APPENDIX 1: CHAPTER 1 APPENDICES

- 1A: NPDES Permit and Fact Sheet
- **1B: YMC and City Development Guidelines**
- 1C: Shoreline Permit
- 1D: City of Yelm Comprehensive Plan (Chapter V. Public Facilities & Utilities)
- 1E: Maps from the City of Yelm Comprehensive Plan
- 1F: Sewer Local Improvement Districts ERU's Remaining
- 1G: Citizen Action Request

1A: NPDES Permit and Fact Sheet



state of washington DEPARTMENT OF ECOLOGY

PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

July 7, 2011

CERTIFIED MAIL 7009 3410 0000 1272 5056

Mr. Tim Peterson, Public Works Director City of Yelm 901 Rhoton Road Yelm, WA 98597



Re: National Pollutant Discharge Elimination System (NPDES) Permit for NPDES Permit Number WA0040762, Yelm Water Reclamation Facility

Dear Mr. Peterson:

Enclosed is a National Pollutant Discharge Elimination System (NPDES) Permit No. WA0040762 for Yelm Water Reclamation Facility. The permit is issued by the Department of Ecology (Ecology) in conformance with the Water Pollution Control Law [Chapter 90.48 Revised Code of Washington (RCW)], and as authorized by the U.S. Environmental Protection Agency (EPA) acting under the Federal Clean Water Act.

Submission of an application for permit renewal or continued discharge must be received by Ecology the date indicated in the permit [Washington Administrative Code (WAC) 173-220-180]. Please contact Carey Cholski, Permit Administrator, at 360-407-6279, or by e-mail at <u>carey.cholski@ecy.wa.gov</u> for an application form.

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 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/modification.

Any appeal must contain the following in accordance with the rules of the hearing board:

- a. The appellant's name and address;
- b. The coverage date and number of the permit appealed;
- c. A description of the substance within the permit that is the subject of the appeal;
- d. A clear, separate, and concise statement of every error alleged to have been committed;
- e. A clear and concise statement of the facts which the requester relies to sustain his or her statements of error; and
- f. A statement setting forth the relief sought.

You must file your appeal with The Pollution Control Hearing Board.

Mr. Tim Peterson Page 2

Mail your appeal to:

The Pollution Control Hearings Board P.O. Box 40903 Olympia, Washington 98504-0903

OR

Deliver your appeal in person to:

The Pollution Control Hearings Board 1111 Israel Road Southwest, Suite 301 Tumwater, Washington 98501

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:

Mahbub Alam, P.E. Department of Ecology Southwest Regional Office P.O. Box 47775 Olympia, Washington 98504-7775

For additional information: Environmental Hearings Office Website: http://www.eho.wa.gov

If you have any questions on this action, please contact Mahbub Alam at 360-407-6318, or by e-mail at mahbub.alam@ecy.wa.gov.

Sincerely,

Relith Bay

Robert W. Bergquist, LEED_©AP Southwest Region Manager Water Quality Program

RB:CC(0040762) Enclosures

cc: Jim Doty, Manager, Yelm Water Reclamation Facility Craig Riley, Department of Health

ADDENDUM TO THE FACT SHEET FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. WA0040762

I. GENERAL INFORMATION

Facility:City of Yelm Water Reclamation Facility931 N.P. Road NortheastYelm, WA98597

II. APPLICATION REVIEW

The city of Yelm submitted an application to Ecology on July 21, 2009, and May 25, 2010, for permit reissuance, and Ecology accepted it on June 10, 2010. Ecology has sufficiently reviewed the application, discharge monitoring reports, and other facility information in enough detail to ensure that:

- The city of Yelm has complied with all of the terms, conditions, requirements and schedules of compliance of the expired permit.
- Ecology has up-to date information on the waste treatment practices and the nature, content, volume, and frequency of its discharge.
- The discharge meets applicable effluent standards and limits, water quality standards, and other legally applicable requirements.

III. PERMIT REAUTHORIZATION

When Ecology reauthorizes a discharge permit it essentially reissues the permit with the existing limits, terms and conditions. Alternatively, when Ecology renews a permit it reevaluates the impact of the discharge on the receiving water which may lead to changes in the limits, terms and conditions of the permit.

This fact sheet addendum accompanies the permit, which Ecology proposes to reauthorize for the discharge of wastewater to Nisqually River, Centralia Power Canal, and to the ground. The previous fact sheet explains the basis for the discharge limitations and conditions of the reauthorized permit and remains as part of the administrative record.

Ecology determined it does not need to change the existing permit requirements, including discharge limits and monitoring, to protect the receiving water receiving quality. The Drinking Water MCL's [Chapter 246-290 Washington Administrative Code (WAC)] have been updated since the previous permit was issued. To be consistent with

the current Drinking Water MCL's, Condition S1.D - Ground Water Recharge Criteria for Ground Water Recharge by Surface Percolation have been updated as follows:

Fecal Coliform Bacteria	Non Detect (ND) ^c
Total Trihalomethanes (TTHM)	80 μg/L
^c Two consecutive exceedances of an enforcement limit are required for the same parameter at the same well in order to constitute a violation.	

Condition S2.E - Monitoring Schedule: Ground Water Recharge by Surface Percolation has been amended to require reporting of Total Trihalomethanes in units of " μ g/L," consistent with the enforcement limit.

In addition a condition has been added to require a written site specific ground water monitoring plan/SOP to be submitted for review and approval within one year of the effective date of this reissued permit.

The previous fact sheet addressed conditions and issues at the facility at the time when Ecology issued the previous permit in 2005. Since the issuance of the current permit, Ecology has not received any additional information which indicates that environmental impacts from the discharge warrant a complete renewal of the permit. The reauthorized permit is virtually identical to the previous permit issued on June 24, 2005.

Ecology reviewed inspections and assessed compliance of the city of Yelm discharge with the terms and conditions in the previous permit and determined that it should not rank the facility as a high priority for permit renewal. Ecology assigns a high priority for permit renewals in situations where water quality would benefit from a more stringent permit during the next five-year cycle.

The permit reauthorization process, along with the renewal of high priority permits, allows Ecology to reissue permits in a timely manner and minimize the number of active permits that have passed their expiration dates. For permit reissuance planning purposes, Ecology follows a system of ranking that considers the benefit gained by renewing a permit rather than reauthorizing a permit during its annual permit planning process. Ecology assesses each permit that is expiring and due for reissuance and compares it with other permits due for reissuance. Ecology notifies the public and seeks input after it has tentatively established the initial draft ranking of the permits it plans to renew and those it plans to reauthorize. Ecology considers all relevant comments and suggestions before it makes a final decision.

Ecology carried over the discharge limits and conditions in effect at the time of expiration of the previous permit to this reauthorized permit. Ecology only changed the submittal dates for reports from those in the previous permit. Ecology removed the completed report requirements that do not require additional or continued assessment. It adjusted Addendum to the Fact Sheet For NPDES Permit No. WA0040762 Page 3

> the dates for the other standard compliance and submittal requirements that it carried over from the past permit into this reauthorized permit. Ecology considered these reports necessary in the previous permit and no information has come forward to cause it to reconsider.

> Ecology must public notice the availability of the draft reauthorized permit at least 30 days before it reissues the permit [Washington Administrative Code (WAC) 173-220-050]. Ecology invites you to review and comment on its decision to reauthorize the permit (see Appendix A-<u>Public Involvement</u> for more detail on the Public Notice procedures).

After the public comment period has closed, Ecology will prepare a response to comments document that it will attach to this fact sheet addendum. The response to comments will include the resultant changes to the permit and either addresses each comment individually or summarizes the substantive comments and respond. Ecology sends a copy of the response to comments to all parties who submitted comments. Ecology will include the response to comments in this fact sheet addendum.

IV. RECOMMENDATION FOR PERMIT ISSUANCE

Ecology proposes to reissue this permit for five years.

Addendum to the Fact Sheet For NPDES Permit No. WA0040762 Page 4

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

Ecology proposes to reissue a permit to city of Yelm. The permit includes wastewater discharge limits and other conditions. This fact sheet addendum describes the facility and Ecology's reasons for reauthorizing the permit conditions.

Ecology placed a Public Notice of Application on June 4, 2009; June 12, 2009; June 16, 2010; and June 23, 2010, in the *Olympian* to inform the public about the submitted application and to invite comment on the reissuance of this permit.

Ecology will place a Public Notice of Draft on March 30, 2011, in the *Olympian* to inform the public and to invite comment on the proposed draft National Pollutant Discharge Elimination System permit and fact sheet addendum.

The Notice –

- Tells where copies of the draft Permit and Fact Sheet are available for public evaluation (a local public library, the closest Regional or Field Office, posted on our website.).
- Offers to provide the documents in an alternate format to accommodate special needs.
- Urges people to submit their comments, in writing, before the end of the Comment Period
- Tells how to request a public hearing of comments about the proposed NPDES Permit.
- Explains the next step(s) in the permitting process.

Ecology has published a document entitled **Frequently Asked Questions about Effective Public Commenting** which is available on our website at http://www.ecy.wa.gov/biblio/0307023.html.

You may obtain further information from Ecology by telephone, 360-407-6279, or by writing to the permit writer at the address listed below.

Water Quality Permit Coordinator Department of Ecology Southwest Regional Office P.O. Box 47775 Olympia, WA 98504-7775

The primary author of this permit and fact sheet is Carey Cholski.

Page 1 of 47 Permit No. WA0040762

Issuance Date:July 7, 2011Effective Date:August 1, 2011Expiration Date:July 31, 2016

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM WASTE DISCHARGE PERMIT and STATE RECLAIMED WATER DISCHARGE PERMIT No. WA0040762

State of Washington DEPARTMENT OF ECOLOGY, SOUTHWEST REGIONAL OFFICE Olympia, Washington 98504-7775

In compliance with the provisions of The State of Washington Water Pollution Control Law Chapter 90.48 Revised Code of Washington; The State of Washington Reclaimed Water Act Chapter 90.46 Revised Code of Washington and

> The Federal Water Pollution Control Act (The Clean Water Act) Title 33 United States Code, Section 1251 et seq.

State of Washington DEPARTMENT OF HEALTH In compliance with the provisions of Chapter 90.46 and 43.70 Revised Code of Washington authorizes

> City of Yelm 105 Yelm Avenue West P.O. Box 479 Yelm, WA 98597-4079

Plant Location: 931 N.P. Road Northeast

Waterway Segment Number: 16-11-01

Water Body I.D. No.: WA-11-1020

Plant Type:

STEP collection followed by secondary treatment (SBRs), and coagulation and flocculation with filtration and chlorine disinfection to meet Class A reclaimed water requirements.

Receiving Water: Nisqually River/Ground Water

Discharge Location:

<u>Reclaimed Water</u> distribution for public and private uses throughout the City to include irrigation, constructed wetlands, and rapid infiltration basins.

Power Canal (Standby Outfall) Latitude: 46.95568 Longitude: -122.58561

Nisqually River (Emergency Outfall Only)

Latitude: 46.96030 Longitude: -122.57199

is authorized to discharge in accordance with the special and general conditions that follow.

Robert Burg

Robert W. Bergquist, LEED_©AP Southwest Regional Manager Water Quality Program Washington State Department of Ecology



State of Washington

Page 4 of 47 Permit No. WA0040762

SUMMARY OF PERMIT REPORT SUBMITTALS

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

Permit Section	Submittal	Frequency	First Submittal Date
S3.	Discharge Monitoring Report	Monthly	September 15, 2011
S3.E	Reporting Permit Violations	As necessary	
S4.B.	Plans for Maintaining Adequate Capacity	As necessary	
S4.C.	Notification of New or Altered Sources	As necessary	
S4.D.	Infiltration and Inflow Evaluation	Annually	May 15, 2012
S4.E.	Wasteload Assessment	Annually	May 15, 2012
S6.D.	Annual Industrial User Survey	Annually	February 15, 2012
S8.	Outfall Evaluation	#001 daily, #002 and #003 monthly	Report monthly on DMRs
S10.	Ground Water Sampling Plan	1/permit	August 1, 2012
G1.	Notice of Change in Authorization	As necessary	
G4.	Reporting Planned Changes	As necessary	
G5.	Engineering Report for Construction or Modification Activities	As necessary	
G7.	Application for Permit Renewal	1/permit cycle	February 1, 2016
G21	Reporting Anticipated Non-compliance	As necessary	
G22	Reporting Other Information	As necessary	

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SPECIAL CONDITIONS

S1. DISCHARGE LIMITS

A. <u>Effluent Limits – Outfall #001 Reclaimed Water</u>

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.

The production and use of reclaimed water shall be in compliance with all specific conditions and requirements of the Washington State Water Reclamation and Reuse Standards, 1997, and is subject to the requirements listed below:

Beginning on the effective date and lasting through the expiration date of this permit, the Permittee is authorized to distribute Class A reclaimed water to public and private entities for commercial and industrial uses and/or to apply reclaimed water to land for irrigation at agronomic rates and ground water recharge by surface percolation at locations listed in special condition S9.A. The Permittee may also be discharging Class A Reclaimed Water to the Centralia Power Canal and the Nisqually River on a limited basis. The distribution and use of reclaimed water is subject to the following treatment and water quality limitations:

EFFLUENT LIMITS: OUTFALL # 001 RECLAIMED WATER ^c				
Parameter	Average Monthly ^a	Average Weekly ^a		
Biochemical Oxygen Demand (5 day)	30 mg/L	N/A		
Total Suspended Solids	30 mg/L	N/A		
Dissolved Oxygen	Shall be measurably present in	Shall be measurably present in the discharge at all times		
рН	Daily minimum is equal to or greater than 6.0 and the daily maximum is less than or equal to 9.0			
Parameter	7-Day Limit ^a	Sample Maximum ^b		
Total Coliform Bacteria	2.2 count/100 mL	23 count/100 mL		
Parameter	Average Monthly ^a	Sample Maximum ^b		
Turbidity	2 NTU	5 NTU		
Parameter	Average Monthly ^a	Daily Maximum		
Total Nitrogen, as the sum of TKN, Nitrate and Nitrite	10 mg/L	. 15 mg/L		

^aThe average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of the seven-day limit for total coliform, which shall be based on the maximum median number of total coliform from the bacteriological results of the last seven days for which analyses have been completed.

^bThe sample maximum for total coliform is the highest allowable value for any sample, and for turbidity the highest allowable validated or official measurement.

A validated or official measurement for a turbidimeter varies by manufacturer and operator settings, but the basic concepts are the same. Before a continuous reading turbidimeter will recognize and record a turbidity measurement there must first be a minimum number of consecutive measurements that have the same value or not be different in value by more than a specified percent.

^cA chlorine residual of at least 0.5 mg/L shall be maintained in the reclaimed water during conveyance to the use area, or the storage facility. This requirement is designed to protect the distribution system from clogging due to microbial slime build-up.

B. Effluent Limits – Outfall #002 Centralia Power Canal

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

Whenever flows in the Power Canal drops below 200 cfs, the City of Yelm must cease discharging effluent to the Centralia Power Canal.

EFFLUENT LIMITS: OUTFALL # 002 CENTRALIA POWER CANAL					
Parameter	Average Monthly ^a	Average Weekly ^a			
Biochemical Oxygen Demand (5 day) ^b	30 mg/L, 250 lbs/day 85% Removal	45 mg/L 375 lbs/day			
Total Suspended Solids ^b	30 mg/L, 250 lbs/day 85% Removal	45 mg/L 375 lbs/day			
Fecal Coliform Bacteria	100 count/100 mL	200 count/100 mL			
рН	Daily minimum is equal to or greater than 6.0 and the daily maximum is less than or equal to 9.0				
Total Residual Chlorine	0.5 mg/L 0.75 mg/L				
Total Ammonia (as NH ₃ -N)	3 mg/L	4.5 mg/L			

^aThe 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.

^bThe Permittee will be presumed to be in compliance with the percent removal requirement in the permit if the permit effluent concentration is met and there is no excessive inflow and infiltration (I/I). Infiltration is excessive when the highest 7-14 day average daily dry weather flow is greater than 120 gallons per capita per day. Inflow is excessive when the highest recorded daily flow during a storm event is greater than 275 gallons per capita per day or when hydraulic overloading of the treatment plant occurs.

C. Effluent Limits – Outfall #003 Nisqually River

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

EFFLUENT LIMITS: OUTFALL # 003 NISQUALLY RIVER				
Parameter	Average Monthly ^a	Average Weekly ^a		
Biochemical Oxygen ^e Demand (5 day)	30 mg/L, 250 lbs/day 85% Removal	45 mg/L 375 lbs/day		
Total Suspended Solids ^c	30 mg/L, 250 lbs/day 85% Removal	45 mg/L 375 lbs/day		
Fecal Coliform Bacteria	100 count/100 mL	200 count/100 mL		
рН	Daily minimum is equal to or greater than 6.5 and the daily maximum is less than or equal to 9.0			
Total Ammonia (as NH3-N)	3 mg/L	4.5 mg/L		
Parameter	Average Monthly ^a	Daily Maximum ^b		
Total Residual Chlorine	0.047 mg/L	0.124 mg/L		
Total Lead	10 µg/L	15 μg/L		

^aThe 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.

^bThe maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day.

^cThe Permittee will be presumed to be in compliance with the percent removal requirement in the permit if the permit effluent concentration is met and there is no excessive inflow and infiltration (I/I). Infiltration is excessive when the highest 7-14 day average daily dry weather flow is greater than 120 gallons per capita per day. Inflow is excessive when the highest recorded daily flow during a storm event is greater than 275 gallons per capita per day or when hydraulic overloading of the treatment plant occurs.

D. Ground Water Recharge Criteria for Ground Water Recharge by Surface Percolation

An exceedance of the following groundwater enforcement limits will be evaluated by the Department of Ecology (Ecology) in accordance with the <u>Implementation Guidance for the Ground Water Quality Standards</u> to determine compliance with standards.

GROUND WATER ENFORCEMENT LIMITS*:				
Primary Drinking Water Criteria Sample Concentration ^b				
Arsenic	10 µg/L			
Cadmium	5 μg/L			
Chromium	100 µg/L			
Mercury	2 μg/L			

Page 8 of 47 Permit No. WA0040762

GROUND WATER ENFORCEMENT LIMITS ^a :				
Primary Drinking Water Criteria Sample Concentration ^b				
Nickel	100 μg/L			
Nitrate as N	10 mg/L			
Nitrite as N	1.0 mg/L			
Fecal Coliform Bacteria	Non Detect (ND) ^c			
Total Trihalomethanes (TTHM)	80 μg/L			
Other Ground Water Criteria	Sample Concentration ^b			
Conductivity	700 umhos/cm			
Copper	1300 µg/L			
Fluoride	2.0 mg/L			
Lead	15 μg/L			
Silver	100 μg/L			
Sulfate	250 mg/L			
Total Dissolved Solids	500 mg/L			
Zinc	5000 μg/L			
^a These Groundwater Enforcement Limits apply to o MW4.	lowngradient monitoring wells MW2, MW3, and			
^b The maximum concentration is the highest allowa the ground water at the top of the uppermost aquifer [°] Two consecutive exceedances of an enforcement	ble concentration for any sample as measured in beneath or down gradient of the infiltration site.			
same well in order to constitute a violation.	mint are required for the same parameter at the			

E. Mixing Zone Descriptions

The maximum boundaries of the mixing zones are defined as follows:

Outfall #002 - Discharge to the Centralia Power Canal - The entire canal extending to the point at which the canal flow re-enters the Nisqually River (RM 12.6). The acute dilution ratio for the Power Canal is 172:1 and the chronic dilution ratio is 195:1.

Outfall #003 - Discharge to the by-pass section of the Nisqually River at the Yelm Diversion Hydroelectric Project

Acute Mixing Zone: 19.7 feet wide, extends 30.15 feet downstream and 10.0 feet upstream. The acute dilution ratio for the Nisqually River is 6.5:1.

Chronic Mixing Zone: 19.7 feet wide, extends 301.5 feet downstream and 100.0 feet upstream. The chronic dilution ratio for the Nisqually River is 20:1.

S2. MONITORING REQUIREMENTS

Monthly, Quarterly, or yearly samples collected during the month shall not need to be resampled should the discharge location change due to a shutdown of the power canal, or if there is a loss or resumption of reclaimed water production.

A. <u>Influent Monitoring Schedule^(a)</u>

The sampling point for the influent will be at the influent meter vault just prior to the influent structure or tower.

