STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

September 28, 2006

CERTIFIED MAIL
7005 1820 0000 6708 0868

Mr. Phil Williams
Director of Public Works and Utilities
City of Bremerton
3027 Olympus Drive
Bremerton, WA 98310-4799

Dear Mr. Williams:

RE: National Pollutant Discharge Elimination System (NPDES) Permit Issuance
Discharge Permit No. WA-002928-9; City of Bremerton Wastewater Treatment Plant
Expiration Date: September 28, 2011

Under the provisions of Chapter 90.48 RCW Water Pollution Control Laws as amended and the Federal Water Pollution Control Act (The Clean Water Act) Title 33 United States Code, Section 1251 et seq., the enclosed NPDES Permit No. WA-002928-9 is hereby issued to the City of Bremerton Wastewater Treatment Plant located at 1600 Oyster Bay, (West Plant) and 2475 Stephenson Avenue, (East Plant), Bremerton, WA (Kitsap County).

The permit authorizes the Permittee to discharge treated municipal wastewater into the Sinclair Inlet and Port Washington Narrows subject to the terms and conditions of the permit.

The Department of Ecology, in response to the passage of Initiative 97 in 1988, has adopted a regulation to recover costs associated with issuing and administering wastewater discharge permits (Chapter 173-224 WAC). The annual fee for both industrial and municipal/domestic discharges is computed according to the permit fee schedules contained in WAC 173-224-040. Ecology will notify permit holders of fee charges by mailed billing statements. Failure to pay the applicable permit fee may result in the suspension or revocation of the permit, and could result in the issuance of civil penalties or actions to enjoin the activity under the permit.

You have the right to appeal this permit within thirty (30) days upon receipt of this document. Pursuant to chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

If you choose to appeal this action or decision, your notice of appeal must contain: (1) A copy of the permit you are appealing, and (2) A copy of the application for the permit.

Your appeal must be filed with:

The Pollution Control Hearings Board
4224 - 6th Avenue SE, Rowe Six, Bldg. 2
P.O. Box 40903
Lacey, Washington 98504-0903

Your appeal must also be served on:

The Department of Ecology
Appeals Coordinator
P.O. Box 47608
Olympia, Washington 98504-7608.

In addition, please send a copy of your appeal to:

Mike Dawda
Department of Ecology
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008-5452

An application for permit renewal must be made at least 180 days prior to the expiration date of this permit. If at any time during the term of this permit a question should arise regarding the permit or discharge, or if there is a significant change in the discharge or operation, please contact at (425)649-7027 or Email at mdaw461@ecy.wa.gov

Sincerely,

Kevin C. Fitzpatrick
Water Quality Section Manager
Northwest Regional Office

KCF:tm
Enclosures

cc: Pat Coxen, Manager, Bremerton WWTP
Bev Poston, Permit Fee Unit
Mike Dawda, Facility Manager
Amy Jankowiak, Municipal Compliance Specialist
Chris Smith, WPLCS
Central Files: WA-002928-9; City of Bremerton Wastewater Treatment Plant; WQ 1.1

Permit No. WA-002928-9
Issuance Date: September 28, 2006
Effective Date: October 1, 2006
Expiration Date: September 28, 2011

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM WASTE DISCHARGE PERMIT NO. WA-002928-9

State of Washington
DEPARTMENT OF ECOLOGY
Northwest Regional Office
3190 160th Avenue SE
Bellevue, Washington 98008-5452

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

CITY OF BREMERTON
345 – 6th Street, Suite 600
Bremerton, Washington 98337

Plant Name	West Plant	East Plant
Plant Address	1600 Oyster Bay Road, Bremerton, WA 98312	2475 Stephenson Avenue, Bremerton, WA 98310
Receiving Water	Sinclair Inlet, Puget Sound	Port Washington Narrows, Puget Sound
Waterbody I.D. No.	1224026474620	1224026474620
Plant Type	Activated Sludge, Secondary Treatment Plant	High Rate Clarification, Combined Sewer Overflow Treatment Plant
Discharge Location **Latitude** **Longitude**	 47° 32' 59" N 122° 40' 11" W	 47° 34' 57" N 122° 37' 45" W

is authorized to discharge in accordance with the Special and General Conditions that follow.

Kevin C. Fitzpatrick
Water Quality Section Manager
Northwest Regional Office
Washington State Department of Ecology

TABLE OF CONTENTS

SUMMARY OF PERMIT REPORT SUBMITTALS 4

SPECIAL CONDITIONS

S1. DISCHARGE LIMITATIONS 6
- A. Effluent Limitations – West Plant
- B. Effluent Limitations – East Plant
- C. Mixing Zone Descriptions and Dilution Ratios

S2. MONITORING REQUIREMENTS 8
- A. Monitoring Schedule
- B. Sampling and Analytical Procedures
- C. Flow Measurement
- D. Laboratory Accreditation

S3. REPORTING AND RECORD KEEPING REQUIREMENTS 12
- A. Reporting
- B. Records Retention
- C. Recording of Results
- D. Additional Monitoring by the Permittee
- E. Twenty-four-hour Notice of Noncompliance Reporting
- F. Immediate Noncompliance Notification
- G. Other Noncompliance Reporting
- H. Maintaining a Copy of This Permit

S4. FACILITY LOADING 15
- A. Design Criteria – West Plant
- B. Plans for Maintaining Adequate Capacity – West Plant
- C. Duty to Mitigate
- D. Notification of New or Altered Sources

S5. OPERATION AND MAINTENANCE 16
- A. Certified Operator
- B. O & M Program
- C. Short-term Reduction
- D. Electrical Power Failure – West Plant
- E. Prevent Connection of Inflow
- F. Bypass Procedures
- G. Operations and Maintenance Manual

S6. PRETREATMENT 19
- A. General Requirements
- B. Wastewater Discharge Permit Required
- C. General Prohibitions
- D. Specific Prohibitions
- E. Notification of Industrial User Violations
- F. Industrial User Survey

S7. RESIDUAL SOLIDS 21

S8. ACUTE TOXICITY – WEST PLANT 21
A. Effluent Limit for Acute Toxicity
B. Monitoring for Compliance With an Effluent Limit for Acute Toxicity
C. Response to Noncompliance With an Effluent Limit for Acute Toxicity
D. Sampling and Reporting Requirements
S9. CHRONIC TOXICITY – WEST PLANT 24
A. Testing Requirements
B. Sampling and Reporting Requirements
S10. COMBINED SEWER OVERFLOWS 26
A. Discharge Locations
B. Combined Sewer Overflow Report
C. Combined Sewer Overflow Reduction Plan Amendment
D. Compliance Schedule
E. Storm Water Connection to the Sewer System
F. Nine Minimum Controls
G. Requirements for Controlled Combined Sewer Overflows
S11. WET WEATHER OPERATION – WEST PLANT 29
S12. OUTFALL EVALUATION – BOTH PLANTS 29

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS 31
G2. RIGHT OF INSPECTION AND ENTRY 32
G3. PERMIT ACTIONS 32
G4. REPORTING A CAUSE FOR MODIFICATION 33
G5. PLAN REVIEW REQUIRED 34
G6. COMPLIANCE WITH OTHER LAWS AND STATUTES 34
G7. DUTY TO REAPPLY 34
G8. TRANSFER OF THIS PERMIT 34
G9. REDUCED PRODUCTION FOR COMPLIANCE 35
G10. REMOVED SUBSTANCES 35
G11. DUTY TO PROVIDE INFORMATION 35
G12. OTHER REQUIREMENTS OF 40 CFR 35
G13. ADDITIONAL MONITORING 35
G14. PAYMENT OF FEES 35
G15. PENALTIES FOR VIOLATING PERMIT CONDITIONS 35
G16. UPSET 36
G17. PROPERTY RIGHTS 36
G18. DUTY TO COMPLY 36
G19. TOXIC POLLUTANTS 36
G20. PENALTIES FOR TAMPERING 36
G21. REPORTING PLANNED CHANGES 37
G22. REPORTING ANTICIPATED NONCOMPLIANCE 37
G23. REPORTING OTHER INFORMATION 37
G24. REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGERS 37
G25. COMPLIANCE SCHEDULES 38

SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Permit Section	Submittal and Monitoring	Frequency	First Submittal or Testing Date
S2.A.1.(3)	Priority Pollutants	3/permit cycle – January 2008, July 2009, and October 2010	Submittal in Part D of the next permit renewal application
S2.A.1.(5)	Conventional Pollutants	3/permit cycle	Submittal in Part B.6 of the next permit renewal application
S3.A.	Discharge Monitoring Reports (DMRs) for Both Plants	Monthly	
S3.A.	Yearly Averages of TSS Removal Efficiency and Effluent Settleable Solids for the East Plant	1/Year – By March 1st of each year	First submittal by March 1, 2008
S3.E.	Noncompliance Notification	As necessary	
S3.F.	Shellfish Protection	As necessary	
S4.B.	Plans for Maintaining Adequate Capacity	As necessary	
S4.D.	Notification of New or Altered Sources	As necessary	
S8.B.	Acute Toxicity Compliance Monitoring	4/year – January, April, July, and October, of each year	First testing in January 2007
S8.B.	Acute Toxicity Compliance Monitoring Reports	4/year – March 31, June 30, September 30, and December 31, of each year	First testing in January 2007 First report submittal by March 31, 2007
S8.C.	Acute Toxicity TI/TRE Plan	As necessary	
S9.A.	Chronic Toxicity Characterization Monitoring	2/permit cycle – January 2010 and July 2010	First testing in January 2010
S9.B.9.	Chronic Toxicity Characterization Data Reports	2/permit cycle – March 31, 2010, and September 30, 2010	First report submittal by March 31, 2010
S9.B.9.	Chronic Toxicity Tests Characterization Summary Report	1/permit cycle	Submittal with the next permit renewal application
S10.B.	Combined Sewer Overflow Report (Annual CSO Report)	1/year – by May 31st of each year	First submittal by May 31, 2007
S10.C.	Combined Sewer Overflow (CSO) Reduction Plan Amendment	1/permit cycle	Submittal with the next permit renewal application
S10.G.	Average number of overflow events per year (during the permit term) from CSO Outfalls OF 13 and OF 17	1/permit cycle	To be included in the Combined Sewer Overflow Reduction Plan Amendment to be submitted with the next permit renewal application

Permit Section	Submittal and Monitoring	Frequency	First Submittal or Testing Date
S11.	Notification of bypassing during wet weather, at the West Plant	As needed; to be reported with monthly DMR	
S12.	Outfall Evaluation	1/permit cycle	Submittal with the next permit renewal application
G1.	Notice of Change in Authorization	As necessary	
G4.	Permit Application for Substantive Changes to the Discharge	As necessary	
G5.	Engineering Report for Construction or Modification Activities	As necessary	
G7.	Application for Permit Renewal [results of monitoring required in Conditions S2.A.1 (3) and S2.A.1 (5) to be reported in the application].	1/permit cycle	March 28, 2011
G21.	Notice of Planned Changes	As necessary	
G22.	Reporting Anticipated Noncompliance	As necessary	

SPECIAL CONDITIONS

S1. DISCHARGE LIMITATIONS

A. Effluent Limitations – West Plant

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is authorized to discharge municipal wastewater at the permitted location subject to complying with the following limitations:

EFFLUENT LIMITATIONS[a]: OUTFALL # 1		
Parameter	**Average Monthly**	**Average Weekly**
Biochemical Oxygen Demand[b] (5-day) (BOD_5)	30 mg/L, 2527 lb/day	45 mg/L, 3790 lb/day
Total Suspended Solids[b] (TSS)	30 mg/L, 2527 lb/day	45 mg/L, 3790 lb/day
Fecal Coliform Bacteria	200/100 mL	400/100 mL
pH	Daily minimum is equal to or greater than 6.0 and the daily maximum is less than or equal to 9.0.	
Acute Toxicity	No acute toxicity detected in a Whole Effluent Toxicity (WET) test concentration representing the acute critical effluent concentration (ACEC). The ACEC is 5% effluent.	
Parameter	**Average Monthly**	**Maximum Daily**
Total Residual Chlorine[c]	0.1 mg/L	0.3 mg/L

[a] The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of fecal coliform, which is based on the geometric mean.

[b] During May through September, the average monthly effluent concentration for BOD_5 and TSS shall not exceed 30 mg/L or 15 percent of the respective monthly average influent concentrations (mg/L), whichever is more stringent. During wet weather months, October through April, inclusively, when the plant flows are influenced by combined sewage, the average monthly effluent concentration for BOD_5 and TSS shall not exceed 30 mg/L or 35 percent of the respective monthly average influent concentrations (mg/L), whichever is more stringent.

[c] The maximum daily value for Total Residual Chlorine is the maximum of the daily values during a calendar month. The daily value is defined as the arithmetic mean of the sample measurements taken during a calendar day.

The average monthly value for Total Residual Chlorine is the arithmetic mean of the daily values during a calendar month.

B. Effluent Limitations – East Plant

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is authorized to discharge treated combined sewer overflows at the permitted location subject to the following limitations. Discharges from this outfall are prohibited except as a result of a precipitation event. CSO discharges that negatively impact the beneficial uses of the receiving water, as identified under applicable water quality standards, are not authorized.

EFFLUENT LIMITATIONS: OUTFALL # 2	
Parameter	**Yearly Average[a]**
Total Suspended Solids (TSS) Removal Efficiency[b]	50%
Settleable Solids	0.3 ml/l/hr.
Parameter	**Monthly Average**
Fecal Coliform Bacteria	400/100 mL (geometric mean)

[a] The yearly average shall be based on a calendar year and calculated using per-discharge event data points. A discharge event is defined as the combined discharge(s) from the treatment plant that are separated by less than 24 hours. The yearly averages of TSS removal efficiency and effluent settleable solids shall be reported to the Department by March 1 of the following year.

[b] The TSS removal efficiency shall be calculated on a mass balance basis as the percent of solids removed at the Plant.

C. Mixing Zone Descriptions and Dilution Ratios

The maximum boundaries of the mixing zones and dilution achieved at the edge of each zone are as follows:

Treatment Plant Outfall	Chronic Mixing Zone Boundary	Acute Mixing Zone Boundary	Chronic Dilution Ratio	Acute Dilution Ratio
West Plant	229 feet[a]	23 feet[a]	120:1	20:1
East plant	224 feet[a]	23 feet[a]	467:1	51:1

[a] Horizontal distance from the discharge ports to the edge of the mixing zone boundary.

S2. MONITORING REQUIREMENTS

A. Monitoring Schedule

1. West Plant – Outfall 001

Parameter	Sample Point	Minimum Sampling Frequency	Sample Type
(1) Compliance			
Flow	Primary Influent[a]	Continuous[b]	Measurement
pH	Final Effluent	Daily	Grab
BOD_5	Plant Influent Final Effluent	3/week 3/week	24-hr composite 24-hr composite
TSS	Plant Influent Final Effluent	3/week 3/week	24-hr composite 24-hr composite
Total Residual Chlorine	Final Effluent (after dechlorination)	Daily	Grab
Fecal Coliform Bacteria[c]	Final Effluent (sampled concurrently with total residual chlorine)	5/week	Grab
(2) Toxics			
Total Ammonia (as NH3-N)[c]	Final Effluent	1/month	24-hr composite[c]
Metals (Total Recoverable)[c] Cadmium Chromium Copper Lead Mercury[d] Nickel Zinc	Plant Influent Final Effluent	2/year beginning 2007 (at least 6 months apart each year, when possible)	24-hr composite[c]
Cyanide (weak acid dissociable)[e]	Plant Influent Final Effluent	2/year beginning 2007 (at least 6 months apart each year, when possible)	Grab
(3) Priority Pollutants Listed in Part D of the NPDES Permit Application – Form 3510-2A[f]			
(a) Metals (Total Recoverable)[d] (b) Cyanide (weak acid dissociable)[e] (c) Total Phenolic Compounds (d) Hardness (as $CaCO_3$) (e) Volatile Organic Compounds (f) Acid-extractable Compounds (g) Base-neutral Compounds	Final Effluent	3/permit term – January 2008, July 2009, and October 2010	Grab
(4) Whole Effluent Toxicity (WET) Testing			
Acute Toxicity[g]	Final Effluent (prior to chlorination)	Beginning January 2007; 4/year during the months of January, April, July, and October	Grab

Parameter	Sample Point	Minimum Sampling Frequency	Sample Type
Chronic Toxicity[h]	Final Effluent (prior to chlorination)	2/year in 2010 - January 2010, & July 2010	Grab
(5) Conventional Pollutants listed in Part B6 of the NPDES Permit Application – Form 3510-2A[i]			
(a) Dissolved Oxygen (b) Total Kjeldahl Nitrogen(TKN) Or Total Nitrogen[j] (c) Oil and Grease (d) Total Phosphorus (e) Total Dissolved Solids (TDS)	Final Effluent	3/permit term	Grab
(6) Conventional Pollutants for TMDL Study			
(a) NO_3-N + NO_2-N (b) Total Kjeldahl Nitrogen(TKN) Or Total Nitrogen[j]	Final Effluent	1/week for three years (2007, 2008, and 2009) during the months of July, August, September, and October	24-hr composite

[a] Since the flow measuring devices for primary clarifiers influent can record much higher flows, the primary influent flow shall be recorded and reported as treatment plant flows.

[b] Continuous means uninterrupted except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance.

[c] Monitoring during Wet Weather Operations (see Condition S11. of this permit) - If the treatment plant operates in wet weather operation mode in any given year, and if it occurs during the time period when the treatment plant is staffed, the Permittee shall collect at least one sample during that year, of the final (blended) effluent and analyze for metals, ammonia, and fecal coliform. Manual or automatic composite (24 hours or less, depending on the bypass duration) samples of the blended effluent for metals and ammonia analysis shall be collected when the plant is staffed.

[d] The analytical method for mercury shall be in accordance with EPA Method Number 1631, Revision E (Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry) from 40 CFR Part 136. The method detection level (MDL) for mercury using this test method is 0.2 ng/L. The quantitation level (QL) for mercury using this test method is 0.5 ng/L.

[e] The analytical method for "weak acid dissociable cyanide" shall be in accordance with 4500-CN^- I, Standard Methods for the Examination of Water and Wastewater, 20th Edition, and as revised.

[f] Final effluent shall be tested for pollutants listed in Part D, *Expanded Effluent Testing Data*, of EPA Form 3510-2A, *NPDES Application*. These pollutants are also listed in Appendix G of the fact sheet for this permit. The analysis results shall be reported in Part D of the next NDPES permit application. Metals testing conducted under part (2)

of this table can be substituted for metals testing to be conducted under part (3) of this table, and vice versa, even though the sample types are different under these parts.

[g] Testing and reporting requirements for the acute WET tests are specified in Condition S8, *Acute Toxicity,* of this permit. The analysis results shall be submitted no later than the dates specified in Condition S8.B of this permit.

[h] Testing and reporting requirements for the chronic WET tests are specified in Condition S9, *Chronic Toxicity,* of this permit. The analysis results shall be submitted no later than the dates specified in Condition S9.B.9 of this permit.

[i] To provide required data for Part B.6, *Effluent Testing Data*, of the EPA Form 3510-2A, *NPDES Application*, for the next permit application, the final effluent shall be tested for these parameters. Samples shall be collected for analysis at least three (3) times during the term of this permit, and results shall be reported in Part B.6 of the next NDPES permit application. Testing conducted for parameters listed under (6) *Conventional Pollutants for TMDL Study*, in the table, need not be repeated.

[j] Testing for TKN or Total Nitrogen conducted under part (6) of this table can be substituted for TKN or Total Nitrogen testing to be conducted under part (5) of this table, and vice versa, even though the sample types are different under these parts.

2. <u>East Plant – Outfall 002</u>

Parameter	Sample Point	Minimum Sampling Frequency	Sample Type
Flow	Plant Influent	Continuous during plant operation[a]	Measurement
Rainfall	Nearby Station	Per Discharge Event[b]	Measurement
TSS	Plant Influent Final Effluent		Composite[c]
pH	Final Effluent		Grab[d]
Fecal Coliform	Final Effluent		Grab[e]
Settleable Solids	Final Effluent		Composite[c]
BOD_5	Plant Influent Final Effluent		Composite[c]
Total Ammonia (as NH3-N)[f]	Final Effluent	Per Discharge Event[b] (minimum six samples per permit term)	Composite[c]
Metals (Total Recoverable)[f] Cadmium Chromium Copper Lead Mercury Nickel Zinc	Final Effluent		Composite[c]

[a] Continuous means uninterrupted except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance.

