Drinking Water Quality

Operating Board Briefing

June 27, 2013

Seattle Public Utilities

Agenda

- **2013 Staffing Update**
- **System Water Quality Status**
- **Regulatory Compliance**
  - Stage 2 DBPR
  - LCR
  - UCMR3

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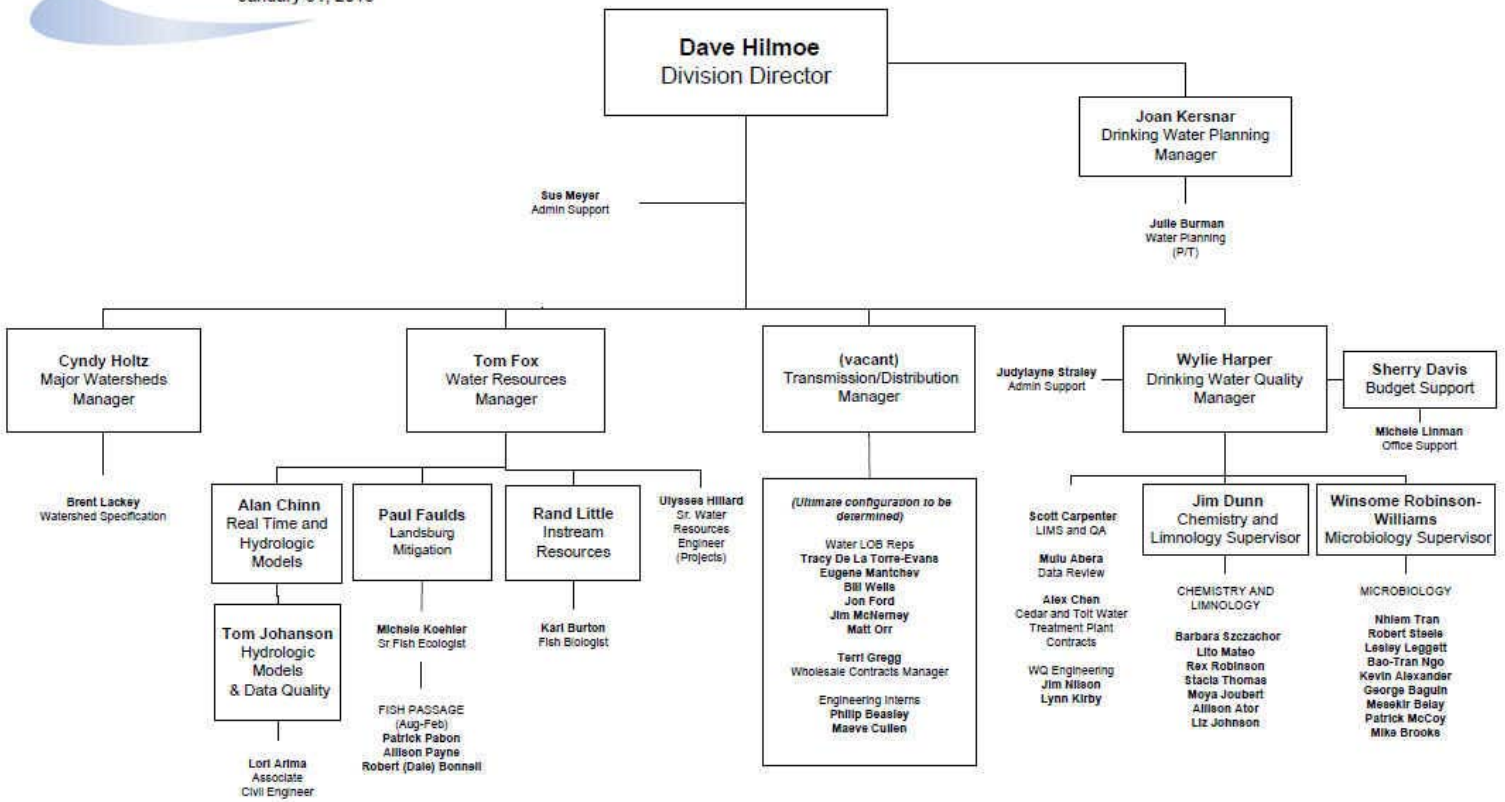
Staffing

SEATTLE PUBLIC UTILITIES
Utility Systems Management Branch
Drinking Water Division
WS750-759
January 31, 2013



