

Council Meeting Post Point Wastewater Treatment Plant Improvements March 15, 2010

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Objectives:

1. Update/confirm peak flow management status
2. Update/confirm solids handling improvements status
3. Review need for BOD improvements
4. Seek direction on preferred alternative for improving Post Point WWTP BOD capacity



PEAK FLOW MANAGEMENT: NEXT STEPS

1. I/I Workshop April 12th
 - Select CSO site
 - Prioritize I/I vs. Storage
2. Complete I/I Monitoring Program
 - Projects and performance
3. Amend Comprehensive Sewer Plan
 - Based on I/I Monitoring Results
4. Develop Facilities Plan for CSO Control



SOLIDS HANDLING: NEXT STEPS

1. Solids handling workshop April 26
 - Alternatives to improve operational performance and efficiency
 - Operational changes to reduce BOD load
2. Incorporate recommendations into Post Point Facilities Plan
3. Add incinerator operator staff at WWTP



3. BOD Capacity at Post Point WWTP

1. Review population, BOD load projections (Facilities Plan)
2. Review project need BOD load reduction assumptions and timing
3. Summarize BOD capacity improvement alternatives
 - a. Triple Bottom Line Plus (TBL+) comparison
 - b. Financial comparison
 - c. Recommended Alternative

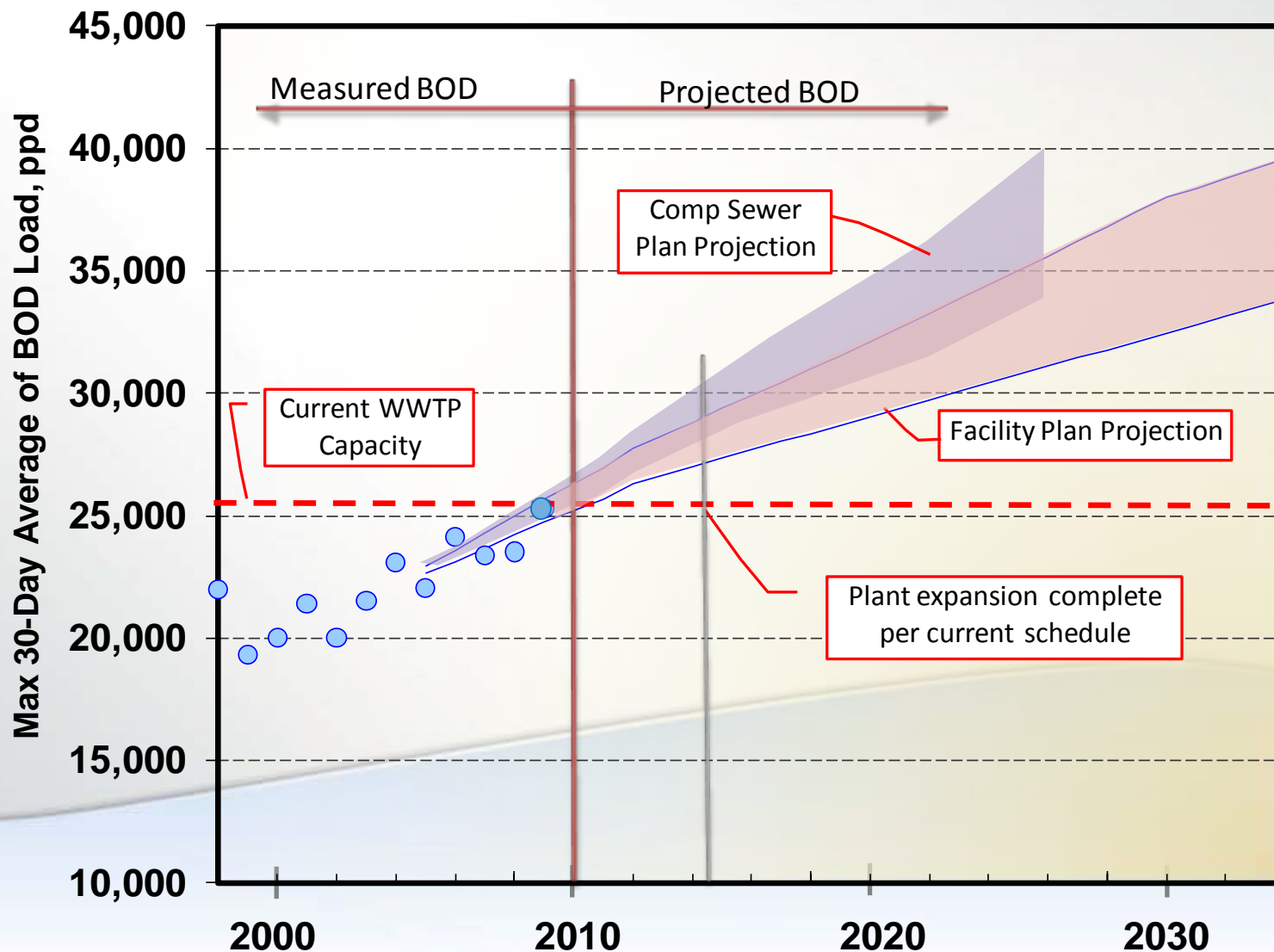
Basis of Planning Population Facilities Plan (corrected column label)