[b] A discharge event is defined as the combined discharge(s) from the treatment plant that are separated by less than 24 hours.

[c] Composite samples shall represent the entire discharge event.

[d] Grab sample for pH must be taken within first two hours after the treatment plant begins discharging to the receiving water.

[e] Grab samples for fecal coliform must be taken at specific time intervals as follows, after the treatment plant begins discharging to the receiving water:

(1) One sample within first 2 hours.

(2) One sample after 4 – 8 hours.

(3) One sample after 20 – 24 hours.

(4) If the discharge continues beyond 24 hours, at a minimum, one sample shall be collected each day until the discharge ceases.

[f] During the term of this permit, minimum of six samples shall be collected and analyzed for metals and ammonia, provided the plant operates enough times and is staffed to be able to collect samples.

B. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by the Department of Ecology (Department).

C. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. Calibration records shall be maintained for at least three (3) years.

D. Laboratory Accreditation

All monitoring data required by the Department shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, chapter 173-50 WAC. Flow, pH, and internal process control parameters are exempt from this requirement. Testing for pH shall be accredited if the laboratory must otherwise be registered or accredited. The Department exempts crops, soils, and hazardous waste data from this requirement pending accreditation of laboratories for analysis of these media.

S3. REPORTING AND RECORD KEEPING REQUIREMENTS

The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted monthly. Monitoring data for both plants, obtained during each monitoring period shall be summarized, reported, and submitted on a Discharge Monitoring Report (DMR) form provided, or otherwise approved, by the Department. DMR forms shall be postmarked or received by the Department no later than the 15th day of the month following the completed monitoring period, unless otherwise specified in this permit.

DMR forms must be submitted monthly whether or not the facility was discharging. If there was no discharge during a given monitoring period, submit the form as required with the words "no discharge" entered in place of the monitoring results.

The yearly averages of TSS removal efficiency and effluent settleable solids for the East Plant shall be reported to the Department by March 1 of the following year.

Monitoring results for toxic compounds required under S2.A.1(2) and for TMDL parameters required under S2.A.1(6) shall be postmarked or received by the Department no later than forty-five (45) days following the monitoring period.

The monitoring reports shall be sent to the Department of Ecology, Northwest Regional Office, 3190 – 160th Avenue SE, Bellevue, WA 98008-5452.

All laboratory reports providing data for organic and metal parameters shall include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/ number, method detection limit (MDL), laboratory practical quantitation limit (PQL), reporting units, and concentration detected.

B. Records Retention

The Permittee shall retain records of all monitoring information for a minimum of three (3) years. Such information shall include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Department.

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place, method, and time of sampling or measurement; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) the individual who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Condition S2 of this permit, then the results of such monitoring shall be included in the calculation and reporting of the data submitted in the Permittee's DMR.

E. Twenty-four-hour Notice of Noncompliance Reporting

1. The Permittee must take the following action upon violation of any permit condition:

   Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance and correct the problem and, if applicable, immediately repeat sampling and analysis. The results of any repeat sampling shall be submitted to Ecology within thirty (30) days of sampling.

2. The Permittee must report the following occurrences of noncompliance by telephone, to Ecology at (425) 649-7000, within 24 hours from the time the Permittee becomes aware of the circumstances:

   a. Any noncompliance that may endanger health or the environment (for example, a fecal coliform measurement in the effluent which is too numerous to count);

   b. Any unanticipated bypass that exceeds any effluent limitation in the permit (See Part S5.F, "Bypass Procedures");

   c. Any upset that exceeds any effluent limitation in the permit (See G.15, "Upset");

d. Any violation of a maximum daily or instantaneous maximum discharge limitation for any of the pollutants in S1.A.; or

e. Any overflow prior to the treatment works, whether or not such overflow endangers health or the environment or exceeds any effluent limitation in the permit.

3. The Permittee must also provide a written submission within five days of the time that the Permittee becomes aware of any event required to be reported under subpart 2, above. The written submission must contain:

a. A description of the noncompliance and its cause.

b. The period of noncompliance, including exact dates and times.

c. The estimated time noncompliance is expected to continue if it has not been corrected.

d. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

e. If the noncompliance involves an overflow prior to the treatment works, an estimate of the quantity (in gallons) of untreated overflow.

4. Ecology may waive the written report on a case-by-case basis if the oral report has been received within 24 hours of the noncompliance.

5. Reports must be submitted to the address in S3 ("REPORTING AND RECORD KEEPING REQUIREMENTS").

F. Immediate Noncompliance Notification

Any failure of the disinfection system shall be reported immediately to the Department of Ecology's Northwest Regional Office 24-hour number (425) 649-7000.

Any failure of the disinfection system, any discharges from the East Plant, and any collection system overflows or plant bypass discharging near a shellfish area shall be reported immediately to the Department of Ecology and the Department of Health, Shellfish Program. The Department of Ecology's Northwest Regional Office 24-hour number is (425) 649-7000, and the Department of Health's Shellfish 24-hour number is (360) 236-3330.

G. Other Noncompliance Reporting

The Permittee must report all instances of noncompliance, not required to be reported within 24 hours, at the time that monitoring reports for S3.A ("Reporting") are submitted. The reports must contain the information listed in paragraph E, above, ("Twenty-four-hour Notice of Noncompliance Reporting"). Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

H. Maintaining a Copy of This Permit

A copy of this permit must be kept at the facility and be made available upon request to Department of Ecology inspectors.

S4. FACILITY LOADING

A. Design Criteria – West Plant

Flows or waste loadings of the following design criteria for the West Plant shall not be exceeded:

Parameter	Design Criteria
Average flow for the maximum month	10.1 MGD
BOD_5 loading for the maximum month	18,100 lb/day
TSS loading for the maximum month	22,600 lb/day

B. Plans for Maintaining Adequate Capacity – West Plant

When the actual flow or waste load reaches 85 percent of any one of the design criteria in S4.A for three consecutive months, or when the projected increases would reach design capacity within five years, whichever occurs first, the Permittee shall submit to the Department, a plan and a schedule for continuing to maintain capacity at the facility sufficient to achieve the effluent limitations and other conditions of this permit. This plan shall address any of the following actions or any others necessary to meet this objective.

1. Analysis of the present design, including the introduction of any process modifications that would establish the ability of the existing facility to achieve the effluent limits and other requirements of this permit at specific levels in excess of the existing design criteria specified in paragraph A, above.

2. Reduction or elimination of excessive infiltration and inflow of uncontaminated ground and surface water into the sewer system.

3. Limitation on future sewer extensions or connections or additional waste loads.

4. Modification or expansion of facilities necessary to accommodate increased flow or waste load.

5. Reduction of industrial or commercial flows or waste loads to allow for increasing sanitary flow or waste load.

Engineering documents associated with the plan must meet the requirements of WAC 173-240-060, "Engineering Report," and be approved by the Department prior to any construction. If the Permittee intends to apply for state or federal funding for the design or construction of a facility project, the plan must also meet the requirements of a "Facility Plan" as described in 40 CFR 35.2030. The plan shall specify any contracts, ordinances, methods for financing, or other arrangements necessary to achieve this objective.

C. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

D. Notification of New or Altered Sources

The Permittee shall submit written notice to the Department whenever any new discharge or a substantial change in volume or character of an existing discharge into the treatment plant is proposed which: (1) would interfere with the operation of, or exceed the design capacity of, any portion of the treatment plant; (2) is not part of an approved general sewer plan or approved plans and specifications; or (3) would be subject to pretreatment standards under 40 CFR Part 403 and Section 307(b) of the Clean Water Act. This notice shall include an evaluation of the system's ability to adequately transport and treat the added flow and/or waste load, the quality and volume of effluent to be discharged to the treatment plant, and the anticipated impact on the Permittee's effluent [40 CFR 122.42(b)].

S5. OPERATION AND MAINTENANCE

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by the Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

A. Certified Operator

1. West Plant

An operator certified for at least a Class IV plant by the State of Washington shall be in responsible charge of the day-to-day operation of the wastewater treatment plant. An operator certified for at least a Class III plant shall be in charge during all regularly scheduled shifts.

2. East Plant

An operator certified for at least a Class III plant by the State of Washington shall be in responsible charge of the day-to-day operation of the wastewater treatment plant. An operator certified for at least a Class II plant shall be in charge during all regularly scheduled shifts.

B. O & M Program

The Permittee shall institute an adequate operation and maintenance program for their entire sewage system. Maintenance records shall be maintained on all major electrical and mechanical components of the treatment plant, as well as the sewage system and pumping stations. Such records shall clearly specify the frequency and type of maintenance recommended by the manufacturer and shall show the frequency and type of maintenance performed. These maintenance records shall be available for inspection at all times.

C. Short-term Reduction

If a Permittee contemplates a reduction in the level of treatment that would cause a violation of permit discharge limitations on a short-term basis for any reason, and such reduction cannot be avoided, the Permittee shall give written notification to the Department, if possible, thirty (30) days prior to such activities, detailing the reasons for, length of time of, and the potential effects of the reduced level of treatment. This notification does not relieve the Permittee of their obligations under this permit.

D. Electrical Power Failure – West Plant

The Permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated wastes or wastes not treated in accordance with the requirements of this permit during electrical power failure at the treatment plant and/or sewage lift stations either by means of alternate power sources, standby generator, or retention of inadequately treated wastes.

The Permittee shall maintain Reliability Class II (EPA 430-99-74-001) at the wastewater treatment plant. The Permittee shall comply with the effluent limitations specified in Condition S1.A of this permit, at all times, including those times associated with power outages at the treatment plant.

E. Prevent Connection of Inflow

The Permittee shall strictly enforce their sewer ordinances and not allow the connection of inflow (roof drains, foundation drains, and so on) to the sanitary sewer system.

F. Bypass Procedures

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited, except as provided for in Condition S11 of this permit.

The Department may take enforcement action against a Permittee for bypass unless one of the following circumstances (1, 2, or 3) is applicable.

1. Bypass for essential maintenance without the potential to cause violation of permit limits or conditions.

   Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health as determined by the Department prior to the bypass. The Permittee shall submit prior notice, if possible, at least ten (10) days before the date of the bypass.

2. Bypass which is unavoidable, unanticipated, and results in noncompliance of this permit.

   This bypass is permitted only if:

   a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

   b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.

   c. The Department is properly notified of the bypass as required in Condition S3.E of this permit.

3. Bypass which is anticipated and has the potential to result in noncompliance of this permit

   The Permittee shall notify the Department at least thirty (30) days before the planned date of bypass. The notice shall contain: (1) a description of the bypass and its cause; (2) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (3) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (4) the minimum and maximum duration of bypass under each alternative; (5) a recommendation as to the preferred alternative for conducting the bypass; (6) the projected date of bypass initiation; (7) a statement of compliance with SEPA; (8) a request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated; and (9) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above shall be considered during preparation of the engineering report or facilities plan and plans and specifications and shall be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

The Department will consider the following prior to issuing an administrative order for this type of bypass:

a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.

b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.

c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, the Department will approve or deny the request. The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by the Department under RCW 90.48.120.

G. Operations and Maintenance Manual

The approved Operations and Maintenance Manual shall be kept available at the treatment plant and all operators shall follow the instructions and procedures of this manual.

S6. PRETREATMENT

A. General Requirements

The Permittee shall work with the Department to ensure that all commercial and industrial facilities discharging to the treatment plant are in compliance with the pretreatment regulations promulgated in 40 CFR Part 403 and any additional regulations that may be promulgated under Section 307(b) (pretreatment) and 308 (reporting) of the Federal Clean Water Act.

B. Wastewater Discharge Permit Required

The Permittee shall not allow significant industrial users (SIUs) to discharge wastewater to the Permittee's sewerage system until such user has received a wastewater discharge permit from the Department in accordance with chapter 90.48 RCW and chapter 173-216 WAC, as amended.

C. General Prohibitions

In accordance with 40 CFR 403.5(a), a nondomestic discharger may not introduce into the Permittee's sewerage system any pollutant(s) that cause pass through or interference.

D. Specific Prohibitions

In accordance with 40 CFR 403.5(b), the following nondomestic discharges shall not be discharged into the Permittee's sewerage treatment system.

1. Pollutants that create a fire or explosion hazard in the treatment plant (including, but not limited to waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21).

2. Pollutants that will cause corrosive structural damage to the Permittee's sewerage system or treatment plant, but in no case discharges with pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges.

3. Solid or viscous pollutants in amounts that could cause obstruction to the flow in sewers or otherwise interfere with the operation of the treatment plant.

4. Any pollutant, including oxygen-demanding pollutants, (BOD, and so on) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the treatment plant.

5. Heat in amounts that will inhibit biological activity in the treatment plant resulting in interference, but in no case heat in such quantities such that the temperature at the treatment plant exceeds 40°C (104°F) unless the Department, upon request of the Permittee, approves, in writing, alternate temperature limits.

6. Petroleum oil, nonbiodegradable cutting oil, or products of mineral origin in amounts that will cause interference or pass through.

7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the treatment plant in a quantity which may cause acute worker health and safety problems.

8. Any trucked or hauled pollutants, except at discharge points designated by the Permittee.

E. Notification of Industrial User Violations

The Permittee shall notify the Department if any nondomestic user violates the prohibitions listed in S8.C and S8.D above.

F. Industrial User Survey

If required by the Department, the Permittee shall perform an industrial user survey, or other activities (for example, sewer use ordinance and local limits development), which are necessary for the proper administration of the state pretreatment program.

S7. RESIDUAL SOLIDS

Residual solids include screenings, grit, scum, primary sludge, waste activated sludge, and other solid waste. The Permittee shall store and handle all residual solids in such a manner so as to prevent their entry into state ground or surface waters. The Permittee shall not discharge leachate from residual solids to state surface or ground waters.

S8. ACUTE TOXICITY - WEST PLANT

A. Effluent Limit for Acute Toxicity

The effluent limit for acute toxicity is no acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC).

The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the zone of acute criteria exceedance assigned pursuant to WAC 173-201A-100. The zone of acute criteria exceedance is authorized in Section S1.C of this permit. The ACEC equals 5 percent effluent.

In the event of failure to pass the test described in Subsection B of this section for compliance with the effluent limit for acute toxicity, the Permittee is considered to be in compliance with all permit requirements for acute whole effluent toxicity as long as the requirements in Subsection C are being met to the satisfaction of the Department.

B. Monitoring for Compliance With an Effluent Limit for Acute Toxicity

The Permittee shall conduct monitoring to determine compliance with the effluent limit for acute toxicity. The acute toxicity tests shall be performed using, at a minimum, 100 percent effluent, the ACEC, and a control. Acute toxicity testing shall follow protocols, monitoring requirements, and quality assurance/quality control procedures specified in this section. Testing shall begin in January 2007. A written report shall be submitted to the Department no later than March 31, 2007. The percent survival in 100 percent effluent shall be reported along with all compliance monitoring results.

Compliance monitoring shall begin in January 2007, and shall be conducted quarterly during the months of January, April, July, and October, using each of the species and protocols listed below on a rotating basis. Written reports of compliance monitoring shall be submitted no later than March 31, June 30, September 30, and December 31.

1. Fathead minnow, *Pimephales promelas* (96-hour static-renewal test, method: EPA-821-R-02-012).

2. Daphnid, *Ceriodaphnia dubia*, *Daphnia pulex*, or *Daphnia magna* (48-hour static test, method: EPA-821-R-02-012). The Permittee shall choose one of the three species and use it consistently throughout compliance monitoring.

The Permittee is in violation of the effluent limit for acute toxicity in Subsection A and shall immediately implement Subsection C if any acute toxicity test conducted for compliance monitoring determines a statistically significant difference in survival between the control and the ACEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than 10 percent, the hypothesis test shall be conducted at the 0.01 level of significance.

C. Response to Noncompliance with an Effluent Limit for Acute Toxicity

If a toxicity test conducted for compliance monitoring under Subsection B determines a statistically significant difference in response between the ACEC and the control, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted weekly for four consecutive weeks using the same test and species as the failed compliance test. Testing shall be conducted using a series of at least five effluent concentrations and a control in order to be able to determine appropriate point estimates. One of these effluent concentrations shall equal the ACEC and be compared statistically to the nontoxic control in order to determine compliance with the effluent limit for acute toxicity as described in Subsection B. The Permittee shall return to the original monitoring frequency in Subsection B after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, and so on) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the acute toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department within sixty (60) days after the sample date. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

D. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on grab samples. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one hour after collection, it must have a temperature below 20°C at receipt. If a grab sample is received at the testing lab within 4 hours after collection, it must be below 12°C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended. The lab shall store all samples at 0 - 6°C in the dark from receipt until completion of the test.

3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.

4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A and the Department of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A or pristine natural water of sufficient quality for good control performance.

6. Effluent samples for whole effluent toxicity testing shall be collected just prior to the chlorination step in the treatment process. The sample collection point (under current treatment process configuration) is secondary treated effluent prior to chlorination.

7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC.

8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing and do not comply with the acute statistical power standard of 29 percent as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

S9. CHRONIC TOXICITY - WEST PLANT

A. Testing Requirements

The Permittee shall test final effluent once in January 2010, and once in July 2010, prior to submission of the application for permit renewal. All of the chronic toxicity tests listed below shall be conducted on each sample. The results of this chronic toxicity testing shall be submitted to the Department as a part of the permit renewal application process.

The Permittee shall conduct chronic toxicity testing on a series of at least five concentrations of effluent and a control in order to be able to determine appropriate point estimates and an NOEC. This series of dilutions shall include the acute critical effluent concentration (ACEC). The ACEC equals 5 percent effluent. The Permittee shall compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.

Chronic toxicity tests shall be conducted with the following species and the most recent version of the following protocols:

Saltwater Chronic Toxicity Test Species		Method
Topsmelt or Silverside minnow	*Atherinops affinis* or *Menidia beryllina*	EPA/600/R-95/136 or EPA/821/R/02/014
Mysid shrimp	*Holmesimysis costata* or *Mysidopsis bahia*	EPA/600/R-95/136 or EPA/821/R/02/014

The Permittee shall use the West Coast fish (topsmelt, *Atherinops affinis*) and mysid (*Holmesimysis costata*) for toxicity testing unless the lab cannot obtain a sufficient quantity of a West Coast species in good condition in which case the East Coast fish (silverside minnow, *Menidia beryllina*) or mysid (*Mysidopsis bahia*) may be substituted.

B. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on grab samples. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one hour after collection, it must have a temperature below 20°C at receipt. If a grab sample is received at the testing lab within 4 hours after collection, it must be below 12°C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended. The lab shall store all samples at 0 - 6°C in the dark from receipt until completion of the test.

3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.

4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A and the Department of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A or pristine natural water of sufficient quality for good control performance.

6. Effluent samples for whole effluent toxicity testing shall be collected just prior to the chlorination step in the treatment process. The sample collection point (under current treatment process configuration) is secondary treated effluent prior to chlorination.

7. The Permittee may choose to conduct a full dilution series test in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC and the CCEC. The ACEC and CCEC may either substitute for the effluent concentration that is closest to it in the dilution series or be an extra effluent concentration.

8. All whole effluent toxicity tests that involve hypothesis testing and do not comply with the chronic statistical power standard of 39 percent as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

9. Written reports of monitoring results of the testing during January 2010 and July 2010 shall be submitted no later than March 31, 2010, and September 30, 2010, respectively. A final summary report shall be submitted to the Department with the next permit renewal application. This summary report shall include a tabulated summary of the individual test results, and any information on sources of toxicity, if any, toxicity source control, toxicity treatability, and correlation with effluent data.