The Permittee shall monitor the wastewater influent according to the following schedule:

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
Wastewater Influent	Flow	MGD	Continuous ^(b)	measurement
Wastewater Influent	BOD ₅	mg/L lbs/day	2/week	24-hour composite
Wastewater Influent	TSS	mg/L lbs/day	2/week	24-hour composite

^(a) For all monitoring, the Permittee shall use methods that can achieve a method detection level (MDL) equal to 0.1 times the effluent limitation or the most sensitive Environmental Protection Agency (EPA) approved method, whichever is greater (see Appendix A of this permit). If the analytical result for any sample is below the MDL, the Permittee shall report "less than {numeric MDL}" on the DMR. For purposes of averaging results, the Permittee shall use actual values for all values above the MDL and zero for values below the MDL.

^(b) Continuous means uninterrupted except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance. Sampling shall be taken every four hours when continuous monitoring is not possible.

B. <u>Monitoring Schedule: Outfall #001 - Reclaimed Water Discharge^(e)</u>

The sampling point for the reclaimed water effluent will be the exit from the chlorine contact chamber prior to entering the reclaimed water wet well.

The Permittee shall monitor the wastewater according to the following schedule:

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
Disinfected reclaimed water	Flow	MGD	Continuous ^(f)	Totalizer
Disinfected reclaimed water	BOD₅	mg/L lbs/day	2/week	24-hour composite

Page 10 of 47 Permit No. WA0040762

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
Disinfected reclaimed water	TSS	mg/L lbs/day	2/week	24-hour composite
Disinfected reclaimed water	Total Coliform ^d Bacteria	cfu/100mL	Daily	Grab ^a
Disinfected reclaimed water	Turbidity ^b	NTU	Recorded every 4 hours	Continuous recording turbidimeter
Disinfected reclaimed water	Total Residual Chlorine ^c	mg/L	Daily	Grab ^a
Disinfected reclaimed water	Dissolved Oxygen	mg/L	Daily	Grab ^a
Disinfected reclaimed water	рН	Standard Units	Daily	Measurement
Disinfected reclaimed water	Temperature	°C	Daily	Measurement
Disinfected reclaimed water	Hardness (as CaCO ₃)	mg/L	Monthly	Grab ^a
Disinfected reclaimed water	TKN (as N)	mg/L	Monthly	24-hour composite
Disinfected reclaimed water	Nitrate NO3 (as N)	mg/L	Monthly	24-hour composite
Disinfected reclaimed water	Nitrite NO ₂ (as N)	mg/L	Monthly	24-hour composite
Disinfected reclaimed water	Total Nitrogen	mg/L	Monthly	TKN + nitrate + nitrite
Disinfected reclaimed water	Total Dissolved Solids	mg/L	Monthly	Measurement

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Page 11 of 47 Permit No. WA0040762

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
Disinfected reclaimed water	Alkalinity (as CaCO ₃)	mg/L	Monthly	24-hour composite
Disinfected reclaimed water	Conductivity	umhos/cm	Monthly	24-hour composite
Disinfected reclaimed water	Chloride	mg/L	Monthly	24-hour composite
Disinfected reclaimed water	Fluoride	mg/L	Monthly	24-hour composite
Disinfected reclaimed water	Sulfate	mg/L	Monthly	24-hour composite
Disinfected reclaimed water	Total Metals: Arsenic, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Silver, Zinc	μg/L	Quarterly ^(g)	Grab or 24-hour composite
Disinfected reclaimed water	Total Trihalomethanes (TTHM)	µg/L	Quarterly ^(g)	Grab or 24-hour composite
Disinfected reclaimed water	Priority Pollutant Scan	µg/L	Yearly ^(h)	Grab or 24-hour composite

^aGrab samples shall be collected at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures.

^bTurbidity analysis shall be performed by a continuous recording turbidimeter and shall be recorded at least every four hours.

^cTotal residual chlorine analysis shall be performed at the same time as the total coliform sample is collected.

^dAs an alternate method, total coliform bacteria may be monitored using the ONPUG-MUG test (also called Autoanalysis Colilert System) per latest edition of standard methods.

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Page 12 of 47 Permit No. WA0040762

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^e For all monitoring, the Permittee shall use methods that can achieve a method detection level (MDL) equal to 0.1 times the effluent limitation or the most sensitive EPA approved method, whichever is greater (see Appendix A of this permit). If the analytical result for any sample is below the MDL, the Permittee shall report "less than {numeric MDL}" on the DMR. For purposes of averaging results, the Permittee shall use actual values for all values above the MDL and zero for values below the MDL.

^f Continuous means uninterrupted except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance. Sampling shall be taken every four hours when continuous monitoring is not possible.

^g Quarterly is defined as calendar quarters ending the last day of: March, June, September, and December.

^h Yearly is defined as March

C. Monitoring Schedule: Outfall #002 – Centralia Power Canal^(c)

The sampling point for the surface water discharge to the Centralia Power Canal will be the exit from the chlorine contact chamber prior to entering the reclaimed water wet well. The sampling point for total residual chlorine will be in the surface water discharge line from the reclaimed water wet well.

The following constituents shall be monitored at the frequency and with the type of measurement indicated. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report (DMR) Form that no discharge occurred.

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
Secondary effluent	Flow	MGD	Continuous ^(d)	Totalizer
Secondary effluent	BOD₅	mg/L lbs/day	2/week	24-hour composite
Secondary effluent	TSS	mg/L lbs/day	2/week	24-hour composite
Secondary effluent	рН	Standard Units	Daily	Measurement
Secondary effluent	Fecal Coliform Bacteria ^b	cfu/100mL	2/week	Grab ^a
Secondary effluent	Dissolved Oxygen	mg/L	Daily	Measurement
Secondary effluent	Total Residual Chlorine	mg/L	Daily	Grab ^a

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
Secondary effluent	Temperature	°C	Daily	Measurement
Secondary effluent	Hardness (as CaCO ₃)	mg/L	Monthly	Grab*
Secondary effluent	Total Ammonia (as NH3-N)	mg/L	Monthly	24-hour composite
Secondary effluent	Total Metals: Arsenic, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Silver, Zinc	µg/L	Quarterly ^(e)	Grab or 24-hour composite

^aGrab samples shall be collected at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures.

^bTesting for fecal coliform bacteria will not be required as long as each daily result from the total coliform bacteria test for the effluent is less than the monthly average permit limit set for fecal coliform. When any result for total coliform exceeds the monthly limit for fecal coliform, the fecal coliform test shall be performed a minimum of twice a week until each result from the last 7 test for total coliform are less than the fecal coliform monthly limit.

^cFor all monitoring, the Permittee shall use methods that can achieve a method detection level (MDL) equal to 0.1 times the effluent limitation or the most sensitive EPA approved method, whichever is greater (see Appendix A of this permit). If the analytical result for any sample is below the MDL, the permittee shall report "less than {numeric MDL}" on the DMR. For purposes of averaging results, the permittee shall use actual values for all values above the MDL and zero for values below the MDL.

^dContinuous means uninterrupted except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance. Sampling shall be taken every four hours when continuous monitoring is not possible.

^eQuarterly is defined as: March, June, September, and December

D. <u>Monitoring Schedule: Outfall #003 – Nisqually River^(f)</u>

The sampling point for the surface water discharge to the Nisqually River will be the exit from the chlorine contact chamber prior to entering the reclaimed water wet well. The sampling point for total residual chlorine will be in the surface water discharge line from the reclaimed water wet well after SO_2 addition and far enough in the discharge line to allow for the proper SO_2 contact time.

The following constituents shall be monitored at the frequency and with the type of measurement indicated. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report (DMR) Form that no discharge occurred.

Page 14 of 47 Permit No. WA0040762

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
Secondary effluent	Flow ^b	MGD	Continuous ^(g)	Totalizer
Secondary effluent	BOD₅ ^c	mg/L lbs/day	2/week	24-hour composite
Secondary effluent	TSS ^c	mg/L lbs/day	2/week	24-hour composite
Secondary effluent	pH	Standard Units	Daily	Measurement
Secondary effluent	Fecal Coliform Bacteria ^c	cfu/100mL	2/week	Grab ^a
Secondary effluent	Dissolved Oxygen	mg/L	Daily	Measurement
Secondary effluent	Total Residual Chlorine	mg/L	Daily	Grab ^a
Secondary effluent	Temperature	°C	Daily	Measurement
Secondary effluent	Hardness (as CaCO ₃)	mg/L	Monthly	Grab ^a
Secondary effluent	Total Ammonia (as NH ₃ -N) ^d	mg/L	Monthly	Grab ^a
Secondary effluent	Total Lead ^d	μg/L	Monthly	Grab or 24-hour composite
Secondary effluent	Total Metals ^e : Arsenic, Cadmium, Chromium, Copper, Iron, Manganese, Mercury, Nickel, Silver, Zinc	μg/L	Quarterly ^(h)	Grab or 24-hour composite

^aGrab samples shall be collected at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures.

^bThe average daily flow of the discharge (MGD), the maximum day flow of the discharge (MGD), and the total flow discharged (MG), during the reporting period shall be reported on the DMR. The date and time of the start and termination of each discharge shall be reported.

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C. L.	l - Thair Franking Berneda	· · ·	Minimum Sampling	
Category	Farameter	Units	이 가지 않는 것 같아요? 가슴 가슴 통신	Sample Type
			Frequency	이 문양의 영화가의 가장하였다. 영화

^cIf the discharge is less than three days in duration a minimum of one sample shall be taken during the discharge, if the discharge is greater than three days in duration a minimum of two samples shall be taken during the first week and two each following week. All of the samples collected during the seven-day or 30-day period are to be used in determining the averages. If only one sample is collected during the period, it must be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

Testing for fecal coliform bacteria will not be required as long as each daily result from the total coliform bacteria test for the effluent is below the monthly average permit limit set for fecal coliform. When any result for total coliform exceeds the monthly limit for fecal coliform, the fecal coliform test shall be performed a minimum of twice a week until each result from the last 7 test for total coliform are below the fecal coliform monthly limit.

^dA minimum of one sample shall be taken during any discharge. If the discharge is greater than one month in duration samples shall be taken a minimum of once a month. All of the samples collected during the sampling period are to be used in determining the averages. If only one sample is collected during the period, it must be considered the same as the average for that period. The Permittee always has the option of collecting additional samples if appropriate.

^eA minimum of one sample shall be taken during any discharge. If the discharge is greater than three months in duration samples shall be taken a minimum of once every three months. All of the samples collected during the sampling period are to be used in determining the averages. If only one sample is collected during the period

^fFor all monitoring, the Permittee shall use methods that can achieve a method detection level (MDL) equal to 0.1 times the effluent limitation or the most sensitive EPA approved method, whichever is greater (see Appendix A of this permit). If the analytical result for any sample is below the MDL, the Permittee shall report "less than {numeric MDL}" on the DMR. For purposes of averaging results, the Permittee shall use actual values for all values above the MDL and zero for values below the MDL.

^gContinuous means uninterrupted except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance. Sampling shall be taken every four hours when continuous monitoring is not possible.

^hQuarterly is defined as: March, June, September, and December

E. <u>Monitoring Schedule:</u> Ground Water Recharge by Surface Percolation^(a)

The sampling points for ground water monitoring will be the six monitoring wells located at the infiltration area.

Ground water purging and sampling shall follow the protocol described in Chapter 5 of Ecology's Implementation Guidance for the Ground Water Quality Standards (Publication #96-02).

Page 16 of 47 Permit No. WA0040762

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
Monitoring wells	Static well water level elevation	feet above sea level	Quarterly ^(b)	Field measurement
Monitoring wells	Temperature	°C	Quarterly ^(b)	Field measurement
Monitoring wells	Dissolved Oxygen	mg/L	Quarterly ^(b)	Field measurement
Monitoring wells	pН	Standard Units	Quarterly ^(b)	Field measurement
Monitoring wells	Conductivity	umhos/cm	Quarterly ^(b)	Field measurement
Monitoring wells	Nitrate as N	mg/L	Quarterly ^(b)	Grab
Monitoring wells	Nitrite as N	mg/L	Quarterly ^(b)	Grab
Monitoring wells	TKN (as N)	mg/L	Quarterly ^(b)	Grab
Monitoring wells	Total Nitrogen	mg/L	Quarterly ^(b)	TkN + nitrate + nitrite
Monitoring wells	Ammonia as N	mg/L	Quarterly ^(b)	Grab
Monitoring wells	Total Dissolved Solids	mg/L	Quarterly ^(b)	Grab
Monitoring wells	Fecal Coliform Bacteria	cfu/100mL	Quarterly ^(b)	Grab
Monitoring wells	Chloride	mg/L	Quarterly ^(b)	Grab
Monitoring wells	Fluoride	mg/L	Quarterly ^(b)	Grab
Monitoring wells	Dissolved Organic Carbon	mg/L	Quarterly ^(b)	Grab
Monitoring wells	Total Trihalomethanes	µg/L	Quarterly ^(b)	Grab
Monitoring wells	Cations/Anions: Bicarbonate, Calcium, Carbonate, Magnesium, Potassium, Sodium, Sulfate	mg/L	Yearly ^(c)	Grab

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Page 17 of 47 Permit No. WA0040762

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
Monitoring wells	Total Metals: Arsenic, Cadmium, Chromium, Copper, Lead, Manganese, Mercury, Nickel, Silver, Zinc	µg/L	Yearly ^(c)	Grab

^aFor all monitoring, the Permittee shall use methods that can achieve a method detection level (MDL) equal to 0.1 times the effluent limitation or the most sensitive EPA approved method, whichever is greater (see Appendix A of this permit). If the analytical result for any sample is below the MDL, the permittee shall report "less than {numeric MDL}" on the DMR. For purposes of averaging results, the permittee shall use actual values for all values above the MDL and zero for values below the MDL.

^bQuarterly is defined as: March, June, September, and December

^cYearly is defined as March

F. Monitoring Schedule: Influent to Cochrane Park Rapid Infiltration Basins^(a)

The sampling point for the influent to the rapid infiltration basins (RIBs) at Cochrane Park will be from catch basin CS#4 in pond three.

The Permittee shall monitor the influent to the rapid infiltration basins according to the following schedule:

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
Influent to RIBs	Ammonia as N	mg/L	Quarterly ^b	Grab
Influent to RIBs	Chloride	mg/L	Quarterly ^b	Grab
Influent to RIBs	Fecal Coliform	CFU/100 ml	Quarterly ^b	Grab
Influent to RIBs	Nitrate as N	mg/L	Quarterly ^b	Grab
Influent to RIBs	Nitrite as N	mg/L	Quarterly ^b	Grab
Influent to RIBs	TKN	mg/L	Quarterly ^b	Grab
Influent to RIBs	Total Nitrogen	mg/L	Quarterly ^b	TKN + Nitrate + Nitrite
Influent to RIBs	TDS	mg/L	Quarterly ^b	Grab

Page 18 of 47 Permit No. WA0040762

Category Parameter Units	Minimum Sampling Frequency	Sample Type
^a For all monitoring, the Permittee shall use methods that equal to 01 times the effluent limitation of the most ser greater (see Appendix A of this permit). If the analytical Permittee shall report "less than {numeric MDL}" on the Permittee shall use actual values for all values above the M	can achieve a method d nsitive EPA approved r result for any sample is DMR. For purposes of ADL and zero for the val	etection level (MDL) nethod, whichever is below the MDL, the averaging results, the lues below the MDL.
^b Ouarterly is defined as: March, June, September, and De	cember.	

G. Monitoring Schedule: Sludge

The Permittee shall monitor sludge according to the following schedule:

Category	Parameter.	Units	Minimum Sampling Frequency	Sample Type
STEP Septic Tanks	Sludge depth	feet	once every 3 years or as needed	measurement

H. 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.

Ground water sampling shall conform to the latest protocols in the Implementation Guidance for the Ground Water Quality Standards, (Ecology 1996).

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 Code of Federal Regulations (CFR) Part 136, unless otherwise specified in this permit or approved in writing by Ecology.

I. 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 are 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 years.

J. Instrument Calibration

Monitoring devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with the manufacturer's recommendations. Calibration records shall be maintained for at least three years.

The Permittee shall also verify the accuracy of on-line turbidimeters at a minimum frequency of at least once every two weeks against bench-top units.

K. Laboratory Accreditation

All monitoring data required by the Departments of Health and Ecology shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 Washington Administrative Code (WAC). Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters except those listed in Special Condition S2 are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited.

Crop and soils testing has not been included in the accreditation program. Crop and soils data shall be provided by reputable agricultural test lab that is an active participant in a nationally recognized agricultural laboratory proficiency testing program.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee must monitor and report in accordance with the following conditions. Falsification of information submitted to Ecology is a violation of the terms and conditions of this permit.

A. <u>Reporting</u>

The first monitoring period begins on the effective date of the permit. The Permittee must:

- 1. Submit monitoring results each month.
- 2. Summarize, report, and submit monitoring data obtained during each monitoring period on a Discharge Monitoring Report (DMR) form provided, or otherwise approved, by Ecology.
- 3. Submit DMR forms monthly whether or not the facility was discharging. If the facility did not discharge during a given monitoring period, submit the form as required with the words "NO DISCHARGE" entered in place of the monitoring results.
- 4. Ensure that DMR forms are postmarked or received by Ecology no later than the 15th day of the month following the completed monitoring period, unless otherwise specified in this permit.
- 5. Submit priority pollutant analysis data no later than forty-five (45) days following the monitoring.

6. Send report(s) to Ecology at:

Water Quality Permit Coordinator Department of Ecology Southwest Regional Office P.O. Box 47775 Olympia, WA 98504-7775

All laboratory reports providing data for organic and metal parameters must 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. Analytical results from samples sent to a contract laboratory must include information on the chain of custody, the analytical method, QA/QC results, and documentation of accreditation for the parameter.

B. <u>Records Retention</u>

The Permittee must retain records of all monitoring information for a minimum of three years. Such information must 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. The Permittee must extend this period of retention during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

C. <u>Recording of Results</u>

For each measurement or sample taken, the Permittee must 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.
- 6. The results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by Condition S2 of this permit, then the Permittee must include the results of such monitoring in the calculation and reporting of the data submitted in the Permittee's DMR.

E. Reporting Permit Violations

The Permittee must take the following actions when it violates or is unable to comply with any permit condition:

- Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance and correct the problem.
- If applicable, immediately repeat sampling and analysis. Submit the results of any repeat sampling to Ecology within 30 days of sampling.
- 1. Immediate Reporting

The Permittee must report any failure of the disinfection system <u>immediately</u> to the Department of Ecology's Regional Office 24-hour number listed below:

Southwest Regional Office 360-407-6300

The Permittee must report any failure of the disinfection system, any collection system overflows, or any plant bypass discharging to a waterbody used as a source of drinking water <u>immediately</u> to the Department of Ecology and the Department of Health, Drinking Water Program at the numbers listed below:

Southwest Regional Office 360-407-6300 Department of Health Drinking Water 360-521-0323 Program (business hours) 360-481-4901 (after business hours)

2. <u>Twenty-Four (24)-Hour Reporting</u>

The Permittee must report the following occurrences of noncompliance by telephone, to Ecology at 360-407-6300, within 24 hours from the time the Permittee becomes aware of any of the following circumstances:

- a. Any noncompliance that may endanger health or the environment, unless previously reported under subpart 1, above.
- b. Any unanticipated **bypass** that exceeds any effluent limitation in the permit (See Part S4.B., "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 Section S1.A of this permit.
- 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. <u>Report Within Five Days</u>

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 subparts 1 or 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. Waiver of Written Reports

Ecology may waive the written report required in subpart 3, above, on a case-by-case basis upon request if a timely oral report has been received.

5. <u>All Other Permit Violation Reporting</u>

The Permittee must report all permit violations, which do not require immediate or within 24 hours reporting, when it submits monitoring reports for S3.A ("Reporting"). The reports must contain the information listed in paragraph E.3, above. 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.

6. <u>Report Submittal</u>

The Permittee must submit reports to the address listed in S3.

F. Other Reporting

The Permittee must report a spill of oil or hazardous materials in accordance with the requirements of RCW 90.56.280 and chapter 173-303-145. You can obtain further instructions at the following website: http://www.ecy.wa.gov/programs/spills/other/reportaspill.htm.

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 Ecology, it must submit such facts or information promptly.

