

Well 17 and Drinking Water Source Review

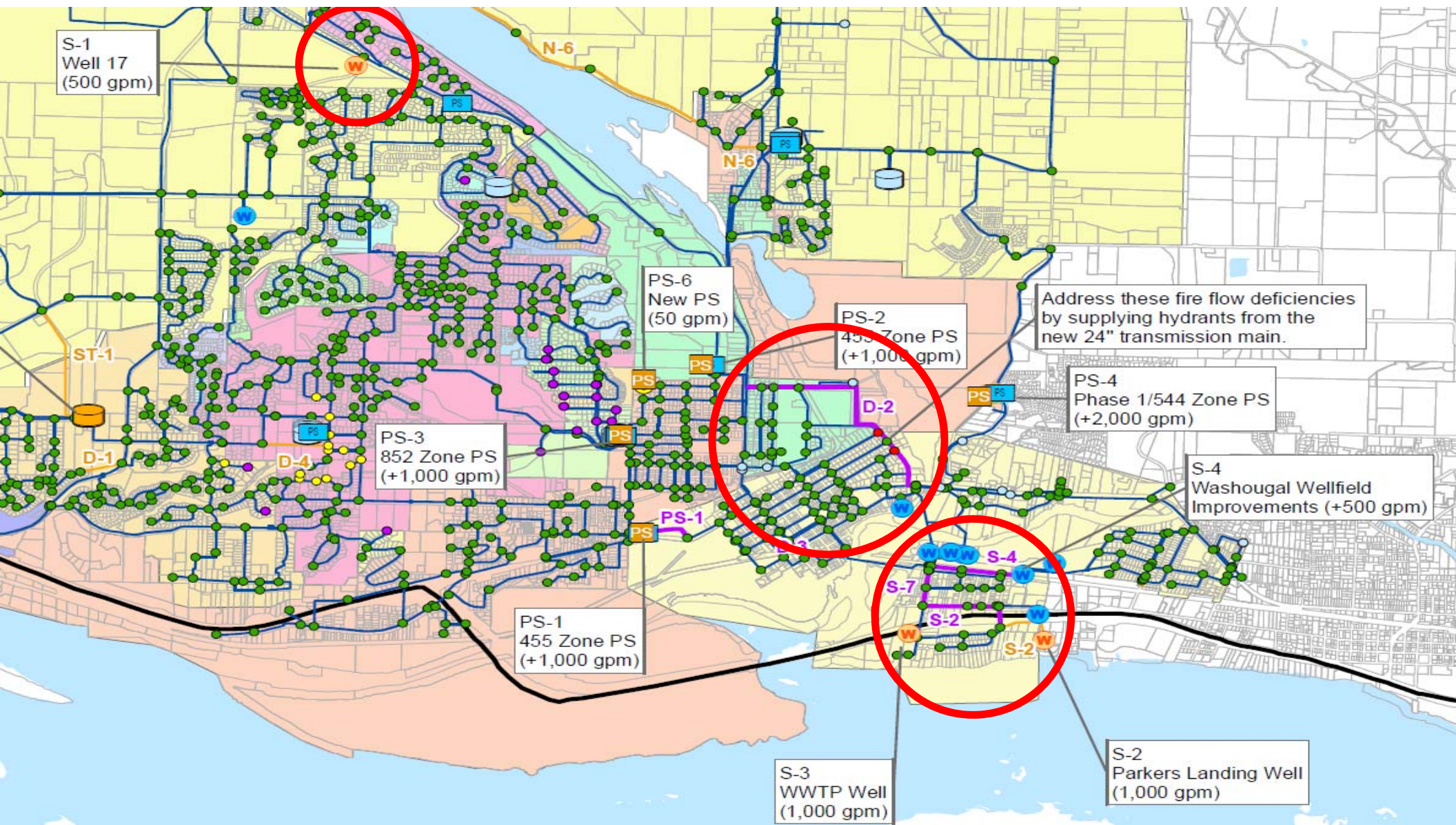
City Council Workshop

April 16, 2018

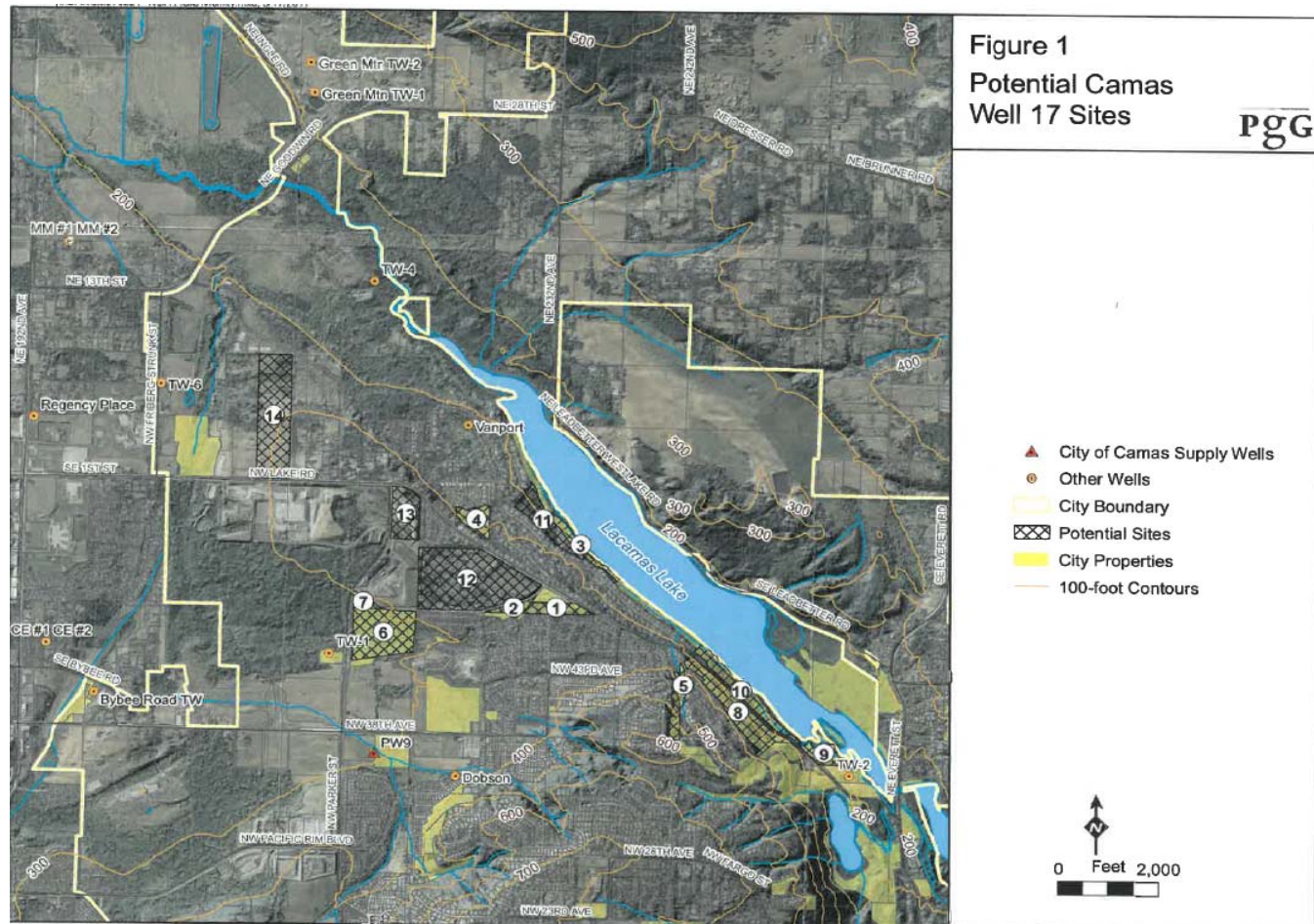


Background Information

- Draft Water System Plan identifies need for additional water supply by 2021 to meet customer demands, with additional sources needed beyond that.
 - Options include:
 - Well 17, Parkers Landing and Wastewater Treatment Plant (WWTP) Wells
 - Development of all three water sources included in the current water rate study
 - Staff continues to pursue water rights and water sources from private owners
- The City has been pursuing a Well site in the Lacamas Shores area (“Well 17”) for several years - Why?
 - Water supply close to high growth area
 - Reduced pumping costs
 - Proximity to existing transmission systems
- Parkers Landing and WWTP Wells will require extensive transmission line upgrades to deliver water.
- Further Consideration of Options - Timing of Source needs and lack of Water Rights for Well 17