S10. COMBINED SEWER OVERFLOWS

A. Discharge Locations

The following is a list of combined sewer overflows (CSOs), which are occasional point sources of pollutants as a result of precipitation events. Discharges from these sites are prohibited except as a result of and during precipitation events. No authorization is given by this permit for discharge from a CSO that causes adverse impacts that threaten characteristic uses of the receiving water as identified in the water quality standards, chapter 173-201A WAC.

OUTFALL NUMBER	BASIN	LOCATION	RECEIVING WATER
OF 1	Pine Road Basin	47° 34' 57" N 122° 37' 45" W	Port Washington Narrows
OF 2	Stevens Canyon Basin	47° 34' 57" N 122° 38' 07" W	Port Washington Narrows
OF 3	Cherry Avenue Basin	47° 34' 45" N 122° 37' 27" W	Port Washington Narrows
OF 4	Eastpark Basin	47° 34' 29" N 122° 36' 58" W	Port Washington Narrows
OF 6	Tracyton Beach Basin	47° 35' 10" N 122° 38' 39" W	Port Washington Narrows
OF 7A	Trenton Avenue Basin	47° 34' 08" N 122° 36' 26" W	Port Washington Narrows
OF 7B	Trenton Avenue Basin	47° 34' 08" N 122° 36' 26" W	Port Washington Narrows
OF 8	Anderson Cove Basin	47° 35' 05" N 122° 39' 00" W	Port Washington Narrows
OF 9	Anderson Cove Basin	47° 34' 45" N 122° 38' 47" W	Port Washington Narrows
OF 10	Anderson Cove Basin	47° 34' 44" N 122° 38' 26" W	Port Washington Narrows
OF 11	Anderson Cove Basin	47° 34' 44" N 122° 38' 22" W	Port Washington Narrows
OF 12	Anderson Cove Basin	47° 34' 43" N 122° 38' 11" W	Port Washington Narrows
OF 13	Warren Avenue Basin	47° 35' 40" N 122° 37' 45" W	Port Washington Narrows
OF 16 (existing)[a]	Pacific Avenue Basin	47° 33' 38" N 122° 37' 43" W	Sinclair Inlet
OF 17	Callow Avenue Basin	47° 33' 15" N 122° 39' 04" W	Sinclair Inlet
OF 16 (future)[b]	Pacific Avenue Basin	47° 33' 42" N 122° 37' 31" W	Sinclair Inlet

[a] Existing CSO outfall location OF 16 to be abandoned after completion of Pacific Avenue Basin CSO Reduction Project.

[b] New CSO outfall location OF 16 after completion of Pacific Avenue Basin CSO Reduction Project.

B. Combined Sewer Overflow Report

No later than May 31 of each calendar year, the Permittee shall submit an annual CSO report for the previous calendar year to the Department for review and approval, which complies with the requirements of WAC 173-245-090(1). This report shall include documentation of compliance with Nine Minimum Controls for CSOs.

C. Combined Sewer Overflow Reduction Plan Amendment

In conjunction with the application for renewal of this permit, the Permittee shall submit an amendment of its CSO Reduction Plan to the Department for review and approval. The amendment shall comply with the requirements of WAC 173-245-090(2).

D. Compliance Schedule

In order to achieve the greatest reasonable reduction of combined sewer overflows at the earliest possible date, the elements of the approved combined sewer overflow reduction plan shall be accomplished in accordance with the schedule stipulated in the Order on Consent Number DE 93WQ-N150 and any amendment(s) thereto.

E. Storm Water Connection to the Sewer System

The Permittee shall prohibit discharge of storm water from new developments into a sanitary or a combined sewer system.

F. Nine Minimum Controls

In accordance with WAC 173-245 and US EPA Combined Sewer Overflow (CSO) control policy (59 FR 18688), the Permittee shall implement and document the following nine minimum controls (NMC) for CSOs. Compliance with the NMC shall be documented in the Annual CSO Report to be submitted as required in Condition S10.B of this permit.

The Permittee shall comply with the following technology-based requirements:

1. The Permittee shall implement proper operation and maintenance program for the collection system (pump stations, sewer system, and CSO outfalls) to reduce the magnitude, frequency, and duration of CSOs. The program shall consider regular inspections of collection system; removal of sediment/debris from the collection system; equipment and sewer system repair or replacement, where necessary; and disconnection of connections that contribute to inflow and infiltration.

2. The Permittee shall implement procedures that will maximize the use of the collection system for wastewater storage that can be accommodated by the storage capacity of the collection system in order to reduce the magnitude, frequency, and duration of CSOs.

3. The Permittee shall review and modify, as appropriate, its existing pretreatment requirements to minimize CSO impacts from the discharges from nondomestic users.

4. The Permittee shall operate the wastewater treatment plants at maximum treatable flows during wet weather flow conditions to reduce the magnitude, frequency, and duration of CSOs. The Permittee shall maximize the conveyance of combined sewage flows to the treatment plants within the constraints of the sewer system and treatment plant capacities.

5. Dry weather overflows from CSO outfalls are prohibited. Each dry weather overflow must be reported and corrective action(s) taken in accordance with Conditions S3.E. *Twenty-four-hour Notice of Noncompliance Reporting,* and S3.F. *Immediate Noncompliance Notification*, of this permit.

6. The Permittee shall implement measures to control solid and floatable materials in CSOs.

7. The Permittee shall implement a pollution prevention program focused on reducing the impact of CSOs on receiving waters.

8. The Permittee shall implement a public notification process to inform the citizens of when and where CSOs occur. The process shall consider notification to appropriate state and local government agencies, and posting at CSO outfalls.

9. The Permittee shall monitor CSO outfalls to characterize CSO impacts and the efficacy of CSO controls. These data shall include:

   a. Characteristics of combined sewer system including the population served by the combined portion of the system and locations of all CSO outfalls in the collection system.

   b. Frequency and duration of CSO events at all CSO outfalls.

   c. Locations and designated uses of receiving water bodies.

   d. Water quality data for receiving water bodies.

   e. Water quality impacts directly related to CSOs (for example, beach closing, presence of floatables, and so on).

G. <u>Requirements for Controlled Combined Sewer Overflows</u>

The following is a list of combined sewer overflow (CSO) outfalls which are considered to have complied with the requirement of greatest reasonable reduction as defined in WAC 173-245. Frequency of overflow events at these CSO outfalls, as a result of and during precipitation events, shall be no more than an average of one event per year per

outfall, based on a long-term average. Compliance will be based on a 5-year average for the permit cycle. A CSO event is as defined in the *Permit Writer's Manual (Page V-30)*, Department of Ecology Publication No. 92-109. The Department of Ecology defines the minimum inter-event period (MIET) for CSOs as 24 hours. A CSO event is considered to have ended only after at least 24 hours has elapsed since the last measured occurrence of an overflow.

The Permittee shall report the average number of overflow events per year (during this permit term) from these CSO outfalls in the CSO Reduction Plan Amendment to be submitted to the Department in conjunction with the permit renewal application, as required in Condition S10.C of this permit.

No authorization is given by this permit for discharge from these CSO sites that causes adverse impacts that threaten characteristic uses of the receiving water as identified in the water quality standards, chapter 173-201A WAC.

OUTFALL NUMBER	BASIN	LOCATION	RECEIVING WATER
OF 13	Warren Avenue Basin	47° 35' 40" N 122° 37' 45" W	Port Washington Narrows
OF 17	Callow Avenue Basin	47° 33' 15" N 122° 39' 04" W	Sinclair Inlet

S11. WET WEATHER OPERATION – WEST PLANT

Combined sewage-related bypassing of the secondary treatment portion of the West Plant is authorized when the influent flow rate to the West Plant exceeds 22.8 million gallons per day (MGD) as a result of a precipitation event. Secondary treatment bypasses when the influent flow is less than 22.8 MGD are not authorized under this condition and are subject to the bypass provisions as stated in Condition S5.F of this permit. In the event of a CSO-related bypass of the secondary treatment system as authorized under this condition, the Permittee shall minimize the discharge of pollutants to the environment. At a minimum, bypass flows must receive preliminary treatment through bar screens and grit removal system, and primary treatment and disinfection. The final discharge must at all times comply with the effluent limitations specified in Condition S1.A of this permit.

The Permittee shall monitor the final discharge of blended effluent (combined primary and secondary treated effluent) as specified in footnote [c] of the table in Condition S2.A.1 of this permit.

The Permittee shall maintain records of all CSO-related secondary treatment bypasses at the treatment plant. These records shall document the duration and dates of the bypassing events, and the influent flows to the treatment plant. This information shall be reported in the discharge monitoring report (DMR) for the month of bypassing.

S12. OUTFALL EVALUATION - BOTH PLANTS

The Permittee shall inspect once during the life of this permit, the submerged portion of the outfall line and diffuser to document its integrity and continued function. The inspection report shall be submitted to the Department in conjunction with the next permit renewal application. If conditions allow for a photographic verification, it shall be included in the report.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the Department shall be signed and certified.

A. All permit applications shall be signed by either a principal executive officer or a ranking elected official.

B. All reports required by this permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to the Department.

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

C. Changes to authorization. If an authorization under paragraph B.2, above, is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph B.2, above, must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.

D. Certification. Any person signing a document under this section shall make the following certification:

> *"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

G2. RIGHT OF INSPECTION AND ENTRY

The Permittee shall allow an authorized representative of the Department, upon the presentation of credentials and such other documents as may be required by law:

A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.

B. To have access to and copy - at reasonable times and at reasonable cost - any records required to be kept under the terms and conditions of this permit.

C. To inspect - at reasonable times - any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.

D. To sample or monitor - at reasonable times - any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G3. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Department's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR 122.62, 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5.

A. The following are causes for terminating this permit during its term, or for denying a permit renewal application:

1. Violation of any permit term or condition.

2. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.

3. A material change in quantity or type of waste disposal.

4. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination [40 CFR part 122.64(3)].

5. A change in any condition that requires either a temporary or permanent reduction, or elimination of any discharge or sludge use or disposal practice controlled by the permit [40 CFR part 122.64(4)].

6. Nonpayment of fees assessed pursuant to RCW 90.48.465.

7. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.

B. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:

1. A material change in the condition of the waters of the state.

2. New information not available at the time of permit issuance that would have justified the application of different permit conditions.

3. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.

4. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.

5. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR part 122.62.

6. The Department has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.

7. Incorporation of an approved local pretreatment program into a municipality's permit.

C. The following are causes for modification or alternatively revocation and reissuance:

1. Cause exists for termination for reasons listed in A1 through A7 of this section, and the Department determines that modification or revocation and reissuance is appropriate.

2. The Department has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer (General Condition G8) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new Permittee.

G4. REPORTING A CAUSE FOR MODIFICATION

The Permittee shall submit a new application, or a supplement to the previous application, along with required engineering plans and reports whenever a material change to the facility or in the quantity or type of discharge is anticipated which is not specifically authorized by this permit. This application shall be submitted at least sixty (60) days prior to any proposed changes. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to the Department for approval in accordance with chapter 173-240 WAC. Engineering reports, plans, and specifications shall be submitted at least one hundred eighty (180) days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities shall be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. DUTY TO REAPPLY

The Permittee shall apply for permit renewal at least one hundred eighty (180) days prior to the specified expiration date of this permit.

G8. TRANSFER OF THIS PERMIT

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Department.

A. Transfers by Modification

Except as provided in paragraph (B), below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

B. Automatic Transfers

This permit may be automatically transferred to a new Permittee if:

1. The Permittee notifies the Department at least thirty (30) days in advance of the proposed transfer date.

2. The notice includes a written agreement between the existing and new Permittees containing a specific date transfer of permit responsibility, coverage, and liability between them.

3. The Department does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under this subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

G9. REDUCED PRODUCTION FOR COMPLIANCE

The Permittee, in order to maintain compliance with its permit, shall control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G10. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G11. DUTY TO PROVIDE INFORMATION

The Permittee shall submit to the Department, within a reasonable time, all information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also submit to the Department upon request, copies of records required to be kept by this permit [40 CFR 122.41(h)].

G12. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G13. ADDITIONAL MONITORING

The Department may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G14. PAYMENT OF FEES

The Permittee shall submit payment of fees associated with this permit as assessed by the Department.

G15. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars ($10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars ($10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G16. UPSET

Definition – "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
1) an upset occurred and that the Permittee can identify the cause(s) of the upset;
2) the permitted facility was being properly operated at the time of the upset;
3) the Permittee submitted notice of the upset as required in Condition S3.E; and
4) the Permittee complied with any remedial measures required under S5 of this permit.

In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G17. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G18. DUTY TO COMPLY

The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G19. TOXIC POLLUTANTS

The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G20. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two (2) years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this Condition, punishment shall be a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four (4) years, or by both.

G21. REPORTING PLANNED CHANGES

The Permittee shall, as soon as possible, give notice to the Department of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in: 1) the permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b); 2) a significant change in the nature or an increase in quantity of pollutants discharged; or 3) a significant change in the Permittee's sludge use or disposal practices. Following such notice, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation of the terms and conditions of this permit.

G22. REPORTING ANTICIPATED NONCOMPLIANCE

The Permittee shall give advance notice to the Department by submission of a new application or supplement thereto at least one hundred eighty (180) days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during noncritical water quality periods and carried out in a manner approved by the Department.

G23. REPORTING OTHER INFORMATION

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Department, it shall promptly submit such facts or information.

G24. REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGERS

The Permittee belonging to the categories of existing manufacturing, commercial, mining, or silviculture must notify the Department as soon as they know or have reason to believe:

A. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels":

1. One hundred micrograms per liter (100 µg/l).

2. Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony.

3. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).

4. The level established by the Director in accordance with 40 CFR 122.44(f).

B. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels":

1. Five hundred micrograms per liter (500 μg/L).
2. One milligram per liter (1 mg/L).
3. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
4. The level established by the Director in accordance with 40 CFR 122.44(f).

G25. COMPLIANCE SCHEDULES

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.

FACT SHEET FOR NPDES PERMIT WA-002928-9
BREMERTON WASTEWATER TREATMENT PLANT

SUMMARY

The City of Bremerton owns, operates, and maintains two wastewater treatment plants – the Westside Wastewater Treatment Plant (West Plant) and the Eastside Wastewater Treatment Plant (East Plant). The West Plant is a secondary wastewater treatment plant which operates year round, and treats waste water from all of the City's sewer service area. During wet weather periods, the West Plant receives and treats combined sewage (sanitary sewage combined with storm water). The East Plant operates only during wet weather periods and treats combined sewage only. Combined sewage from East Bremerton is diverted to the East Plant when the volume of combined sewage exceeds the capacity of sewage conveyance system to the West Plant. The East Plant was constructed to reduce frequency of combined sewage overflows (CSOs) from the City's sewerage system to an average of one per year per outfall as required by the state regulations.

TABLE OF CONTENTS

SUMMARY 1

INTRODUCTION 4

GENERAL INFORMATION 5

BACKGROUND INFORMATION 6
- DESCRIPTION OF THE FACILITY 6
  1. Wastewater Sources 6
  2. Description of the Wastewater Collection System 6
  3. Description of the Wastewater Treatment Plant 7
  4. Description of the Discharge Outfall 8
  5. Residual Solids 8
  6. Wet Weather Operations – West Plant 9
- PERMIT STATUS 9
- SUMMARY OF RECENT INSPECTIONS 10
- SUMMARY OF COMPLIANCE WITH THE EXISTING PERMIT 10
- EFFLUENT CHARACTERIZATION 10

PROPOSED PERMIT LIMITATIONS 12
- DESIGN CRITERIA – WEST PLANT 12
- TECHNOLOGY-BASED EFFLUENT LIMITATIONS 12
- SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS 14
  - Numerical Criteria for the Protection of Aquatic Life 15
  - Numerical Criteria for the Protection of Human Health 15
  - Narrative Criteria 15
  - Antidegradation 15
  - Critical Conditions 15
  - Mixing Zones 15
  - Description of the Receiving Water 16
  - Surface Water Quality Criteria 16
  - Consideration of Surface Water Quality-Based Limits for Numeric Criteria 17
  - Limits Derivation – West Plant 18
  - Limits Derivation – East Plant 19
  - Whole Effluent Toxicity – West Plant 20
  - Human Health – West Plant 21
  - Sediment Quality – West Plant 22
- COMBINED SEWER OVERFLOWS 22
- OUTFALL EVALUATION 23
- GROUND WATER QUALITY LIMITATIONS 23
- COMPARISON OF THE PROPOSED EFFLUENT LIMITS WITH THE EXISTING EFFLUENT LIMITS 24

MONITORING REQUIREMENTS 25
- LAB ACCREDITATION 25

OTHER PERMIT CONDITIONS 25
REPORTING AND RECORD KEEPING 25
PREVENTION OF FACILITY OVERLOADING 25
OPERATION AND MAINTENANCE (O&M) 26
RESIDUAL SOLIDS HANDLING 26
PRETREATMENT 26
GENERAL CONDITIONS 26

PERMIT ISSUANCE PROCEDURES 26
PERMIT MODIFICATIONS 26
RECOMMENDATION FOR PERMIT ISSUANCE 26

REFERENCES FOR TEXT AND APPENDICES 27

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION 28

APPENDIX B—GLOSSARY 29

APPENDIX C—TREATMENT PLANT LAYOUTS 36

APPENDIX D—REASONABLE POTENTIAL CALCULATION FOR WATER QUALITY CRITERIA 38

APPENDIX E—REASONABLE POTENTIAL CALCULATION FOR PROTECTION OF HUMAN HEALTH 40

APPENDIX F—WATER QUALITY-BASED PERMIT LIMITS CALCULATIONS FOR CHLORINE 41

APPENDIX G—LIST OF POLLUTANTS FOR TESTING REQUIRED IN PERMIT CONDITION S2.A.1.(3) 42

APPENDIX H—RESPONSE TO COMMENTS 43

INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has authorized the State of Washington to administer the NPDES permit program. Chapter 90.48 RCW defines the Department of Ecology's authority and obligations in administering the Wastewater Discharge Permit Program.

The regulations adopted by Washington State include procedures for issuing permits (chapter 173-220 WAC), technical criteria for discharges from municipal wastewater treatment facilities (chapter 173-221 WAC), water quality criteria for surface and ground waters (chapters 173-201A and 200 WAC), and sediment management standards (chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty (30) days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A—Public Involvement of the fact sheet for more detail on the public notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Comments and the resultant changes to the permit will be summarized in Appendix H—Response to Comments.

GENERAL INFORMATION	
Applicant	City of Bremerton 345 – 6th Street, Suite 600 Bremerton, WA 98337
Facility Name and Address	(a) Westside Wastewater Treatment Plant (West Plant) 1600 Oyster Bay Road Bremerton, WA 98312 (b) Eastside Wastewater Treatment Plant (East Plant) 2475 Stephenson Avenue Bremerton, WA 98310
Type of Treatment	(a) West Plant: Activated Sludge - Secondary Treatment System (b) East Plant: High Rate Clarification (HRC) – Combined Sewage Treatment System
Discharge Location	(a) West Plant: Sinclair Inlet, Puget Sound Latitude: 47° 32' 59" N Longitude: 122° 40' 11" W (b) East Plant: Port Washington Narrows, Puget Sound Latitude: 47° 34' 57" N Longitude: 122° 37' 45" W
Waterbody ID Number	(a) West Plant: 1224026474620 (b) East Plant: 1224026474620

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

1. WASTEWATER SOURCES

(a) West Plant: The West Plant receives domestic sewage from residential and light commercial activities in the city of Bremerton and Kitsap County Sewer District Number 1. The plant also receives waste water from Harrison Memorial Hospital, and domestic and industrial wastewater from Puget Sound Naval Shipyard (PSNS). The domestic wastewater from PSNS includes waste water from on-shore chemical toilet facilities and saline wastewater from toilet facilities on ships. The industrial wastewater from PSNS includes pretreated wastewater from the industrial wastewater treatment facility. This discharge is covered under a State Waste Discharge Permit No. ST-7274. The plant receives and treats combined sewage during wet weather periods.

(b) East Plant: The East Plant operates only during wet weather periods and treats combined sewage only. Combined sewage from East Bremerton is diverted to the East Plant when the volume of combined sewage exceeds the capacity of sewage conveyance system to the West Plant. The East Plant was constructed to reduce the frequency of combined sewage overflows (CSOs) from the City's sewerage system to an average of one per year per outfall as required by the state regulations, WAC 173-245.

