

WATER QUALITY UPDATE

October 10, 2013

*Presented by:
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Outline

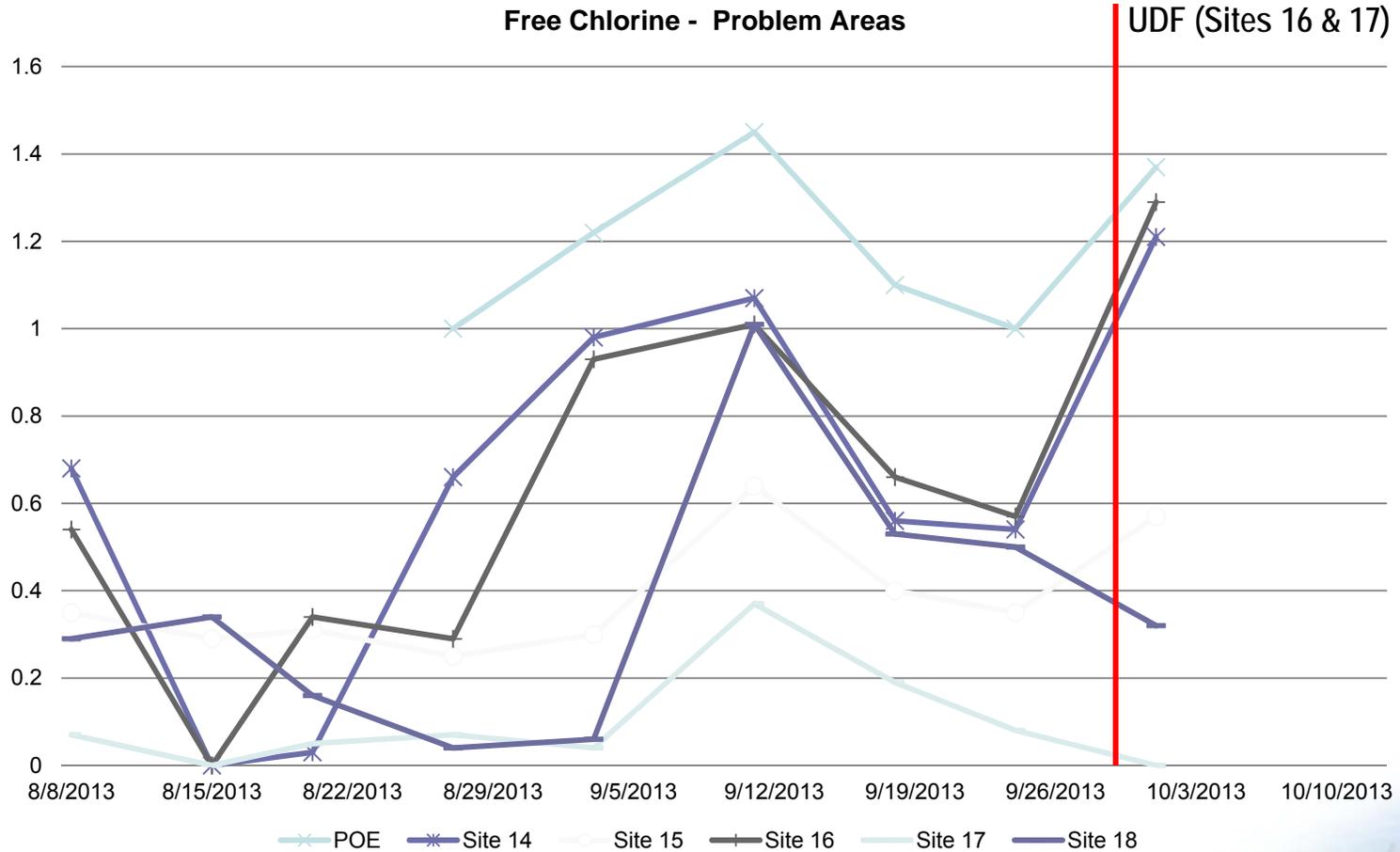
- ▶ **Weekly Progress Report**
- ▶ **Softening Investigation**
- ▶ **Expanded Flushing Program**
- ▶ **Residential Support Program**
- ▶ **Main Replacement Program**
- ▶ **Phosphate Treatment Option**
- ▶ **Recommendations**