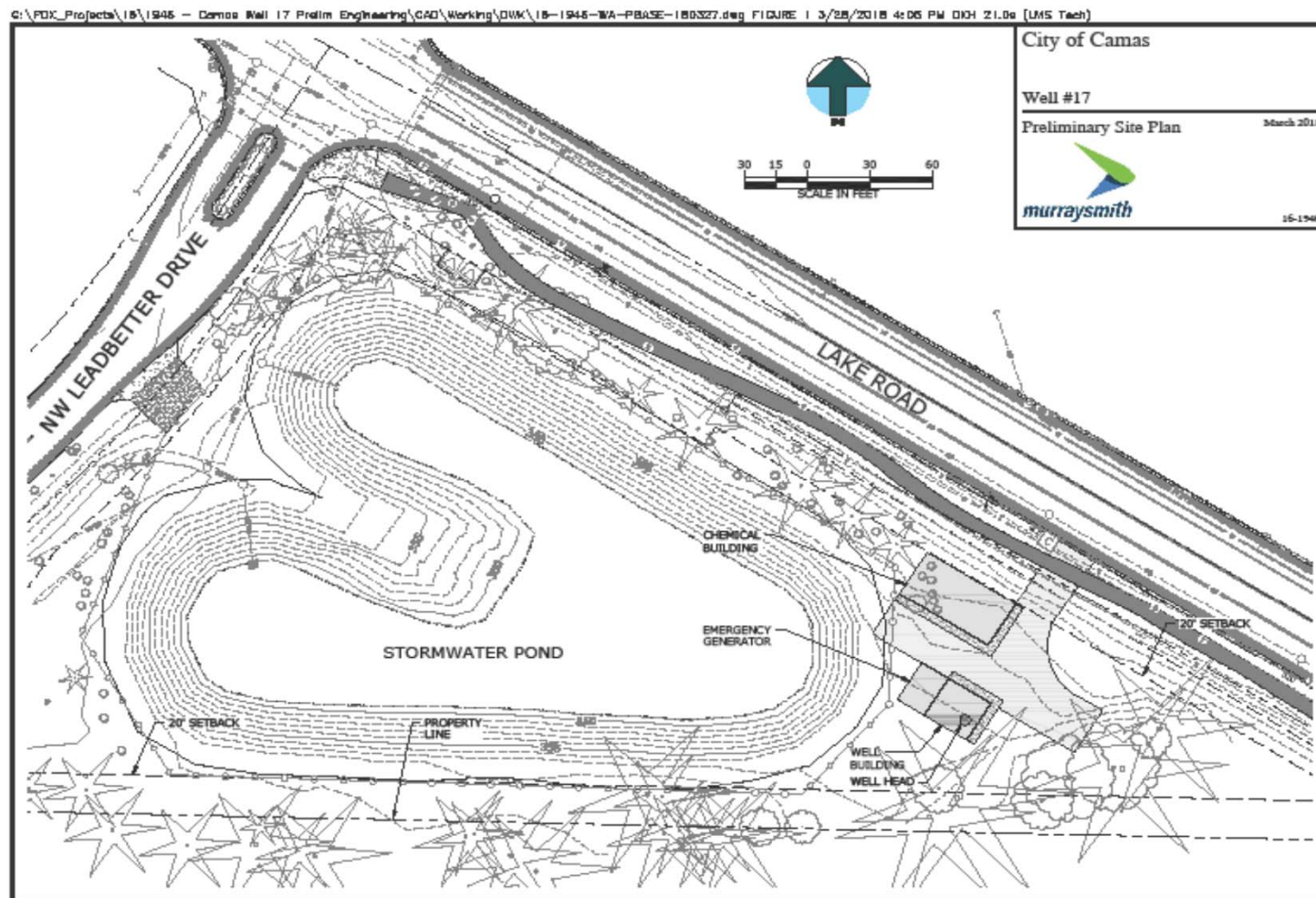
Well 17 Context



Well 17 Context

Site Number	Property Owner	Parcel Area (ft ²)	Elevation (ft – mall)	Distance to Lacamas Lake (ft)	Site Evaluation Criteria				
					GWI Concerns	Wetland Issues	Limited Water Supply Potential	Too Far from Lake	Access Issues
1	City	265,716	365	1,050					
2	City	122,403	350	2,100				X	X
3	City	214,315	195	170	X	X			
4	City	305,791	300	1,300	X	X			X
5	City	353,553	400	850			X		X
6	City	1,207,047	310	4,000				X	
7	City	116,305	310	4,400				X	
8	City	870,343	360	360			X		X
9	City	261,360	190	200			X		
10	City	777,981	280	200	X		X		X
11	Lacamas HOA	534,481	195	250	X	X			X
12	Underwriters Laboratory	2,509,056	360	1,300					
13	WaferTech	587,744	360	2,500				X	
14	Grimm	1,733,252	310	4,200				X	

Well 17 Context



Consideration of Options

- Well 17 - Uncertainty on timing of receiving water rights approval from Ecology
 - Cost Reimbursement process can be lengthy
 - Mitigation that will be needed
- Pace of development warrants looking at other options
- Have water rights secured for WWTP and Parkers Landing proposed Wells
 - Cost is higher due to needed piping improvements
- Other potential Water source options that we're exploring, but not guaranteed and timing may not be adequate to meet system demands

Source Development Comparison – Costs and Benefits/Risks

Well 17

Costs

- \$156,650 Prelim Engineering
 - \$67,000 spent to date
- \$185,000 Test Well
 - Bids received and will be reviewed at 4/16 Regular Council Meeting