2. DESCRIPTION OF THE WASTEWATER COLLECTION SYSTEM

The wastewater collection system in Bremerton has been constructed in various phases as a result of changing regulations coupled with occasional rapid population growth and new development over the course of nearly 100 years. There are 36 pump stations and 15 combined sewer overflow (CSO) outfalls in the collection system.

Bremerton's separate and combined sanitary sewer collection system mains range in size from 6 to 42 inches in diameter for gravity mains and from 4 to 36 inches in diameter for force mains. The sewers have been constructed with a variety of materials including clay, concrete, PVC, asbestos cement, cast iron, ductile iron, and HDPE. Approximately 60 percent of the sewer system is composed of combined sewers and, consequently, inflow (storm water) represents a significant portion of the total sewage flow during wet weather months. Most of the combined sewage is received and treated at one of the two treatment plants.

Sewage in East Bremerton is collected from six sewer basins through a series of pump stations, gravity pipelines, and pressure mains that discharge to the East Bremerton beach main. The flow from the beach main gravity sewer discharges to 16-inch and 24-inch siphons under Port Washington Narrows, to pump station CE-1. Pump station CE-1 pumps the sewage to the West Plant via the Cross-town Pipeline.

During wet weather periods, combined sewage from East Bremerton is diverted to and treated at the East Plant when the volume of combined sewage exceeds the capacity of sewage conveyance system to the West Plant.

In West Bremerton, separate and combined sewage systems flows from various basins, as well as flows from East Bremerton are pumped into the Cross-town Pipeline system, which conveys flows to the West Plant.

3. DESCRIPTION OF THE WASTEWATER TREATMENT PLANT

(a) West Plant: The treatment system at this plant consists of an activated sludge (plug flow with an anaerobic selector zone) secondary treatment system. The liquid stream treatment system includes three mechanical bar screens, two aerated grit chambers, two primary clarifiers, a roughing biofilter (currently not in use), two aeration basins with fine bubble diffusers, two secondary clarifiers, two chlorine contact basins for sodium hypochlorite disinfection system, and a sodium bisulfite dechlorination system.

The solids stream treatment system components at this plant include a gravity thickener (currently not in use), a dissolved air flotation thickener (DAFT), two anaerobic digesters, and a centrifuge. Primary sludge (solids removed in the primary clarifiers) is sent directly to the anaerobic digesters. Secondary sludge (solids removed in the secondary clarifiers) is thickened in the DAFT prior to sending it to the anaerobic digesters. Primary and secondary sludge are digested in the two anaerobic digesters operated as primary digesters. Digested sludge is dewatered in the centrifuge. The dewatered digested sludge (biosolids) is spread on permitted forest lands owned by the City. The recycle wastewater stream, which includes DAFT underflow, digesters supernatant, and centrate from the centrifuge, is returned to the head of the plant for further treatment.

An odor control system consisting of three packed tower chemical odor scrubbers was installed at the plant in 1996, in order to process odorous air generated from various treatment units. These include headworks (bar screens and grit removal units), primary clarifiers, gravity thickener, DAFT system, digester complex, centrifuge area, biofilter, aeration basin headworks, RAS wet well, and primary and secondary scum boxes.

(b) East Plant: The treatment system at this plant consists of a High Rate Clarification (HRC) system to treat combined sewage from East Bremerton. Treatment components at the facility include a 100,000-gallon storage tank, an HRC system, and an ultraviolet (UV) light disinfection system. Solids removed at this plant are stored in the storage tank. When capacity becomes available in the sewer system, the solids are conveyed to the West Plant for removal and treatment.

Waste water from East Bremerton is normally treated at the City's West Plant. This includes sanitary sewage during dry weather months and combined sewage during wet weather months. Waste water from East Bremerton is conveyed by two inverted siphons across Port Washington Narrows (which separates East and West Bremerton) to pump station CE-1. Waste water is then pumped to the West Plant via the Cross-town Pipeline. During wet weather periods, when the combined sewage volume exceeds the capacity of the inverted siphons, it is diverted through a 20-inch pipe to the East Plant. The treatment system at the East Plant starts automatically when the in-line storage capacity has been exhausted and the 100,000 gallons capacity (short-term) storage tank is nearing full.

If the capacity of the inverted siphons starts to free up before the in-line storage capacity is exhausted and short-term storage tank becomes full, the combined sewage drains back to the siphons and then to the pump station CE-1. The East Plant does not begin operating under these circumstances.

The East Plant pages the on-call operator through the Programmable Logic Control (PLC) system when the level in the storage basin reaches 7.6 feet, and the operator is dispatched to monitor, in-person, operation of the East Plant. The East Plant begins start-up at a level of 13.4 feet in the storage basin, and flow enters the plant at a level of 13.66 feet. The East Plant began operation in January 2003. It operated fourteen times in 2003, three times in 2004, and six times in 2005.

Layouts for both treatment plants are included in Appendix C.

4. DESCRIPTION OF THE DISCHARGE OUTFALL

(a) West Plant: Secondary treated effluent from the West Plant is discharged to Sinclair Inlet, Puget Sound, at a location west of Puget Sound Naval Shipyard (PSNS), via a 36-inch diameter outfall, which extends 568 feet offshore. The terminal portion of the outfall consists of a 20-port diffuser with 6.5-inch diameter openings at 6-foot spacing. The diffuser ports discharge horizontally in alternating directions at a depth of approximately 30 feet below Mean Lower Low Water (MLLW).

(b) East Plant: Treated effluent is discharged to Port Washington Narrows, Puget Sound. The discharge outfall is approximately 480 feet long. The first 200 feet of the outfall consists of a 20-inch diameter cast iron pipe, and the remaining outfall and diffuser consist of a 36-inch diameter reinforced concrete pipe. The diffuser portion of the outfall is equipped with twenty-one 5.75-inch diameter ports. The ports are located on alternating sides of the pipe at 4-foot spacing. Discharge into Port Washington Narrows is at a depth of approximately 24 feet below MLLW.

5. RESIDUAL SOLIDS

(a) West Plant: Screenings and grit removed at the West Plant are transported to the Olympic View Sanitary Landfill for disposal. Biosolids generated at the West Plant are utilized on forest lands owned by the City. The biosolids application/utilization sites are permitted by the Bremerton-Kitsap County Health District.

Primary sludge and secondary sludge (after thickening in dissolved air flotation thickener – DAFT) are digested in anaerobic digesters. The digested sludge is dewatered in a centrifuge. The dewatered digested sludge (biosolids) is utilized as fertilizer to enhance timber growth, as well as an amendment to improve overall soil quality.

(b) East Plant: Screenings and sludge generated at the East Plant are stored in the storage tank and transported to the West Plant when the conveyance system capacity becomes available and the waste water begins flowing back to the West Plant.

6. WET WEATHER OPERATIONS – WEST PLANT

The wastewater treatment system at the West Plant is designed for a maximum month flow of 10.1 million gallons per day (MGD) and a peak hourly flow of 32.1 MGD. However, plant operations over the years have shown that the plant can operate at higher flows and still be able to comply with the effluent limits. As part of the CSO reduction efforts, the Permittee has been conveying more combined sewage to the West Plant for treatment. The plant has occasionally operated at peak flows greater than 50 MGD during wet weather. The Permittee has submitted a rerating study to the Department requesting approval of higher design flow criteria for the plant. In addition to demonstrating higher influent design flow capacity for the plant, this study indicates that, during wet weather months when the influent flows are high, flows to the secondary treatment portion of the plant can be as high as 22.8 MGD without compromising the secondary treatment portion of the plant. The study recommends that flows greater than 22.8 MGD be bypassed around the secondary treatment and provided only primary treatment in order to preserve the integrity of the biota in the secondary treatment portion of the plant. Flows from the two separately treated streams would then be combined and disinfected prior to discharge.

EPA's *1994 Combined Sewer Overflow Control Policy* allows for "CSO-related bypass" whereby, under certain conditions, the permit writer may allow wet weather flows to bypass secondary treatment (*Combined Sewer Overflow Guidance for Permit Writers,* EPA, August 1995, pp 4-34).

Condition S11 of the proposed permit, *Wet Weather Operations – West Plant,* allows secondary treatment bypass of flows greater than 22.8 MGD. The combined primary and secondary treated effluent is required to meet secondary treatment limits at all times. This alternative would ensure compliance with the permitted effluent limits without compromising the secondary treatment portion of the plant. There is no separate combined sewer overflow outfall at the plant site.

It should be noted that when the original facility plan for the West Plant was approved by the Department, it was with the understanding that the plant would operate in this manner as this was, and is, considered to be good engineering practice and an acceptable solution for treating a significant portion of the combined sewer overflow volume which occurs in the system during wet weather periods. The West Plant has been operating in this manner since 1986 when the secondary treatment system was constructed at the plant.

PERMIT STATUS

(a) West Plant: The existing permit for the West Plant expired on June 21, 2001. An application for permit renewal was received by the Department on December 21, 2000, and accepted on June 27, 2001. Due to administrative backlog, the existing permit was extended by the Department on June 27, 2001. The plant is currently operating under the terms and conditions of this permit.

(b) East Plant: Construction of the East Plant was completed in December 2001. An application for a discharge permit was received by the Department on October 11, 2001, and has been accepted by the Department.

The existing permit is for the West Plant only. The proposed permit authorizes discharges from both plants.

SUMMARY OF RECENT INSPECTIONS

(a) West Plant: A Class I inspection of the West Plant was conducted by the Department staff on September 29, 2005. In addition, a Class II inspection was conducted on June 25, 2002. The effluent looked clear at the time of Class I inspection. The effluent looked slightly turbid at the time of the Class II inspection. During the inspections, the plant appeared to be well operated and maintained.

(b) East Plant: A Class I inspection of the East Plant was conducted by the Department staff on October 23, 2002. This plant operates only during wet weather periods when the volume of combined sewage exceeds the capacity of the inverted siphons (crossing Port Washington Narrows) that convey waste water from East Bremerton to West Bremerton. Due to lack of rain at the time of inspection, there was no combined sewage present in the collection system and hence, the plant was not operating.

The inspection reports are on file at the Northwest Regional Office (NWRO) of the Department.

SUMMARY OF COMPLIANCE WITH THE EXISTING PERMIT

Based on Discharge Monitoring Reports (DMRs) submitted to the Department, during the term of the existing permit (from July 1, 1996, to present) there have been thirteen violations of the effluent limits for BOD and TSS. The monthly average flow to the plant exceeded the influent design criteria four times during this period. The effluent limits violations and exceedance of the influent flow design criteria occurred between December 1996 and February 1999. Based on DMRs submitted to the Department, the Permittee has consistently remained in compliance with the effluent limits and there have been no exceedance of influent design criteria since February 1999.

EFFLUENT CHARACTERIZATION

The concentrations of pollutants in the discharge were reported in the NPDES application and in DMRs. The results of the effluent analyses are shown in the following table. The concentrations of conventional pollutants (BOD, TSS, and fecal coliform) shown in the table below are from the monitoring data for the year 2000. Ammonia, chlorine, and metals concentrations are from the monitoring data from July 1996 through July 2005. The reported concentrations of Bis (2-Ethylhexyl) Phthalate and 1,4-Dichlorobenzene are the averages of two sampling and analysis conducted during the permit term.

Parameter	Maximum Daily Effluent Concentration	Average Daily Effluent Concentration	Number of Samples	Comments
BOD_5	34 mg/L	10 mg/L	156	
TSS	37 mg/L	11 mg/L	156	
Fecal Coliform	997/100 mL	36/100 mL	260	
Dissolved Oxygen	11.9 mg/L	7.7 mg/L	366	
Ammonia (NH3-N)		47 mg/L	443	
Chlorine Residual		0.04 mg/L	109	
Cyanide	0.013 mg/L		60	Most sample results are below Method Detection Limit (MDL).
Arsenic	0.0033 mg/L		60	
Cadmium	0.0008 mg/L		60	All but sample result below MDL.
Chromium	0.078 mg/L		60	Most sample results are below MDL.
Copper	0.0271 mg/L		60	
Lead	0.02 mg/L		60	Only four sample results are above MDL.
Mercury	0.00028 mg/L		60	Only two sample results are above MDL.
Nickel	0.016 mg/L		60	Most sample results are below MDL.
Selenium	< 0.05 mg/L		60	All sample results are below MDL.
Zinc	0.19 mg/L		60	
Bis (2-Ethylhexyl) Phthalate		0.00011 mg/L	2	
1,4-Dichlorobenzene		0.00325 mg/L	2	

PROPOSED PERMIT LIMITATIONS

Federal and state regulations require that effluent limitations set forth in an NPDES permit must be either technology- or water quality-based. Technology-based limitations for municipal discharges are set by regulation (40 CFR 133, and chapters 173-220 and 173-221 WAC). Water quality-based limitations are based upon compliance with the surface water quality standards (chapter 173-201A WAC), ground water standards (chapter 173-200 WAC), sediment quality standards (chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992.) The most stringent of these types of limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the State of Washington were determined and included in this permit. Ecology does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation. Effluent limits are not always developed for pollutants that may be in the discharge but not reported as present in the application. In those circumstances the permit does not authorize discharge of the non-reported pollutants. Effluent discharge conditions may change from the conditions reported in the permit application. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department of Ecology. The Permittee may be in violation of the permit until the permit is modified to reflect additional discharge of pollutants.

DESIGN CRITERIA – WEST PLANT

In accordance with WAC 173-220-150 (1) (g), flows or waste loadings shall not exceed approved design criteria.

The design criteria shown in the following table, for the West Plant, are taken from Plans and Specifications, April 1983, prepared by CH2M Hill and approved by the Department.

Parameter	Design Criteria
Average flow for the maximum month	10.1 MGD
BOD_5 influent loading for the maximum month	18,100 lb/day
TSS influent loading for the maximum month	22,600 lb/day

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Municipal wastewater treatment plants are a category of discharger for which technology-based effluent limits have been promulgated by federal and state regulations. These effluent limitations are given in the Code of Federal Regulations (CFR) 40 CFR Part 133 (federal) and in chapter 173-221 WAC (state). These regulations are performance standards that constitute all known, available and reasonable methods of prevention, control, and treatment for municipal wastewater.

The effluent limitations for CSO treatment facilities are given in chapter 173-245 WAC (state). These regulations are performance standards that constitute all known, available and reasonable methods of prevention, control, and treatment by CSO treatment facilities.

(a) West Plant: The technology-based limits for pH, fecal coliform, BOD_5, and TSS, taken from chapter 173-221 WAC are shown in the following table:

Parameter	**Limit**
pH	Shall be within the range of 6.0 to 9.0 standard units.
Fecal Coliform Bacteria	Monthly Geometric Mean = 200 organisms/100 mL Weekly Geometric Mean = 400 organisms/100 mL
BOD_5 (concentration)	Average Monthly Limit is the most stringent of the following: - 30 mg/L - may not exceed fifteen percent (15%) of the average influent concentration (see note (ii) below) Average Weekly Limit = 45 mg/L
TSS (concentration)	Average Monthly Limit is the most stringent of the following: - 30 mg/L - may not exceed fifteen percent (15%) of the average influent concentration (see note (ii) below) Average Weekly Limit = 45 mg/L

Note:

(i) The following technology-based mass limits are based on WAC 173-220-130(3)(b) and 173-221-030(11)(b).

Monthly average effluent mass loadings for BOD_5 and TSS = 10.1 MGD (maximum monthly design flow) x 30 mg/L (concentration limit) x 8.34 (conversion factor) = 2527 lb/day.

Weekly average effluent mass loadings for BOD_5 and TSS = 10.1 MGD (maximum monthly design flow) x 45 mg/L (concentration limit) x 8.34 (conversion factor) = 3791 lb/day.

(ii) WAC 173-221-050 (3) states: *For domestic wastewater facilities, which receive flows from combined sewers, the Department shall decide on a case-by-case basis whether any attainable percent removal can be defined during wet weather. If it can be defined, the department will set an alternative percent removal effluent limitation for the wet weather period. A permittee who requests such alternative limits shall submit supporting documentation to the department.*

The influent BOD_5 and TSS concentrations shown in the monitoring data submitted by the Permittee from July 1996 through May 2005, show that the influent received at the plant during wet weather periods is dilute compared to that during dry weather periods. This is due to the presence of combined sewage in the Permittee's collection system during wet weather periods. The monitoring data show that from July 1996 through May 2005, the average influent BOD_5 concentration was 15 percent higher during dry weather period and 10 percent lower during wet weather period compared to the average influent BOD_5 concentration for the whole period.

Similarly, the average influent TSS concentration was 12 percent higher during dry weather period and 9 percent lower during wet weather period compared to the average influent TSS concentration for the whole period. This generally results in lower percent removal efficiencies for BOD_5 and TSS during wet weather periods. Analyses of the monitoring data from July 1996 through May 2005 show that the Permittee is generally able to maintain 75 percent removal efficiency at the plant for both BOD_5 and TSS.

The Permittee has in the past and is currently implementing various projects in its collection system to reduce combined sewer overflows (CSOs) into the state waters in order to comply with the state regulations of no more than an average of one CSO per year per CSO site. As a result of the ongoing CSO reduction projects, the plant influent during wet weather periods is expected to get more diluted, which in turn is expected to result in further reduction in percent removal efficiencies of BOD_5 and TSS. Therefore, percent removal efficiency of 65 percent for BOD_5 and TSS is proposed in this permit, for wet weather period (October through April), which is specified in footnote "b" of Permit Condition S1.A. It should be noted that the concentrations of effluent BOD_5 and TSS are still limited to a maximum of 30 mg/L, and that only the required percent removal efficiencies are reduced during wet weather periods in order to account for the expected (further) dilution of the plant influent due to the ongoing CSO reduction projects. It should also be noted that the plant is operated in a manner to maximize BOD_5 and TSS removals, and that the reduction in required percent removal limits will not compromise the plant performance or the actual BOD_5 and TSS percent removals at the plant. It would be possible to determine fairly accurately, the achievable percent removals for BOD_5 and TSS during wet weather periods based on plant performance after completion of the Permittee's CSO reduction program. In future permits, the Department will reevaluate the attainable percent removals for BOD_5 and TSS based on plant performance after completion of the Permittee's CSO reduction program.

As part of the CSO Reduction Program, the Permittee is conveying more combined sewage to the West Plant for treatment. This is expected to further dilute the plant influent. The percent removal efficiencies for BOD_5 and TSS during wet weather months will be reevaluated during the next permit renewal.

(b) East Plant: The effluent limits for TSS and settleable solids, taken from chapter 173-245 WAC are shown in the following table.

Parameter	Limit
TSS	May not exceed fifty percent (50%) of the influent concentration
Settleable Solids	Less than 0.3 ml/l/hr

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established surface water quality standards. The Washington State Surface Water Quality Standards (chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin-wide total maximum daily loading study (TMDL).

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the State of Washington's Water Quality Standards for Surface Waters (chapter 173-201A WAC). They specify the levels of pollutants allowed in a receiving waterbody while remaining protective of aquatic life. Numerical criteria set forth in the water quality standards are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The state was issued 91 numeric water quality criteria for the protection of human health by the U.S. EPA (EPA 1992). These criteria are designed to protect humans from cancer and other diseases and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDEGRADATION

The Washington State's Antidegradation Policy requires that discharges into receiving waters shall not further degrade the existing water quality of the water body. In cases where the natural conditions of receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when receiving waters are of higher quality than the criteria assigned, the existing water quality shall be protected. More information on the Washington State's Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic waterbody uses.

MIXING ZONES

The water quality standards allow the Department of Ecology to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known, available and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100.

The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

DESCRIPTION OF THE RECEIVING WATER

The West Plant discharges to Sinclair Inlet, Puget Sound, and the East Plant discharges to Port Washington Narrows, Puget Sound. Both these water bodies are designated as Class A - Marine Waters, in the vicinity of the respective outfalls. Characteristic uses of these water bodies include the following:

> water supply (domestic, industrial, agricultural); stock watering; fish migration; fish and shellfish rearing, spawning and harvesting; wildlife habitat; primary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation.