Weekly Progress Report

- ▶ **Problem areas flushed – St. Helens, Highlands, Olympic**
- ▶ **(2) automatic flushers installed for water exchange**
- ▶ **UDF flushing will be complete Oct 23rd (Areas 1 - 4)**
- ▶ **Ongoing weekly sampling conducted at (9) sites**
- ▶ **Analyte list expanded to include:**
 - **Total and soluble alum (potential spotting contribution)**
 - **Total and ortho phosphates (benchmark testing)**
 - **Complete metals analysis at sites 5 (control) and 17 (problem)**
- ▶ **Status update issued to citizen sentinels, social networks**

Weekly Progress Report



Softening Investigation

► Preliminary results indicate:

- Solids content varies between MFRWTP and distribution system
- Evidence of alum contribution but largely controlled by calcium
- Silica is also present
- Softening treatment should help but need to verify objectives are met without consequence



17th Avenue

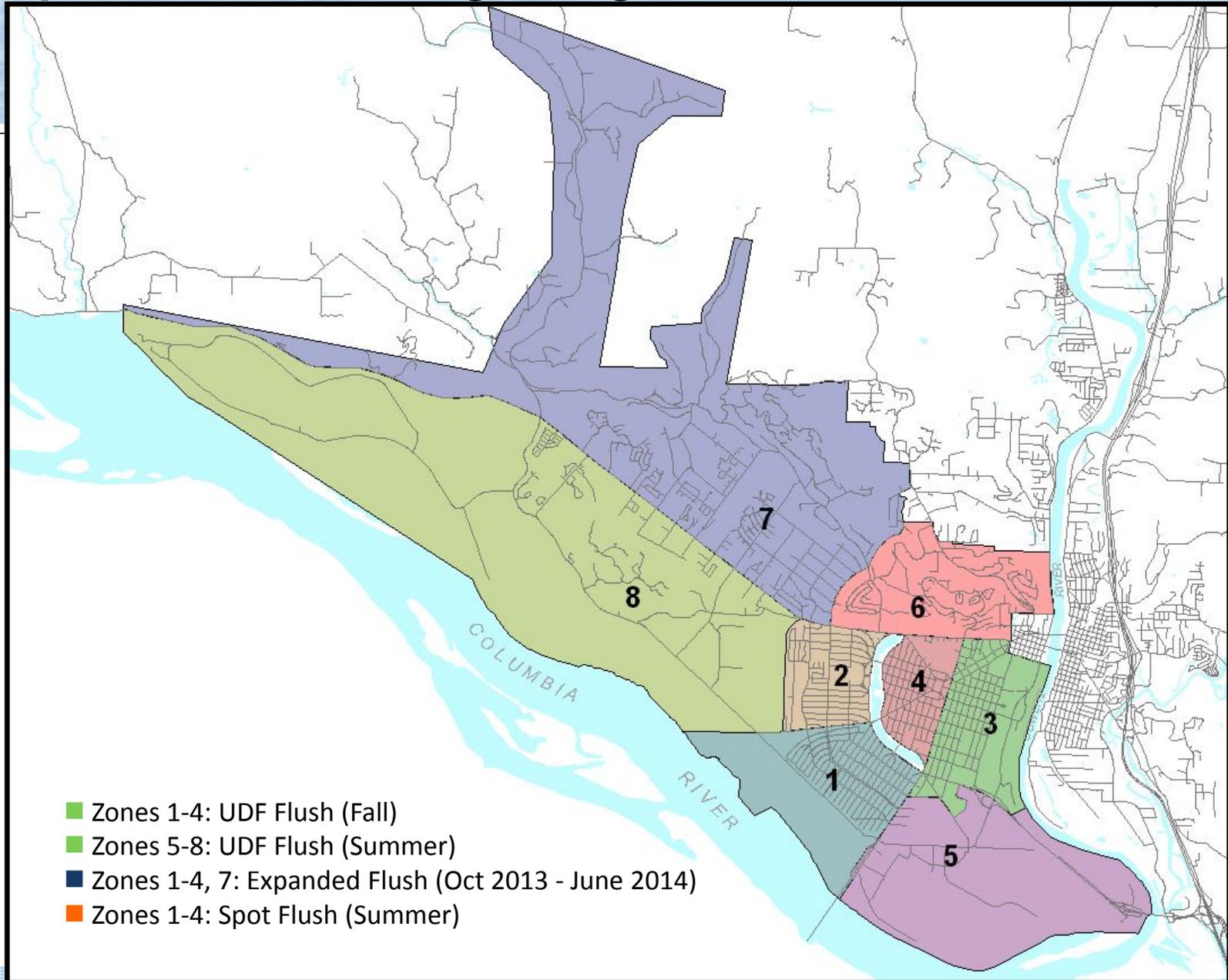
MFRWTP

Expanded Flushing Program

- ▶ **Flush St. Helens (Baltimore) area twice weekly**
- ▶ **Flush other problem areas on rotating weekly basis**
- ▶ **Flush emerging problem areas after UDF (late October)**
- ▶ **Requires:**
 - **(3) temporary FTE's for full time flushing crew (\$20k/month)**
 - **Increased de-chlorination chemical cost (\$600/month)**