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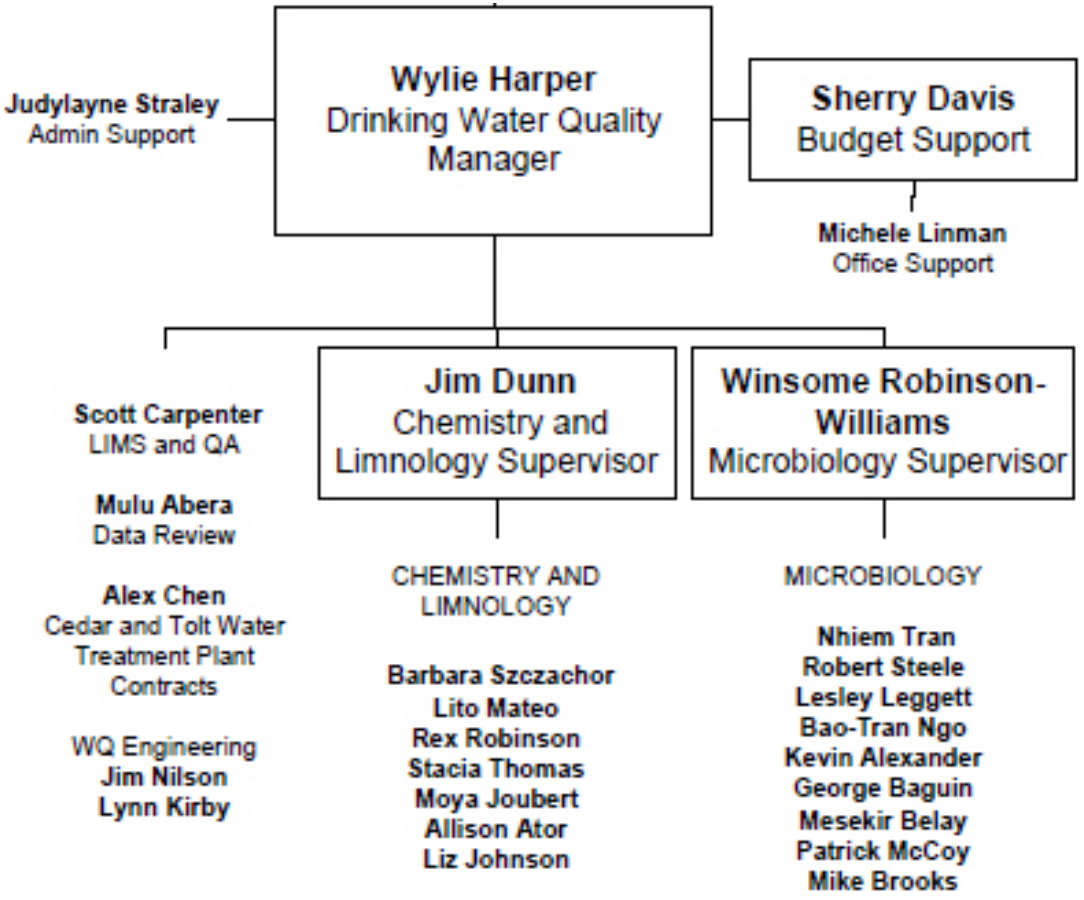

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General WQ Status

WQ is very good right now.

Distribution system coliform monitoring:

- There was a coliform positive sample on May 26th from K-3 (DSA) All repeats were good. No WSA positive samples in May.

Chlorine residual levels in the distribution system have been trending down slightly.

- In May, 5.1% of samples from the Seattle DSA had low chlorine, with an overall average of 0.77 mg/L.
- June average so far is 0.79 mg/L with 5.3% of samples with low chlorine.

Storage: Closed storage water quality has been good.

Source water quality is good.

- Cedar supply is back to Lake Youngs. Coliform levels are normal or below normal for all sources. Temperatures are above normal for Lake Youngs, normal for Tolt.