The Permittee must submit a new application or supplement at least 180 days prior to commencement of discharges, resulting from the activities listed below, which may result

in permit violations. These activities include: any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility.

G. <u>Maintaining a Copy of This Permit</u>

The Permittee must keep a copy of this permit at the facility and make it available upon request to Ecology inspectors.

- H. <u>Reclaimed Water Operational Records</u>
 - 1. Operating records shall be maintained at the reclamation treatment plant or within a central depository within the Permittee's operating agency. These records shall include: records of all analyses performed, records of operational problems, unit process and equipment breakdowns, and diversions to emergency storage or disposal; and all corrective or preventative action taken.
 - 2. Process or equipment failures triggering an alarm that is key to maintaining reliability of reclaimed water quality shall be recorded and maintained as a separate record file. The recorded information shall include the time and cause of failure and corrective actions taken to remediate and prevent reoccurrence.
 - 3. A monthly summary of operating records as specified above shall be submitted with the Discharge Monitoring Report form to the Departments of Ecology and Health at the address listed under S3.A above.
 - 4. Cross Connection Control Report. An annual cross-connection control report shall be submitted to the Departments of Health by a certified Cross-Control Specialist identifying all devices tested and any cross-connection incidents which occurred in the reuse system.

S4. FACILITY LOADING

A. <u>Design Criteria</u>

Flows or waste loadings of the following design criteria for the permitted treatment facility shall not be exceeded:

Average flow for the maximum month:	<u>1.0 MGD</u>
BOD ₅ loading for maximum month:	2,000 lbs/day
TSS loading for maximum month:	<u>430 lbs/day</u>

B. <u>Plans for Maintaining Adequate Capacity</u>

The Permittee shall submit to Ecology a plan and a schedule for continuing to maintain capacity when:

1. The actual flow or waste load reaches 85 percent of any one of the design criteria in S4.A for three consecutive months; or

2. When the projected increase would reach design capacity within five years,

Whichever occurs first. If such a plan is required, it shall contain a plan and schedule for continuing to maintain capacity. The capacity as outlined in this plan must be 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 the objective of maintaining capacity.

- 3. 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.
- 4. Reduction or elimination of excessive infiltration and inflow of uncontaminated ground and surface water into the sewer system.
- 5. Limitation on future sewer extensions or connections or additional waste loads.
- 6. Modification or expansion of facilities necessary to accommodate increased flow or waste load.
- 7. 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 Ecology 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. Notification of New or Altered Sources

The Permittee shall submit written notice to Ecology whenever any new discharge or a substantial change in volume or character of an existing discharge into the Publicly Owned Treatment Works (POTW) is proposed which: (1) would interfere with the operation of, or exceed the design capacity of, any portion of the POTW; (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 POTWs ability to adequately transport and treat the added flow and/or waste load, the quality and volume of effluent to be discharged to the POTW, and the anticipated impact on the Permittee's effluent [40 CFR 122.42(b)].

D. Infiltration and Inflow Evaluation

- 1. The Permittee shall conduct an infiltration and inflow evaluation. Refer to the U.S. EPA publication, *I/I Analysis and Project Certification*, available as Publication No. 97-03 at: Publications Office, Department of Ecology, P.O. Box 47600, Olympia, Washington, 98504-7600. Plant monitoring records may be used to assess measurable infiltration and inflow.
- 2. A report shall be prepared which summarizes any measurable infiltration and inflow. If infiltration and inflow have increased by more than 15 percent from that found in the first report based on equivalent rainfall, the report shall contain a plan and a schedule for: (1) locating the sources of infiltration and inflow; and (2) correcting the problem.
- 3. The report shall be submitted by May 15, 2012, and annually thereafter.

E. <u>Waste load Assessment</u>

The Permittee shall conduct an annual assessment of their flow and waste load and submit a report to Ecology by May 15, 2012, and annually thereafter. The report shall contain the following: an indication of compliance or noncompliance with the permit effluent limitations; a comparison between the existing and design monthly average dry weather and wet weather flows, peak flows, Biochemical Oxygen Demand (BOD), and Total Suspended Solids (TSS) loadings; and (except for the first report) the percentage increase in these parameters since the last annual report. The report shall also state the present and design population or population equivalent, projected population growth rate, and the estimated date upon which the design capacity is projected to be reached, according to the most restrictive of the parameters above. The interval for review and reporting may be modified if Ecology determines that a different frequency is sufficient.

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 a Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

A. <u>Certified Operator</u>

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. <u>O & M Program</u>

The Permittee shall institute an adequate operation and maintenance program for the 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

Page 26 of 47 Permit No. WA0040762

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 Ecology, if possible, 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 its obligations under this permit.

D. <u>Electrical Power Failure</u>

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 430/9-74-001) at the wastewater treatment plant, which requires a backup power source sufficient to operate all vital components and critical lighting and ventilation during peak wastewater flow conditions, except vital components used to support the secondary processes (i.e., mechanical aerators or aeration basin air compressors) need not be operable to full levels of treatment, but shall be sufficient to maintain the biota.

E. <u>Prevent Connection of Inflow</u>

The Permittee shall strictly enforce their sewer ordinances and not allow the connection of inflow (roof drains, foundation drains, etc.) 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, and Ecology 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 Ecology prior to the bypass. The Permittee shall submit prior notice, if possible at least 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. Ecology is properly notified of the bypass as required in Condition S3E of this permit.
- 3. Bypass which is anticipated and has the potential to result in noncompliance of this permit.

The Permittee shall notify Ecology at least 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 State Environmental Policy Act (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.

Ecology will consider the following prior to issuing an administrative order for this type bypass:

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

Page 28 of 47 Permit No. WA0040762

- 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, Ecology 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 Ecology under Revised Code of Washington (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. The Operation and Maintenance Manual for the facility shall include the following reclaimed water information:

- 1. An alarm condition response plan to ensure that no untreated or inadequately treated wastewater will be delivered to the use areas.
- 2. A discussion of the cross-connection control and inspection program, including who will be responsible for compliance and testing of cross connection control devices.
- 3. Operational strategies for the reclaimed water use areas.

H. Maintenance of STEP Tanks

All tanks shall be inspected and measured at least once every three years. The contents of the tanks shall be removed when the clear space is one-third of the fluid depth or when the scum layer is within three inches of the bottom of the scum baffle.

I. <u>Removal of Sludge from the Equalization Basin</u>

Sludge shall be removed from the equalization basin when the average depth reaches one foot. If sludge accumulates to a depth greater than two and a half feet in any area of the basin, the solids shall be removed from the accumulated area or from the entire pond.

J. Reclaimed Water System Maintenance

The Permittee shall institute an adequate operation and maintenance (O&M) program for the entire reclamation facility. Maintenance records shall be maintained on all major electrical and mechanical components of the treatment plant, collection, distribution and use areas. 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.
- 1. At all times, the reclamation facility, distribution and use areas shall be maintained to ensure that all equipment is kept in a reliable operating condition.
- 2. A chlorine residual of at least 0.5 mg/l shall be maintained in the reclaimed water during conveyance from the reclamation plant to the use area unless waived by the Departments of Health and Ecology.
- 3. Maintenance of a chlorine residual is not required in reclaimed water impoundments and storage ponds. At the discretion of the Departments of Health and Ecology, chlorine residual may not be required in reclaimed water distributed from storage ponds.

S6. **PRETREATMENT**

A. <u>General Requirements</u>

The Permittee shall work with Ecology to ensure that all commercial and industrial users of the POTW 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. <u>Wastewater Discharge Permit Required</u>

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 Ecology in accordance with Chapter 90.48 RCW and Chapter 173-216 WAC, as amended.

- C. Identification and Reporting of Existing, New, and Proposed Industrial Users
 - 1. The Permittee shall take continuous, routine measures to identify all existing, new, and proposed SIUs and potential significant industrial users (PSIUs) discharging or proposing to discharge to the Permittee's sewerage system (see Appendix B of Fact Sheet for definitions).
 - 2. Within 30 days of becoming aware of an unpermitted existing, new, or proposed industrial user who may be an SIU, the Permittee shall notify such user by registered mail that, if classified as an SIU, they shall be required to apply to Ecology and obtain a state waste discharge permit. A copy of this notification letter shall also be sent to Ecology within this same 30-day period.
 - 3. The Permittee shall also notify all PSIUs, as they are identified, that if their classification should change to an SIU, they shall be required to apply to Ecology for a State Waste Discharge Permit within 30 days of such change.
- D. <u>Annual Submittal of List of Industrial Users</u>

The Permittee shall submit annually to Ecology a list summarizing all existing and proposed SIUs and PSIUs. This list must be received by Ecology by February 15, 2012, and annually thereafter.

Page 30 of 47 Permit No. WA0040762

E. Duty to Enforce Discharge Prohibitions

- 1. In accordance with 40 CFR 403.5(a), the Permittee shall not authorize or knowingly allow the discharge of any pollutants into its POTW which cause pass through or interference, or which otherwise violates general or specific discharge prohibitions contained in 40 CFR Part 403.5 or WAC-173-216-060.
- 2. The Permittee shall not authorize or knowingly allow the introduction of any of the following into their treatment works:
 - a. Pollutants which create a fire or explosion hazard in the POTW (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).
 - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, or greater than 11.0 standard units, unless the works are specifically designed to accommodate such discharges.
 - c. Solid or viscous pollutants in amounts that could cause obstruction to the flow in sewers or otherwise interfere with the operation of the POTW.
 - d. Any pollutant, including oxygen demanding pollutants, (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW.
 - e. Petroleum oil, nonbiodegradable cutting oil, or products of mineral origin in amounts that will cause interference or pass through.
 - f. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity which may cause acute worker health and safety problems.
 - g. Heat in amounts that will inhibit biological activity in the POTW resulting in interference but in no case heat in such quantities such that the temperature at the POTW headworks exceeds 40°C (104°F) unless
 Ecology, upon request of the Permittee, approves, in writing, alternate temperature limits.
 - h. Any trucked or hauled pollutants, except at discharge points designated by the Permittee.
 - i. Wastewaters prohibited to be discharged to the POTW by the Dangerous Waste Regulations (Chapter 173-303 WAC), unless authorized under the Domestic Sewage Exclusion (WAC 173-303-071).
- 3. All of the following are prohibited from discharge to the POTW unless approved in writing by Ecology under extraordinary circumstances (such as a lack of direct discharge alternatives due to combined sewer service or the need to augment sewage flows due to septic conditions):

- a. Noncontact cooling water in significant volumes.
- b. Stormwater, and other direct inflow sources.
- c. Wastewaters significantly affecting system hydraulic loading, which do not require treatment, or would not be afforded a significant degree of treatment by the system.
- 4. The Permittee shall notify Ecology if any industrial user violates the prohibitions listed in this section.

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. OUTFALL EVALUATIONS

<u>Outfall #001 Reclaimed Water Distribution</u> - The Permittee shall inspect public uses and impoundments of reclaimed water on at least a daily basis and private uses and impoundment's on at least a quarterly basis.

<u>Outfall #002 Centralia Power Canal</u> - The Permittee shall visually inspect the discharge location once per month and verify the integrity and continued function of the side bank discharge into the Power Canal at least once per year.

<u>Outfall #003 Nisqually River</u> - The Permittee shall visually inspect the discharge location once per month and the Tideflex valve during low flow conditions in the Nisqually River at least once per year, to verify its integrity and continued function.

The Permittee shall note the inspections on each month's DMR in the notes section.

S9. RECLAIMED WATER DISTRIBUTION AND USE

A. <u>Authorized Uses and Locations</u>

Beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to distribute water reclaimed in accordance with the terms and conditions of this permit for authorized uses.

The distribution by the Permittee of reclaimed water that does not meet the treatment, water quality and monitoring requirements established in this permit or the use of reclaimed water other than for authorized uses and locations listed in a Department of Health and Ecology approved reclaimed water engineering report shall constitute a violation of the terms and conditions of this permit.

The Permittee may produce and distribute Class A reclaimed water to public or private users for purposes such as, but not limited to, landscape irrigation, constructed wetlands discharge, ground water recharge, and industrial and commercial uses, at locations throughout the City as described the Department of Health and Ecology approved engineering report.

B. <u>Water Reuse Plan</u>

The Permittee shall maintain an up-to-date water reuse plan, which contains a summary description of the proposed water reuse system from the approved Engineering Report. The Permittee shall review the plan at least annually and the plan shall be updated whenever new uses or users are added to the distribution system. A copy of the revised plan shall be submitted to Ecology and Health. The plan shall contain, but not be limited to, the following:

- 1. Description of the reuse distribution system;
- 2. Identification of uses, users, location of reuse sites.
- 3. Evaluation of reuse sites, estimated volume of reclaimed water use, means of application, and for irrigation or surface percolation uses, the application rates, water balance, expected agronomic uptake, and potential to impact ground water or surface water at the site. Background water quality and hydro geological information necessary to evaluate potential water quality impacts is requested for surface percolation projects.

C. <u>Bypass Prohibited</u>

There shall be no bypassing of untreated or partially treated wastewater from the reclamation plant or any intermediate unit processes to the distribution system or point of use at any time. All reclaimed water being distributed for beneficial use must meet Class A requirements at all times. Water not meeting Class A must be retained for additional treatment by diversion to a bypass storage lagoon or discharged to an authorized wastewater outfall.

The Departments of Ecology and Health shall be notified by telephone within 24 hours of any diversion to a bypass storage lagoon or authorized outfall. Substandard wastewater shall not be discharged to the reclaimed water distribution system or use areas without specific approval from the Departments of Health and Ecology

D. <u>Reliability</u>

The Permittee shall maintain the highest reliability class as described in the Water Reclamation and Reuse Standards which require one of the following features for each of the critical reclamation treatment unit processes of oxidation, coagulation, filtration and disinfection:

- 1. Alarms and standby power source
- 2. Alarms and automatically actuated short-term (24-hour) storage or disposal provisions.
- 3. Automatically actuated long-term storage or disposal provisions for treated wastewater.

E. <u>Use Area Responsibilities</u>

- 1. A standard notification sign shall be developed by the Permittee using colors and verbiage approved by the state Department of Health. The signs shall be used in all reclaimed water use areas, consistent with the <u>Water Reclamation and Reuse Standards</u>.
- 2. Reclaimed water use, including runoff and spray shall be confined to the designated and approved use area.
- 3. The Permittee shall control industrial and toxic discharges to the sanitary sewer that may affect reclaimed water quality through either a delegated pretreatment program with Ecology or assuring all applicable discharges have permits issued under the Water Pollution Control Act, Chapter 90.48 RCW, and the State Waste Discharge Permit Regulation, Chapter 173-216 WAC.
- 4. Where the reclaimed water production, distribution and use areas are under direct control of the Permittee, the Permittee shall maintain control and be responsible for all facilities and activities inherent to the production, distribution and use of the reclaimed water. The Permittee shall ensure that the reuse system operates as approved by the Departments of Health and Ecology.

F. Service and Use Area Agreement

Where the reclaimed water additional treatment, distribution system, or use area is not under direct control of the Permittee:

- 1. The person(s) who provides additional treatment, distributes, owns, or maintains control over the reclaimed water use area is responsible for reuse facilities and activities inherent to the production, distribution or use of the reclaimed water to ensure that the system(s) operate as approved by the Departments of Health and Ecology in accordance with this Permit.
- 2. Reclaimed water uses, including runoff and spray, shall be confined to the designated and approved use areas.
- 3. A binding Service and Use Area Agreement among the parties involved is required to ensure that construction, operation, maintenance, and monitoring meet all requirements of the Departments of Health and Ecology. This agreement must be consistent with the requirements of the <u>Water Reclamation</u> and <u>Reuse Standards</u>, 1997. A copy of each Service and Use Area Agreement must be submitted to and approved by the Departments of Health and Ecology prior to implementation.
- 4. The Service and Use Area Agreement shall provide the Permittee with authority to terminate service of reclaimed water to a customer violating the State Water Reclamation and Reuse Standards and restrictions outlined in the Service and Use Area Agreement. The Service and Use Area Agreements shall be approved by the Departments of Health and Ecology prior to the distribution of any reclaimed water.

Page 34 of 47 Permit No. WA0040762

- 5. No reclaimed water shall be distributed by the Permittee without a reclaimed water service and use agreement approved by the Departments of Health and Ecology.
- G. <u>Irrigation Use</u>
 - 1. For any irrigation use of reclaimed water, the hydraulic loading rate of reclaimed water shall be determined based on a detailed water balance analysis. The calculated loading rate(s) and the parameters and methods used to determine the loading rate(s) shall be submitted to Ecology for approval.
 - 2. There shall be no runoff of reclaimed water applied to land by spray irrigation to any surface waters of the state or to any land not authorized by approved use agreement.
 - 3. There shall be no application of reclaimed water for irrigation purposes when the ground is saturated or frozen.
 - 4. The reclaimed water shall not be applied to the irrigation lands in quantities that:
 - a. Significantly reduce or destroy the long-term infiltration rate of the soil.
 - b. Cause long-term anaerobic conditions in the soil.
 - c. Cause ponding of reclaimed water and produce objectionable odors or support insects or vectors.
 - d. Cause leaching losses of constituents of concern beyond the treatment zone or in excess of the approved design. Constituents of concern are constituents in the reclaimed water, partial decomposition products, or soil constituents that would alter ground water quality in amounts that would affect current and future beneficial uses.

The Permittee shall maintain all irrigation agreements for lands not owned for the duration of the permit. The Permittee shall inform the Departments of Health and Ecology in writing of any proposed changes to existing agreements.

- H. Surface Percolation Use
 - 1. For any surface percolation of reclaimed water the hydraulic loading rate shall be determined based on a detailed water balance. The calculated loading rate(s) and the parameters and methods used to determine the loading rates shall be submitted to Ecology for approval.
 - 2. Background/natural groundwater quality must be documented and sampling locations identified and approved by Ecology.
 - 3. Surface waters shall not be impaired due to the infiltration of reclaimed water.

Page 35 of 47 Permit No. WA0040762

S10. GROUND WATER SAMPLING PLAN

5

By August 1, 2012, Yelm will submit a written Ground Water Sampling Plan for Ecology's review and approval. The Sampling Plan must include a step by step description of the procedures to be followed by sampling staff during each ground water sampling event. The Plan must address the elements identified in Publication #96-02, *Implementation Guidance for the Ground Water Quality Standards*, Section 5.9, Sampling and Analytical Protocol, and follow EPA sampling guidance. Upon request Ecology will provide technical assistance to Yelm in developing the sampling plan.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to Ecology 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 Ecology 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 Ecology.
 - 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 Ecology 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 Ecology, 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 Ecology'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. Ecology 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 Ecology determines that modification or revocation and reissuance is appropriate.
 - 2. Ecology 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 PLANNED CHANGES**

The Permittee shall, as soon as possible, but no later than 60 days prior to the proposed changes, give notice to Ecology 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, and the submittal of a new application or supplement to the existing application, along with required engineering plans and reports, 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.

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 Ecology for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications shall be submitted at least 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 by February 1, 2016.

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 Ecology.

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 Ecology at least 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. Ecology 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 Ecology, within a reasonable time, all information which Ecology 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 Ecology upon request, copies of records required to be kept by this permit.

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

Ecology 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 Ecology.

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 \$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 \$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 S4.C of this permit.

In any enforcement preceding 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 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 years, or by both.

G21. REPORTING ANTICIPATED NON-COMPLIANCE

The Permittee shall give advance notice to Ecology by submission of a new application or supplement thereto at least 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 non critical water quality periods and carried out in a manner approved by Ecology.

G22. 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 Ecology, it shall promptly submit such facts or information.

G23. 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 14 days following each schedule date.

Page 42 of 47 Permit No. WA0040762

APPENDIX A

EFFLUENT CHARACTERIZATION FOR POLLUTANTS THIS LIST INCLUDES EPA REQUIRED POLLUTANTS (PRIORITY POLLUTANTS) AND SOME ECOLOGY PRIORITY TOXIC CHEMICALS (PBTs)

The following table specifies analytical methods and levels to be used for effluent characterization in NPDES and State waste discharge permits. This appendix specifies effluent characterization requirements of the Department of Ecology unless other methods are specified in the body of this permit.