Water quality of this class shall meet or exceed the requirements for all, or substantially all, uses.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA 1992). Criteria for these discharges are summarized below:

Parameter	Criteria
Fecal Coliforms	14 organisms/100 mL maximum geometric mean
Dissolved Oxygen	6 mg/L minimum
Temperature	16 degrees Celsius maximum or incremental increases above background
pH	7.0 to 8.5 standard units
Turbidity	less than 5 NTUs above background
Toxics	No toxics in toxic amounts

The Federal Clean Water Act [Section 303(d)] requires the state to prepare a list of water bodies that do not meet water quality standards. This list is called the 303(d) list because the process is described in Section 303(d) of the Clean Water Act. The Department is required to submit the 303(d) list to the Environmental Protection Agency (EPA) for approval. After approval by the EPA, the Department is required to develop water cleanup plans, also known as total maximum daily loads or TMDLs, for each of the water bodies on the 303(d) list. The latest approved 303(d) list is the 2002/2004 303(d) list, which lists Sinclair Inlet for various parameters for both water and tissue mediums. The parameters listed for water medium in this list are dissolved oxygen (DO), fecal coliform, pH, and temperature.

Of the parameters listed for water medium in Sinclair Inlet in the 2002/2004 303(d) list, only DO is listed as Category 5; the rest are listed as Category 2, *Waters of Concern*. The parameters included in Category 2 of the 303(d) list are the ones that show some evidence of water quality problem, but not enough to require a TMDL study at this time. Additional monitoring for these parameters would need to be conducted to determine if a TMDL study needs to be conducted.

The Department, in the near future, is planning to conduct a TMDL study in Sinclair Inlet to address noncompliance with the water quality standards for DO. The results of the TMDL study will be used to determine whether waste load allocations for BOD and nutrients are necessary (nutrients can contribute indirectly to DO depression by stimulating phytoplankton growth).

Fecal coliform bacteria in Sinclair Inlet are listed as Category 2, *Waters of Concern*, on the 2004 303(d) list, also called the *Water Quality Assessment*. A fecal coliform TMDL was initiated in 2000 based on the 1998 303(d) listing of fecal coliform bacteria in Dyes and Sinclair Inlets. Though these listings are not on the 2004 303(d) list, the marine waters of nearshore areas of Sinclair and Dyes Inlets have been shown to be impaired through additional monitoring conducted for the TMDL and routine monitoring conducted by Kitsap County Health District and Washington State Department of Health. The Department of Ecology is continuing to develop the TMDL in a cooperative effort with Puget Sound Naval Shipyard (PSNS) in Bremerton and U.S. Environmental Protection Agency (EPA) Region 10. The Department plans to establish waste load allocations for fecal coliform bacteria from point sources (wastewater treatment plants and Municipal Phase II NPDES Stormwater Permittees) and load allocations for fecal coliform bacteria from nonpoint sources that discharge to Sinclair Inlet. If the fecal coliform waste load allocation for the West Plant results in lower than permitted effluent limits, the Department may impose the more stringent TMDL-based limits through permit modification or issuance of an Administrative Order. A reasonable time period will be given to the Permittee to make plant modifications, if needed, to comply with the more stringent limits.

CONSIDERATION OF SURFACE WATER QUALITY-BASED LIMITS FOR NUMERIC CRITERIA

Pollutant concentrations in the proposed discharge exceed water quality criteria with technology-based controls which the Department has determined to be AKART. Acute and chronic mixing zones are authorized in accordance with the geometric configuration, flow restriction, and other restrictions for mixing zones in chapter 173-201A WAC. Mixing zone boundaries for discharges to estuaries such as Sinclair Inlet and Port Washington Narrows are defined as follows:

(a) In estuaries, mixing zones, singularly or in combination with other mixing zones, shall:

  (i) Not extend in any horizontal direction from the discharge port(s) for a distance greater than two hundred feet plus the depth of water over the discharge port(s) as measured during mean lower low water.

  (ii) Not occupy greater than 25 percent of the width of the waterbody as measured during mean lower low water.

(b) In estuarine waters, a zone where acute criteria may be exceeded shall not extend beyond 10 percent of the distance established in (a) above, as measured independently from the discharge port(s).

(c) Vertical limitations for both chronic and acute zones is the depth of water over the discharge port(s) as measured during mean lower low water.

The acute and chronic mixing zone boundaries for discharges from the West Plant and East Plant are determined based on the above definitions and are specified in Condition S1.B of the proposed permit.

The dilution factors of effluent to receiving water that occur within these zones have been determined at the critical condition by the use of PLUMES model for both plants. The outfall analysis with PLUMES modeling for the West Plant is included in the January 19, 2006, memorandum from Bill Fox (Cosmopolitan Engineering) to Pat Coxon of City of Bremerton. This memorandum was submitted as an amendment to the *Bremerton Westside WWTP Mixing Zone Study,* Cosmopolitan Engineering, February 2002. The outfall analysis with PLUMES modeling for the East Plant is included in the approved engineering report *City of Bremerton Eastside CSO Treatment Facility,* Camp Dresser & McKee, January 2001. The dilution ratios based on the water quality models are shown in the following table:

Criteria	West Plant		East Plant	
	Acute	Chronic	Acute	Chronic
Aquatic Life	20:1	120:1	51:1	467:1
Human Health		120:1		

Pollutants in an effluent may affect the aquatic environment near the point of discharge (near-field) or at a considerable distance from the point of discharge (far-field). Toxic pollutants, for example, are near-field pollutants—their adverse effects diminish rapidly with mixing in the receiving water. Conversely, a pollutant such as BOD is a far-field pollutant whose adverse effect occurs away from the discharge even after dilution has occurred. Thus, the method of calculating water quality-based effluent limits varies with the point at which the pollutant has its maximum effect.

The derivation of water quality-based limits also takes into account the variability of the pollutant concentrations in both the effluent and the receiving water.

LIMITS DERIVATION – WEST PLANT

BOD_5—This discharge with technology-based limitations results in a small amount of BOD loading relative to the large amount of dilution occurring in the receiving water at critical conditions. Technology-based limitations will be protective of dissolved oxygen criteria in the receiving water.

Temperature—Due to the high dilution achieved (120:1) under critical conditions, there is no predicted violation of the water quality standard for surface waters. Therefore, no effluent limitation for temperature is placed in the proposed permit.

pH—Because of the high buffering capacity of marine water, compliance with the technology-based limits of 6 to 9 will assure compliance with the water quality standards for surface waters.

Fecal Coliform—As stated earlier, the Department is planning to develop waste load allocations for fecal coliform for various point and non-point sources that discharge to Sinclair Inlet. Until then, technology-based fecal coliform limits (200/100 mL monthly average, and 400/100 mL

weekly average) are placed in the proposed permit. If the fecal coliform waste load allocation for the West Plant results in lower than permitted effluent limits, the Department will impose the more stringent TMDL-based limits through permit modification or issuance of an Administrative Order.

Toxic Pollutants—Federal regulations (40 CFR 122.44) require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the surface water quality criteria. This process occurs concurrently with the derivation of technology-based effluent limits. Facilities with technology-based effluent limits defined in regulation are not exempted from meeting the water quality standards for surface waters or from having surface water quality-based effluent limits.

The following toxics were determined to be present in the discharge: chlorine, ammonia, heavy metals, cyanide, arsenic, Bis (2-Ethylhexyl) Phthalate, and 1,4-Dichlorobenzene. Concentrations of these pollutants detected in the plant effluent are shown in the table in *EFFLUENT CHARACTERIZATION* section of this fact sheet. A reasonable potential analysis to exceed the water quality criteria was conducted for chlorine, ammonia, heavy metals, cyanide, and arsenic, to determine whether or not effluent limitations for these parameters would be required in this permit.

The determination of the reasonable potential to exceed the water quality criteria was evaluated with procedures given in EPA, 1991 (Appendix C) at the critical condition in the receiving water. Dilution ratios at the critical condition used in the modeling are: acute dilution ratio 20:1 and chronic dilution ratio 120:1. The reasonable potential analysis is shown in Appendix D of this fact sheet.

Valid ambient background data was available only for ammonia, which was used in the reasonable potential analysis. The analysis shows reasonable potential for chlorine to exceed the water quality criteria. Therefore, lower (than existing) effluent limitations for chlorine are required in the permit. The existing permit has effluent chlorine limits of 0.13 mg/L average monthly and 0.37 mg/L maximum daily. The new chlorine limits based on the dilution ratios at critical conditions (acute dilution ratio 20:1 and chronic dilution ratio 120:1) in the receiving water are 0.1 mg/L average monthly and 0.3 mg/L maximum daily. The chlorine limits derivation is shown in Appendix F of this fact sheet. These effluent chlorine limits are placed in Condition S1.A of the proposed permit.

LIMITS DERIVATION – EAST PLANT

BOD_5—There is no technology-based effluent limitation for BOD_5 for an intermittently discharging primary treatment plant treating combined sewage. This is an advanced primary treatment plant with BOD_5 and TSS removal efficiencies much greater than those of a conventional primary treatment plant. In addition, the plant influent (combined sewage) is dilute with low concentrations BOD_5 and TSS. With large amounts of dilution occurring in the receiving water at critical conditions, the intermittent discharge from the plant with low effluent BOD_5 is expected to result in negligible water quality impact in the receiving water.

Temperature—Due to the high dilution achieved (467:1) under critical conditions, there is no predicted violation of the water quality standard for surface waters. Therefore, no effluent limitation for temperature is placed in the proposed permit.

pH—Because of the high buffering capacity of marine water, compliance with the technology-based limits of 6 to 9 will assure compliance with the water quality standards for surface waters.

Fecal Coliform—There is no technology-based effluent limitation for fecal coliform for an intermittently discharging primary treatment plant treating combined sewage. However, Ecology's technical guidance document (Section C3-3.3.8, *Disinfection of Criteria for Sewage Works Design*, December 1998) states that 400 counts/100 ml is appropriate for performance for an on-site CSO treatment facility. This limit is placed in the proposed permit.

Toxic Pollutants—Based on results of the effluent analysis during the pilot scale study of the HRC treatment system, a reasonable potential analysis to exceed the water quality criteria was conducted for ammonia, arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc, to determine whether or not effluent limitations for these parameters would be required in this permit.

The determination of the reasonable potential to exceed the water quality criteria was evaluated with procedures given in EPA, 1991 (Appendix C) at the critical condition in the receiving water. Dilution ratios at the critical condition used in the modeling are: acute dilution ratio 51:1 and chronic dilution ratio 467:1. The dilution analysis and the reasonable potential analysis are included in the approved *City of Bremerton Eastside CSO Treatment Facility Engineering Report*.

Valid ambient background data was available only for ammonia, which was used in the reasonable potential analysis. The analysis shows no reasonable potential for any of the toxics to exceed the water quality criteria. Therefore, no effluent limitations for these parameters are required in the permit.

WHOLE EFFLUENT TOXICITY – WEST PLANT

The water quality standards for surface waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the waste water in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing. Some WET tests measure acute toxicity and other WET tests measure chronic toxicity.

Acute toxicity tests measure mortality as the significant response to the toxicity of the effluent. Dischargers who monitor their waste water with acute toxicity tests are providing an indication of the potential lethal effect of the effluent to organisms in the receiving environment.

Chronic toxicity tests measure various sublethal toxic responses such as retarded growth or reduced reproduction. Chronic toxicity tests often involve either a complete life cycle test of an organism with an extremely short life cycle or a partial life cycle test on a critical stage of one of a test organism's life cycles. Organism survival is also measured in some chronic toxicity tests.

Accredited WET testing laboratories have the proper WET testing protocols, data requirements, and reporting format. Accredited laboratories are knowledgeable about WET testing and capable of calculating an NOEC, LC_{50}, EC_{50}, IC_{25}, and so on. All accredited labs have been provided the

most recent version of the Department of Ecology Publication No. WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria,* which is referenced in the permit. Any Permittee interested in receiving a copy of this publication may call the Ecology Publications Distribution Center at (360) 407-7472 for a copy. Ecology recommends that Permittees send a copy of the acute or chronic toxicity sections(s) of their permits to their laboratory of choice.

Acute toxicity was measured during effluent characterization in the previous permit term. Acute toxicity was found to be at levels that, in accordance with WAC 173-205-050(2)(a), have a reasonable potential to cause receiving water toxicity. An acute toxicity limit is therefore required. The acute toxicity limit is no statistically significant difference in test organism survival between the acute critical effluent concentration (ACEC), 5 percent of the effluent, and the control. Permit Condition S1.A includes the limit for acute toxicity.

The acute toxicity limit is set relative to the zone of acute criteria exceedance (acute mixing zone) established in accordance with WAC 173-201A-100. The acute critical effluent concentration (ACEC) is the concentration of effluent existing at the boundary of the acute mixing zone during critical conditions.

Monitoring for compliance with an acute toxicity limit is accomplished by conducting an acute toxicity test using a sample of effluent diluted to equal the ACEC and comparing test organism survival in the ACEC to survival in nontoxic control water. The Permittee is in compliance with the acute toxicity limit if there is no statistically significant difference in test organism survival between the ACEC and the control.

The WET tests during effluent characterization indicate that no reasonable potential exists to cause receiving water chronic toxicity, and the Permittee will not be given a chronic WET limit, and will only be required to retest the effluent prior to application for permit renewal in order to demonstrate that chronic toxicity has not increased in the effluent.

If the Permittee makes process or material changes which, in the Department's opinion, results in an increased potential for effluent toxicity, then the Department may require additional effluent characterization in a regulatory order, by permit modification, or in the permit renewal. Toxicity is assumed to have increased if WET testing conducted for submission with a permit application fails to meet the performance standards in WAC 173-205-020, "whole effluent toxicity performance standard." The Permittee may demonstrate to the Department that changes have not increased effluent toxicity by performing additional WET testing after the time the process or material changes have been made.

HUMAN HEALTH – WEST PLANT

Washington's water quality standards now include 91 numeric health-based criteria that must be considered in NPDES permits. These criteria were promulgated for the state by the U.S. EPA in its National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992).

The Department has determined that the effluent contains chemicals of concern for human health. The chemicals of (human health) concern present in the discharge are: arsenic, cyanide, mercury, nickel, Bis (2-Ethylhexyl) Phthalate, and 1,4-Dichlorobenzene. The discharger's high priority status is based on the discharger's status as a major discharger, and knowledge of data indicating regulated chemicals occur in the discharge.

A determination of the discharge's potential to cause an exceedance of the water quality standards was conducted as required by 40 CFR 122.44(d) The reasonable potential determination was evaluated with procedures given in the *Technical Support Document for Water Quality-Based Toxics Control* (EPA/505/2-90-001) and the Department's *Permit Writer's Manual* (Ecology Publication 92-109, July 1994). The determination indicated that the discharge has no reasonable potential to cause a violation of water quality standards for human health, thus an effluent limit is not warranted. The reasonable potential analysis is shown in Appendix E of this fact sheet.

SEDIMENT QUALITY – WEST PLANT

The Department has promulgated aquatic sediment standards (chapter 173-204 WAC) to protect aquatic biota and human health. These standards state that the Department may require Permittees to evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-204-400).

As required by the existing permit, the Permittee collected and analyzed sediment samples in the vicinity of the West Plant outfall. The Permittee submitted to the Department a Sediment Data Report containing the analysis results. Based on comments provided on the report by the Department staff, the Permittee completed two more sets of sediment sampling and analysis in the vicinity of the outfall. The first set of sampling and analysis was conducted in August 2002, and the second set in April 2003. The analysis results were submitted to the Department by the Permittee in Sediment Data Reports. After review of these Sediment Data Reports, if the Department determines that there is a potential for violation of the sediment quality standards, the Department may require the Permittee, through an Administrative or Consent Order, to conduct additional sediment monitoring or to apply for a Sediment Impact Zone (SIZ).

COMBINED SEWER OVERFLOWS

Chapter 173-245 WAC, *Submission of Plans and Reports for Construction and Operation of Combined Sewer Overflow Reduction Facilities,* requires the Permittee to achieve and at least maintain the greatest reasonable reduction at all combined sewer overflow (CSO) sites. As defined in the regulation, "the greatest reasonable reduction" means control of each CSO such that an average of one untreated discharge may occur per year. Definition of "CSO event" (untreated CSO discharge) is included in the *Permit Writer's Manual (page V-30),* Department of Ecology Publication No. 92-109. The Department of Ecology defines the minimum inter-event period (MIET) for CSOs as 24 hours. A single CSO event would include CSO discharges that are separated by less than 24 hours. A CSO event is considered to have ended only after at least 24 hours has elapsed since the last measured occurrence of an overflow.

As required by WAC 173-245, the Permittee submitted a CSO Reduction Plan to the Department for review and approval in 1992. The Permittee's *CSO Reduction Plan, October 1992*, was approved by the Department on November 20, 1992. In 2000, the Permittee updated this plan, which reflects changes in the strategy of achieving CSO reduction to comply with the state regulations. The Permittee's *CSO Reduction Plan Update, October 2000*, was approved by the Department on February 15, 2001. The Permittee is currently implementing this plan, which recommends combination of various CSO reduction alternatives that include storm drainage separation, and storage of combined sewage and subsequent conveyance to and treatment at one of the two treatment plants.

As required by Order on Consent No. DE 93WQ-N150 (and First Amendment to this Order) between the Department of Ecology and the Permittee, the Permittee has completed construction at CSO outfalls OF 13, OF 14 (eliminated), and OF 17, to achieve CSO reduction to an average of one untreated discharge per year. Proposed Permit Condition S10.G requires that CSOs from outfalls OF 13 and OF 17 shall be no more than an average of one event per year, based on a long-term average. The Permittee is required to report the five-year moving average of CSO frequency at these outfalls in the CSO Reduction Plan Amendment to be submitted with the next permit renewal application. The Department, in the near future, is expected to develop post-construction monitoring guidelines for the corrected CSO outfalls. When this is done, inclusion of the post-construction monitoring in future permits for the Permittee's corrected CSO outfalls will be evaluated.

The Consent Order also requires the Permittee to complete projects at CSO outfalls OF 1, OF 2, OF 3, OF 4, OF 6, Of 7, OF 8, OF 9, OF 10A (now OF 10), OF 11, OF 12, OF 15/15A, and OF 16, by December 31, 2011, to reduce CSOs to an average of one untreated discharge per year. Of these CSO projects, the Permittee has eliminated CSO outfalls OF 15A and OF 15B. Proposed Permit Condition S10.D requires the Permittee to complete these CSO reduction projects in accordance with the schedule stipulated in the Consent Order and any amendment(s) thereto.

As part of the Pacific Avenue Basin CSO Reduction Project, the Permittee is going to abandon the existing CSO outfall OF 16 on the Navy property. After completion of this project, CSOs from this part of the system will be conveyed to and discharged from a storm line in the vicinity of the Bremerton ferry dock.

In accordance with RCW 90.48.480 and chapter 173-245 WAC, proposed permit Condition S10. requires the Permittee to submit an annual combined sewer overflow (CSO) report, and to update its CSO reduction plan at the time of permit renewal.

OUTFALL EVALUATION

Proposed permit Condition S12 requires the Permittee to conduct an outfall inspection at both plants, and submit a report detailing the findings of that inspection. The purpose of the inspection is to determine the condition of the discharge pipe and diffusers and to determine if sediment is accumulating in the vicinity of the outfall.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated ground water quality standards (chapter 173-200 WAC) to protect uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

This Permittee has no discharge to ground and therefore no limitations are required based on potential effects to ground water.

COMPARISON OF THE PROPOSED EFFLUENT LIMITS WITH THE EXISTING EFFLUENT LIMITS

Comparison of the proposed and existing effluent limits is shown in the following table. For the West Plant, the proposed effluent limits for conventional pollutants (BOD, TSS, fecal coliform bacteria, and pH), and chlorine, are same as the existing limits. Due to noncompliance with the performance standard for acute toxicity test during the existing permit term, the proposed effluent limits also include limits for acute toxicity. For the East Plant, the limits for TSS removal efficiency and settleable solids are taken from WAC 173-245. The fecal coliform limits are taken from the guidance in *Criteria for Sewage Works Design,* Department of Ecology, December 1998.

