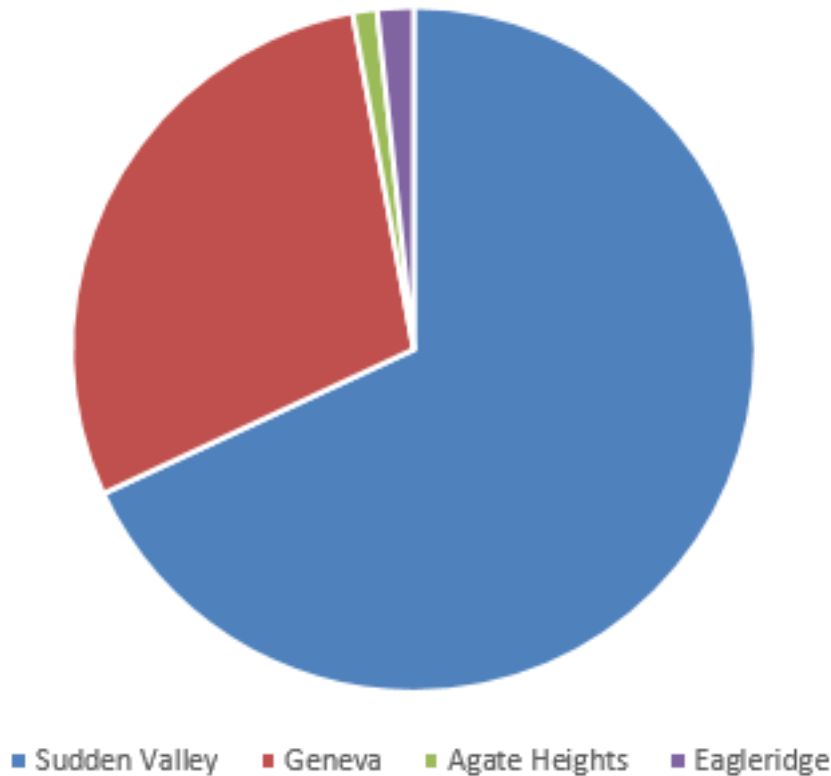
2021 Customer Goals Update
Lake Whatcom Water and Sewer District

Background

- Municipal Water Law (2003) adopted by State Legislature required all municipal water suppliers to use water more efficiently
 - In 2007, an enforceable Water Use Efficiency (WUE) program was established
- Goal setting
 - Must include at least one goal for customer side
 - Must involve public forum
 - Re-establish goals every 6 years
 - Required number of measures based on system size

Background

Number of Households (ERUs)



Sudden Valley	2,763
Geneva	1,160
Agate Heights	45
Eagleridge	70
Total	4,038

Purpose

- Goals are established and revised as needed through a review process and in conjunction with public input.
- The main purpose of the goals is to create a program that will bring the District within compliance of requirements of the WUE Program.
- Measures are activities that will move District towards accomplishing these goals.

2015 Goal #1 – **Reduce Distribution System Losses**

- Continue to focus on reducing losses in South Shore (Geneva and Sudden Valley) service areas.
- Goal is to reach and maintain <10% losses in all service areas.
- WUE standard: less than 10% losses.

2015 Goal #1 – Reduce Distribution System Losses

PROGRESS TO DATE:

South Shore (Sudden Valley and Geneva)

Month	Gross Production (CU. FT.)	Metered Residential Consumption (CU. FT.)	Distribution System Leakage (CU. FT.)	% of Water Consumed	Net % of Distribution System Leakage
TOTAL 2018	24,028,760	21,066,262	2,962,498	87.67%	12.33%
TOTAL 2019	21,938,436	20,619,305	1,319,131	93.99%	6.01%
TOTAL 2020	22,286,527	21,051,508	1,235,019	94.46%	5.54%
3-YR AVG	22,751,241	20,912,358	1,838,883	92.04%	7.96%

GOAL MET

- 3-yr average was 11.61% in 2014
- Final data for 2021 is not yet available

2015 Goal #1 – Reduce Distribution System Losses

PROGRESS TO DATE:

<u>AGATE HEIGHTS WATER SYSTEM</u>					
Month	Gross Production (CU. FT.)	Metered Residential Consumption (CU. FT.)	Distribution System Leakage (CU. FT.)	% of Water Consumed	Net % of Distribution System Leakage
TOTAL 2018	459,887	438,432	21,455	95.33%	4.67%
TOTAL 2019	454,504	430,206	24,298	94.65%	5.35%
TOTAL 2020	432,743	418,657	14,086	96.74%	3.26%
3-YR AVG	449,045	429,098	19,946	95.58%	4.42%