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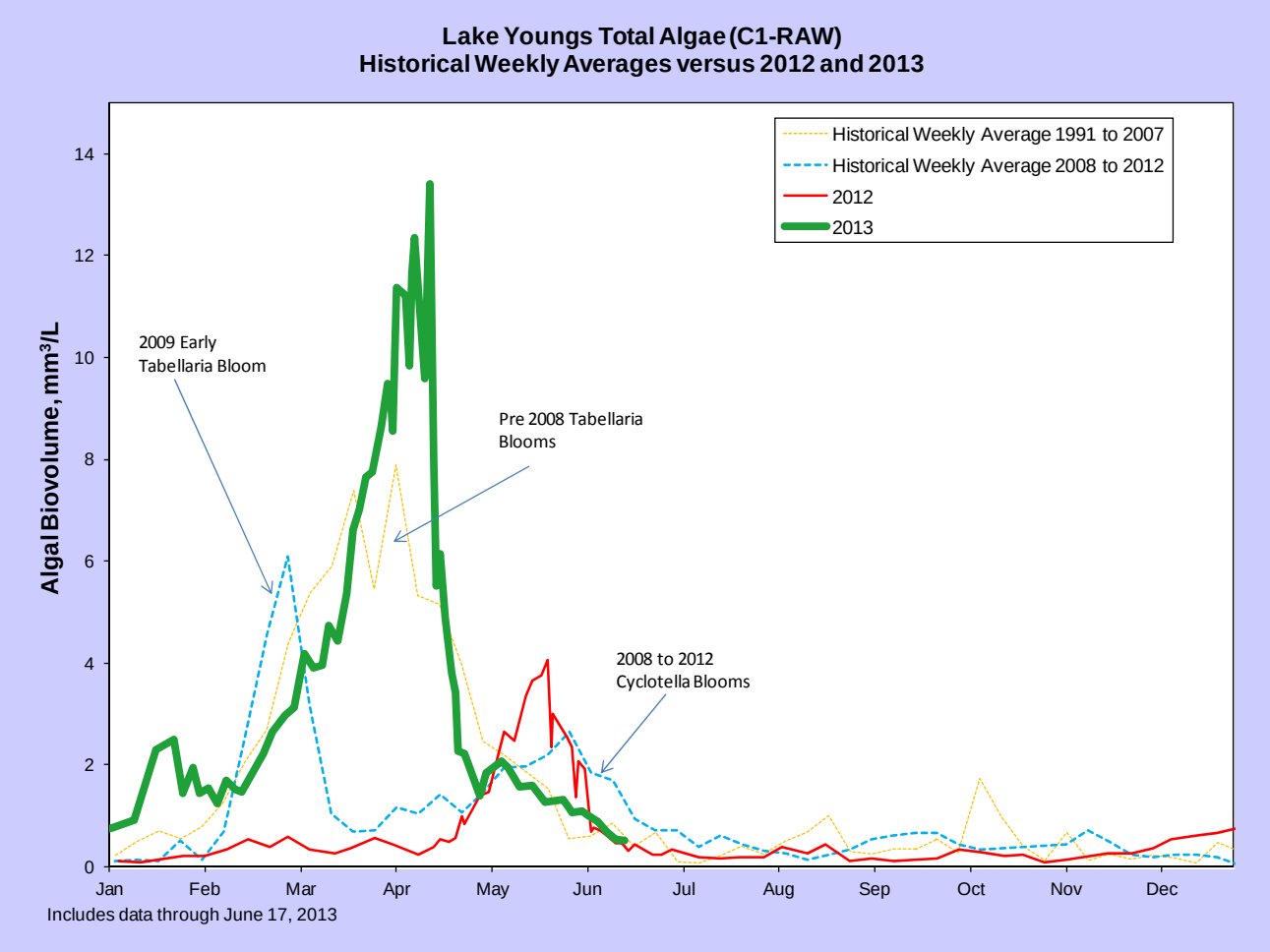
Cedar Source Water Quality – Lake Youngs



- Total algae biovolume as of June 21st was 0.59 mm^3/L in Lake Youngs, down from 1.1 mm^3/L on June 1st.
- *Cyclotella* is now at 0.49 mm^3/L.
- The by-pass was operated from April 23rd to June 14th