Parameter	Existing Effluent Limits	Proposed Effluent Limits
West Plant		
BOD_5 (average monthly concentration)	30 mg/L	30 mg/L
TSS (average monthly concentration)	30 mg/L	30 mg/L
Fecal Coliform (average monthly concentration)	200/100 mL	200/100 mL
pH (standard units)	6.0 to 9.0	6.0 to 9.0
Total Residual Chlorine (average monthly concentration)	0.13 mg/L	0.1 mg/L
Acute Toxicity	None	No acute toxicity in a whole effluent toxicity (WET) test concentration representing the acute critical effluent concentration (ACEC) of 5% effluent.
East Plant		
TSS Removal Efficiency (yearly average)	NA	50%
Settleable Solids (yearly average)	NA	0.3 ml/l/hr.
Fecal Coliform Bacteria (monthly average)	NA	400/100 mL (geometric mean)

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

The monitoring schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring. Agency guidance for required monitoring frequencies for wastewater treatment plants is given in the current version of Ecology's *Permit Writer's Manual* (July 2002). The guidance for monitoring frequency for the West Plant is given in the subsection for *activated sludge plants with greater than 5 MGD average design flow*. The suggested monitoring frequencies given in the guidance for BOD and TSS are five/week, and for fecal coliform, daily. The monitoring frequencies for these parameters in the proposed are same as the existing permit, which are three/week for BOD and TSS, and five/week for fecal coliform. As stated above in the *SUMMARY OF COMPLIANCE WITH THE EXISTING PERMIT* section of this fact sheet, based on DMRs submitted to the Department, the Permittee has consistently remained in compliance with the effluent limits and there have been no exceedance of influent design criteria since February 1999. Therefore, monitoring of these parameters at the existing level is deemed sufficient.

Priority pollutants and conventional pollutants monitoring is required for reporting in the next permit application. Monitoring for toxics (metals and cyanide) has been continued from the previous permit in order to continue monitoring for the influence of industrial discharges. Monitoring for additional nitrogen compounds (nitrite, nitrate, and TKN or total nitrogen) is required for use by the Department in the Sinclair Inlet TMDL study.

LAB ACCREDITATION

With the exception of certain parameters, the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of chapter 173-50 WAC, *Accreditation of Environmental Laboratories.* The laboratory at this facility is accredited for BOD, TSS, ammonia, fecal coliform and pH. Samples for analyzing other parameters are sent to commercial laboratories.

OTHER PERMIT CONDITIONS

REPORTING AND RECORD KEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and record keeping requirements to prevent and control waste discharges (WAC 173-220-210).

PREVENTION OF FACILITY OVERLOADING

Overloading of the treatment plant is a violation of the terms and conditions of the permit. To prevent this from occurring, RCW 90.48.110 and WAC 173-220-150 require the Permittee to take the actions detailed in proposed permit Requirement S4 to plan expansions or modifications before existing capacity is reached and to report and correct conditions that could result in new or increased discharges of pollutants.

OPERATION AND MAINTENANCE (O&M)

The proposed permit contains Condition S5 as authorized under RCW 90.48.110, WAC 173-220-150, chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

RESIDUAL SOLIDS HANDLING

To prevent water quality problems, the Permittee is required in permit Condition S7 to store and handle all residual solids (grit, screenings, scum, sludge, and other solid waste) in accordance with the requirements of RCW 90.48.080 and state water quality standards.

The final use and disposal of sewage sludge from this facility is regulated by U.S. EPA under 40 CFR 503, and by Ecology under chapter 70.95J RCW and chapter 173-308 WAC. The disposal of other solid waste is under the jurisdiction of the Bremerton/Kitsap County Health Department.

PRETREATMENT

Since the pretreatment program has not been delegated to the Permittee, the pretreatment Condition S8 in the permit is a standard condition derived from the Federal Regulation 40 CFR 403.5.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual municipal NPDES permits issued by the Department.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary, to meet water quality standards, sediment quality standards, or ground water standards, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this permit be issued for the full allowable five (5)-year period.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1995. Combined Sewer Overflow Guidance for Permit Writers.

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Washington State Department of Ecology

Laws and Regulations http://www.ecy.wa.gov/laws-rules/index.html

Permit and Wastewater Related Information http://www.ecy.wa.gov/programs/wq/wastewater/index.html

1994. Permit Writer's Manual. Publication Number 92-109

City of Bremerton

2005. City of Bremerton Wastewater Comprehensive Plan Update (Final Draft), Camp Dresser & McKee

2002. Westside WWTP Mixing Zone Study, Cosmopolitan Engineering

2001. Westside Wastewater Treatment Plant Rerating Study, Camp Dresser & McKee and Richwine Environmental, Inc.

2001. Eastside CSO Treatment Facility Engineering Report, Camp Dresser & McKee

2000. CSO Reduction Plan Update, HDR Engineering

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on September 6 and 13, 2002, in the *Bremerton Sun*, to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department published a Public Notice of Draft (PNOD) on June 7, 2006, in the *Kitsap Sun* to inform the public that a draft permit and fact sheet were available for review. Interested persons were invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents were available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments were mailed to:

Water Quality Permit Coordinator
Department of Ecology
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008-5452

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30)-day comment period to the address above. The request for a hearing shall indicate the interest of the party and the reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone (425) 649-7201, or by writing to the address above.

APPENDIX B—GLOSSARY

CSO RELATED TERMINOLOGY

GLOSSARY OF CSO TERMS (from EPA's *CSO Guidance for Permit Writers*)

Average Number of Overflow Events Per Year—The total number of combined sewer overflow events that occurred during the term of the permit divided by the permit term in years.

Combined Sewer Overflow—The discharge from a combined sewer system to a receiving water of the United States prior to reaching the publicly owned treatment works treatment plant.

Combined Sewer Overflow Event—The discharges from any number of points in the combined sewer system resulting from a single wet weather event that do not receive minimum treatment (that is, primary clarification, solids disposal, and disinfection, where appropriate). For example, if a storm occurs that results in untreated overflows from 50 different CSO outfalls within the CSS, this is considered one overflow event.

Combined Sewer System—A wastewater collection system owned by a state or one or more municipalities (as defined by Section 502(4) of the Clean Water Act) which conveys sanitary wastewaters (domestic, commercial, and industrial wastewaters) and storm water through a single-pipe system to a publicly owned treatment works treatment plant [as defined in 40 CFR 403.3(p)].

Dry Weather Flow Conditions—Hydraulic flow conditions within the combined sewer system resulting from one or more of the following: flows of domestic sewage, ground water infiltration, commercial and industrial wastewaters, and any other nonprecipitation event-related flows (for example, tidal infiltration under certain circumstances). Other nonprecipitation event-related flows that are included in dry weather flow conditions will be decided by the permit writer based on site-specific conditions.

Dry Weather Overflow—A combined sewer overflow that occurs during dry weather flow conditions.

Precipitation Event—An occurrence of rain, snow, sleet, hail, or other form of precipitation. Precipitation events are generally characterized by parameters of duration and intensity (inches or millimeters per unit of time). This definition will be highly site-specific. For example, a precipitation event could be defined as 0.25 inches or more of precipitation in the form of rain or 3 inches or more of precipitation in the form of sleet or snow, reported during the preceding 24-hour period at a specific gaging station. A precipitation event could also be defined by a minimum time interval between measurable amounts of precipitation (for example, 6 hours between the end of rainfall and the beginning of the next rainfall).

Primary Clarification or Equivalent—The level of treatment that would typically be provided by one or more treatment technologies under peak wet weather flow conditions. Options for defining primary clarification include a design standard (for example, side wall depth and maximum overflow rate), a performance standard (for example, percent removal), or an effluent standard (for example, concentration of pollutants). "Equivalent to primary clarification" is site-specific and includes any single technology or combination of technologies shown by the Permittee to achieve primary clarification under the presumption approach. The Permittee is responsible for showing equivalency to primary treatment as part of the evaluation of CSO control alternatives during LTCP development. Primary clarification is discussed in more detail in the Combined Sewer Overflows-Guidance for Long-term Control Plan (EPA, 1995a).

Sensitive Areas—Areas of particular environmental significance or sensitivity that could be adversely affected by a combined sewer overflow, including Outstanding National Resource Waters, National Marine Sanctuaries, water with threatened or endangered species, waters with primary contact recreation, public drinking water intakes, shellfish beds, and other areas identified by the Permittee or National Pollutant Discharge Elimination System permitting authority, in coordination with the appropriate state or federal agencies.

Solid and Floatable Materials—Solid or semi-solid materials should be defined on a case-by-case basis determined by the control technologies proposed by the Permittee to control these materials. The term generally includes materials that might impair the aesthetics of the receiving waterbody.

Wet Weather Flow Conditions—Hydraulic flow conditions within the combined sewer system resulting from a precipitation event. Since the definition of precipitation event is site-specific, the permit writer should evaluate and define certain site-specific weather conditions that typically contribute to wet weather flow. EPA encourages permit writers to include snowmelt as a condition that typically contributes to wet weather flow.

GLOSSARY OF CSO TERMS (from Ecology's *Permit Writer's Manual*, page v-23)

Combined Sewer Overflow (CSO)—An event during which excess combined sewage flow caused by inflow is discharged from a combined sewer, rather than conveyed to the sewage treatment plant because either the capacity of the treatment plant or the combined sewer is exceeded.

Event—A CSO event is defined as a 24-hour minimum inter-event time for a CSO outfall.

Inter-Event Time (IET)—The dry period or time steps between storm or CSO events. A CSO event is defined as a 24-hour minimum inter-event time for a CSO outfall.

Minimum Inter-Event Time (MIET)—The amount of thy time or non-overflow time required to indicate a storm event or CSO event is independent (CV = 1).

Storm Duration—The time from the first wet time step at the beginning of the storm event to the last wet time step ending the event.

Storm Event—A period of rainfall separated from other wet time steps by a dry period equal to or greater than the minimum precipitation inter-event time.

Storm Inter-Arrival Time—The time from the beginning of one storm event to the beginning of the next storm event (equal to one storm duration and one inter-event time).

Threshold Rainfall—The amount of rainfall necessary to cause runoff. In the Portland, Oregon area this varies from 0.05 to 0.1 inch, depending on length of the storm.

Wet Time Steps—A time increment in a precipitation record in which a measurable amount of precipitation occurs. The measurable amount may be defined as threshold rainfall.

GENERAL TERMINOLOGY

Acute Toxicity—The lethal effect of a pollutant on an organism that occurs within a short period of time, usually 48 to 96 hours.

AKART—An acronym for "all known, available, and reasonable methods of prevention, control, and treatment."

Ambient Water Quality—The existing environmental condition of the water in a receiving water body.

Ammonia—Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation—The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month (except in the case of fecal coliform). The daily discharge is calculated as the average measurement of the pollutant over the day.

Average Weekly Discharge Limitation—The highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week. The daily discharge is calculated as the average measurement of the pollutant over the day.

Best Management Practices (BMPs)—Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5—Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving waterbody after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass—The intentional diversion of waste streams from any portion of a treatment facility.

$CBOD_5$—The quantity of oxygen utilized by a mixed population of microorganisms acting on the nutrients in the sample in an aerobic oxidation for five days at a controlled temperature of 20 degrees Celsius, with an inhibitory agent added to prevent the oxidation of nitrogen compounds. The method for determining $CBOD_5$ is given in 40 CFR Part 136.

Chlorine—Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity—The effect of a pollutant on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA)—The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Combined Sewer Overflow (CSO)—The event during which excess combined sewage flow caused by inflow is discharged from a combined sewer, rather than conveyed to the sewage treatment plant because either the capacity of the treatment plant or the combined sewer is exceeded.

Compliance Inspection - Without Sampling—A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling—A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the percent removal requirement. Additional sampling may be conducted.

Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing a minimum of four discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction Activity—Clearing, grading, excavation, and any other activity which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

Continuous Monitoring—Uninterrupted, unless otherwise noted in the permit.

Critical Condition—The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Dilution Factor—A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the effluent fraction, for example, a dilution factor of 10 means the effluent comprises 10 percent by volume and the receiving water 90 percent.

Engineering Report—A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria—Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample—A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial User—A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Infiltration and Inflow (I/I)—"Infiltration" means the addition of ground water into a sewer through joints, the sewer pipe material, cracks, and other defects. "Inflow" means the addition of precipitation-caused drainage from roof drains, yard drains, basement drains, street catch basins, and so on, into a sewer.

Interference—A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued there under (or more stringent state or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) [including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including state regulations contained in any state sludge management plan prepared pursuant to Subtitle D of the SWDA], sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Major Facility—A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum Daily Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)—The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minor Facility—A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone—A volume that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES)—The NPDES (Section 402 of the Clean Water Act) is the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both state and federal laws.

Pass Through—A discharge which exits the POTW into waters of the state in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of state water quality standards.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Potential Significant Industrial User—A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges waste water meeting one or more of the following criteria:

a. Exceeds 0.5 percent of treatment plant design capacity criteria and discharges <25,000 gallons per day; or

b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (for example, facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

Quantitation Level (QL)—A calculated value five times the MDL (method detection level).

Significant Industrial User (SIU)—

1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and

2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process waste stream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR 403.8(f)(6)].

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, wetlands, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

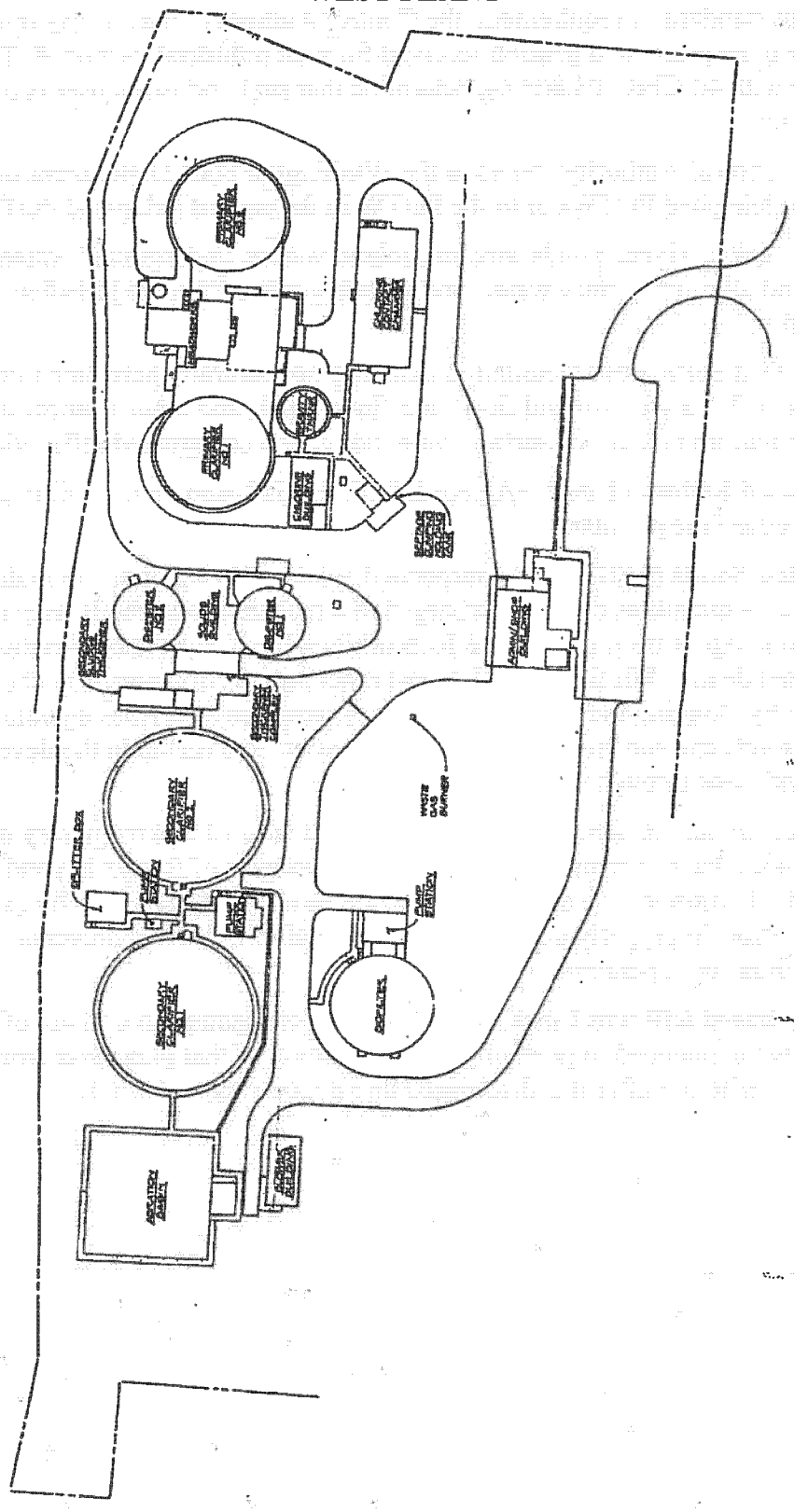
Total Suspended Solids (TSS)—Total suspended solids are the particulate materials in an effluent. Large quantities of TSS discharged to a receiving waterbody may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Upset—An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

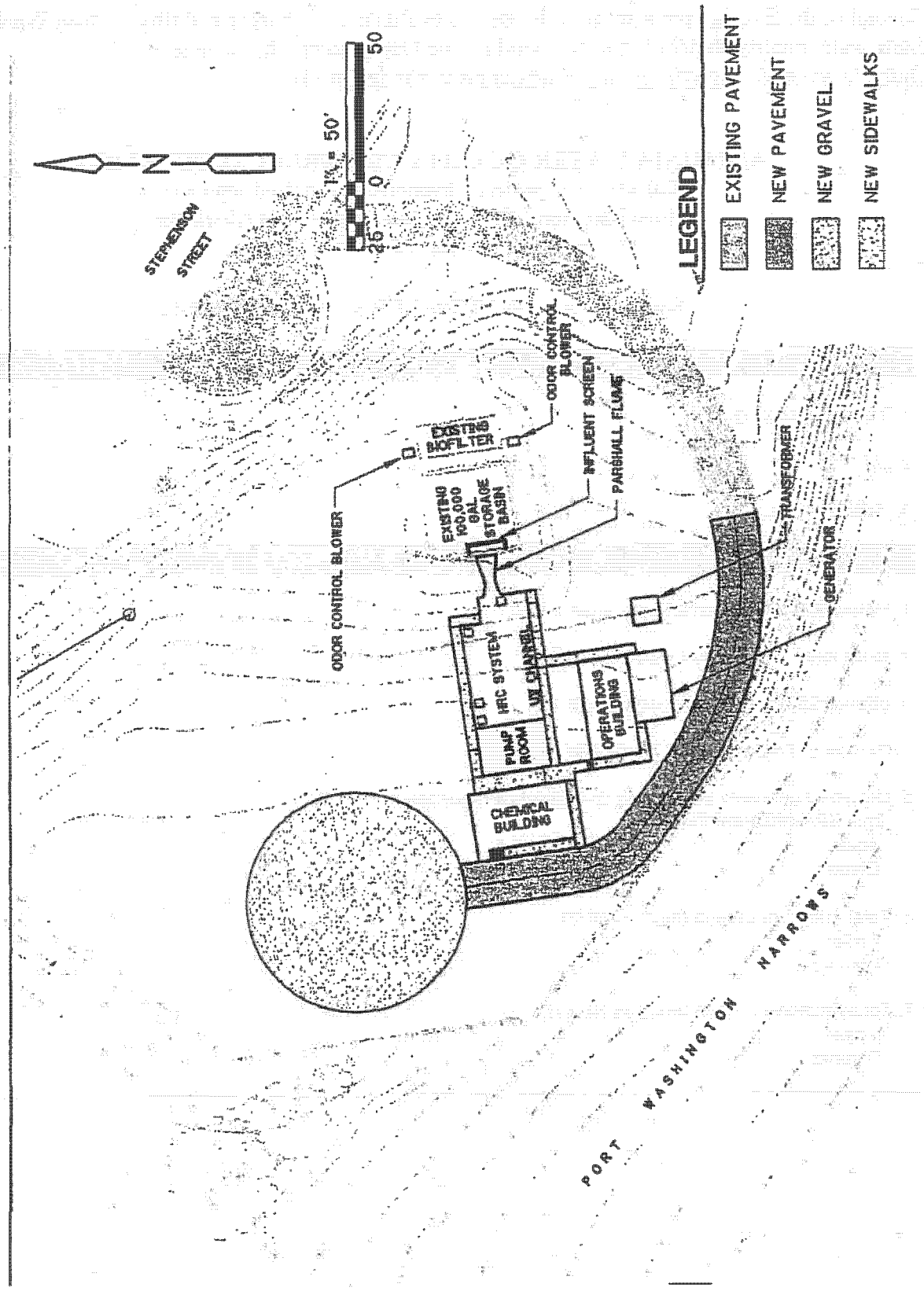
Water Quality-based Effluent Limit—A limit on the concentration or mass of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving waterbody.