GOAL MET

- 3-yr average was 2.83% in 2014
- Final data for 2021 is not yet available

2015 Goal #1 – Reduce Distribution System Losses

PROGRESS TO DATE:

<u>EAGLERIDGE WATER SYSTEM</u>					
Month	Gross Production (CU. FT.)	Metered Residential Consumption (CU. FT.)	Distribution System Leakage (CU. FT.)	% of Water Consumed	Net % of Distribution System Leakage
TOTAL 2018	689,060	651,997	37,063	94.62%	5.38%
TOTAL 2019	650,051	614,046	36,005	94.46%	5.54%
TOTAL 2020	686,113	647,737	38,376	94.41%	5.59%
3-YR AVG	675,075	637,927	37,148	94.50%	5.50%

GOAL MET

- 3-yr average was 2.87% in 2014
- Final data for 2021 is not yet available

2021 Goal #1 – Reduce Distribution System Losses

- Continue to focus on reducing losses in South Shore (Geneva and Sudden Valley) service areas.
- Goal is to reach and maintain <10% losses in all service areas.
- WUE standard: less than 10% losses.

2015 Goal #2 – Reduce Peak Residential Consumption

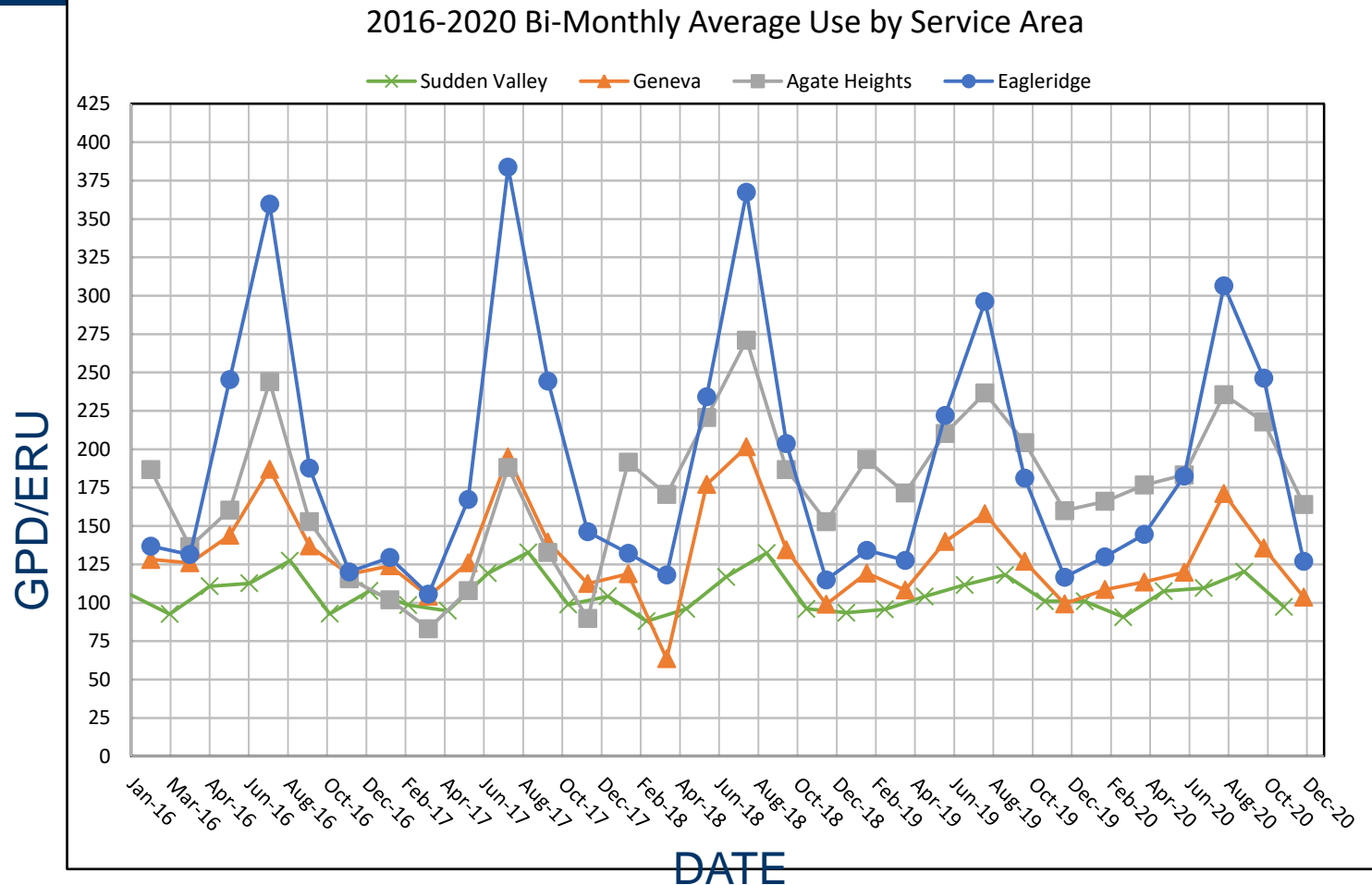
PROGRESS TO DATE:

- Goal was to reduce high peak consumption in all service areas.
- Goal set target summer peak usage by 2020.