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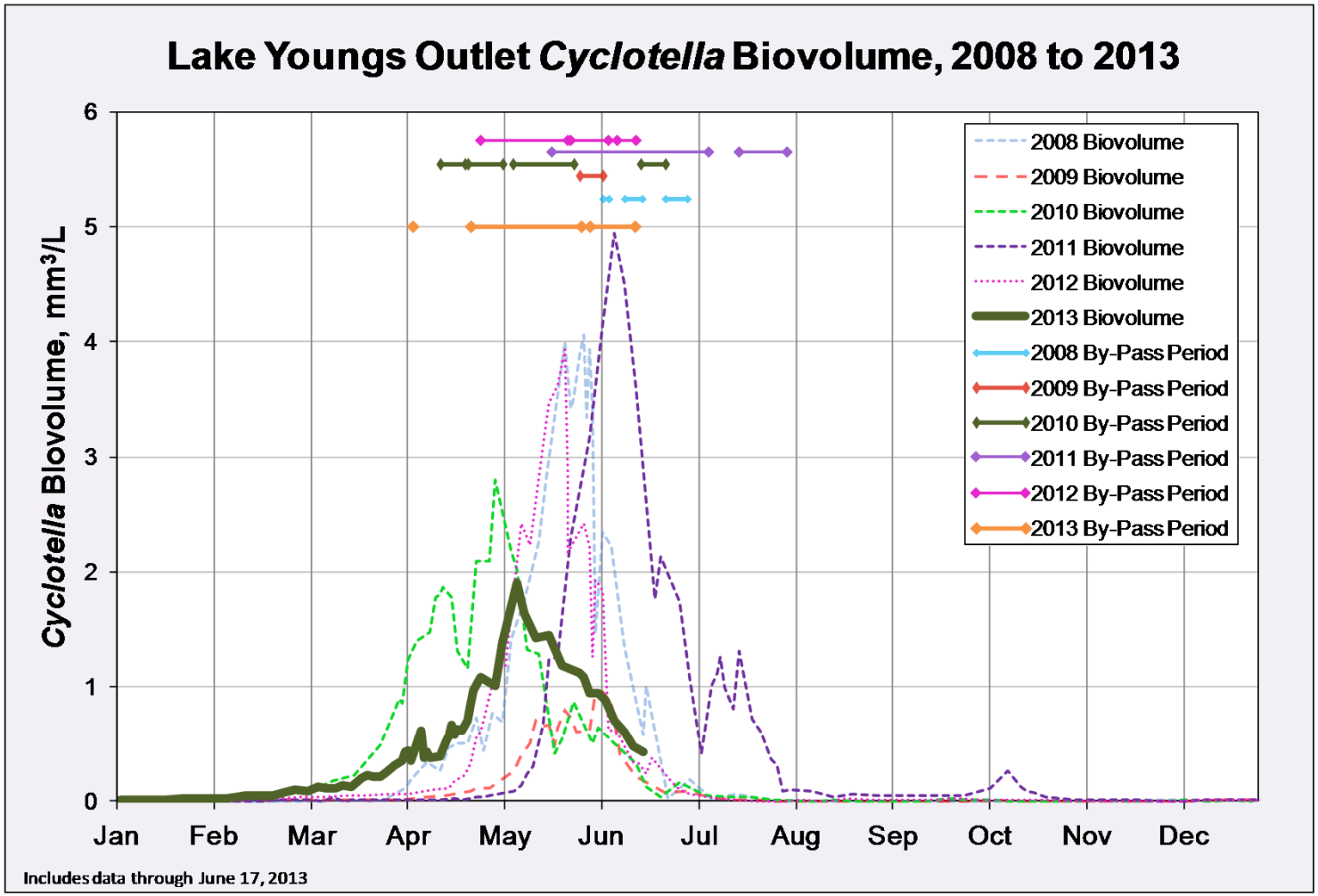
Cedar Source Water Quality – Lake Youngs



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Lake Youngs By-Pass

	2008	2009	2010	2011	2012	2013
Total number of days LY bypassed	15	7	47	65	45	50
First day of bypassing LY	6/4/2008	5/28/2009	4/13/2010	5/19/2011	4/26/2012	4/23/2013 (4/4/2013 for 1 day)
Last day of bypassing LY	7/1/2008	6/4/2009	6/24/2010	8/2/2011	6/15/2012	6/14/2013
Number of days Cyclotella >0.5 mm^3/L	57	26	69	73	47	63
Number of days Cyclotella >0.5 mm^3/L and Landsburg WQ acceptable for bypass	-	-	59	71	43	57
Number of days LY bypassed while Cylcotella >0.5 mm^3/L	8	2	39	60	42	49
Percentage of days LY bypassed while Cyclotella >0.5 mm^3/L, regardless of Landsburg WQ	-	-	-	82%	89%	78%
Percentage of days LY bypassed while Cyclotella >0.5 mm^3/L and Landsburg WQ acceptable	-	-	-	85%	98%	86%

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Regulatory - Stage 2 DPB Rule

- **Stage 2 DBP sample analysis for May 2013 is complete.**
- **All results were below the TTHM MCL.**
- **One DSA site had HAAs above the MCL (G-1, collected during by-pass).**
- **No WSA samples are above the TTHM or HAA MCL this quarter.**

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Regulatory – Lead & Copper Rule

Results and Future Monitoring:

- **SPU sampling conducted during summer 2010 (next monitoring summer 2013):**
  - The 90th percentile value for lead was 5.1 µg/L
- **Tolt Wholesale sampling conducted during summer 2011 (next monitoring summer 2014):**
  - The 90th percentile value for lead was 5.6 µg/L
- **Bellevue sampling conducted during summer 2011 (next monitoring summer 2014):**
  - The 90th percentile value for lead was 6.6 µg/L
- **Cedar Wholesale sampling conducted during summer 2012:**
  - The 90th percentile value for lead was 3.6 µg/L (action level is 15 µg/L) Samples collected this summer (2012) currently being analyzed
- **Copper levels for all sub-regions were below the action level**

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Regulatory – Lead & Copper Rule

Summary of Lead and Copper Rule Compliance Status 2003 to 2011

90th Percentile Lead Levels

Regional Group	2003	2004	2005 1st Round	2005 2nd Round	2006	2007	2008	Summer 2009	Summer 2010	Summer 2011	Summer 2012
Seattle	8	8	6	5	5.3	6.4			5.1		
Cedar Wholesale	4	6	5	4	4.6			6.3			3.6
Tolt Wholesale	14	20	15	9	12.8	15.2	11.8			5.64	
Bellevue	9	14	13	8	11.1	12.1	14.4			6.6	

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Regulatory - UCMR3 Purpose

“To collect occurrence data for contaminants suspected to be present in drinking water but that do not have health-based standards set under the Safe Drinking Water Act (SDWA).”

***EPA Fact Sheet EPA 815-F-12-003**

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What are we monitoring for?

List 1

- 7 VOCs
- 1 SOC
- 5 Metals
- Chlorate
- 6 Perfluorinated Compounds

List 2

- 7 Hormones

List 3

- 2 Viruses and 5 pathogen indicators

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Regulatory - UCMR3 Applicability
(AKA Who has to do this – approximately 6000 PWS)

System Type	Serving > 10,000	Serving ≤ 10,000
CWS & NTNCWS	All systems monitor for List 1	800 randomly selected systems monitor for List 1 (EPA Pays)
CWS & NTNCWS	All systems > 100,000 and 320 randomly selected systems between 10,001 and 100,000 monitor for List 2	480 randomly selected systems monitor for List 2 (EPA pays)
CWS, TNCWS & NTNCWS	No requirements for List 3	800 randomly selected systems monitor for List 3. Selected systems served by non-disinfecting ground water wells in vulnerable areas (EPA pays)
TNCWS	No List 1 or List 2 requirements	No List 1 or List 2 requirements

Regulatory – UCMR3 Schedule

	2013	2014	2015
Jan		KCWD 20, Shoreline	Highline, KCWD 90, Olympic View, Seattle
Feb		Bellevue, KCWD 49	Port of Seattle, Northshore, KCWD 125, Kirkland
Mar	Mercer Island, Soos Creek		Bothell, Woodinville, Cedar River, Redmond
Apr	Shoreline	KCWD 20, Shoreline, Highline	KCWD 90, Olympic View, Seattle
May	Bellevue	KCWD 49, Northshore	Port of Seattle, KCWD 125, Kirkland
Jun	Mercer Island, Soos Creek	Redmond	Bothell, Woodinville, Cedar River
Jul	Shoreline	KCWD 20, Highline, KCWD 90, Olympic View	Seattle
Aug	Bellevue	KCWD 49, Northshore, Kirkland	Port of Seattle, KCWD 125
Sep	Mercer Island, Soos Creek	Redmond	Bothell, Woodinville, Cedar River
Oct	KCWD 20, Shoreline	Highline, KCWD 90, Olympic View	Seattle
Nov	Bellevue	KCWD 49, Northshore, KCWD 125, Kirkland	Port of Seattle
Dec	Mercer Island, Soos Creek	Woodinville, Redmond	Bothell, Cedar River

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Regulatory – UCMR3 Cost

For systems ≤ 10,000 EPA will cover the analysis costs

For systems doing only List 1, lab costs range from $2,700 to $5,000 per source, for the year (4 qtrs)

For systems doing List 1 and List 2, the cost is slightly higher.

Other costs to consider: Shipping, field staff time, office staff time, resampling

Number of Sources	List 1 Range	List 2 Range
1	$2,700 to $5,000	$1,000 to $2,000
2	$5,400 to $10,000	$2,000 to $4,000
5	$13,500 to $25,000	$5,000 to $10,000
10	$27,000 to $50,000	$10,000 to $20,000

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Regulatory – UCMR3

What you may find…..

- Chromium
- Chromium-6
- Vanadium
- Molybdenum (possibly below the MRL)
- Cobalt (below MRL)
- Strontium (below MRL?)
- Chlorate??

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Thank You!

Questions?

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