APPENDIX C—TREATMENT PLANT LAYOUTS

WEST PLANT



EAST PLANT


N
STEPHENSON STREET
1" = 50'
25
0
50
LEGEND
EXISTING PAVEMENT
NEW PAVEMENT
NEW GRAVEL
NEW SIDEWALKS
ODOR CONTROL BLOWER
EXISTING BIOFILTER
EXISTING 100,000 GAL STORAGE BASIN
ODOR CONTROL BLOWER
INFLUENT SCREEN
PARSHALL FLUME
TRANSFORMER
GENERATOR
PUMP ROOM
HRC SYSTEM
VIC CHAMBER
OPERATIONS BUILDING
CHEMICAL BUILDING
PORT WASHINGTON NARROWS

APPENDIX D—REASONABLE POTENTIAL CALCULATION FOR WATER QUALITY CRITERIA

Several of the Excel® spreadsheet tools used to evaluate a discharger's ability to meet Washington State water quality standards can be found on the Department's homepage at (http://www.ecy.wa.gov/programs/wq/wastewater/index.html)

AMMONIA WATER QUALITY CRITERIA CALCULATION

Calculation of seawater fraction of un-ionized ammonia from Hampson (1977). Un-ionized ammonia criteria for salt water are from EPA 440/5-88-004.

Based on Lotus File NH3SALT.WK1 Revised 19-Oct-93

INPUT	
1. Temperature (deg C):	18.0
2. pH:	8.4
3. Salinity (g/Kg):	28.0
OUTPUT	
1. Pressure (atm; EPA criteria assumes 1 atm):	1.0
2. Molal Ionic Strength (not valid if >0.85):	0.574
3. pKa8 at 25 deg C (Whitfield model "B"):	9.312
4. Percent of Total Ammonia Present as Unionized:	6.776%
5. Unionized ammonia criteria (mg un-ionized NH3 per liter) from EPA 440/5-88-004	
Acute:	0.233
Chronic:	0.035
6. Total Ammonia Criteria (mg/L as NH3)	
Acute:	3.44
Chronic:	0.52
7. Total Ammonia Criteria (mg/L as NH3-N)	
Acute:	2.83
Chronic:	0.42

REASONABLE POTENTIAL CALCULATION TO DETERMINE EXCEEDANCE OF WATER QUALITY-BASED CRITERIA

This spreadsheet calculates the reasonable potential to exceed state water quality standards for a small number of samples. The procedure and calculations are done per the procedure in Technical Support Document for Water Quality-based Toxics Control, U.S. EPA, March, 1991 (EPA/505/2-90-001) on page 56. User input columns are shown with red headings. Corrected formulas in col G and H on 5/98 (GB)

CALCULATIONS

				State Water Quality Standard		Max concentration at edge of...												
Parameter	Metal Criteria Translator as decimal Acute	Metal Criteria Translator as decimal Chronic	Ambient Concentration (metals as dissolved) ug/L	Acute ug/L	Chronic ug/L	Acute Mixing Zone ug/L	Chronic Mixing Zone ug/L	LIMIT REQ'D?	Effluent percentile value	Pn	Max effluent conc. measured (metals as total recoverable) ug/L	Coeff Variation CV	s	# of samples n	Multiplier	Acute Dil'n Factor	Chronic Dil'n Factor	COMMENTS
Ammonia - N				2830.00	420.00	1624.93	270.62	NO	0.95	0.993	47000.00	0.47	0.45	443	0.89	20	120	
Chlorine				13.00	7.50	15.08	2.51	YES	0.95	0.973	350.00	0.57	0.53	109	0.86	20	120	
Cyanide				1.00	1.00	0.65	0.11	NO	0.95	0.951	13.00	0.35	0.34	60	1.00	20	120	Most samples below MDL. Maximum Effluent Concentration Measured = 13 ug/l
Arsenic				69.00	36.00	0.16	0.03	NO	0.95	0.951	3.30	0.42	0.40	60	0.99	20	120	
Cadmium				42.00	9.30	0.04	0.01	NO	0.95	0.951	0.80	0.62	0.57	60	0.99	20	120	All but one sample below MDL. Maximum Effluent Concentration Measured = 0.8 ug/l
Chromium (Hex)				1100.00	50.00	3.83	0.64	NO	0.95	0.951	78.00	2.43	1.39	60	0.98	20	120	Most samples below MDL. Maximum Effluent Concentration Measured = 78 ug/l WQ Standards are for Hexavalent Chromium, but the Effluent sample results are for total Chromium
Copper				4.80	3.10	1.34	0.22	NO	0.95	0.951	27.10	0.87	0.75	60	0.99	20	120	
Lead				210.00	8.10	0.99	0.16	NO	0.95	0.951	20.00	1.05	0.86	60	0.99	20	120	All but four sample below MDL Maximum Effluent Concentration Measured = 20 ug/l
Mercury				1.80	0.025	0.01	0.00	NO	0.95	0.951	0.28	1.60	1.13	60	0.99	20	120	All but two samples below MDL Maximum Effluent Concentration Measured = 0.28 ug/l
Nickel				74.00	8.20	0.79	0.13	NO	0.95	0.951	16.00	0.68	0.62	60	0.99	20	120	Most samples below MDL. Maximum Effluent Concentration Measured = 16 ug/l
Zinc				90.00	61.00	9.39	1.57	NO	0.95	0.951	190.00	1.15	0.92	60	0.99	20	120	

APPENDIX E—REASONABLE POTENTIAL CALCULATION FOR PROTECTION OF HUMAN HEALTH

Several of the Excel® spreadsheet tools used to evaluate a discharger's ability to meet Washington State water quality standards can be found on the Department's homepage at http://www.ecy.wa.gov/programs/wq/wastewater/index.html

Revised 3/00	Ambient Concentration (Geometric Mean)	Water Quality Criteria for Protection of Human Health	Max concentration at edge of chronic mixing zone.	LIMIT REQ'D?	Expected Number of Compliance Samples per Month	AVERAGE MONTHLY EFFLUENT LIMIT	MAXIMUM DAILY EFFLUENT LIMIT	Estimated Percentile at 95% Confidence		Max effluent conc. measured	Coeff Variation		# of samples from which # in col. K was taken	Multiplier	Calculated 50th percentile Effluent Conc. (When n>10)	Dilution Factor	
Parameter	ug/L	ug/L	ug/L			ug/L	ug/L		Pn	ug/L	CV	B	n				COMMENTS
ARSENIC (Inorganic)		0.14	0.01	NO	4	NONE	NONE	0.50	0.95	3.30	0.42	0.4	60	0.51	1.40	120	26 samples below MDL, Detected Max. Conc. 3.3 ug/l
CYANIDE		220000	0.08	NO	4	NONE	NONE	0.50	0.95	13.00	0.35	0.3	60	0.67	9.60	120	Most samples below MDL,
																	Maximum Effluent Concentration Measured = 13 ug/l
MERCURY		0.15	0.00	NO	4	NONE	NONE	0.50	0.95	0.28	1.60	1.1	60	0.15	0.20	120	All but two samples below MDL,
																	Maximum Effluent Concentration Measured = 0.28 ug/l
NICKEL		4600	0.06	NO	4	NONE	NONE	0.50	0.95	16.00	0.68	0.6	60	0.36	5.80	120	Most samples below MDL,
																	Maximum Effluent Concentration Measured = 16 ug/l
1,4 DICHLOROBENZENE		2600	0.08	NO	1	NONE	NONE	0.50	0.22	4.50	0.60	0.6	2	1.52		120	
BIS(2-ETHYLHEXYL) PHTHALATE		5.9	0.25	NO	1	NONE	NONE	0.50	0.22	20.00	0.60	0.6	2	1.52		120	

APPENDIX F—WATER QUALITY-BASED PERMIT LIMITS CALCULATIONS FOR CHLORINE

Several of the Excel® spreadsheet tools used to evaluate a discharger's ability to meet Washington State water quality standards can be found on the Department's homepage at http://www.ecy.wa.gov/programs/wq/wastewater/index.html

Dilution (Dil'n) factor is the inverse of the percent effluent concentration at the edge of the acute or chronic mixing zone.

			Permit Limit Calculation Summary								Waste Load Allocation (WLA) and Long Term Average (LTA) Calculations							Statistical variables for permit limit calculation				
	Acute Dil'n Factor	Chronic Dil'n Factor	Metal Criteria Translator Acute	Metal Criteria Translator Chronic	Ambient Concentration	Water Quality Standard Acute	Water Quality Standard Chronic	Average Monthly Limit (AML)	Maximum Daily Limit (MDL)	Comments	WLA Acute	WLA Chronic	LTA Acute	LTA Chronic	LTA Coeff. Var. (CV)	LTA Prob'y Basis	Limiting LTA	Coeff. Var. (CV)	AML Prob'y Basis	MDL Prob'y Basis	# of Samples per Month	
PARAMETER					ug/L	ug/L	ug/L	ug/L	ug/L		ug/L	ug/L	ug/L	ug/L	decimal	decimal	ug/L	decimal	decimal	decimal	n	
Chlorine	20	120				13.00	7.50	103.7	271.4		260	900.00	87.1	488.5	0.57	0.99	87.1	0.60	0.95	0.99	30.00	1.00

This spreadsheet calculates water quality-based permit limits based on the two value steady state model using the State Water Quality Standards contained in WAC 173-201A. The procedure and calculations are done per the procedure in Technical Support Document for Water Quality-based Toxics Control, U.S. EPA, March 1991 (EPA/505/2-90-001) on page 99. Last revision date 9/98.

APPENDIX G—LIST OF POLLUTANTS FOR TESTING REQUIRED IN PERMIT CONDITION S2.A.1.(3)

EPA "PART D" NPDES APPLICATION FORM 2A TESTING REQUIREMENTS

The following pollutant scan data are required at the time of NPDES permit application for municipal treatment facilities with design flow greater than 1.0 mgd. At least three scans are to be conducted during the term of the permit. The metals are to be analyzed as "Total recoverable Metals" Section 4.1.4, Publication EPA-600/4-79-020, *Methods for Chemical Analysis of water and Wastes*, 1979. Please see Condition S2.A(4) of the permit.

METALS & MISC.	VOL. ORGANICS (Cont.)	BASE NEUTRALS (Cont.)
Antimony	Ethylbenzene	Bis (2-Chloroethyl)-Ether
Arsenic	Methyl Bromide	Bis (2-Chloroiso-Propyl) Ether
Beryllium	Methyl Chloride	Bis (2-Ethylhexyl) Phthalate
Cadmium	Methylene Chloride	4-Bromophenyl Phenyl Ether
Chromium	1,1,2,2-Tetrachloro-Ethane	Butyl Benzyl Phthalate
Copper	Tetrachloro-Ethylene	2-Chloronaphthalene
Lead	Toluene	4-Chlorphenyl Phenyl Ether
Mercury	1,1,1-Trichloroethane	Chrysene
Nickel	1,1,2-Trichloroethane	Di-N-Butyl Phthalate
Selenium	Trichlorethylene	Di-N-Octyl Phthalate
Silver	Vinyl Chloride	Dibenzo(A,H) Anthracene
Thallium		1,2-Dichlorobenzene
Zinc	**ACID EXTRACTABLES**	1,3-Dichlorobenzene
Cyanide	P-Chloro-M-Cresol	1,4-Dichlorobenzene
Total Phenolic Compounds	2-Chlorophenol	3,3-Dichlorobenzidine
Hardness (As $CaCO_3$)	2,4-Dichlorophenol	Diethyl Phthalate
	2,4-Dimethylphenol	Dimethyl Phthalate
VOLATILE ORGANICS	4,6-Dinitro-O-Cresol	2,4-Dinitrotoluene
Acrolein	2,4-Dinitrophenol	2,6-Dinitrotoluene
Acrylonitrile	2-Nitrophenol	Fluoranthene
Benzene	4-Nitrophenol	Fluorene
Bromoform	Pentachlorophenol	Hexachlorobenzene
Carbon Tetrachloride	Phenol	Hexachlorobutadiene
Clorobenzene	2,4,6-Trichlorophenol	Hexachlorocyclo-Pentadiene
Chlorodibromo-Methane		Hexachloroethane
Chloroethane	**BASE NEUTRALS**	Indeno(1,2,3-CD)Pyrene
2-Chloro-Ethylvinyl Ether	Acenaphthene	Isophorone
Chloroform	Acenaphthylene	Naphthalene
Dichlorobromo-Methane	Anthracene	Nitrobenzene
1,1-Dichloroethane	Benzidine	N-Nitrosodi-N-Propylamine
1,2-Dichloroethane	Benzo(A)Anthracene	N-Nitrosodi-Methylamine
Trans-1,2-Dichloro Ethylene	3,4 Benzo-Fluoranthene	N-Nitrosodi-Phenylamine
1,1-Dichloroethylene	Benzo(Ghi)Perylene	Phenanthrene
1,2-Dichloropropane	Benzo(K)Fluoranthene	Pyrene
1,3-Dichloro-Propylene	Bis (2-Chloroethoxy) Methane	1,2,4-Trichlorobenzene

APPENDIX H—RESPONSE TO COMMENTS

During the public comment period, comments on the draft permit were received from the City of Bremerton (the Permittee), and the Environmental Protection Agency (EPA) - Region 10. Letters from the City of Bremerton and EPA with their comments are included in this appendix for reference.

Responses to these comments are as follows:

Response to Comment from the City of Bremerton:

Effluent Metals and Cyanide Monitoring:

Based on the past ten years of effluent metals and cyanide monitoring data, and the results of the reasonable potential analysis (Appendix D of this fact sheet), the Permittee requested that metals and cyanide monitoring be reduced from bimonthly to twice a year. Results of the past ten years of metals and cyanide monitoring data show effluent concentrations mostly below method detection limits (MDLs). In addition, the reasonable potential analysis shows that the potential maximum concentrations of these parameters at the edge of mixing zones are much lower than water quality standards, and that no limit is required for any of these parameters. *Therefore, the effluent metals and cyanide monitoring has been reduced to twice a year in Condition S2.A.1.(2).*

Responses to Comments from EPA - Region 10:

(1) Bypass of Secondary Treatment:

(A) Feasibility Analysis:

The following factors were taken into consideration to determine if the requirement to conduct a feasibility analysis during this permit term should be placed in the permit.

(a) The table below shows occurrences of secondary treatment bypass events at the West Plant, from January 2001 through August 2006. As shown in the table, these bypass events at the plant are very infrequent, with a maximum of three events in a single year (2003) during the past six years. Also, during this period, the maximum volume of bypass flow in a single year (2003) was only 0.22 percent of the total annual flow treated at the West Plant.

(b) The West Plant was designed in the early to mid-1980s, and became operational in 1985. Wastewater flows greater than what can reasonably be treated by the secondary treatment system without affecting its integrity, are bypassed around the secondary treatment system. Primary and secondary treated flows are then blended prior to disinfection. The final effluent is required to comply with the technology-based secondary treatment limits prior to discharge to Sinclair Inlet. When the original facility plan for the West Plant was approved by the Department, it was with the understanding that the plant would operate in this manner as this was, and is, considered to be good engineering practice and an acceptable solution for treating a significant portion of the combined sewage which occurs in the system during wet weather periods.

(c) As recommended in the *City of Bremerton CSO Reduction Plan Update*, October 2000, the Permittee constructed the East Plant with a ballasted sand clarifier system for treating combined sewage from East Bremerton. In addition, as recommended in this plan, the Permittee has constructed facilities to convey more combined sewage to the West Plant. This is more cost effective than constructing additional satellite primary treatment plants.

(d) The Permittee's CSO reduction program to achieve compliance with the state regulations is still in progress. The Order on Consent Number DE 93WQ-N150 (First Amendment) between the Department of Ecology and the Permittee requires the Permittee to achieve an average of no more than one CSO event at its overflow sites by December 31, 2011. As part of the CSO reduction program, the Permittee is planning to convey additional combined sewage to the West Plant for treatment.

(e) The Permittee has submitted to the Department, a rerating study report requesting approval of a higher design flow capacity for the West Plant. As part of the CSO reduction program, the Permittee is conveying more combined sewage to the West Plant. The rerating study report is to demonstrate that the treatment plant is capable of treating flows higher than those approved in the original facility plan for the West Plant. The approved influent flow design capacity of the West Plant is 10.1 million gallons per day (MGD). Based on the evaluation reported in the rerating study report, the Permittee is requesting to raise the approved capacity to 14.1 MGD. In addition, this report states that the maximum daily secondary flow that can be adequately treated is 22.8 MGD. Forcing flows higher than 22.8 MGD through the secondary treatment system would degrade the effluent quality by flushing solids from the secondary clarifiers. The report concludes that the best alternative that will produce the best effluent quality is to maximize the flow to the secondary system to 22.8 MGD and blend the primary effluent flows greater than 22.8 MGD with the secondary effluent prior to disinfection. Generally, the plant staff has been able to treat up to 30 MGD through the secondary treatment system without affecting its integrity and without exceeding the effluent limits.

(f) The Department is planning to begin conducting a TMDL study in Sinclair Inlet for dissolved oxygen in 2007 or 2008. At the end of this study, the Department is expected to determine wasteload allocations for various point and non-point sources discharging to Sinclair Inlet. This may result in more stringent effluent limits for BOD and/or effluent limits for nutrient(s) for the West Plant. The Permittee may have to construct additional treatment system(s) at the West Plant to comply with these limits.

Based on the information presented by the Permittee in the documents discussed above, the Permittee has addressed some of the required elements of a feasibility analysis. However, the Permittee may need to perform a feasibility analysis in the future. The Department believes it is prudent to wait until after completion of the Sinclair Inlet TMDL study and the Permittee's CSO reduction program before determining if a feasibility analysis is necessary. After completion of the Sinclair Inlet TMDL study and determination of wasteload allocations for various discharges to Sinclair Inlet, the Permittee may have to construct additional treatment facilities at the West Plant to comply with the new TMDL-based effluent limits. In addition, the feasibility analysis would require evaluation of compliance with the water quality standards for the West Plant discharge and the cost-benefit analysis to determine technical and financial feasibility to provide secondary treatment at the West Plant for greater amounts of wet weather flow. The Permittee's CSO reduction program is still in progress and is expected to convey additional combined sewage to the West Plant. Therefore, it would be prudent to wait to evaluate the need for a feasibility analysis until completion of (i) the TMDL study to determine if additional wastewater treatment is needed at the plant and (ii) the Permittee's CSO reduction program when the Permittee can estimate the volume of flows received at the plant during wet weather months.

(B) Monitoring During Secondary Treatment Bypass:

Monitoring to determine the quality of effluent discharged during the secondary treatment bypass has been added to Condition S2.A.1. (footnote [c]) of the permit. This condition requires monitoring of final (blended) effluent for metals, ammonia, and fecal coliform. Monitoring of blended effluent is required at least once per year, provided the secondary treatment bypass occurs during the year and provided it occurs during the time period when the treatment plant is staffed.