This permit specifies the compounds and groups of compounds to be analyzed. Ecology may require additional pollutants to be analyzed within a group. The objective of this appendix is to reduce the number of analytical "non-detects" in permit-required monitoring and to measure effluent concentrations near or below criteria values where possible at a reasonable cost. If a Permittee knows that an alternate, less sensitive method (higher DL and QL) from 40 CFR Part 136 is sufficient to produce measurable results in their effluent, that method may be used for analysis.

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) ¹ µg/L unless specified	Quantitation Level (QL) ² µg/L unless specified
C	ONVENTIONALS		
Biochemical Oxygen Demand	SM5210-B		2 mg/L
Chemical Oxygen Demand	SM5220-D		10 mg/L
Total Organic Carbon	SM5310-B/C/D		1 mg/L
Total Suspended Solids	SM2540-D		5 mg/L
Total Ammonia (as N)	SM4500-NH3-		0.3 mg/L
	GH		
Flow	Calibrated device		
Dissolved oxygen	4500-OC/OG		0.2 mg/L
Temperature (max. 7-day avg.)	Analog recorder		
_	or Use micro-		
	recording devices		0.2° C
	known as		
	thermistors		
pH	SM4500-H ⁺ B	N/A	N/A
NOI	NCONVENTIONAL	"S	
Total Alkalinity	SM2320-B		5 mg/L as CaCo3
Chlorine, Total Residual	4500 Cl G		50.0
Color	SM2120 B/C/E		10 color unit
Fecal Coliform	SM	N/A	N/A
	9221D/E,9222		
Fluoride (16984-48-8)	SM4500-F E	25	100
Nitrate-Nitrite (as N)	4500-NO3-		100
	E/F/H		
Nitrogen, Total Kjeldahl (as N)	4500-NH3-		300
	C/E/FG		

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) ¹ µg/L unless specified	Quantitation Level (QL) ² µg/L unless specified
Ortho-Phosphate (PO ₄ as P)	4500- PE/PF	3	10
Phosphorus, Total (as P)	4500-PE/PF	3	10
Oil and Grease (HEM)	1664A	1.400	5.000
Salinity	SM2520-B		3 PSS
Settleable Solids	SM2540 -F		100
Sulfate (as mg/L SO ₄)	SM4110-B		200
Sulfide (as mg/L S)	4500-S ² F/D/E/G		200
Sulfite (as mg/L SO ₃)	SM4500-SO3B		2000
Total dissolved solids	SM2540 C		20 mg/L
Total Hardness	2340B		200 as CaCO3
Aluminum, Total (7429-90-5)	200.8	2.0	10
Barium Total (7440-39-3)	200.8	0.5	2.0
Boron Total (7440-42-8)	200.8	2.0	10.0
Cobalt, Total (7440-48-4)	200.8	0.05	0.25
Iron, Total (7439-89-6)	200.7	12.5	50
Magnesium, Total (7439-95-4)	200.7	10	50
Molybdenum, Total (7439-98- 7)	200.8	0.1	0.5
Manganese, Total (7439-96-5)	200.8	0.1	0.5
Tin, Total (7440-31-5)	200.8	0.3	1.5
METALS, CY	ANIDE & TOTAL	PHENOLS	
Antimony, Total (7440-36-0)	200.8	0.3	1.0
Arsenic, Total (7440-38-2)	200.8	0.1	0.5
Beryllium, Total (7440-41-7)	200.8	0.1	0.5
Cadmium, Total (7440-43-9)	200.8	0.05	0.25
Chromium (hex) dissolved (18540-29-9)	SM3500-Cr EC	0.3	1.2
Chromium, Total (7440-47-3)	200.8	0.2	1.0
Copper, Total (7440-50-8)	200.8	0.4	2.0
Lead, Total (7439-92-1)	200.8	0.1	0.5
Mercury, Total (7439-97-6)	1631E	0.0002	0.0005
Nickel, Total (7440-02-0)	200.8	0.1	0.5
Selenium, Total (7782-49-2)	200.8	1.0	1.0
Silver, Total (7440-22-4)	200.8	0.04	0.2
Thallium, Total (7440-28-0)	200.8	0.09	0.36
Zinc, Total (7440-66-6)	200.8	0.5	2.5
Cyanide, Total (57-12-5)	335.4	2	10
Cyanide, Weak Acid Dissociable	SM4500-CN I	2	10
Phenols, Total	EPA 420.1		50
	DIOXIN		
2,3,7,8-Tetra-Chlorodibenzo-P- Dioxin (176-40-16)	1613B	1.3 pg/L	5 pg/L
VOLA	TILE COMPOUN	DS	

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Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) ¹ µg/L unless specified	Quantitation Level (QL) ² µg/L unless specified
Acrolein (107-02-8)	624	5	10
Acrylonitrile (107-13-1)	624	1.0	2.0
Benzene (71-43-2)	624	1.0	2.0
Bromoform (75-25-2)	624	1.0	2.0
Carbon tetrachloride (56-23-5)	624/601 or SM6230B	1.0	2.0
Chlorobenzene (108-90-7)	624	1.0	2.0
Chloroethane (75-00-3)	624/601	1.0	2.0
2-Chloroethylvinyl Ether (110- 75-8)	624	1.0	2.0
Chloroform (67-66-3)	624 or SM6210B	1.0	2.0
Dibromochloromethane (124- 48-1)	624	1.0	2.0
1,2-Dichlorobenzene (95-50-1)	624	1.9	7.6
1,3-Dichlorobenzene (541-73- 1)	624	1.9	7.6
1,4-Dichlorobenzene (106-46- 7)	624	4.4	17.6
Dichlorobromomethane (75-27-4)	624	1.0	2.0
1,1-Dichloroethane (75-34-3)	624	1.0	2.0
1,2-Dichloroethane (107-06-2)	624	1.0	2.0
1,1-Dichloroethylene (75-35-4)	624	1.0	2.0
1,2-Dichloropropane (78-87-5)	624	1.0	2.0
1,3-dichloropropylene (mixed isomers) (542-75-6)	624	1.0	2.0
Ethylbenzene (100-41-4)	624	1.0	2.0
Methyl bromide (74-83-9) (Bromomethane)	624/601	5.0	10.0
Methyl chloride (74-87-3) (Chloromethane)	624	1.0	2.0
Methylene chloride (75-09-2)	624	5.0	10.0
1,1,2,2-Tetrachloroethane (79- 34-5)	624	1.9	2.0
Tetrachloroethylene (127-18-4)	624	1.0	2.0
Toulene (108-88-3)	624	1.0	2.0
1,2-Trans-Dichloroethylene (156-60-5) (Ethylene dichloride)	624	1.0	2.0
1,1,1-Trichloroethane (71-55-6)	624	1.0	2.0
1,1,2-Trichloroethane (79-00-5)	624	1.0	2.0
Trichloroethylene (79-01-6)	624	1.0	2.0
Vinyl chloride (75-01-4)	624/SM6200B	1.0	2.0

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Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) ¹ µg/L unless specified	Quantitation Level (QL) ² µg/L unless specified
2-Chlorophenol (95-57-8)	625	1.0	2.0
2.4-Dichlorophenol (120-83-2)	625	0.5	1.0
2.4-Dimethylphenol (105-67-9)	625	0.5	1.0
$\frac{2.7 - D m cuty phenol (105 - 07 - 0)}{4.6 - dinitro-o-cresol (534 - 52 - 1)}$	625/1625B	1.0	2.0
(2-methyl-4.6 -dinitronhenol)	025/10250	. 1.0	2.0
2.4 dinitrophenol (51-28-5)	625	1.0	2.0
2-Nitrophenol (88-75-5)	625	0.5	1.0
4-nitronhenol (100-02-7)	625	0.5	1.0
Parachlorometa cresol (50,50	625	1.0	2.0
	025	1.0	2.0
(A chloro 3 methylphenol)			
Pentechlorophonel (87.86.5)	625	0.5	1.0
Dhanal (109.05.2)	625	0.5	1.0
$\frac{2}{2} \frac{1}{2} \frac{1}$	62.5	2.0	4.0
2,4,6-1 richlorophenol (88-06-2)		2.0	4.0
BASE/NEUTRAL COMPO	UNDS (compounds)	in bold are EC	cology PBIs)
Acenaphthene (83-32-9)	625	0.2	0.4
Acenaphthylene (208-96-8)	625	0.3	0.6
Anthracene (120-12-7)	625	0.3	0.6
Benzidine (92-87-5)	625	12	24
Benzyl butyl phthalate (85-68-	625	0.3	0.6
7)			
Benzo(<i>a</i>)anthracene (56-55-3)	625	0.3	0.6
Benzo(j)fluoranthene (205-82- 3)	625	0.5	1.0
Benzo(r,s,t)pentaphene (189- 55-9)	625	0.5	1.0
Benzo(a)pyrene (50-32-8)	610/625	0.5	1.0
3,4-benzofluoranthene (Benzo(b)fluoranthene) (205- 99-2)	610/625	0.8	1.6
11,12-benzofluoranthene (Benzo(k)fluoranthene) (207- 08-9)	610/625	0.8	1.6
Benzo(ghi)Perylene (191-24-2)	610/625	0.5	1.0
Bis(2-chloroethoxy)methane (111-91-1)	625	5.3	21.2
Bis(2-chloroethyl)ether (111- 44-4)	611/625	. 0.3	1.0
Bis(2-chloroisopropyl)ether (39638-32-9)	625	0.3	0.6
Bis(2-ethylhexyl)phthalate (117- 81-7)	625	0.1	0.5
4-Bromophenyl phenyl ether (101-55-3)	625	0.2	0.4

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Page 46 of 47 Permit No. WA0040762

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) ¹ µg/L unless specified	Quantitation Level (QL) ² µg/L unless specified
2-Chloronaphthalene (91-58-7)	625	0.3	0.6
4-Chlorophenyl phenyl ether (7005-72-3)	625	0.3	0.5
Chrysene (218-01-9)	610/625	0.3	0.6
Dibenzo (a,j)acridine (224-42-	610M/625M	2.5	10.0
0)			
Dibenzo (a,h)acridine (226-36- 8)	610M/625M	2.5	10.0
Dibenzo(a-h)anthracene (53-70- 3)(1,2,5,6- dibenzanthracene)	625	0.8	1.6
Dibenzo(a,e)pyrene (192-65-4)	610M/625M	2.5	10.0
Dibenzo(a,h)pyrene (189-64-0)	625M	2.5	10.0
3,3-Dichlorobenzidine (91-94-	605/625	0.5	1.0
Diethyl phthalate (84-66-2)	625	1.9	7.6
Dimethyl phthalate (131-11-3)	625	1.6	6.4
Di-n-butyl phthalate (84-74-2)	625	0.5	1.0
2,4-dinitrotoluene (121-14-2)	609/625	0.2	0.4
2,6-dinitrotoluene (606-20-2)	609/625	0.2	0.4
Di-n-octyl phthalate (117-84-0)	625	0.3	0.6
1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	1625B	5.0	20
Fluoranthene (206-44-0)	625	0.3	0.6
Fluorene (86-73-7)	625	0.3	0.6
Hexachlorobenzene (118-74-1)	612/625	0.3	0.6
Hexachlorobutadiene (87-68-3)	625	0.5	1.0
Hexachlorocyclopentadiene (77-47-4)	1625B/625	0.5	1.0
Hexachloroethane (67-72-1)	625	0.5	1.0
Indeno(<i>1,2,3-cd</i>)Pyrene (193- 39-5)	610/625	0.5	1.0
Isophorone (78-59-1)	625	0.5	1.0
3-Methyl cholanthrene (56- 49-5)	625	2.0	8.0
Naphthalene (91-20-3)	625	0.3	0.6
Nitrobenzene (98-95-3)	625	0.5	1.0
N-Nitrosodimethylamine (62- 75-9)	607/625	2.0	4.0
N-Nitrosodi-n-propylamine (621-64-7)	607/625	0.5	1.0
N-Nitrosodiphenylamine (86- 30-6)	625	0.5	1.0
Pervlene (198-55-0)	625	1.9	7.6

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Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) ¹ µg/L unless specified	Quantitation Level (QL) ² µg/L unless specified
Phenanthrene (85-01-8)	625	0.3	0.6
Pyrene (129-00-0)	625	0.3	0.6
1,2,4-Trichlorobenzene (120- 82-1)	625	0.3	0.6
P	ESTICIDES/PCBs		
Aldrin (309-00-2)	608	0.025	0.05
alpha-BHC (319-84-6)	608	0.025	0.05
beta-BHC (319-85-7)	608	0.025	0.05
gamma-BHC (58-89-9)	608	0.025	0.05
delta-BHC (319-86-8)	608	0.025	0.05
Chlordane (57-74-9)	608	0.025	0.05
4,4'-DDT (50-29-3)	608	0.025	0.05
4,4'-DDE (72-55-9)	608	0.025	0.0510
4,4' DDD (72-54-8)	608	0.025	0.05
Dieldrin (60-57-1)	608	0.025	0.05
alpha-Endosulfan (959-98-8)	608	0.025	0.05
beta-Endosulfan (33213-65-9)	608	0.025	0.05
Endosulfan Sulfate (1031-07-8)	608	0.025	0.05
Endrin (72-20-8)	608	0.025	0.05
Endrin Aldehyde (7421-93-4)	608	0.025	0.05
Heptachlor (76-44-8)	608	0.025	0.05
Heptachlor Epoxide (1024-57- 3)	608	0.025	0.05
PCB-1242 (53469-21-9)	608	0.25	0.5
PCB-1254 (11097-69-1)	608	• 0.25	0.5
PCB-1221 (11104-28-2)	608	0.25	0.5
PCB-1232 (11141-16-5)	608	0.25	0.5
PCB-1248 (12672-29-6)	608	0.25	0.5
PCB-1260 (11096-82-5)	608	0.13	0.5
PCB-1016 (12674-11-2)	608	0.13	0.5
Toxaphene (8001-35-2)	608	0.24	0.5

1. <u>Detection level (DL)</u> or detection limit means the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure given in 40 CFR part 136, Appendix B.

<u>2. Quantitation Level (QL)</u> is equivalent to EPA's Minimum Level (ML) which is defined in 40 CFR Part 136 as the minimum level at which the entire GC/MS system must give recognizable mass spectra (background corrected) and acceptable calibration points. These levels were published as proposed in the Federal Register on March 28, 1997.

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1B: YMC and City Development Guidelines

Chapter 13.08 SEWER SYSTEM

Sections:	
<u>13.08.010</u>	Definitions.
<u>13.08.020</u>	Use of municipal sewer.
<u>13.08.030</u>	Application for sewer service.
<u>13.08.040</u>	STEP sewer connection permit.
<u>13.08.050</u>	Collection lines.
<u>13.08.060</u>	Inspections and compliance with standards.
<u>13.08.070</u>	Unlawful acts.
<u>13.08.080</u>	Prohibited uses.
<u>13.08.090</u>	Sewer service charges.
<u>13.08.095</u>	Monthly sewer fees.
<u>13.08.100</u>	Operational authority.
<u>13.08.105</u>	Adjustment of sewer bill.
<u>13.08.110</u>	Violations – Penalties.

13.08.010 Definitions.

"As-built" or "as-built drawing" means a drawing showing the horizontal and vertical location of the improvements as actually constructed; showing invert elevations, slopes of pipes, location of the pipes, tanks, controls, valves, depths of cover, type of material and any other feature different than shown on the design drawing.

"Assess" means to establish an amount or rate for the value of required improvements, fees or charges that are due for services provided which may become a lien on the property receiving such improvements or services.

"BOD" is the abbreviation for "biochemical oxygen demand" which means the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five days at 20 degrees centigrade, expressed in parts per million by weight; provided, that, in the event an alternative definition is utilized by or within the terms of a permit issued by a governmental agency under which the treatment system is required to operate, then such definition shall be deemed incorporated herein by reference.

"City of Yelm department of public works" or "public works" means the sewer function of the city and the rules, regulations, boundaries, etc., relating to such sewer function. See "director."

"City standards" means the official design and engineering specifications of the city adopted by the city council and applying to the construction of facilities under the city's jurisdiction.

"Collection lines" means a pressure or gravity sewage conveyance line and appurtenances as defined from time to time by the city standards.

Commercial Waste. See "industrial/commercial waste."

"Cover" means the depth of earth material lying between the top of the sewer and the finished grade immediately above it.

"Director," when utilized within this chapter, refers to the director of public works/health officer or his/her designee.

"Disabled citizen" means a permanently disabled head of household whose combined income from all sources does not exceed income levels as established or amended by resolution of the city council.

"Down spout" means the leader, whether pipe, chain or otherwise, above ground which is installed to conduct water from the roof gutter.

"Drain" means any type of conduction of waste or surplus liquids.

"Equivalent residential unit" or "ERU" means the unit of measurement determined by that quantity of flow associated with a single residential household as defined by YMC <u>13.08.095</u>.

"Garbage" means solid waste which includes, but is not limited to, matter originating from the preparation, cooking and dispensing of food; from handling, sale and storing of produce; from public places or from private ownership.

"Health officer" means the official responsible for the public health of the citizens of Yelm or his/her designee. See "director."

"House drain" or "building drain" means the pipe used for conveying sewage from the building to the clean-out or to a point two and one-half feet beyond the outer line of any footing, piling, building support or porch under which it may run; whether such drain consists of one line extending from the building or of two or more such lines.

"Industrial/commercial waste" means the wastes from an industrial or commercial process, as distinguished from sanitary sewage.

"Licensed sewer contractor" means any contractor licensed by the state of Washington who is duly registered as a specialty contractor or a general contractor, and as such is licensed to construct, install, repair, reconstruct or excavate any sewers and to connect any building sewer to such public sewers, and who possesses a valid city business license.

Maintenance Manager. See "director."

"Municipal sewer service area" or "sewer service area" means the geographic area defined in the city's comprehensive sewer plan in which sewer service is currently available and planned to be served with sewer service in the future.

"Municipal sewer system" means the city's sewer system and includes collectively: the STEP system, collection lines, treatment plant, discharge piping and outfall piping.

"NPDES" is an abbreviation for National Pollution Discharge Elimination System which is a federal wastewater discharge permitting system that establishes discharge limits for facilities discharging wastewater to waters of the United States of America.

"Occupant" means any person in physical possession of the building or structure to which sewer service is available, whether the owner, tenant or other person holding a possessory interest.

"On-site" means that the majority of the component parts of a wastewater collection or soil absorption system are located on the private property where the wastewater is generated.

"Owner" means any person who holds fee title to the subject property.

"Person" means any individual, firm, company, association, society, corporation or group.

"pH" means the logarithm of the reciprocal of the weight of hydrogen ions in grams per liter of solution.

"Pretreatment ordinance" means an ordinance adopted by the city addressing the type or level of treatment that may be required prior to the discharge of sanitary sewage into the STEP system.

"Primary treated wastewater" means wastewater that has been treated by the septic tank.

"Public place" or "public area" means any space dedicated to or acquired for the use of the general public or utilized with the permission of the owner or occupant on a continuing basis by the general public.

"Rate reduction application procedure" means the application procedure set forth in YMC 13.04.320.

"Sanitary sewage" means the combination of the water-carried wastes from residences, business buildings, institutions, commercial and industrial establishments, which wastes contain polluted matter subject to treatment at the sewage treatment plant, i.e., sanitary sewer.

"Sanitary sewer system" means an integrated system of piping, pumps, valving and related structures constructed for the purpose of collecting and conveying domestic wastewater from sources to points of treatment.

"Septic tank" means a tank designed to provide primary treatment of the wastewater, and sized according to the city's Technical Specifications STEP Onsite System. See "STEP tank."

"Sewer" means a pipe or conduit for conveyance of wastewater, and may be either gravity or pressure flow.

Sewer Collection System. See "sanitary sewer system."

Sewer Service Area. See "municipal sewer service area."

"Sewer system" means the treatment plant, outfall, collection lines and STEP system as defined herein.

Shall – May. For purposes of this code, "shall" shall be deemed to be mandatory and "may" permissive, unless the circumstances of the utilization thereof mandate otherwise.

"Side sewers" means the sewer pipe from the building drain to the STEP or septic tank serving the particular building, beginning at a single discharge point two and one-half feet outside the foundation wall, or at the clean-out if closer than two and one-half feet outside the foundation wall and ending at the inlet to the STEP or septic tank.

"Site plot" or "site map" means a map of the side sewer location retained by the city in conjunction with any permit; the site plot or site map shall serve as a record of all matters pertaining to such permit.