Summer Peak Targets	2020 Target Summer Usage: per Capita / per ERU (GPD)	2016-2020 Number of Exceedances		2020 Number of Exceedances	Goal Met by 2020
<u>SUDDEN VALLEY</u>	55 / 148.5	6	*	0	Yes
<u>GENEVA</u>	65 / 188.5	2		1	No
<u>AGATE HEIGHTS</u>	75 / 202.5	11		2	No
<u>EAGLERIDGE</u>	100 / 270.0	5		1	No

* SV meter readings cover Aug/Sep; others are Jul/Aug

2015 Goal #2 – Reduce Peak Residential Consumption



2021 Goal #2 – Reduce High Peak Residential Consumption

All Service Areas

- Continue to focus on reducing peak usage during summer months.
- Goal is to reduce summer peak to target levels listed below by 2020:

Summer Peak Targets	2025 Target Summer Usage per ERU (GPD)
<u>SUDDEN VALLEY</u>	145.5
<u>GENEVA</u>	188
<u>AGATE HEIGHTS</u>	202
<u>EAGLERIDGE</u>	270

2015 Goal #3

Maintain Low Residential Consumption Levels

- Goal - reduce 3-year average annual per capita usage in by Sudden Valley and Geneva by 2%, and Agate Heights and Eagleridge by 10% by 2020.
- Goals was only met by Sudden Valley.

	2015 Report Annual Usage Per Capita (gpd)	2020 Target Annual Usage Per Capita (gpd)	2020 3-yr Avg Annual Usage Per Capita (gpd)	Goal Met?	% Reduction (increase)
<u>SUDDEN VALLEY</u>	44.0	43.2	43	Yes	2.3%
<u>GENEVA</u>	47.8	46.6	48	No	-0.4%
<u>AGATE HEIGHTS</u>	69.2	62.3	77	No	-11.3%
<u>EAGLERIDGE</u>	74.5	67.0	73	No	2.0%

2021 Goal #3

Maintain Low Residential Consumption Levels

- New Goal is to achieve additional reductions to the 3-year average annual per capita usage by 2025 as listed below:

3-yr Average Annual Targets	2020 3-yr Annual Usage per ERU (gpd)	2025 Target 3-yr Annual Usage per ERU (gpd)
<u>SUDDEN VALLEY</u>	116.1	113.4
<u>GENEVA</u>	139.2	135.1
<u>AGATE HEIGHTS</u>	207.9	168.2
<u>EAGLERIDGE</u>	197.1	180.9



Required Measures

- Install production (source) meters – **Complete**
- Install consumption (service) meters – **Complete**
- Perform Meter Calibration – **Ongoing**
- Implement a water loss control action plan to control leakage over 10%– **Plan implemented; progress is good.**
- Educate customers about water use efficiency practices – **Ongoing; bimonthly bills contain water conservation information**



Additional Supply-Side Measures

- Improve record-keeping of non-metered authorized consumption (hydrant flushing, construction, gravity sewer flushing, Fire Department training, quantify known leaks, etc.) – **Ongoing**
- Replace service meters (age, failure); track progress – **Ongoing**
2017– 1,243; 2018 – 1,471; 2019 – 107;
2020 – 19; 2021 – 57 year-to-date
- Replace malfunctioning and obsolete fire hydrants – **Ongoing**
- Control unauthorized use of water – **Ongoing**
- Monitor overnight tank levels for unusual drops – **Ongoing**



Additional Consumption-Side Measures (minimum of 6 required)

- Conservation Rate Structure (+4)*
- Water bill showing consumption history (+4)*
- Customer conservation education (newsletter, bill stuffers, social media posts) (+4)*
- Customer leak education (+4)*
- Participate in Regional Water Conservation programs and/or measures (Whatcom Water Alliance) (+1)

Total: 17 consumption-side measures

* Each customer class (4) counts as a measure

Customer classes are:

- single family residence
- multi-family residence
- recreational services
- institutional services



WUE Goals and Measures

- Board Comments?
- Public Comments?