(2) East Plant Limits and Monitoring:

The TSS effluent limit under the CSO regulations (WAC 173-245) is "minimum fifty percent removal" for primary treatment plant treating combined sewage. In addition, the Department of Ecology publication "Criteria for Sewage Works Design" (Orange Book) states that Ecology's policy is to interpret an annual mass balance approach for suspended solids. Therefore, the TSS effluent limit for the East Plant includes only the yearly average percent removal. Please note that 50% TSS removal is required to be achieved by the East Plant without the credit for TSS removal at the Permittee's West Plant. Also, the Permittee is required to monitor and report (monthly) percent TSS removal.

The East Plant treats only combined sewage during wet weather months and discharges infrequently. Therefore, the permit does not require WET testing. *Monitoring of effluent metals and ammonia has been added in Condition S2.A.2. Minimum of six samples during the permit term are required to be collected and analyzed for metals and ammonia.*

(3) Post-construction Monitoring:

The Department has not yet developed criteria or guidance for post-construction monitoring for CSO discharges that are considered to have achieved an average of no more than one CSO event per year (corrected CSOs). The Department is expected to develop post-construction monitoring guidance within the next five years. In addition, the CSO reduction projects in Bremerton are expected to be completed in a short time frame (by 2011), and all of the CSO discharges are in two contiguous water bodies. Therefore, the Department believes that in the case of Bremerton, it is prudent to implement post-construction monitoring after all of the CSO outfalls have been corrected to comply with the CSO regulation of an average of no more than one CSO event per year. Otherwise, uncorrected CSO discharges would likely interfere with the post-construction monitoring of corrected CSO discharges.

(4) Evaluation of BOD_5 and NH3-N Impacts on Dissolved Oxygen:

The Department is expected to begin the TMDL study in Sinclair Inlet for dissolved oxygen in the summer of 2007 or 2008. Most likely, this study will use the existing monitoring data, including the data collected during the Puget Sound Naval Shipyard's ENVEST project involving sediment and water quality monitoring in Sinclair Inlet. If needed, additional monitoring data will be collected during the study. This study will be a major undertaking involving many point and non-point sources discharging to Sinclair Inlet. This is considered to be a major regional project and beyond the scope of the Department's expectations of the City of Bremerton.

CITY OF BREMERTON WEST PLANT

SECONDARY TREATMENT BYPASS OF INFLUENT FLOWS DURING WET WEATHER OPERATIONS – 2001 THROUGH 2006

Year	Date, Time, and (Duration)	Average Daily Flow - ADF (MGD)	Peak Daily Flow – PDF (MGD)	Average Annual Flow – AAF (MGD)	Estimated Volume of Flow bypassing Secondary Treatment (gallons)	Estimated Total (Yearly) Volume of Flow bypassing Secondary Treatment (gallons)	% of Total Annual Flow bypassing Secondary Treatment
2001	12/16/2001, 10:31 am to 8:59 pm, (10.47 hrs.)	33.04 MGD	38.0 MGD	5.10 MGD	453,265 gallons	453,265 gallons	0.024%
2002	01/07/2002, 5:43 am to 7:56 pm, (14.22 hrs.)	34.0 MGD	41.0 MGD	5.05 MGD	1,180,000 gallons	1,180,000 gallons	0.064%
2003	03/12/2003, 4:08 pm to 4:42 pm, (0.57 hrs.)	32.52 MGD	35.05 MGD		70,788 gallons		
	10/20/2003, 9:00 am to 6:56 pm, (9.93 hrs.)	39.2 MGD	59.72 MGD		2,990,000 gallons		
	11/18/2003, 9:07 am to 3:18 pm, (6.18 hrs.)	39.7 MGD	49.8 MGD		1,130,000 gallons		
				5.24 MGD		4,190,788 gallons	0.219%
2004	01/29/2004, 11:46 pm to 12:46 am, (1.00 hr.)	36.8 MGD	44.8 MGD	4.68 MGD	199,872 gallons	199,872 gallons	0.012%
2005	No secondary treatment bypass during the year						
2006	01/10/2006, 1:49 am to 3:03 am, (1.23 hrs.)	35.4 MGD	44.8 MGD		268,994 gallons		
	01/292006, 8:00 pm to 2:05 am, (4.08 hrs.)	34.5 MGD	41.62 MGD		633,275 gallons		
				5.33 MGD		902,269 gallons	0.046%

PUBLIC WORKS & UTILITIES
Wastewater Treatment Plant

RECEIVED
JUL 7 2006
DEPT OF ECOLOGY

July 6, 2006

Mr. Mike Dawda
WADOE NW Regional Office
3190 160th SE
Bellevue, WA 98008

Dear Mike:

In further review of the Draft NPDES Permit, The City of Bremerton feels that the metals and cyanide monitoring is too frequent. This is based on the last ten years (July 1996 – July 2005) of monitoring data that is found in the Appendix D spreadsheet of the Draft Permit. The reasonable potential calculation in the Appendix D spreadsheet is that no limit is required for metals and cyanide.

Based on the Appendix D spreadsheet it seems that the maximum concentration at the edge of the dilution zones is much lower than the State Water Quality Standards, resulting in no requirements for limits for the metals and cyanide parameters. Also noted in the comments section of this spreadsheet, most levels are below detection limits.

Based on the above information, the City of Bremerton is requesting to go from bi-monthly sampling of metals and cyanide to twice a year sampling.

I would appreciate your prompt consideration of this request, and if you have any questions or concerns, please contact me at 360.473.5448.

Respectfully,

Pat J. Coxon
Wastewater Manager
City of Bremerton

CC: Phil Williams. File

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

RECEIVED
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July 7, 2006

Reply to
Attn Of: OWW-130

Mr. Mike Dawda
Water Quality Program
Washington State Department of Ecology
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008-5452

Re: City of Bremerton Wastewater Treatment Facilities
NPDES Permit No. WA-002928-9

Dear Mr. Dawda:

Thank you for the opportunity to review the draft NPDES permit for the City of Bremerton's (City's) West and East Treatment Plant outfalls. Following are our comments:

1. Bypass of Secondary Treatment
Condition S11. of the permit authorizes a bypass during wet weather events at the West Plant. Under the 1994 CSO Control Policy (Section II.C.7), the permit may authorize the anticipated bypass if the criteria of the bypass provision are met. There must be sufficient data in the administrative record (reflected in the permit fact sheet) supporting all the requirements in 40 CFR 122.41(m)(4) for approval of an anticipated bypass. The CSO Control Policy (II.C.7) requires a feasibility analysis. The analysis should show that it is technically or financially infeasible to provide secondary treatment at the existing facilities for greater amounts of wet weather flow. The feasible alternative analysis should include consideration of enhanced primary treatment and non-biological secondary treatment at the treatment facility plant. If a feasibility analysis has been done, document the findings in the fact sheet.

The permit should specify monitoring to be conducted during bypass events to ensure compliance with water quality standards.

2. East Plant Limits and Monitoring
Conditions S1.B. and S2.A.2.- Additional limitations and monitoring are needed at the East Plant. For example, the permit should include monthly concentration limits and

percent removal requirements for TSS. The permit should require monitoring to verify compliance with WQS, e.g. priority pollutants and WET testing.

3. Post-construction Monitoring
Condition S10. - The permit lacks CSO post-construction monitoring at controlled outfalls OF13 and OF17. Specific monitoring requirements are needed to demonstrate compliance with water quality standards and protection of designated uses as well as to determine the effectiveness of CSO controls.

4. Evaluation of BOD_5 and NH_3-N Impacts on Dissolved Oxygen
The fact sheet states that in the near future Ecology will perform a TMDL for dissolved oxygen, which will determine the impacts of biochemical oxygen demand and nutrients on dissolved oxygen levels in the receiving water. Unless the TMDL is scheduled for completion within the proposed permit cycle, an analysis for impacts on dissolved oxygen for the West Plant should be done for this permit.

Please send us the proposed final permit and response to comments prior to issuance of the permit. If you have any questions regarding these comments, please contact Lisa Olson at (206) 553-0176 or Susan Poulsom at (206) 553-6258. They can also be reached via email at olson.lisa@epa.gov or poulsom.susan@epa.gov.

Sincerely,

Michael J. Lidgard
Manager
NPDES Permits Unit

EAST SIDE DISCHARGE MONITORING REPORT (DMR)

CITY OF BREMERTON # 696
345 6TH STREET SUITE 600
BREMERTON, WA 98337
CILITY LOCATION : EAST
CITY OF BREMERTON
2475 STEPHENSON STREET
BREMERTON, WA 98310
PHONE : 360-473-5400

WA - 0029289
PERMIT NUMBER

001
DISCHARGE NUMBER

DISCHARGE LOCATION	
LAT	47° 34' 57" N
LONG	122° 37' 45" W

MONITORING PERIOD					
YEAR	MONTH	DAY	YEAR	MONTH	DAY

	QUALITY OR LOADING				QUALITY OR CONCENTRATION						
PARAMETER		Average	Maximum	UNITS	Minimum	Average	Maximum	UNITS	# EX	Frequency of Anaylsis	Sample Type
FLOW	Sample Measurement			MGD	**********	**********	**********	********			
	Permit Measurement	REPORT	REPORT		**********	**********	**********			Continuous	Measured
RAINFALL	Sample Measurement	**********	**********	*********		**********		" / day			
	Permit Measurement	**********	**********		REPORT	**********	REPORT			Continous	Measured
BOD_5 INFLUENT	Sample Measurement			lbs/day	**********			mg/L			
	Permit Measurement	**********	**********		**********	REPORT	REPORT			01 / event	COMPOSITE
TSS INFLUENT	Sample Measurement			lbs/day	**********			mg/L			
	Permit Measurement	**********	**********		**********	REPORT	REPORT			01 / event	COMPOSITE
BOD_5 EFFLUENT	Sample Measurement			lbs/day	**********			mg/L			
	Permit Measurement	**********	**********		**********	REPORT	REPORT			01 / event	COMPOSITE
TSS EFFLUENT	Sample Measurement			lbs/day	**********			mg/L			
	Permit Measurement	**********	**********		**********	REPORT	REPORT			01 / event	COMPOSITE
BOD % REMOVAL	Sample Measurement	*********	*********	*********	**********		**********	%			
	Permit Measurement	**********	**********		**********	**********	**********			01 / event	CALCULATED
TSS % REMOVAL	Sample Measurement	**********	**********	*********	**********		**********	%			
	Permit Measurement	**********	**********		**********	REPORT	**********			01 / event	CALCULATED
FECAL COLIFORM	Sample Measurement	**********	**********	*********	**********		**********	# /100 ml			
	Permit Measurement	**********	**********		**********	400	**********			01-03 / event	Grab
pH	Sample Measurement	**********	**********	*********		**********		STD			
	Permit Measurement	**********	**********		REPORT	**********	REPORT			01 / event	Grab
SETTLABLE SOLIDS	Sample Measurement	**********	**********	*********	**********		**********	ml/L/hr			
	Permit Measurement	**********	**********		**********	REPORT	**********			01 / event	COMPOSITE
AMMONIA NITROGEN	Sample Measurement	**********	**********	*********	**********			mg/L			
	Permit Measurement	**********	**********		**********	REPORT	REPORT			06 / permit	COMPOSITE

* THE TSS REMOVAL EFFICIENCY SHALL BE CALCULATED ON A MASS BALANCE BASIS AS THE PERCENT OF SOLIDS REMOVED AT THE PLANT.

** ATTACH COMMENTS AND EXPLANATIONS OF ANY VIOLATIONS TO THIS SHEET

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS

NAME / TITLE PRINCIPAL EXECUTIVE OFFICER

TYPED OR PRINTED

COMPLETION DATE

MM / DD / YR

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

EAST SIDE DISCHARGE MONITORING REPORT (DMR)

CITY OF BREMERTON # 696
345 6TH STREET SUITE 600
BREMERTON, WA 98337
FACILITY LOCATION : EAST
CITY OF BREMERTON
1600 OYSTER BAY AVE S
BREMERTON, WA 98312
PHONE : 360-473-5400

WA - 0029289	001	DISCHARGE LOCATION
PERMIT NUMBER	DISCHARGE NUMBER	LAT 47° 34 ' 57" N
		LONG 122° 37' 45" W

MONITORING PERIOD					
YEAR	MONTH	DAY	YEAR	MONTH	DAY

	QUALITY OR LOADING			QUALITY OR CONCENTRATION				
PARAMETER		Average	UNITS	Average	UNITS	# EX	Frequency of Anaylsis	Sample Type
CADMIUM (TR)	Sample Measurement		lbs/day		mg/L			
EFFLUENT	Permit Measurement	**********		REPORT			06 / permit	COMP
CHROMIUM (TR)	Sample Measurement		lbs/day		mg/L			
EFFLUENT	Permit Measurement	**********		REPORT			06 / permit	COMP
COPPER (TR)	Sample Measurement		lbs/day		mg/ L			
EFFLUENT	Permit Measurement	**********		REPORT			06 / permit	COMP
LEAD (TR)	Sample Measurement		lbs/day		mg/L			
EFFLUENT	Permit Measurement	**********		REPORT			06 / permit	COMP
MERCURY (TR)	Sample Measurement		lbs/day		mg/ L			
EFFLUENT	Permit Measurement	**********		REPORT			06 / permit	COMP
NICKEL (TR)	Sample Measurement		lbs/day		mg/ L			
EFFLUENT	Permit Measurement	**********		REPORT			06 / permit	COMP
ZINC (TR)	Sample Measurement		lbs/day		mg/ L			
EFFLUENT	Permit Measurement	**********		REPORT			06 / permit	COMP

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WEST SIDE DISCHARGE MONITORING REPORT (DMR)

CITY OF BREMERTON # 696
345 6TH STREET SUITE 600
BREMERTON, WA 98337
FACILITY LOCATION : WEST
CITY OF BREMERTON
1600 OYSTER BAY AVE S
BREMERTON, WA 98312
PHONE : 360-473-5400

WA - 0029289	001	DISCHARGE LOCATION
PERMIT NUMBER	DISCHARGE NUMBER	LAT 47° 32' 59' N
		LONG 122° 40' 11" W

MONITORING PERIOD					
YEAR	MONTH	DAY	YEAR	MONTH	DAY

	QUALITY OR LOADING			QUALITY OR CONCENTRATION				
PARAMETER		Average	UNITS	Average	UNITS	# EX	Frequency of Anaylsis	Sample Type
CADMIUM (TR) INFLUENT	Sample Measurement		lbs/day		mg/L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
CADMIUM (TR) EFFLUENT	Sample Measurement		lbs/day		mg/L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
CHROMIUM (TR) INFLUENT	Sample Measurement		lbs/day		mg/L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
CHROMIUM (TR) EFFLUENT	Sample Measurement		lbs/day		mg/L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
COPPER (TR) INFLUENT	Sample Measurement		lbs/day		mg/L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
COPPER (TR) EFFLUENT	Sample Measurement		lbs/day		mg/ L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
LEAD (TR) INFLUENT	Sample Measurement		lbs/day		mg/ L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
LEAD (TR) EFFLUENT	Sample Measurement		lbs/day		mg/L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
MERCURY (TR) INFLUENT	Sample Measurement		lbs/day		mg/L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
MERCURY (TR) EFFLUENT	Sample Measurement		lbs/day		mg/ L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
NICKEL (TR) INFLUENT	Sample Measurement		lbs/day		mg/L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
NICKEL (TR) EFFLUENT	Sample Measurement		lbs/day		mg/ L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
ZINC (TR) INFLUENT	Sample Measurement		lbs/day		mg/ L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
ZINC (TR) EFFLUENT	Sample Measurement		lbs/day		mg/ L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
CYANIDE INFLUENT	Sample Measurement		lbs/day		mg/ L			
	Permit Measurement	**********		REPORT			01 / 180	COMP
CYANIDE EFFLUENT	Sample Measurement		lbs/day		mg/ L			
	Permit Measurement	**********		REPORT			01 / 180	GRAB

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WEST SIDE DISCHARGE MONITORING REPORT (DMR)

CITY OF BREMERTON # 696
345 6TH STREET SUITE 600
BREMERTON, WA 98337
FACILITY LOCATION : WEST
CITY OF BREMERTON
1600 OYSTER BAY AVE S
BREMERTON, WA 98312
PHONE : 360-473-5400

WA - 0029289
PERMIT NUMBER

001
DISCHARGE NUMBER

DISCHARGE	
LAT	47°
LONG	122°

MONITORING PERIOD						
YEAR	MONTH	DAY		YEAR	MONTH	DAY

		QUALITY OR LOADING			QUALITY OR CONCENTRATION					
PARAMETER		Average	Maximum	UNITS	Minimum	Average	Maximum	UNITS	# EX	Frequency of Anaylsis
FLOW	Sample Measurement			MGD	**********	**********	**********	********		
	Permit Measurement	10.1	REPORT		**********	**********	**********			Continuous
BOD_5 INFLUENT	Sample Measurement			lb/day	**********			mg/L		
	Permit Measurement	18100	**********		**********	REPORT	REPORT			03 / 07
TSS INFLUENT	Sample Measurement			lb/day	**********			mg/L		
	Permit Measurement	22600	**********		**********	REPORT	REPORT			03 / 07
BOD_5 EFFLUENT	Sample Measurement			lb/day	**********			mg/L		
	Permit Measurement	2527	3790		**********	30	45			03 / 07
BOD_5 % REMOVAL	Sample Measurement	**********	**********	********	**********		**********	%		
	Permit Measurement	**********	**********		**********	85% *	**********			01 / 30
TSS EFFLUENT	Sample Measurement			lb/day	**********			mg/L		
	Permit Measurement	2527	3790		**********	30	45			03 / 07
TSS % REMOVAL	Sample Measurement	**********	**********	********	**********		**********	%		
	Permit Measurement	**********	**********		**********	85% *	**********			01 / 30
FECAL COLIFORM	Sample Measurement	**********	**********	********	**********			# /100 ml		
	Permit Measurement	**********	**********		**********	200	400			05 / 07
pH	Sample Measurement	**********	**********	********	**********			STD		
	Permit Measurement	**********	**********		6.0	**********	9.0			07 / 07
TOTAL RESIDUAL CHLORINE	Sample Measurement	**********	**********	********	**********			mg/ L		
	Permit Measurement	**********	**********		**********	0.10	0.30			07 / 07
AMMONIA - N NH_3 - N	Sample Measurement		**********	lbs/day	**********		**********	mg/ L		
	Permit Measurement	**********	**********		**********	REPORT	**********			01 / 30

* THIS LIMIT IS 65 % OCTOBER THRU APRIL

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NAME / TITLE PRINCIPAL EXECUTIVE OFFICER

TYPED OR PRINTED

COMPLETION DATE

MM / DD / YR

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

WEST SIDE DISCHARGE M. .ITORING REPORT (DMR)

CITY OF BREMERTON # 696
345 6TH STREET SUITE 600
BREMERTON, WA 98337
FACILITY LOCATION : WEST
CITY OF BREMERTON
1600 OYSTER BAY AVE S
BREMERTON, WA 98312
PHONE : 360-473-5400

WA - 0029289
PERMIT NUMBER

001
DISCHARGE NUMBER

DISCHARGE LOCATION	
LAT	47° 32 ' 59 ' N
LONG	122° 40' 11" W

MONITORING PERIOD						
YEAR	MONTH	DAY		YEAR	MONTH	DAY

	QUALITY OR LOADING				QUALITY OR CONCENTRATION						
PARAMETER		Average	Maximum	UNITS	Minimum	Average	Maximum	UNITS	# EX	Frequency of Anaylsis	Sample Type
TOTAL KJELDAHL NITROGEN	Sample Measurement		**********	lbs/day	**********		**********	mg/L			
	Permit Measurement	**********	**********		**********	REPORT	**********			01 / 07 **	COMPOSITE
NO_3-N + NO_2-N	Sample Measurement		**********	lbs/day	**********		**********	mg/L			
	Permit Measurement	**********	**********		**********	REPORT	**********			01 / 07 **	COMPOSITE

**** NOTE : SAMPLES ARE DONE 1 / 07 FOR THREE YEARS (2007,2008,2009) DURING THE MONTHS OF JULY, AUGUST,SEPTEMBER, & OCTOBER.**

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