"Slug" means any discharge of water, sewage or commercial/industrial wastewater which, for any period longer than 15 minutes, has a flow rate or concentration of any given constituent that exceeds more than five times the average 24-hour flow rate or concentration of normal operation.

"Soil absorption system" means a system designed to percolate primary treated wastewater into soil through the use of a drainfield, mound system or other land disposal system approved by the Thurston County health department.

"Standard participation contract" means the form of contract required by this code to be entered into before properties which have not yet been connected to or assessed for sewers or do not otherwise qualify for sewer service may nevertheless use the public sewers of the city.

"STEP system" means all facilities from the building drain to the sewer collection lines including: the STEP tank, pump, screens, controls, alarms, electrical breakers, the effluent line, including the pipe, valves and valve box, and all miscellaneous appurtenances from the STEP tank to the sewer collection line.

"STEP tank" means a septic tank effluent pump tank and appurtenances as defined by the city standards.

"Suspended solids" means solids that either float on the surface of or are in suspension in water, sewage or other liquids, and which are removable by the application of a treatment process.

"Treatment plant" means the structures, equipment and facilities required to receive, treat and reclaim wastewater, including the outfall piping and structures. (Ord. 868 § 3, 2007; Ord. 505 § 1, 1994).

13.08.020 Use of municipal sewer.

A. It is unlawful for any person to place, deposit or permit to be placed or deposited, any human or animal excrement, sanitary sewage or other objectionable waste, by any natural or nonnatural means in any manner, upon property of the city or private property within the city sewer boundaries, or in any area under the jurisdiction of the city, except through the city's sewage collection system or through an approved on-site system as provided in this chapter.

B. Except as provided in this chapter, it is unlawful to construct or maintain any privy, privy vault, cesspool or other facility intended or used for the disposal of sewage and to install or use any on-site soil absorption systems in such cases where the city's sewer collection system is available for service as provided herein. For purposes of this code, the sewer collection system shall be deemed available when the premises are within 200 feet of the city's collection lines; provided, that the city's treatment plant holds sufficient unused capacity to treat the expected sewage from the premises. The 200-foot distance shall be calculated by measuring from the lot line closest to the existing portion of the city's collection system.

C. For the purpose of this code, when the sewer is not available as defined in this section, primarily treated wastewater may be disposed of on-site with a treatment and disposal system that meets the approval of the health officer. All components shall be designed and constructed to meet the city's STEP system standards. The city shall establish the standards under

which all components of the system will be constructed, including: side sewers, tanks, pumps, pump controls and associated appurtenances for both the municipal system and on-site soil absorption systems that will be converted for use in the transport of effluent to the Yelm municipal collection system at such time as sewer is available.

D. The owner(s) of any premises upon which any building is located within the city's sewer service area shall connect to the city's municipal sewer system if: (1) the city's sewer collection system is available to the premises, as defined in subsection A of this section; (2) the Thurston County health department has determined that the interests of public health and safety require a connection to the city's municipal sewer system. Where the sewer collection system is available and as such, a property owner is required to connect to such system, such connection shall be made within the lesser of: (1) two years from May 1, 1994, or (2) when in the opinion of the health officer, the on-the-site system on the premises requires repair or replacement. Such connections shall be made at the sole expense of the owner within 30 days after notification by the city that service is available. This section shall apply to new buildings constructed within the city on or after the effective date of the ordinance codified in this chapter.

E. The director may authorize the connection of more than one structure on the premises, whether residential, commercial or industrial to a single septic tank or STEP system installation serving the property. Any multiple connection must receive prior written approval from the director before a construction permit will be issued.

F. In the event that property is not timely connected to the municipal collection system within the time period prescribed by subsection B of this section, the director is authorized and directed to make such a connection to the system and to notify the city clerk/treasurer of the total cost thereof. Thereupon, a warrant shall be issued and drawn upon the city's sewer fund for payment of such total cost. A statement of such total cost shall be filed with the auditor of the county of Thurston, as well as the treasurer of the county of Thurston, and such amount, together with interest at the rate as may from time to time be established for judgments on the total amount of the costs, shall be assessed against the property and shall become a lien thereon as provided in this chapter.

G. Any building hereafter constructed or made available for human occupation and use, or parcel of real estate to which the sewer collection system is available as provided in subsection A of this section, shall, within 60 days after an application for a side sewer permit is received by the city, or prior to occupancy of the premises, whichever event first occurs, be connected to the municipal sewer system of the city.

H. The owners of property within the corporate limits of the city, which property has not been connected to sewers, may, with the city's consent, connect to the municipal sewer system of the city and obtain sewer service by entering into an assessment agreement provided for by YMC 13.08.040(A). Property located outside the corporate limits of the city shall not be permitted to connect to the city's municipal sewer system at any time unless:

1. The property is included within the boundaries of the sewer service area; and

2. Either the property is annexed to the city or the owners thereof enter into a binding agreement with the city, agreeing the property shall be annexed to the city at such time as the city may request, and that the property owner waives any protest to the annexation. (Ord. $505 \$ 2, 1994).

13.08.030 Application for sewer service.

A. Properties that are located within the city's sewer service area, as that area may from time to time be modified, and are not connected to the municipal sewer system and otherwise do not qualify for sewer service under the terms of this chapter, may be eligible to be connected to the city's municipal sewer system and be served thereby when the owner thereof executes an application for sewer service and the city concurs therewith. Upon the concurrence by the city, the application and all of its terms become a binding contract on all parties named therein. The application shall be filed and recorded with the Thurston County auditor.

B. The application for sewer service shall contain such terms, conditions and requirements as may be from time to time established by the public works director. At a minimum, it shall provide the following:

1. That the property owner warrants that he/she is the owner of that property with full authority to bind the property with the covenants and conditions contained in the application;

2. That the property owner shall subject his/her property to the terms of the application and shall use the city's municipal sewer system in accordance with the rules and regulations of the city as they may be amended from time to time, and that the property shall be subject to the regular schedule of sewer service charges of the city as may from time to time be fixed by the city for its use classification, including, if the city so provides, a reasonable split or special rate for properties in particular areas;

3. That the property described in the application shall be the only property served with sewer service pursuant to the terms in the application;

4. That the property subject to the application shall be subject to liens, penalties and interest for nonpayment of sewer service charges to the same extent as any other property served by the city;

5. That the property owner and his/her successors in interest shall not object to any annexation to the city or the formation of any utility local improvement district, the areas of which may include the property subject to the

application;

6. That owner shall provide all necessary easements prior to the commencement of installation of collection lines on-site and all collection and STEP system materials and equipment shall be approved by the city and the ownership of such equipment and materials shall meet the specifications and approval of the city, including, but not limited to, a transfer of ownership to the city at the city's request;

7. The owner shall agree to pay, prior to connection, any connection fee which may from time to time be assessed, as well as any monetary amount that may be expended by the city pursuant to this chapter and YMC 13.08.095. Such charges shall constitute a lien upon the properties and be subject to collection as provided in YMC 13.08.020(F).

C. Charge in Lieu of Assessment. The property owner must pay to the city, in addition to any connection fee, application fee or other charge which may be due, an amount of money which shall constitute a charge in-lieu of assessment which may be determined by the use of an assessment formula used by the city. The charge in-lieu of assessment must be paid in full before connection to the city's municipal sewer system is permitted. This charge in-lieu of assessment shall be deemed to take into consideration, among other factors, the reduction in capacity of the collection system and/or treatment plant, resulting from the connection, which shall be in such amount as may from time to time be established by the director pursuant to the provisions of YMC <u>13.08.100</u>.

D. Other Terms. To protect the interests of the city, the city may require that other conditions and provisions be inserted into the application for sewer service as the individual case may warrant.

E. Developer Agreement. In addition to authority provided in this chapter, the city may also enter into contracts with the owners of real estate to the extent allowed by law. (Ord. 505 § 3, 1994).

13.08.040 STEP sewer connection permit.

A. It is unlawful for any person to make connection to the city's municipal sewer system without complying with all of the provisions of this code and having first procured a permit to do so from the city.

B. Applications for the STEP sewer connection permit shall be obtained from the office of the public works director and shall be filed therewith. The application shall be on such form as may from time to time be established by the public works director, including, but not limited to, the name and address of the owner or owners, the correct address and proper legal description of the property to be served, the anticipated use of the property to be served, and the name, address and contractor's number of the contractor who will be doing the work. The director or his/her designee may meet with the owners of the property or their representatives to approve the proposed location of the STEP tank and manner of connection. The application will then be submitted to the city along with such fee as may from time to time be established, for final consideration. The permit shall not be issued until the application has been approved by the director or his/her designee. No sewer connection shall be made until such STEP sewer connection permit has been issued.

C. No contractor shall commence sewer work within the corporate limits of the city or the sewer service area as defined by the latest sewer comprehensive plan, engineering report or facility plan, until proof has been submitted to the city that the contractor is a licensed contractor as defined in YMC <u>13.08.010</u>.

D. Upon completion of the installation of the STEP system, tank and associated appurtenances, the owner shall be responsible for ensuring that the contractor provides to the city an as-built drawing to the satisfaction of the director. The asbuilt drawing shall be prepared on a site map showing the location of the STEP tank, the point of connection with the house or building, the grade of the side sewer, the location of all piping and electrical wiring and such other information as shall be deemed pertinent by the director. Records of all sewer connections, as-builts and inspection reports of completed work shall be kept on file in the city public works office, along with the STEP sewer connection permits.

E. Upon approval of an application for a STEP sewer connection permit, and any drawing related thereto, it is unlawful to install the permitted improvements in any manner other than as provided for in the permit, without the prior written approval of the director. During the course of construction of the improvements, the installation shall be inspected and approved by the director or his/her designee, both before the installation is covered and upon final completion. No work other than that covered by the permit shall be done without the prior approval of the city. The installation or repair of any portion of the STEP system between the house drain and the sewer collection system shall be considered to be an installation pursuant to this chapter.

F. It is unlawful for any person to break, alter or tamper with any city sewer collection line, except that property owner or his or her representative or contractor may connect to an existing wye, saddle or tee which exists for that specific purpose, with the prior approval of the director; provided, that any such connection shall be inspected and approved by the approval of the director before the installation is covered.

G. It is unlawful to disconnect any side sewer, STEP system or other connection to the city's sewer collection system or remove any portion of a STEP system without securing prior written approval by the director. The discontinued service shall be turned off or sealed in such a manner as may be acceptable to the director, whether at the curbstop or otherwise. All expenses for disconnecting from the sewer collection system shall be borne by the property owner.

H. The approval of the design and installation of a STEP system or a city sewer collection system by the city shall not relieve the property owner of the responsibility for obtaining such other permits or licenses as may be required by the city, county, state or other agency, nor shall it be deemed to be a statement by the city that the installation was performed without defect in workmanship, parts or material. It shall be the responsibility of the sewer contractor to contact other utility service providers to determine the location of other utility facilities before commencing work and they shall have the responsibility for protecting such other facilities during the course of construction.

I. The property owner shall, prior to issuance of the STEP system connection permit, provide an easement to the city for the purpose of operation and maintenance of the STEP system, in a form as may from time to time be required by the director. (Ord. 505 § 4, 1994).

13.08.050 Collection lines.

A. The director shall not allow any substandard or temporary collection lines to be installed or connected to the city's sewer collection system.

B. Whenever application is made for sewer service to premises with no collection line in the adjacent street, a collection line must be installed prior to connection. The installation of such lines shall conform to the comprehensive sewer plan for the city. A collection line shall be installed by, and at the expense of, the owner(s) of the premises to be served thereby, pursuant to plans approved by the director. In such cases, the city may contract with the owner(s) to provide for reimbursement of the costs of design and construction of such collection lines in a manner consistent with Chapter <u>35.91</u> RCW. The owner(s) may elect to request that the collection line be installed by the city upon making payment to the city of the appropriate collection line extension charges, as provided by this chapter.

C. Whenever a collection line is installed within the city's sewer service area as provided in this chapter, the collection line extension charge to be paid by the owner(s) of the premises so served shall be determined by the city council on the advice of the director, based upon the actual costs for design, and the cost of the necessary material, labor and equipment required for the construction in accordance with current standards and the comprehensive sewer plan. The charge shall be based upon the acreage or front footage of the property to be served or a combination of acreage and the front footage of properties to be served, or on the basis of equivalent residential units (ERUs) as defined in YMC 13.08.095. (Ord. 505 § 5, 1994).

13.08.060 Inspections and compliance with standards.

A. The director and his/her assistant and the city council, bearing proper credentials and identification, shall be permitted to enter upon all and any premises at all reasonable times for the purpose of inspection, observation, measurements, samplings, testing of sewers and sewage waste and performing all other acts or duties required by the provisions of this code. It is unlawful for any person to prevent any such entrance or obstruct or interfere with any such officer or employee so engaged.

B. All work performed pursuant to any permit granted as provided by this chapter, including the quality of material and manner of construction, shall be subject to the inspection and approval of the director.

C. No excavation undertaken for purposes of the installation, connection, repair or replacement of a collection tank, side sewer or other portion of the STEP system or any collection line shall be back-filled or any sewer covered until the work has been inspected and approved by the director or his/her designee.

D. It shall be the responsibility of the person performing work under the authorization of a permit issued pursuant to the provisions of this chapter to notify the director when the work will be ready for inspection and that person shall specify in such notification the location of the premises. The director or his/her designee shall make such inspection within 48 hours after receipt of the notice, excluding Saturday, Sunday and holidays.

E. When such work authorized by a permit pursuant to this chapter is performed by a contractor, either the contractor or competent representative shall be available to meet the city representative on the premises when so directed.

F. If the director or respective designee finds that any work or materials used are not in accordance with any applicable code, ordinance, rule, specification or regulation, the director or designee shall notify the person doing the work and also the owner or occupant of the premises by posting a written notice, and such posted notice shall be all the notice required to be given with regard to defects in the work or materials found in such inspection.

G. All work within the limits of any public area shall be prosecuted to completion with due diligence. If any excavation is left open beyond a time reasonably necessary to back-fill the same, the city may cause the same to be back-filled and the public area restored forthwith at the expense of the property owner, occupant, or contractor, as the case may be. Any such work shall be protected by appropriate warning signs and barricades. The director may, if deemed necessary and appropriate to insure the completion of work, require the posting of a bond in favor of the city in such form as may from time to time be approved by the director in such amount as may be equal to one and one-half times the value of the work to be done.

H. Under any of the circumstances set forth in subsection I of this section, and after written notice has been provided by the director, or his/her designee, the contractor, owner or person doing the work, as the case may be, shall properly correct

such work by performing the necessary construction or repair, or by otherwise taking the steps necessary to remedy the circumstances, within the time specified in the notice. In the event the contractor, owner or responsible person fails to properly correct such work within the specified time, then the city may perform such work as may be necessary to remedy such circumstances, and the cost of such work so done shall be charged to the property owner, occupant or contractor, as the case may be, and shall become immediately payable to the city upon written notice of such being delivered to such owner, occupant or contractor or charged against the construction bond as provided for herein. Any licensed sewer contractor, and any contractor performing work pursuant to a permit issued under this chapter, who refuses to modify, remove, replace or complete any portion of the work when so instructed by the director, shall by such refusal, forfeit his or her city license for construction of sewers or drains in the city.

I. The circumstances under which the provisions of this section shall apply are as follows:

1. When any work performed in the construction, installation, repair or modification of a sewer is not performed in accordance with the provisions of any applicable code, including this chapter, or any plans, specifications or permits approved by the city;

2. When the health officer or responsible city official determines that a collection system, STEP system or other portion of the sewage disposal system is obstructed, broken or inadequate and is a menace to the public health or is likely to cause damage to either public or private property;

3. The provisions of YMC <u>13.08.070</u> have been violated by noncompletion;

4. The STEP system serving any property has been shut-off from its service of electrical power as a result of delinquent payment for such service, or any other reason.

J. Any moneys expended by the city pursuant to the taking of any action by the city under the provisions of this section shall be subject to a lien and enforcement as provided in YMC 13.08.020(F). (Ord. 505 § 6, 1994).

13.08.070 Unlawful acts.

A. No person shall discharge or cause to be discharged any stormwater, surface water, ground water, roof runoff, subsurface drainage, cooling water or unpolluted commercial/industrial process water to a connection, STEP system, or any portion of the collection system, and no yard drains, or any exterior drains of any type shall be connected to the sanitary sewers in any manner.

B. It is unlawful to drain large volumes of waste directly into the sewer and thereby cause surcharge of sewer lines without the prior approval of the director. Swimming pools, public or private, shall not be directly connected to the sewer. Only upon authorization of the director, swimming pools may be drained into the sewer system by a pumped discharge. To prevent surcharges or excessive flows in the sewer line, the director may require reduced pumping rates, the utilization of smaller discharge pipe and/or throttled valves, and/or limited times of the day when pumping will be allowed.

C. It is unlawful to tamper with the municipal sewer system, or to break, damage, destroy, deface, alter or tamper with any structure, appurtenance or equipment which is part of the municipal sewer system, or without authority from the city, to break, damage, destroy or deface any public walk, curb or pavement, or to make openings or excavations in a public area for the purpose of connecting to the city municipal sewer system.

D. It is unlawful to disconnect or cause to be disconnected the electrical power source from the STEP tank, whether such tank is designed to serve multiple buildings or a single building, while the building or buildings are occupied and subject to continuing utilization or while the plumbing facilities in any of the connected structures are in use subject to continuing use. This prohibition shall not apply to gravity tanks that do not require electrical power for conveyance of the effluent. Nor shall it be deemed to apply to the sections of the electrical utility providing power to the tank, when such disconnection is necessitated by a failure of the responsible person to pay the electrical charges, or when the utility determines that such disconnections are necessary for the public safety. (Ord. 505 §§ 7.01 - 7.04, 1994).

13.08.080 Prohibited uses.

A. No person shall discharge or cause to be discharged any of the following described waters or wastes to any city sewers:

1. Any gasoline, benzene, naphtha, fuel oil or other flammable or explosive or liquid, solid or gas;

2. Any waters or wastes containing toxic or poisonous solids, liquids or gases in sufficient quantity, either singly or by interaction with other wastes that injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving waters of the waters of the sewage treatment plant, including, but not limited to, cyanide in excess of two mg/l as CN in the wastes as discharged to the city sewer system;

3. Any waters or wastes having a pH lower than 5.5 or in excess of 9.5 or having any other corrosive property capable of causing damage or hazard to structures, equipment and personnel of the sewage works;

4. Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the sewage works such as, but not limited to, ashes, cinders, sand,

mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, unground garbage, whole blood, paunch manure, hair and fleshings, entrails, paper dishes, cups or milk containers, either whole or ground by garbage grinders.

B. No person shall discharge or cause to be discharged the following described substances, materials, waters or wastes if it appears likely, in the opinion of the director, that such wastes can harm either the sewers, sewage treatment process (lagoons) or equipment, have an adverse effect on the receiving stream, or can otherwise endanger life, limb, public property or constitute a nuisance. In forming his opinion as to the acceptability of these wastes, the director will give consideration to such factors as the quantities of such wastes in relation to flows and velocities in the sewers, materials of construction of the sewers, nature of sewage treatment lagoons, degree of treatability of wastes in the lagoons, and other pertinent factors. The substances prohibited are:

1. Any liquor or vapor having a temperature higher than 150 degrees Fahrenheit (65 degrees centigrade);

2. Any water or waste containing fats, wax, grease or oils, whether emulsified or not, in excess of 100 mg/l or containing substances which may solidify or become viscous at temperatures between 32 and 150 degrees Fahrenheit (zero and 65 degrees centigrade);

3. Any garbage that has not been properly shredded to meet such specifications as may from time to time be established by the director. The installation and operation of any garbage grinder equipped with a motor of three-fourths horsepower (0.76 hp metric) or greater shall be subject to the review and approval of the director;

4. Any waters or wastes containing strong acid iron pickling wastes or concentrated plating solutions whether neutralized or not;

5. Any waters or wastes containing iron, chromium, copper, zinc and similar objectionable or toxic substances; or wastes exerting excessive chlorine requirements to such degree that any such material received in the composite sewage at the lagoons exceeds the limits established by the city for such materials;

6. Any waters or wastes containing phenols or other taste or odor producing substances, in such concentrations exceeding limits which may be established by the director as necessary after treatment of the composite sewage to meet the requirements of state, federal, or other public agencies or jurisdiction for such discharge to the receiving waters;

7. Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits which may be established by the director in compliance with the applicable state or federal regulations;

8. Materials which exert or cause:

a. Unusual concentrations or inert suspended solids (such as, but not limited to, Fuller's earth, lime slurries and lime residues) or of dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate),

b. Excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions),

c. Unusual BOD, chemical oxygen demand or chlorine requirements in such quantities as to constitute a significant load on the sewage treatment works,

d. Unusual volume of flow or concentration of wastes constituting "slugs" as defined herein;

9. Waters or wastes containing substances which are not amenable to treatment or reduction by sewage treatment processes employed; or

10. Any discharge that would be a violation of the city's NPDES permit. (Ord. 505 § 7.05, 1994).

13.08.090 Sewer service charges.

A. Hook-Up Fee Required. At the time the director certifies that the property owner has submitted an application for connection and that the city concurs with such applications, the applicant shall pay to the city such hook-up fees as may from time to time be established by resolution or ordinance of the city council. In the event that the connection is not in fact completed, such fees shall be refunded to the property owner.