Population	Year 2002	Year 2031
City Limits	69,260	89,835
UGA	12,194	26,365
Total	81,454	116,200

Note:

(1) Consistent with most recent City Council Resolution

Facilities Plan Future BOD Load Projections (no change to chart)



Summary of project need and BOD load reduction

1. Post Point has reached rated BOD capacity
2. Near-term BOD load reductions ($\pm 5\%$) buy time for project implementation
3. Aggressive, long-term BOD reductions and slower growth can:
 - a. further reduce BOD load (up to 25%)
 - b. greatly extend useful life of improvements
 - c. free up capacity for future nutrient removal

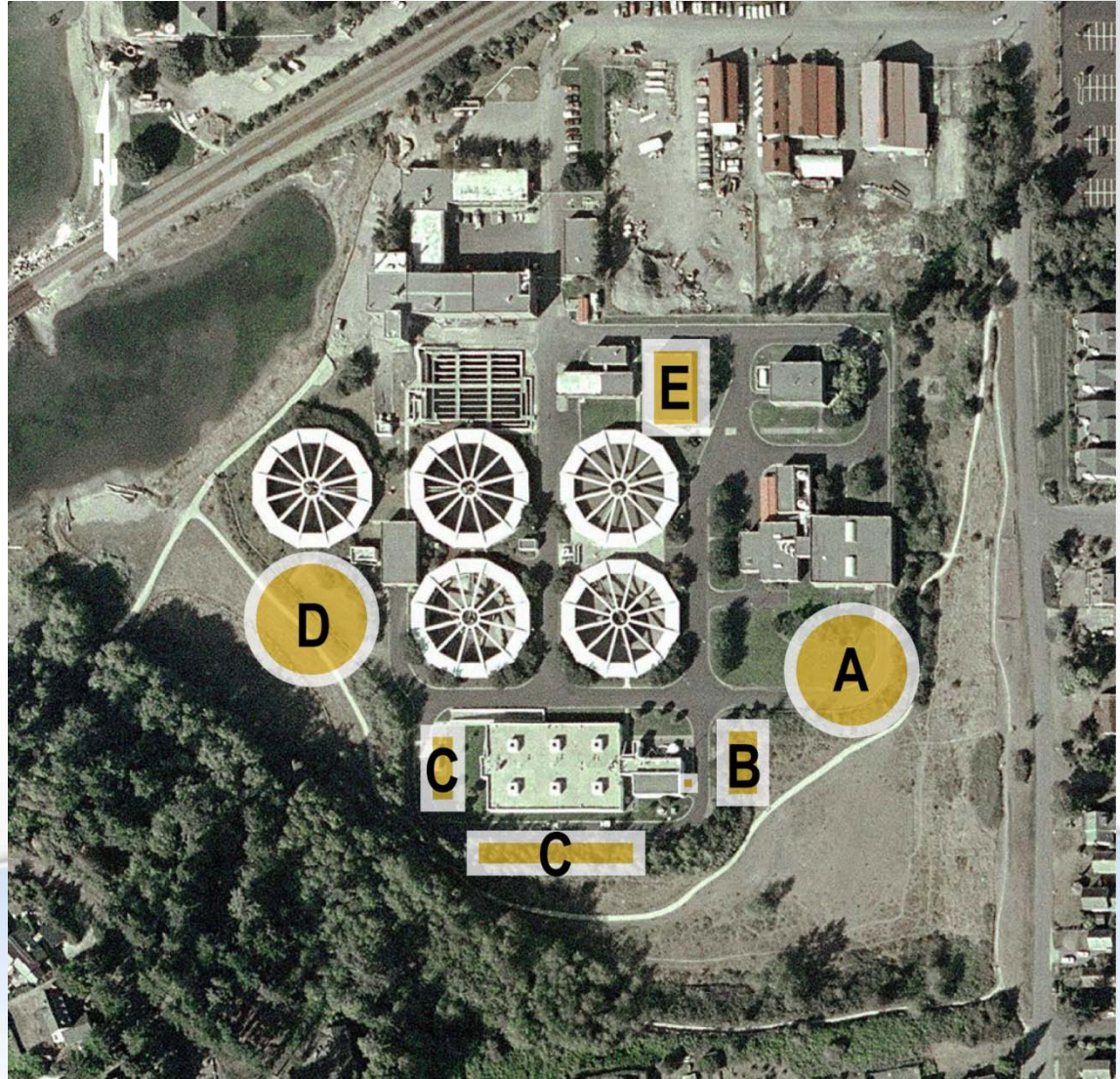
Alternatives for improving BOD Capacity at Post Point WWTP