- \$300,000 Design
- \$2,000,000 Well Construction

Total Cost = \$2.64 million

Benefits	Risks
Reduced Pumping Costs	Deep Well
Close to existing Transmission system	Water Quality unknown
Close to growth	Water Quantity unknown
	Water Rights not secured

Parkers Landing or WWTP Well

Costs

- \$160,000 Prelim Engineering
- \$100,000 Test Well
- \$600,000 Design
- \$2,300,000 Well Constr.
- \$1,400,000 Pipeline Constr.

Total Cost = \$4.56 million (w/out Land)

Benefits	Risks
Shallow Well	Water Quality unknown (?)
Existing Water Rights	Water Quantity unknown (?)
Near Existing Wells	Land Acquisition for Parker's Landing site

Recommended Steps

1. Continue to move forward on Well 17 at the “UL” Stormwater Pond site:
 - a) Drill Test Well – Will provide data on quality and quantity
 - i. All work located on Stormwater Parcel – No Trees being removed!
 - b) Assuming Water quality/quantity good – Begin working with Ecology on Water Rights
 - c) Evaluate source needs once Water Rights are in hand
2. Concurrently with Well 17 work:
 - a) Begin site evaluations and preliminary engineering on WWTP and Parkers Landing Wells (Concurrent with Well 17)
 - i. Move as quickly as possible into Design and Construction of at least one well
 - b) Continue evaluating other options for potential water sources
3. Long Term – Continue evaluating Steigerwald per the Ecology approved Water Resource Inventory Areas 27 and 28 Watershed Management Plan

Goal: New water source(s) added to City’s drinking water system by 2021