B. Connection Fees. In the event of construction of a structure upon vacant land requiring a connection to the city's municipal sewer system, there shall be paid a connection fee in an amount established by the city, per equivalent residential unit (ERU), or such other amount as may hereafter be established by resolution or ordinance of the city council, this amount being deemed to represent the per unit cost for pipeline and treatment plant improvements.

C. Service Rates. Service rates, billings and collection procedures shall be governed by the applicable provisions of this code, as now existing or hereafter amended or supplanted.

D. Delinquent Charges. All delinquent charges for sewer service, for electrical service paid for by the city, and for the costs of sewer system connection, together with the penalties and interest thereon as provided in this chapter, shall be a lien upon the property upon which such connection is made or sewer or electrical service furnished, superior to all other liens or encumbrances except those for general taxes and special assessments. Enforcement of such lien or liens shall be in the manner provided by this chapter and by other laws for the enforcement of the same and for delinquent sewer service and

electrical service charges. (Ord. 505 § 8, 1994).

13.08.095 Monthly sewer fees.

A charge for sanitary sewage disposal shall be levied against all accounts and premises connected to a sewer line at the rate established by this section or as amended hereafter.

A. Sewer Charge. There is established and charged a monthly sewer fee to be collected by the city using the following procedures and rates.

B. Definitions.

"Base flow" means the flow associated with an equivalent residential unit.

"Equivalent residential unit (ERU)" means the unit of measurement determined by that quantity of flow associated with a single residential household, defined as follows:

1. ERU measurement shall be an equivalent flow of 900 cubic feet, or less, per month, based on water meter inflow, or sewer effluent meter when installed by owner with approval of the Yelm sewer department.

2. With respect to each residential structure, the number of ERUs and associated "base flow" will be based on Table 1.

Type of Unit	No. ERUs	Base Flow
Single-family residence	1.00	900 cf
Duplex dwelling unit	1.00	900 cf
Triplex dwelling unit	0.90	810 cf
Fourplex dwelling unit	0.80	720 cf
Residential structures > four units	0.75	675 cf
Nonresidential unit	1.00	900 cf

3. With respect to uses other than residential, one ERU shall be designated for each 900 cubic feet of water consumed per month or sewage discharged as measured at source; provided, that for volumes in excess of 900 cubic feet per month, the service charge shall be computed at the rate established on Table 2.

4. With respect to accounts consisting of both residential and nonresidential uses, or combination thereof, the residential uses shall be charged as in Table 2 of this section and each nonresidential connection shall be charged an additional ERU plus a charge, as established in subsection C of this section, for each cubic foot of flow over the base flow.

"Senior citizen" means a head of household over the age of 65 who is retired and is below the median income as established by the city.

C. Sewer Rates and Structure. The sewer rate for the city is established per the rates as identified in Table 2. There shall be an additional charge per cubic foot flow in excess of 900 cubic feet per month for commercial/industrial use. This additional charge shall be calculated by dividing the current monthly rate by 900 cubic feet.

Established Sewer Rate Per Unit						
	City-Owned E	lectrical Meter		Private Elec	etrical Meter	
			With	Meter	No N	Meter
Type of Unit		Senior		Senior		Sen
One single-family one tank	\$43.56	\$32.67	\$43.16	\$32.37	\$43.56	\$32
Two single-family one tank	\$43.56	\$32.67	\$42.76	\$32.07	\$43.56	\$32

Three single-family one tank	\$43.56	\$32.67	\$42.36	\$31.77	\$43.56	\$32
Duplex units	\$43.56	\$32.67	\$42.76	\$32.07	\$43.56	\$32
Triplex units	\$39.20	\$29.40	\$38.80	\$29.10	\$39.20	\$29
Fourplex units	\$34.85	\$26.14	\$34.45	\$25.84	\$34.85	\$26
Residential with more than four units			\$32	2.67		
Nonresidential units	\$4	3.56 + .0484 per o	cubic foot for flow	in excess of 900	cubic feet per mon	ıth

D. Payment of Sewer Bills. The rates, fees and/or charges shall be due and payable at the office of the city clerk/treasurer for the city, on the fifteenth day of the month following use of Yelm's sewer system. Any payments not paid as specified herein shall be considered delinquent.

E. Application for Service. Sewer customers shall be required to complete an application for utility service and provide photo identification with the city clerk/treasurer's office to start service for sewer at the address listed on their application. (Ord. 915 § 1, 2009; Ord. 810 § 1, 2004; Ord. 719 § 1, 2000; Ord. 683 § 1, 1999; Ord. 567 § 1, 1995; Ord. 547 § 1, 1995; Ord. 527 §§ 1 - 3, 1995; Ord. 506 §§ 1 - 5, 1994).

13.08.100 Operational authority.

A. In addition to the authority granted to the director to make rules and regulations, the city council may make rules and regulations implementing the provisions of this chapter and may amend the same from time to time, but not in a manner inconsistent with the provisions of this code. In the event of an inconsistency between a rule or regulation established by the director and one established by the city council pursuant to the provisions of this section, the rule or regulation established by the city council shall be deemed to control.

B. The director shall be authorized to issue such rules or regulations as he or she may from time to time determine appropriate in relation to matters of methodology, standards, techniques and materials to be utilized in relation to the connection, repair and replacement of systems upon individual properties. The authority granted by this section shall be deemed supplemental to any authority granted to the director pursuant to any other of the provisions of this chapter.

C. The director is authorized to establish by rule or regulation, such construction standards, rules and regulations as may be necessary to govern the installation, improvement, repair, replacement or operation of the sanitary sewer system of the city. The standards may include, but are not limited to, specification of materials and installation requirements, limitations upon materials to be permitted to enter the sewer system from a building served by the system, collection system and treatment plant capacity and such other matters as may be deemed necessary by the director.

D. Any proposed rule or regulation to be issued by the director shall be submitted to the council prior to its implementation. The council shall have 21 days following the date of its initial submission to the council at a regular meeting to approve, disapprove or modify any proposed rule or regulation. In the event the council does in fact so act, such action shall be deemed to be effective immediately upon approval or modification by the council. In the event of no action by the city council, unless the time period established by this section is extended by affirmative action of the council, the proposed rule or regulation shall become effective upon the twenty-second day following date of submission. (Ord. 644 \$ 1, 1998; Ord. 505 \$ 9, 1994).

13.08.105 Adjustment of sewer bill.

A. The city administrator, or her designee, is empowered to resolve billing disputes upon receipt of request to do so from a city sewer utility customer. Upon receipt of such notice from the customer, the city administrator, or her designee, shall review the bill with the customer to see if the amount is justly owed. The customer shall have the right to have a meeting to bring forth reasons and evidence why such bill should not be due and owing.

B. When any customer in any given billing period has used, according to the customer's water meter or metered sewer effluent, a quantity of water or effluent which is more than double the average amount of water used or effluent discharged on such premises in similar billing periods in prior years, and the water consumption or effluent is solely caused by a broken water pipe on the user's premises, the customer may make an application to the treasurer in writing for a reduction of the billing.

1. If the application states a broken pipe on a customer's premises caused a large consumption or large discharge of effluent, the existence of a broken pipe shall be verified by inspection by public works employees. If it is established by presenting acceptable documentation demonstrating to the city that such broken pipe has been repaired, a reduction of the sewer utility bill to an amount that is the average of the prior four months plus one-half

of the difference between the average and existing disputed bill shall be made.

2. The reduction provided for in this section shall not be allowed if such excess effluent discharge is due to the customer's neglect or failure to repair the broken pipe. A reduction in billing shall not be permitted if such excess discharge is due simply to leaky faucets or other plumbing fixtures releasing wastewater through the system.

3. This section only applies to those customers other than flat-rate sewer customers.

4. In newly developed property which does not have a prior service record, the appropriate sewer utility charge will be based upon the charges for a similar type of sewer service and occupancy for the preceding year.

5. The application by the customer shall be on the forms provided by the city. (Ord. 921 §§ 1, 2, 2010).

13.08.110 Violations – Penalties.

A. Civil Penalties.

1. Any person who shall violate any provision of this code or the city's NPDES permit, or cause such NPDES permit to be violated, shall be liable to the city for any expense, loss, damage, cost of inspection or cost of correction incurred by the city by reason of such violation including any cost to the city incurred in collecting from such person such loss, damage, expense, cost of inspection or cost of correction, including necessary reasonable attorney's fees and court costs.

2. Any person who shall make an authorized connection to the city's municipal sewer system shall be charged a minimum fine of \$250.00, or such other fines and penalties as may be adopted from time to time by city ordinance, for each unauthorized connection.

3. Any person found to be violating any provision of this chapter shall be served by the city with written notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction thereof. The offender shall, within the period of time stated in such notice, permanently cease all violations and make all necessary corrections.

4. Any person who shall continue any violation beyond the time limit provided in such notice shall be disconnected from use of the city's municipal sewer system until such violation has been corrected and certified by the director or his/her designee. Such discontinuance of sewer service will be reported to the Thurston County health department and a reconnection fee of \$250.00 will be assessed against the property.

B. Criminal Penalties. Any person violating a provision of this chapter shall, in addition to any other penalty which may be imposed pursuant to the chapter, be subject to, upon conviction of such violation, a penalty as provided in this code. The first citation within any 12-month period issued a person alleging any particular violation shall be deemed to be an infraction. The person, upon a finding that the violation was committed, shall be subject to the allowable penalties, up to \$250.00. Any second or subsequent violation within any 12-month period issued to a person for a particular violation shall constitute a criminal violation and be deemed to be a misdemeanor. (Ord. 505 § 10, 1994).

Chapter 13.24 RECLAIMED WATER

Sections:	
<u>13.24.010</u>	Findings.
<u>13.24.020</u>	Water reclamation policy.
<u>13.24.030</u>	Definitions.
<u>13.24.040</u>	Comprehensive water reclamation plan.
<u>13.24.050</u>	Use of reclaimed water.
<u>13.24.060</u>	User agreements.
<u>13.24.070</u>	Reclaimed water charges.
<u>13.24.080</u>	Legal requirements.

13.24.010 Findings.

The policies described above are in the best interest of the city of Yelm. This chapter is necessary to protect the water supply of the region, which is vital to public health and safety, and to prevent endangerment of public and private property. The city of Yelm is dependent on ground water sources and limited water rights. The ability to obtain additional water rights in the future is uncertain. Developing and utilizing reclaimed water can reduce the need for additional potable water. In light of these circumstances, certain uses of potable water may be considered where reclaimed water is available or production of potable water is unduly impaired. To encourage the use of reclaimed water in lieu of potable water the city desires to sell the reclaimed water at a fraction of the established potable water rates. (Ord. 720 § 1, 2000; Ord. 684 § 1, 1999).

13.24.020 Water reclamation policy.

It is the policy of the city of Yelm to reclaim 100 percent of the wastewater generated by the city and that reclaimed water shall be used within the jurisdiction wherever its use is economically justified, financially and technically feasible, and is consistent with legal requirements of Chapter <u>90.46</u> RCW, for the preservation of public health, safety and welfare, and the protection of the environment. (Ord. 720 § 1, 2000; Ord. 684 § 2, 1999).

13.24.030 Definitions.

The following terms are defined for purposes of this chapter:

"Agronomic rate" means the amount of water required to sustain and promote plant and vegetation growth without saturation of the underlying soils.

"Agricultural purposes" means and includes the growing of field and nursery crops, row crops, trees, and vines and the feeding of fowl and livestock.

"Beneficial use" means the use of reclaimed water, which has been transported from the point of production to the point of use without an intervening discharge to waters of the state, for a beneficial purpose.

"City" means the city of Yelm, Washington, or as indicated by the context, may mean the public works director, treatment plant operator, water department, water superintendent, city clerk/treasurer, engineer or other employee or agent representing the city in the discharge of his duties.

"City engineer" means the professional engineer regularly employed or retained by the city.

"Commercial office buildings" means any building for office or commercial uses with water requirements which include, but are not limited to: landscape irrigation, fire protection, toilet and urinal flushing and decorative fountains.

"Commercial water service" means reclaimed water service provided to a premises utilized for business or industrial purposes.

"Council" means the council of the city of Yelm.

"Department" means the Washington State Departments of Ecology and Health.

"Greenbelt areas" includes, but is not limited to, golf courses, cemeteries, parks and landscaping.

"Infiltration basins" means a basin, pond or area specifically designed for the controlled application of reclaimed water by surface percolation for the purpose of replenishing ground water.

"Irrigation" means watering by sprinkling or dripping through orifices at normal agronomic rates.

"Industrial process water" means water used by any industrial facility with process water requirements which include, but are not limited to, rinsing, washing, cooling and circulation, or construction process.

"Nonrestricted recreational impoundment" means a body of reclaimed water in which no limitations are imposed on bodycontact water sports activities. Examples may include but are not limited to recreational lakes, water features, ponds and fishponds.

"Off-site facilities" means reclaimed water facilities from the source of supply to the point of connection with the on-site facilities, normally up to and including the water meter.

"On-site facilities" means reclaimed water facilities under the control of the owner, normally downstream from the reclaimed water meter.

"Plan" means the city of Yelm's facility plan or comprehensive water reclamation plan.

"Potable water" means ground water that is used or intended to be used as, or is suitable for, a source of a water supply for domestic purposes and has been classified as a source of drinking water by the Department of Health.

"Reclaimed water" means effluent derived in any part from sewage from a wastewater treatment system that has been adequately and reliably treated, so that as a result of that treatment, it is suitable for a beneficial use or a controlled use that would not otherwise occur and is no longer considered wastewater. As used herein, reclaimed water shall be classified as Class A reclaimed water as defined in Chapter 90.46 RCW and the Water Reclamation and Reuse Standards.

"Reclaimed water distribution systems" means a piping system intended for the delivery of reclaimed water separate from and in addition to the potable water distribution system.

"Reclaimed water user agreement" means a binding agreement between the city of Yelm and the owner of a use area outlining the conditions for use of reclaimed water to ensure that construction, operation, maintenance and monitoring meets all requirements of the Washington Departments of Ecology and Health and the city.

"Reuse" means the use of reclaimed water, in compliance with Washington Departments of Ecology and Health regulations, for a beneficial use.

"Residential service" means reclaimed water service for lawn and/or vegetable garden irrigation provided to a residential living site.

"Service connection" means that portion of the city's reclaimed water supply system connecting the city's reclaimed water distribution main including the tap into the main, the water meter and appurtenances and the service line from the main to the meter and from the meter to the user's property line. "Service connection" includes connections for fire protection as well as for irrigation, commercial and industrial uses.

"Spray irrigation" means the application of reclaimed water to land by spraying it from sprinklers of orifices in piping.

"Standard specifications" means the specifications set forth in the current volume of "Standard Specifications for Road, Bridge, and Municipal Construction" prepared and distributed jointly by the Washington State Department of Transportation (WSDOT) and by the Washington State Chapter of the American Public Works Association (APWA) and the current "Standards" of the American Water Works Association (AWWA).

"Surface percolation" means the controlled application of water to the ground surface for the purpose of replenishing ground water.

"Use area" means any facility, building, or area approved for use of reclaimed water as evidenced by an executed user agreement.

"Water reclamation and reuse standards" means standards developed by the Washington State Departments of Ecology and Health dated September 1997 and as may be amended from time to time. (Ord. 720 § 1, 2000; Ord. 684 § 3, 1999).

13.24.040 Comprehensive water reclamation plan.

A. General. The city of Yelm has prepared and adopted a Water Reuse Facilities Plan pursuant to the requirements of the Growth Management Act (GMA) and the Washington State Department of Ecology as part of the city's update of the wastewater treatment facilities and implementation of the reuse plan.

Updates to the facilities plan shall be prepared in the form of a comprehensive water reclamation plan. The city engineer shall prepare the plan for the city and three copies of the same shall be maintained on file in the office of the city clerk/treasurer. The plan shall be submitted to and approved by the Departments of Ecology and Health.

B. Uses of Reclaimed Water. The facilities plan identified any use that meets the standards for Class A reclaimed water as a planned or potential use of reclaimed water within the city's service area. Reclaimed water uses may include, but are not limited to, the irrigation of food and nonfood crops, landscape irrigation, impoundments, fish hatchery basins, decorative fountains, flushing of sanitary sewers, street cleaning, dust control, fire fighting and protection, toilet and urinal flushing, washing aggregate and concrete production, industrial cooling and industrial processes. Refer to Table 1* for additional uses and regulations pertaining to those uses.

C. Contents of the Reclamation Plan. The comprehensive water reclamation plan shall be updated from time to time as deemed necessary by the city council, but in any event not less than every five years. The plan shall include the following:

1. Plants and Facilities. Proposed location and size of the reclamation treatment plant, distribution pipelines, pump stations, reservoirs, and other related reuse facilities.

2. Reclaimed Water Service Areas. A designation of the boundary within the city of Yelm service area that can or may in the future use reclaimed water in lieu of potable water, including reuse areas and ground water recharge infiltration basins. An evaluation of reuse sites, estimated volume of water to be reused, means of application, application rates, water balance, expected agronomic uptake, potential to impact ground water or surface water at the site, background water quality and hydrogeological information necessary to evaluate potential water quality impacts shall be addressed in the plan.

3. Contingency Plans. The plan shall address a contingency plan to ensure that no untreated or inadequately treated wastewater will be delivered to a use area.

4. Cross-Connection Control. The plan shall discuss cross-connection control and inspection program, including who will be responsible for compliance and testing of cross-connection control devices.

5. Design Standards. The plan shall identify design standards, which shall be adopted from time to time by the council and three copies of the same shall be maintained on file at the office of the city clerk/treasurer. (Ord. 720 1, 2000; Ord. 684 4, 1999).

*Code reviser's note: Table 1 is on file in the city clerk/treasurer's office.

13.24.050 Use of reclaimed water.

A. Identification of Pipe and Appurtenances. All reclaimed water pipelines, valves, outlets, and other appurtenances, including all irrigation systems pipelines, valve and control boxes shall be color-coded purple (Pantone 622 or other shades of purple acceptable to the city). The piping shall be embossed or integrally stamped or marked "Caution: Reclaimed Water – Do Not Drink," and be installed with a purple (Pantone 512 or other shades of purple acceptable to the city) identification tracer tape. The pipe and tape shall have the warning stamped on opposite sides of the pipe and tape and be repeated every three feet or less. Identification tracer tape shall be consistent with the Water Reclamation and Reuse Standards. Signs for notification of reclaimed water connections shall read "Reclaimed Water – Do Not Drink." Signs for notification of irrigation use areas shall read "For Water Conservation, This Property Is Irrigated with Reclaimed Water – Do Not Drink." Signs shall be color-coded purple (Pantone 522 or other shades of purple acceptable to the city) with black lettering. Sleeves over standard water pipe will not be permitted.

B. Ownership of Mains and Service Connections. The ownership of all mains, service connections and appurtenances in the public street or utility rights-of-way shall be vested fully in the city and the person responsible for the construction of such mains shall relinquish, by bill of sale, or other appropriate instrument of conveyance, all interest in the ownership of such mains upon acceptance by the city.

The city shall operate, control and maintain all approved and accepted components of the city water reuse system in the public streets or utility rights-of-way up to and including the meter, but shall not be responsible beyond the meter. The owner of the property served shall be responsible for maintenance of all pipe and fittings from the meter to his premises. No alteration shall be made to any connection nor shall any connection be made to the city's reclaimed water system without the approval of the city. All connections or alterations shall be made by the city's public works department or by a contractor supervised by the city.