1. Three potential alternatives
 - a. 1A/1B – Expand “Core” Process
 - b. 3 – Parallel Biological Aerated Filter (BAF)
 - c. 4 – Parallel Membrane Bioreactor (MBR)
2. Alternative 1B is recommended based on TBL+ analysis
3. Alternative 1B has lowest impact on existing, future rates

Alternative 1B – Expand “Core” Process to the South

Components

- A. Primary clarifier
(NOTE: may be eliminated with chemically enhanced primary treatment)
- B. Anaerobic selector
- C. Two activated sludge basins
- D. Fourth secondary clarifier
- E. Replacement and addition of oxygen system



• Capital Funding Summary

Treatment Plant Expansion Scenario	SDC per ERU	Projected 2010 – 2015 Debt Issuance	Incremental Annual Debt Service
<i>Baseline: City Capital Budget</i>	\$7,637	\$80.2 Million	\$6.4 Million
<i>Alternative #1: Expand Core Process</i>	\$7,637	\$78.3 Million	\$6.3 Million
<i>Alternative #2: Parallel Biological Aerated Filters (BAFs)</i>	\$8,305	\$89.5 Million	\$7.2 Million
<i>Alternative #3: Parallel Membrane Bioreactors (MBRs)</i>	\$10,340	\$128.0 Million	\$10.3 Million

Increase in SDC warranted by significant increment in capital investment over what is included in the City's current wastewater SDC of \$7,637 per equivalent residential unit (ERU).

• Revenue Requirement Summary

Revenue Requirement Forecast	2010	2011	2012	2013	2014	2015
Baseline:						
Annual Rate Increase		6.5%	6.5%	1.8%	2.5%	0.0%
Bimonthly Residential Bill	\$58.60	\$62.40	\$66.46	\$67.65	\$69.36	\$69.36
Alternative #1:						
Annual Rate Increase		6.5%	6.5%	0.0%	4.1%	0.0%
Bimonthly Residential Bill	\$58.60	\$62.40	\$66.46	\$66.46	\$69.20	\$69.20
Alternative #2:						
Annual Rate Increase		6.5%	6.5%	6.0%	4.9%	0.9%
Bimonthly Residential Bill	\$58.60	\$62.40	\$66.46	\$70.45	\$73.89	\$74.53
Alternative #3:						
Annual Rate Increase		10.0%	10.0%	10.1%	10.7%	0.7%
Bimonthly Residential Bill	\$58.60	\$64.46	\$70.91	\$78.10	\$86.49	\$87.10

Council has adopted 6.5% increases for 2011 and 2012

• Revenue Requirement Summary – Low Growth

Revenue Requirement Forecast	2010	2011	2012	2013	2014	2015
Baseline:						
Annual Rate Increase		6.5%	6.5%	8.1%	8.6%	2.8%
Bimonthly Residential Bill	\$58.60	\$62.40	\$66.46	\$71.84	\$78.04	\$80.25
Alternative #1:						
Annual Rate Increase		6.5%	6.5%	8.0%	7.6%	3.0%
Bimonthly Residential Bill	\$58.60	\$62.40	\$66.46	\$71.78	\$77.22	\$79.55
Alternative #2:						
Annual Rate Increase		6.5%	6.5%	12.0%	12.1%	3.7%
Bimonthly Residential Bill	\$58.60	\$62.40	\$66.46	\$74.44	\$83.45	\$86.56
Alternative #3:						
Annual Rate Increase		14.0%	14.0%	14.0%	13.1%	3.3%
Bimonthly Residential Bill	\$58.60	\$66.80	\$76.16	\$86.82	\$98.22	\$101.49

Council has adopted 6.5% increases for 2011 and 2012

Facilities Plan and Predesign Schedule

Task	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Council Briefing - BOD Alternative	◆									
Dept. of Ecology Briefings		◆		◆		◆		◆		
Document BOD Alternative	■									
Council Briefing - I/I Program		◆								
Council Briefing - Solids Handling Alternatives			◆							
Document Solids Handling Alternative			■							
Public Meeting #3 - Site Concepts			◆							
Document Site Planning/Implementation			■							
SEPA Checklist and Document					■					
Council Briefing - Recommended Plan					◆					
Public Meeting #4 - Final Open Space Plan						◆				
Council Briefing - DRAFT Facilities Plan							◆			
DRAFT Facilities Plan to DOE							■			
Preliminary Design Document		■								