Expanded Flushing Program



Residential Support Program

- ▶ **Provide Onsite Customer Assistance**
 - Identify potential problems between meter and tap
 - Flush service line, household plumbing and hot water heater
 - Provide recommendations if issues do not improve
- ▶ **Requires:**
 - Contract employee with utility experience (\$8k / month)
 - (6) weeks to contact (100) customers in 2-hour appointments
 - Criteria for eligibility and/or prioritization (turbidity / color)
 - Public outreach to launch program

Main Replacement Program

2013 Projects (2013-2014 Budget)	Size	Pipe	LF	Cost
Maple Street (30 th Ave to NW Nichols)	6"	AC	2,000	\$556,000*
Ocean Beach Highway (NE Nichols to Olympia Way)	4"	CI	1,000	\$281,000*
Alley between 21 st & 22 nd Ave (WA Way to Delaware)	6"	AC	1,300	\$353,000*
Design and engineering	-	-	-	\$55,000
Construction management, etc.	-	-	-	\$20,000
Total	-	-	5,300	\$1,210,000

*** Construction only**



Projects	Size	Pipe	Issue	LF	Cost*
Beech Street (OR Way to 20 th)	6"	GALV	WQ	2500	\$845,000
Alley between 15 th & 16 th (Beech to Nichols)	6"	CI	WQ	2200	\$745,000
Alley between 16 th & 17 th (Beech to Nichols)	6"	CI	WQ	2200	\$745,000
Nichols Blvd (20 th to Oregon Way)	8"	CI	trees/leaks	2000	\$675,000
Beech Street (20 th to 30 th)	8"	CI	WQ	2800	\$945,000
Commerce Ave (Hemlock to Tennant)	6"	CI	leaks	4000	\$1,350,000
30th Ave (Beech to WA Way)	8"	CI	WQ	2000	\$675,000
Washington Way (30 th to 34 th)	-	CI	WQ	2800	\$945,000
Madrona (Laurel to Cascade)	4"	AC	leaks	2100	\$710,000
Alley between 20 th & 21 st (Fir to WA Way)	6"	AC	leaks	1200	\$405,000
Alley between 19 th & 20 th (Delaware to WA Way)	6"	AC	leaks	2000	\$675,000
Alley between 18 th & 19 th (Delaware to Florida)	6"	AC	leaks	1300	\$440,000
Alleys between 26 th & 27 th and 27 th & 28 th (Baltimore to CO)	6"	AC	low flow	3000	\$1,015,000
Wildwood (3200 block to end of street)	1½"	GALV	low flow	1000	\$340,000
Alleys between 7 th & 8 th and 8 th & 9 th (Hemlock to Delaware)	4"	CI	leaks	9000	\$3,040,000
Pacific Way (32 nd to 38 th)	8"	AC	leaks	4000	\$1,350,000
Alleys between 24 th & 25 th and 25 th & Kessler (N. of Louisiana)	6"	CI	leaks/flow	2000	\$675,000
Dead-end lines serving 5 - 6 homes with very low volume	2" - 2½"	GALV	low flow	-	-

*** Based on construction at \$270/LF plus 25% allowance for design, construction management & contingency**

Phosphate Treatment Option

- ▶ **Testing groundwater, filter influent and finished water to determine background levels**
- ▶ **Contacting suppliers to procure multiple ortho/poly blends**
- ▶ **Static jar testing required to determine effectiveness**
- ▶ **Dynamic pipe loop testing recommended for optimization**
- ▶ **(2) homes selected to conduct full scale trials**
- ▶ **Working with Confluence to develop testing protocols**
- ▶ **Working with Kennedy/Jenks to develop scope of design for phosphate feed system**

Recommendations

- ▶ **Additional staff to expand flushing program**
- ▶ **Additional staff to support residential support program**
- ▶ **Investigate alternative main cleaning options**
- ▶ **Allow distribution system time to re-stabilize**
- ▶ **Recommendations will be provided on Oct 24th for:**
 - **Phosphate and/or softening treatment options**
 - **Rate reduction proposal for 1100 customers in affected area**
 - **Option to install water dispensing station at MFRWTP**



QUESTIONS ?



Distribution System Sampling Plan