C. Cross-Connection Control. There shall be no cross-connections between the reclaimed water and potable water systems. The city shall coordinate with the water department to establish and obtain approval from the Washington State Department of Health a cross-connection control and inspection program pursuant to WAC <u>246-290-490</u>. Where both reclaimed water and potable water are supplied to a reclaimed water use area, a "reduced pressure principle backflow" prevention device, or an approved "air gap separation" shall be installed at the potable water service connection to the reuse area.

The cost of such device and the installation thereof shall be borne by the owner of the premises affected. The installation and periodic testing shall conform to the provisions of WAC <u>248-54-500</u>. No interconnection with private wells is allowed and inspection by the city to verify disconnection is required for continued reclaimed water service. An independent testing laboratory shall submit a test report indicating the backflow prevention device has been tested and is in conformance with this section. Annual testing and reporting shall be required.

D. Dwelling Unit. Reclaimed water shall not enter a dwelling unit or a building containing a dwelling unit except as specifically provided in the Water Reclamation and Reuse Standards.

E. Automatic Fire Sprinkler Systems. All buildings with an automatic fire sprinkler system connected to the city's
reclaimed water system shall pay the same fees and rates as identified in the water ordinance. No reclaimed water shall be used through such connections or sprinkler system except for actual fire control.

F. Temporary Water Service for Construction. Temporary reclaimed water service from a reclaimed water fire hydrant for construction of any building, street, utility or similar project shall be provided at 80 percent of the lowest potable water rate tier as established by the city or as amended from time to time. A construction meter shall be required and application shall be made at the office of the public works department identifying location and reason for use of the reclaimed water. A deposit shall be collected as identified in the water ordinance. Upon completion of the project, return of construction meter and charges for consumed reclaimed water are paid for, return of the deposit shall be made to consumer.

The city shall provide a separate "purple meter" for connection to the reclaimed water system. Information shall be provided with the meter indicating the use of reclaimed water pursuant to the requirements of the reclaimed water and reuse standards.

Temporary connections to the reclaimed water system other than directly to a reclaimed water fire hydrant shall not be allowed.

G. Tank Trucks. Tank trucks and other equipment used to distribute reclaimed water shall be clearly identified with advisory signs. The tank trucks used to transport reclaimed water shall not be used to transport potable water that is used for drinking or other potable purposes. The tank trucks used to transport reclaimed water shall not be filled through on-board piping or hoses that may subsequently be used to fill tanks with water from a potable water supply. Tank trucks used to transport reclaimed water shall be inspected and approved for such use by the city prior to transporting reclaimed water.

H. Mandatory Reclaimed Water Use. The facilities plan update and subsequent comprehensive water reclamation plan identifies existing and planned reuse areas for consumptive beneficial use and ground water recharge areas. This information shall be used by city officials to mandate construction of reclaimed water distribution systems or other facilities in new and existing developments for current or future reclaimed water use as a condition of any development approval or continued potable water service if future reclamation facilities are proposed in the facilities plan indicating reclaimed water could adequately serve the development.

I. Conversion of Existing Potable Water System. Based upon the comprehensive water reclamation plan the city may require an existing potable water user to convert their irrigation and/or other nonpotable uses of water to the use of reclaimed water for potable water conservation purposes.

J. Implementation. Should a determination be made to convert an existing potable water use to reclaimed water, city versus user costs associated with the required connection shall be identified in the required execution of the user agreement. Once connected, the user shall pay the cost of reclaimed water consumed based on the terms of this chapter.

K. Objections – Appeals. The water customer may file a notice of objection with the city within 30 days after any notice of determination to comply is delivered or mailed to the customer, and may request reconsideration of the determination or may request a modification of the proposed conditions or schedule for conversion. The objection must be in writing and specify the reasons for the objection. The preliminary determination shall be final if the customer does not file a timely objection. The city administrator or designee shall review the objection with the objector, and shall confirm, modify or abandon the preliminary determination. Such decision may be appealed to the city council within 30 days.

L. Conditions. Upon application by a developer, owner or water customer (herein referred to as "applicant") for a land use approval, or other development project as defined by this code, staff shall review the facilities plan and any subsequent reclaimed water comprehensive plan and make a preliminary determination whether the subject property is required to be served with reclaimed water or to include facilities designed to accommodate the use of reclaimed water in the future. Based upon such determination, use of reclaimed water and provisions of a reclaimed water distribution system or other facilities for the use of reclaimed water, and an application for a user agreement for such use shall be required as a condition of approval of any such application, in addition to any other conditions of approval.

M. Alterations and Remodeling. On a case-by-case basis, upon application for an alteration or remodeling of multifamily, commercial or industrial structures (including, for example, hotels), staff shall review the facilities plan or subsequent comprehensive water reclamation plan update and make a preliminary determination whether the subject property shall be required to be served with reclaimed water or to include facilities designed to accommodate the use of reclaimed water in the future. Based upon such determination, use of reclaimed water and provision of reclaimed water distribution systems or other facilities for the use of reclaimed water, and application for a user agreement for such use, may be required as a condition of approval of the application. (Ord. 779 §§ 1, 2, 2003; Ord. 720 § 1, 2000; Ord. 684 § 5, 1999).

13.24.060 User agreements.

A. Requested Service. On a case-by-case basis, upon application for a user agreement to use reclaimed water on a property not covered by YMC <u>13.24.050</u>, staff shall review the facilities plan and any subsequent comprehensive water reclamation plan and make a determination whether the subject property shall be served with reclaimed water. Based upon such determination, the application for the user agreement shall be accepted and processed.

B. User Agreement Conditions. The user agreement shall specify the design, construction, operation, maintenance and

monitoring requirements for the applicant's planned use, based on the rules and regulations adopted pursuant to this chapter and shall require compliance with the Washington State Departments of Ecology and Health requirements (see Chapter <u>90.46</u> RCW), and requirements of the Water Reclamation and Reuse Standards.

The staff shall review plans for the reclaimed and nonreclaimed water distribution systems for the parcel and a field inspection conducted before the user agreement is granted. Reclaimed water shall not be supplied to a property until inspection by staff determines that the applicant is in compliance with the user agreement conditions.

C. Application. All applications for reclaimed water service shall be made at the office of the city public works department or at such other place as the council may thereafter designate by resolution and upon such form as may be prescribed by the city. Every such application shall be made by the owner of the property to be furnished reclaimed water, or by its authorized agent, and the applicant shall state fully and truly all the purposes for which the reclaimed water may be used. Reclaimed water service shall only be granted for use meeting the water reclamation and reuse standards and upon the execution of a reclaimed water user agreement.

D. Reclaimed Water User Agreement Process. Upon completion of the reuse agreement conditions, the agreement shall be scheduled for city council consideration.

E. Connection – General Requirements. When a permit has been obtained for the installation of reclaimed water service, the city shall cause the premises described in the application to be connected with the reclaimed water system by a service pipe extending from the reclaimed water main to the property line and a shutoff valve and reclaimed water meter placed within the right-of-way. Every separate user and premises shall have its own separate meter.

All connections to city's reclaimed water service shall conform to the standard specifications and regulations of the city.

F. Temporary Use of Potable Water. At the discretion of the city, potable water may be made available on a temporary basis until reclaimed water is available. Before the applicant receives temporary potable water, a water reclamation user agreement must be obtained for all reuse facilities. Prior to commencement of reclaimed water service, an inspection of the on-site facilities will be conducted to verify that the facilities have been maintained and are in compliance with the reclaimed water user agreement and current requirements for service. Upon verification of compliance, reclaimed water can be served to the parcel for the agreed upon use. If the facilities are not in compliance, the applicant shall not receive potable or reclaimed water service.

Prior to making reclaimed water available, the potable water connection shall be removed and the on-site distribution system field tested to verify no cross-connections with the potable water system exist.

G. Installation of Main. Whenever application is made for reclaimed water service to a premises with no reclaimed water main in the adjacent street, a standard reclaimed water main must be installed prior to connection. The installation of such standard mains shall conform to the comprehensive reclaimed water plan.

A reclaimed water main shall be installed by and at the expense of the owner(s) of the premises to be served thereby, pursuant to plans reviewed by the city and approved by the city engineer. In such cases the city will contract with the owner (s) to provide for reimbursement of the costs of design and construction of such main over a period not to exceed 15 years pursuant to the provisions of Chapter 35.92 RCW. The actual cost must be approved by the city showing the method of determining benefit cost. The council shall record the contract in the office of the county auditor upon acceptance of construction of the main.

The owner may elect to have a reclaimed water main installed by the city upon making payment to the city of the appropriate main extension charges as provided for in the water ordinance.

H. Water Meters. All service connections to the city reclaimed water system shall be metered. Reclaimed water meters shall be sized to provide adequate flow of reclaimed water to the customer. Minimum water meter sizes shall ordinarily be determined from the maximum flow requirements for the user as determined by an engineering study. All water meters shall be American Water Works Association (AWWA) approved. (Ord. 779 § 3, 2003; Ord. 720 § 1, 2000; Ord. 684 § 6, 1999).

13.24.070 Reclaimed water charges.

A. Reclaimed Water Rate. The rate charged for reclaimed water shall be set at 80 percent of the lowest potable water rate tier as established by the city or as amended from time to time. Special circumstances may be taken into consideration to allow for a different rate. Such special circumstances and rates shall be identified in the user agreement and approved by the city council.

B. Reclaimed Water Service, Hook-Up and Meter Charge. To encourage use of reclaimed water in lieu of potable water and to advance the use of reclaimed water throughout the city service area, there is no equivalent residential unit/hook-up fee to the reclaimed water system, except the user shall pay the appropriate meter charge as identified in the city's water ordinance. In every case, title to the reclaimed water meter, meter box and service connection lines shall remain with the city. C. Billing and Payments. Monthly statements of charges for reclaimed water service shall be due and payable at the office of the city clerk/treasurer or at such other place or places designated by him/her on or before the fifteenth of the month and are deemed delinquent thereafter. Delinquent accounts will be assessed a penalty as identified in the water ordinance. Statements shall cover service charges for the period shown thereon and shall be forwarded by mail to the customer as soon as practicable after each service period.

D. Nonpayment of Charges. Reclaimed water service terminated for nonpayment shall not be restored to the nonpaying user until all delinquent charges, together with a service fee as identified in the water ordinance for restoring services, are paid. (Ord. 779 § 4, 2003; Ord. 720 § 1, 2000; Ord. 684 § 7, 1999).

13.24.080 Legal requirements.

A. Rules and Regulations. The city administrator is charged with administration and enforcement of this chapter. Reclaimed water service to any premises served by the city reclaimed water system may be discontinued for any violation or abridgement of the provisions of this chapter or the user agreement, after due notice thereof. In the event reclaimed water service is discontinued for failure to comply with provisions of this chapter it shall remain terminated for the duration of such noncompliance.

B. Inspection of Premises. Authorized employees of the public works department, properly identified, shall have free access at reasonable hours of the day, to all premises served by the city's reuse system for the purpose of ascertaining conformity to this chapter, the Water Reclamation and Reuse Standards and the city's NPDES permit.

C. Sprinkling During Fires Prohibited. It is unlawful for any person to knowingly use reclaimed water for a lawn or garden sprinkling or irrigating purposes on any premises during the progress of a fire or disaster within the area served by the city's reclaimed water system.

D. Damaging or Interfering with Water System. It is unlawful for any person to wilfully disturb, break, deface, or damage any reclaimed water fire hydrant, reclaimed water meter, gate valve, water pipe or other reclaimed waterworks appurtenance together with the buildings, grounds and improvements thereon belonging to or connected with the reclaimed water system of the city in any manner whatsoever, including all reclaimed water features located at Cochrane Memorial Park. It is unlawful for any person to open, close, turn or interfere with, or attempt to, or to connect with any reclaimed water fire hydrant, valve, or pipe belonging to the city unless authorized by the city in writing; provided, that this rule shall not apply to members of the city department or such other fire department duly authorized to operate fire hydrants while acting in such capacity.

It is unlawful for any person to throw refuse or any substance into any city reclaimed water reservoir, feature or system or to throw any deleterious matter into or upon any part of the city's reclaimed water treatment system, reclaimed water supply system or water reuse system, including Cochrane Memorial Park.

E. Public. The use of reclaimed water by any person or entity in any manner in violation of this chapter or of any user agreement issued hereunder is subject to prosecution for a misdemeanor.

F. Injunction. Whenever a discharge of wastes or use of reclaimed water is in violation or threatens to cause a violation of this chapter, the city attorney may seek injunctive relief as maybe appropriate to enjoin such discharge or use.

G. User Agreement Revocation. In addition to any other statute or rule authorizing termination of reclaimed water service, the city may revoke a reclaimed water user agreement issued hereunder if a violation of any provision of this chapter is found to exist or if a discharge of wastes or use of reclaimed water causes or threatens to cause violation of this chapter.

H. Penalty. Any owner and/or operator who violates this chapter shall, for each day of violation, or portion thereof, be subject to a fine not exceeding \$1,000. In addition, reclaimed water and potable water service to the property may be discontinued. (Ord. 720 § 1, 2000; Ord. 684 § 8, 1999).

CITY OF YELM SEWER DEPARTMENT

Sewer Spec addendum

- 1. All STEP Tanks installed larger than 3000 gallons shall be fiberglass tanks mfg. by either Containment Solutions Inc. or Xerxes Inc.
- 2. All fiberglass STEP Tanks Shall be installed by qualified installers, following the mfg. directions and shall be secured with Tie-Down straps with "Dead Men" Sizing and materials for Dead Men and strapping shall be per the mfg. recommendations.
- 3. Buildings served by STEP Sewer, utilizing on site "back-up" generators for power outages must have electrical service installed in such a manner that the STEP system will also be supplied power by the auxiliary Generator.
- 4. The Pump Control Panels for all STEP tanks housing 2 or more pumps shall be fitted with a transfer switch model DT 323 URK as mfg by Cutler Hammer and a male plug, model 70530 MBWP as mfg by Bryant for use with the cities portable auxiliary generator.
- 5. All STEP tanks less than 3000 gallon shall have one 4" hole in the divider baffle centered at 20" above the floor of the tank. STEP Tanks sized at 3000 gallon shall have one hole in the divider baffle centered at 26" above the floor of the tank.
- 6. All 'Traffic Bearing' Service Boxes shall be a model MSBC 1324-12 mfg. by Mid States Plastics BC Series.
- 7. All posts used to support Pump Control Panels must be Hot Dipped Galvanized Unistrut.
- 8. All 'Air Release, Vacuum Release and Combination Air Release/Vacuum Release valves shall be a model D-021 Combination Air Valve "MINI SAAR" sized according to the mfg. recommendation per pipe size.
- 9. Minimum STEP Tank size shall be 1000 Gallons
- 10. All STEP tanks housing more than 1 pump must utilize 2" piping for the Service Line.
- 11. The maximum depth of bury for all STEP Tanks shall be 60" as measured from finished grade to the invert elevation of the inlet pipe to the tank.

7.000	CHAPTER 7 – SANITARY SEWER7-1
7A	SEWER SERVICE
7A.010 7A.020 7A.030	Definition of Terms Per Yelm Sewer Ordinance 505
7A.040 7A.050	STEP Sewer Connection Permit
7A.060 7A.070	Inspections and Compliance with Standards
7A.080 7A.090	Sewer Service Charges
7B	GENERAL CONSIDERATIONS
7B.010	General
7B.020	Design Standards7-23
7C	STEP TANK SYSTEM7-24
7C.010 7C.020	STEP Tanks
	Table 1B STEP Tank Sizing 7-25 Table 2 Estimated Daily Sewer Flows 7-26
7C.030 7C 040	Loading Criteria
7C.050	Concrete Tanks
7D	STEP PIPELINES7-32
7D.010	General7-32
7E	CONSTRUCTION REQUIREMENTS - STEP TANKS/ PIPELINES 7-32
7E.010 7E.020	General
7E.030	STEP Tank Installation
7E.040	Pipeline and Service Line Installation
/ <i>F</i>	SIEP PUMP ASSEMBLIES7-41
7F.010 7F.020	Materials and Installation
7F.030 7F.040	Pump Vault, Riser, and Lid

7F.050 7F.060	Level Control and Alarm Floats
7F.070	Additional Material Requirements
7F.080	Electric Connections
7G	GRAVITY SEWER
7G.010	General
7G.030	Side Sewers7-51
7H	RESTORATION
7H.010	General
7H.020	Crushed Surfacing7-52
71	GENERAL NOTES (SANITARY SEWER MAIN INSTALLATION)7-53
7J	INSPECTION GUIDE FOR S.T.E.P. SEWER INSTALLATION
	List of Drawings7-57

CHAPTER 7

7.000 SANITARY SEWER

7A SEWER SERVICE

7A.010 Definition of Terms Per Yelm Sewer Ordinance 505 (YMC 13.08)

> "Assess" - means to establish an amount or rate for the value of required improvements, fees or charges that are due for services provided which may become a lien on the property receiving such improvements or services.

> "As-Builts" or "Record Drawing" - means a drawing showing the horizontal and vertical location of the improvements as actually constructed; showing invert elevations, slopes of pipes, location of the pipes, tanks, controls, valves, depths of cover, type of material and any other feature different than shown on the design drawing.

> "Base Flow" - Means the flow associated with an Equivalent Residential Unit.

"B.O.D." - The abbreviation for biochemical oxygen demand which means the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five days at 20 degrees centigrade, expressed in parts per million by weight. PROVIDED that, in the event an alternative definition is utilized by or within the terms of a permit issued by a governmental agency under which the treatment system is required to operate, then such definition shall be deemed incorporated herein by reference.

"City Standards" - Means the official design and engineering specifications of the City of Yelm adopted by the City Council and applying to the construction of facilities under the City's jurisdiction.

"Collection Lines" - Means a pressure or gravity sewage conveyance line and appurtenances as defined from time to time by the City Standards. "Commercial Waste" - See Industrial/Commercial waste.

"Cover" - Means the depth of earth material lying between the top of the sewer and the finished grade immediately above it.

"Director" - When utilized within this chapter, the title "Director" shall refer to the Director of Public Works/Health Officer or his/her designee.

"Down Spout" - Means the leader, whether pipe, chain, or otherwise, above ground which is installed to conduct water from the roof gutter.

"Drain" - Means any type of conduction of waste or surplus liquids.

"Equivalent Residential Unit" or "ERU" - means the unit of measurement determined by that quantity of flow associated with a single residential household, defined by the City of Yelm Ordinance 506 as follows:

- 1. E.R.U. measurement shall be an equivalent flow of 900 Cubic Feet, or less, per month, based on water meter inflow, or sewer effluent meter when installed by owner with approval of Yelm Sewer Department.
- 2. With respect to each residential structure, the number of E.R.U.'s and associated "base flow" will be based on Table 1A.

<u>Type of Unit</u>	No. ERU's	Base Flow
Single Family Residence	1.00	900cf
Duplex Dwelling Unit	1.00	900cf
Triplex Dwelling Unit	0.90	810cf
Fourplex Dwelling Unit	0.80	720cf
Residential Structures > 4 U	nits0.75	675cf
Non-Residential Unit	1.00	900cf
TA	BLE 1A	

3. With respect to uses other than residential, one E.R.U. shall be designated for each nine hundred (900) cubic feet of water consumed per month or sewage discharged as measured at source.

"Garbage" - Means solid waste which includes, but is not limited to, matter originating from the preparation, cooking, and dispensing of food; from handling, sale, and storing of produce; from public places or from private ownership.

"Health Officer" - Means the official responsible for the public health of the citizens of Yelm or his/her designee. See Director.

"House Drain" - or "Building Drain" - Means the pipe used for conveying sewage from the building to the clean-out or to a point 2 1/2 feet beyond the outer line of any footing, piling, building support, or porch under which it may run; whether such drain consists of one line extending from the building or of two or more such lines.

"Industrial/Commercial Waste" - Means the wastes from an industrial or commercial process, as distinguished from sanitary sewage.

"Licensed Sewer Contractor" - Means any contractor licensed by the State of Washington who is duly registered as a "specialty contractor" or a "general contractor," and as such is licensed to construct, install, repair, reconstruct or excavate any sewers and to connect any building sewer to such public sewers, and who possesses a valid City of Yelm Business License.

"Maintenance Manager" - See Director.

"Municipal Sewer Service Area" or "Sewer Service Area" - Means the geographic area identified in the City of Yelm's Comprehensive Sewer Plan in which sewer service is currently available and planned to be served with sewer service in the future.

"Municipal Sewer System" - Means the City of Yelm's sewer system and includes collectively: the STEP system, collection lines, treatment plant, discharge piping and outfall piping.

"N.P.D.E.S." - An abbreviation for National Pollution Discharge Elimination System which is a Federal wastewater discharge permitting system that establishes discharge limits for facilities discharging wastewater to waters of the United States of America.

"City of Yelm Department of Public Works" - or "Public Works" -Means the sewer function of the City of Yelm and the rules, regulations, boundaries, etc., relating to such sewer function. See Director. "Occupant" - Means any person in physical possession of the building or structure to which sewer service is available, whether the owner, tenant, or other person holding a possessory interest.

"Onsite" - Means that the majority of the component parts of a wastewater collection or soil absorption system are located on the private property where the wastewater is generated.

"Owner" - City of Yelm or its duly appointed representative.

"Ph" - Means the logarithm of the reciprocal of the weight of hydrogen ions in grams per liter of solution.

"Person" - Means any individual, firm, company, association, society, corporation, or group.

"Pre treatment Ordinance" - Means an ordinance adopted by the City of Yelm addressing the type or level of treatment that may be required prior to the discharge of sanitary sewage into the STEP system.

"Primary Treated Waste Water" - Means wastewater that has been treated by a STEP tank.

"Public Place" or "Public Area" - Means any space dedicated to or acquired for the use of the general public or utilized with the permission of the owner or occupant on a continuing basis by the general public.

"Sanitary Sewage" - Means the combination of the water-carried wastes from residences, business buildings, institutions, commercial and industrial establishments, which wastes contain polluted matter subject to treatment at the sewage treatment plant, i.e., sanitary sewer.

"Sanitary Sewer System" - Means an integrated system of piping, pumps, valving and related structures constructed for the purpose of collecting and conveying domestic wastewater from sources to points of treatment.

"Senior Citizen" - Means a head of household over the age of 65 who is retired and is below the median income as established by the City.

"Septic Tank" - Means a tank designed to provide primary treatment of the wastewater, and sized according to the City of Yelm's "Technical Specifications STEP Onsite System". See "STEP Tank".

"Sewer" - Means a pipe or conduit for conveyance of wastewater; and may be either gravity or pressure flow.

"Sewer Collection System" - see "Sanitary Sewer System".

"Sewer Service Area" see "Municipal Sewer Service Area".

"Sewer System" - Means the treatment plant, outfall, collection lines and STEP system as defined herein.

"Shall - May" - For purposes of this Code, "Shall" shall be deemed to be mandatory and "May" permissive, unless the circumstances of the utilization thereof mandate otherwise.

"Side Sewers" - Means the sewer pipe from the building drain to the STEP or Septic tank serving the particular building, beginning at a single discharge point 2 1/2 feet outside the foundation wall, or at the clean-out if closer than 2 1/2 feet outside the foundation wall but still outside the foundation wall, and ending at the inlet to the STEP or Septic tank. Side sewer maint. shall be the responsibility of the property owner.

"Site Plot" or "Site Map" - Means a map of the side sewer location retained by the City in conjunction with any permit; the site plot or site map shall serve as a record of all matters pertaining to said permit.

"Slug" - Shall mean any discharge of water, sewage or commercial/industrial wastewater which, for any period longer than 15 minutes, has a flow rate or concentration of any given constituent that exceeds more than five (5) times the average twenty-four (24) hour flow rate or concentration of normal operation.

"Soil Absorption System" - Means a system designed to percolate primary treated wastewater into soil through the use of a drainfield, mound system or other land disposal system approved by the Thurston County Health Department.

"Standard Participation Contract" - Shall mean the form of contract required by this Code to be entered into before properties which have not yet been connected to or assessed for sewers or do not otherwise qualify for sewer service may nevertheless use the public sewers of the City of Yelm.

"Standard Specifications" - Shall mean the latest version of the Standard Specifications for Road, Bridge, and Municipal Construction, prepared by the Washington State Department of Transportation and the American Public Works Association, Washington State Chapter, including the Division 1 APWA supplement.

"STEP" - Shall mean the Septic Tank Effluent Pump System defined in the latest version of the Department of Ecology Criteria for Sewage Works Design.

"STEP System" - Means all facilities from the building drain to the sewer collection lines including: the STEP tank, pump, screens, controls, alarms, electrical breakers, the effluent line, including the pipe, valves and valve box, and all miscellaneous appurtenances from the STEP tank to the sewer collection line.

"STEP Tank" - Means a Septic Tank Effluent Pump Tank and appurtenances as defined by the City Standards.

"Suspended Solids" - Means solids that either float on the surface of or are in suspension in water, sewage, or other liquids, and which are removable by the application of a treatment process.

"Treatment Plant" - Means the structures, equipment, and facilities required to receive, treat, reclaim, wastewater, including the outfall piping and structures.

7A.020 Use of Municipal Sewer

It shall be unlawful for any person to place, deposit, or permit to be placed or deposited, any human or animal excrement, sanitary sewage, or other objectionable waste, by any natural or non-natural means in any manner, upon property of the City or private property within the City of Yelm sewer boundaries, or in any area under the jurisdiction of the City, except through the City's sewage collection system or through an approved onsite system as provided herein.

Except as provided herein, it shall be unlawful to construct or

maintain any privy, privy vault, cesspool, or other facility intended or used for the disposal of sewage and to install or use any onsite soil absorption systems in such cases where the City's sewer collection system is available for service as provided herein. For purposes of this Section (Ordinance 505), the sewer collection system shall be deemed available when the premises are within 200 feet of the City's collection lines; provided that the City's treatment plant holds sufficient unused capacity to treat the expected sewage from the premise. The 200-foot distance shall be calculated by measuring from the lot line closest to the existing portion of the City's collection system.

For the purpose of this chapter, when sewer is not available as defined in this Section, primarily treated waste water may be disposed of onsite with a treatment and disposal system that meets the approval of the Health Officer. All components shall be designed and constructed to meet the City of Yelm's STEP System Standards, included in this Chapter. The City of Yelm shall establish the standards under which all components of the system will be constructed, including: side sewers, tanks, pumps, pump controls, and associated appurtenances for both the municipal system and onsite soil absorption systems that will be converted for use in the transport of effluent to the Yelm municipal collection system at such time as sewer is available.

The owner(s) of any premises upon which any building is located within the City's sewer service area shall connect to the City's municipal sewer system if: (a) the City's sewer collection system is available to the premises, as defined herein; (b) the Thurston County Health Department has determined that the interests of public health and safety require a connection to the City's municipal sewer system. Where the sewer collection system is available and as such, a property owner is required to connect to such system, such connection shall be made when, in the opinion of the Health Officer, the on-site system on the premises requires repair or replacement. Such connections shall be made at the sole expense of the owner within 30 days after notification by the City that service is available.

The Director may authorize the connection of more than one structure on the premises, whether residential, commercial, or industrial to a single septic tank or STEP system installation serving the property. Any multiple connection must receive prior written approval from the Director before a construction permit will be issued. In the event that property is not timely connected to the Municipal collection system within the time period proscribed by this Section, the Director is authorized and directed to make such a connection to the system and to notify the City Clerk-Treasurer of the total cost thereof. Thereupon, a warrant shall be issued and drawn upon the City's sewer fund for payment of such total cost. A statement of such total cost shall be filed with the Auditor of the County of Thurston, as well as the Treasurer of the County of Thurston, and such amount, together with interest at the rate as may from time-to-time be established for judgments on the total amount of the costs, shall be assessed against the property and shall become a lien thereon as provided in this Chapter.

Any building hereafter constructed or made available for human occupation and use, or parcel of real estate to which the sewer collection system is available as provided herein, shall, within sixty (60) days after an application for a side sewer permit is received by the City, or prior to occupancy of said premises, whichever event first occurs, be connected to the municipal sewer system of the City.

The owners of property within the corporate limits of the City of Yelm, which property has not been connected to sewers, may, with the City's consent, connect to the municipal sewer system of the City and obtain sewer service by entering into an Assessment Agreement provided for by Ordinance 505. Property located outside the corporate limits of the City shall not be permitted to connect to the City's municipal sewer system at any time unless (1) the property is included within the boundaries of the sewer service area, and (2) either the property is annexed to the City or the owners thereof enter into a binding agreement with the City, agreeing the property shall be annexed to the City at such time as the City may request, and that the property owner waives any protest to the annexation.

7A.030 Application for Sewer Service:

Properties that are located within the City's sewer service area, as that area may from time-to-time be modified, and are not connected to the municipal sewer system and otherwise do not qualify for sewer service under the terms of this chapter, may be eligible to be connected to the City's municipal sewer system and be served thereby when the owner thereof executes an Application for sewer service (see Appendix D) and the City concurs therewith. Upon the concurrence by the City, the application and all of its terms become a binding contract on all parties named therein. The application shall be filed and recorded with the Thurston County Auditor.

The Application for sewer service shall contain such terms, conditions and requirements as may be from time-to-time be established by the Public Works Director. At a minimum, it shall provide the following:

- A. That the property owner warrants that he/she is the owner of that property with full authority to bind the property with the covenants and conditions contained in the Application.
- B. That the property owner shall subject his/her property to the terms of the Application and shall use the City's municipal sewer system in accordance with the rules and regulations of the City as they may be amended from time-to-time, and that the property shall be subject to the regular schedule of sewer service charges of the City as may from time-to-time be fixed by the City for its use classification, including, if the City so provides, a reasonable split or special rate for properties in particular areas.
- C. That the property described in the Application shall be the only property served with sewer service pursuant to the terms in the application.
- D. That the property subject to the Application shall be subject to liens, penalties, and interest for nonpayment of sewer service charges to the same extent as any other property served by the City.
- E. That the property owner and his/her successors in interest shall not object to any annexation to the City or the formation of any utility local improvement district, the areas of which may include the property subject to the Application.

- F. That owner shall provide all necessary easements prior to the commencement of installation of collection lines onsite and all collection and STEP system materials and equipment shall be approved by the City and the ownership of such equipment and materials shall meet the specifications and approval of the City, including, but not limited to, a transfer of ownership to the City at the City's request.
- G. The owner shall agree to pay, prior to connection, any connection fee which may from time-to-time be assessed, as well as any monetary amount that may be expended by the City pursuant to this Ordinance and City of Yelm Ordinance 506. Such charges shall constitute a lien upon the properties and be subject to collection as provided in Section 7A.020.

Charge in Lieu of Assessment.

The property owner must pay to the City, in addition to any connection fee, application fee or other charge which may be due, an amount of money which shall constitute a "Charge inlieu of Assessment" which may be determined by the use of an assessment formula used by the City. The Charge in-Lieu of Assessment must be paid in full before connection to the City's municipal sewer system is permitted. This Charge in-Lieu of Assessment shall be deemed to take into consideration, among other factors, the reduction in capacity of the collection system and/or treatment plant, resulting from the connection, which shall be in such amount as may from time-to-time be established by the Director pursuant to the provisions of Section 7A.090 of this Ordinance.

Other Terms.

To protect the interests of the City of Yelm, the City may require that other conditions and provisions be inserted into the application for sewer service as the individual case may warrant.

Developer Agreement.

In addition to authority provided in this chapter, the City may also enter into contracts with the owners of real estate to the extent allowed by law.

7 - 10

7A.040 STEP Sewer Connection Permit

It shall be unlawful for any person to make connection to the City's municipal sewer system without complying with all of the provisions of this Code and having first procured a permit to do so from the City.

Applications for the STEP Sewer Connection Permit shall be obtained from the Office of the Public Works Director and shall be filed there with. The application shall be on such form as may from time-to-time be established by the Public Works Director and shall require such information as from time-totime may be established by the Public Works Director, including, but not limited to, the name and address of the owner or owners, the correct address and proper legal description of the property to be served, the anticipated use of the property to be served, and the name, address, and contractor's number of the contractor who will be doing the work. The Director or his/her designee may meet with the owners of the property or their representatives to approve the proposed location of the STEP tank and manner of connection. The application will then be submitted to the City along with such fee as may from time-to-time be established, for final The permit shall not be issued until the consideration. Application has been approved by the Director or his/her designee. No sewer connection shall be made until such STEP Sewer Connection Permit has been issued.

No contractor shall commence sewer work within the corporate limits of the City or the sewer service area as defined by the latest Sewer Comprehensive Plan, Engineering Report, or Facility Plan, until proof has been submitted to the City of Yelm that the contractor is a licensed sewer contractor as defined in Section 7A.010.

Upon completion of the installation of the STEP system, tank and associated appurtenances, the owner shall be responsible for ensuring that the contractor provides to the City a drawing to the satisfaction of the Director. The record drawing shall be prepared on a site map showing the location of the STEP tank, the point of connection with the house or building, the grade of the side sewer, the location of all piping and electrical wiring and such other information as shall be deemed pertinent by the Director. Records of all sewer connections, as-builts, and inspection reports of completed work shall be kept on file in the City Public Works Office, along with the STEP Sewer Connection Permits.

Upon approval of an application for a STEP Sewer Connection Permit, and any drawing related thereto, it shall be unlawful to install the permitted improvements in any manner other than as provided for in said permit, without the prior written approval of the Director. During the course of construction of the improvements, the installation shall be inspected and approved by the Director or his/her designee, both before the installation is covered and upon final completion. No work other than that covered by the permit shall be done without the prior approval of the City. The installation or repair of any portion of the STEP system between the house drain and the sewer collection system, shall be considered to be an installation pursuant to this Chapter.

It shall be unlawful for any person to break, alter, or tamper with any City sewer collection line, except that property owner or his or her representative or contractor may connect to an existing wye, saddle, or tee which exists for that specific purpose, with the prior approval of the Director; provided that any such connection shall be inspected and approved by the Director before the installation is covered.

It shall be unlawful to disconnect any side sewer, STEP System, or other connection to the City's sewer collection system or remove any portion of a STEP System without securing prior written approval by the Director. The discontinued service shall be turned off or sealed in such a manner as may be acceptable to the Director, whether at the curbstop or otherwise. All expenses for disconnecting from the sewer collection system shall be borne by the property owner.

The approval of the design and installation of a STEP System or a City sewer collection system by the City shall not relieve the property owner of the responsibility for obtaining such other permits or licenses as may be required by the City, County, State, or other agency, nor shall it be deemed to be a statement by the City that the installation was performed without defect in workmanship, parts or material. It shall be the responsibility of the sewer contractor to contact other utility service providers to determine the location of other utility facilities before commencing work and they shall have the responsibility for protecting such other facilities during the course of construction. The property owner shall, prior to the issuance of the STEP System Connection Permit, provide an easement to the City for the purpose of operation and maintenance of the STEP system, in a form as may from time-to-time be required by the Director.

7A.050 Collection Lines

The Director shall not allow any substandard or temporary collection lines to be installed or connected to the City's sewer collection system.

Whenever application is made for sewer service to premises with no collection line in the adjacent street, a collection line must be installed prior to connection. The sizing and installation of such lines shall conform to the Comprehensive Sewer Plan for the City and be designed by a professional engineer licensed in the state of Washington. A collection line shall be installed by, and at the expense of, the owner(s) of the premises to be served thereby, pursuant to plans approved by the Director. In such cases, the City may contract with the owner(s) to provide for reimbursement of the costs of design and construction of such collection lines in a manner consistent with RCW 35.91. The owner(s) may elect to request that the collection line be installed by the City upon making payment to the City of the appropriate collection line extension charges, as provided by this Ordinance.

Whenever a collection line is installed within the City's sewer service area as provided herein, the collection line extension charge to be paid by the owner(s) of the premises so served shall be determined by the City Council on the advice of the Director, based upon the actual costs for design, and the cost of the necessary material, labor and equipment required for the construction in accordance with current standards and the Comprehensive Sewer plan. The charge shall be based upon the acreage or front footage of the property to be served or a combination of acreage and the front footage of properties to be served, or on the basis of Equivalent Residential Units (ERU's) as defined in Section 7A.010.

7A.060 Inspections and Compliance with Standards

The Director and his/her assistant and the City Council, bearing proper credentials and identification, shall be permitted to enter upon all and any premises at all reasonable times for the purpose of inspection, observation, measurements, samplings, testing of sewers and sewage waste and performing all other acts or duties required by the provisions of this chapter. It is unlawful for any person to prevent any such entrance or obstruct or interfere with any such officer or employee so engaged.

All work performed pursuant to any permit granted as provided by this Chapter, including the quality of material and manner of construction, shall be subject to the inspection and approval of the Director.

No excavation undertaken for purposes of the installation, connection, repair, or replacement of a collection tank, side sewer, or other portion of the STEP system or any collection line shall be back-filled or any sewer covered until the work has been inspected and approved by the Director or his/her designee.

It shall be the responsibility of the person performing work under the authorization of a permit issued pursuant to the provisions of this Chapter to notify the Director when the work will be ready for inspection and that person shall specify in such notification the location of the premises. The Director or his/her designee shall make such inspection within 48 hours after receipt of the notice, excluding Saturday, Sunday and holidays.

When such work authorized by a permit pursuant to this chapter is performed by a contractor, either the contractor or competent representative shall be available to meet the City representative on the premises when so directed.

If the Director or respective designee finds that any work or materials used are not in accordance with any applicable Code, Ordinance, rule, specification, or regulation, the Director or designee shall notify the person doing the work and also the owner or occupant of the premises by posting a written notice, and such posted notice shall be all the notice required to be given with regard to defects in the work or materials found in such inspection.

All work within the limits of any public area shall be prosecuted to completion with due diligence. If any excavation is left open beyond a time reasonably necessary to back-fill the same, the City may cause the same to be back-filled and the public area restored forthwith at the expense of the property owner, occupant, or contractor, as the case may be. Any such work shall be protected by appropriate warning signs and barricades. The Director may, if deemed necessary and appropriate to insure the completion of work, require the posting of a bond in favor of the City in such form as may from time-to-time be approved by the Director in such amount as may be equal to one and a half (1.5) times the value of the work to be done.

Under any of the circumstances set forth in this Section below, and after written notice has been provided by the Director, or his/her designee the contractor, owner, or person doing the work, as the case may be, shall properly correct such work by performing the necessary construction or repair, or by otherwise taking the steps necessary to remedy the circumstances, within the time specified in the notice. In the event the contractor, owner, or responsible person fails to properly correct such work within the specified time, then the City may perform such work as may be necessary to remedy such circumstances, and the cost of such work so done shall be charged to the property owner, occupant, or contractor, as the case may be, and shall become immediately payable to the City upon written notice of such being delivered to such owner, occupant, or contractor or charged against the construction bond as provided for herein. Any licensed sewer contractor, and any contractor performing work pursuant to a permit issued under this Chapter, who refuses to modify, remove, replace, or complete any portion of the work when so instructed by the Director, shall by such refusal, forfeit his or her City license for construction of sewers or drains in the City of Yelm.

The circumstances under which the provisions of this Section shall apply are as follows:

- A. When any work performed in the construction, installation, repair or modification of a sewer is not performed in accordance with the provisions of any applicable code, including this chapter, or any plans, specifications or permits approved by the City.
- B. When the health officer or responsible City official determines that a collection system, STEP System or other portion of the sewage disposal system is obstructed, broken, or inadequate and is a menace to the public health or is likely to cause damage to either public or private property.

- C. The provisions of 7A.070 have been violated by non-completion.
- D. The STEP system serving any property has been shut-off from its service of electrical power as a result of delinquent payment for such service, or any other reason.

Any moneys expended by the City pursuant to the taking of any action by the City under the provisions of this Section shall be subject to a lien and enforcement as provided in Section 7A.020 of this chapter.

7A.070 Forbidden Acts:

No person shall discharge or cause to be discharged any stormwater, surface water, ground water, roof runoff, subsurface drainage, cooling water, or unpolluted commercial/industrial process water to a connection, STEP System, or any portion of the collection system, and no yard drains, or any exterior drains of any type shall be connected to the sanitary sewers in any manner.

It shall be unlawful to drain large volumes of waste directly into the sewer and thereby cause surcharge of sewer lines without the prior approval of the Director. Swimming pools, public or private, shall not be directly connected to the sewer. Only upon authorization of the Director, swimming pools may be drained into the sewer system by a pumped discharge. To prevent surcharges or excessive flows in the sewer line, the Director may require reduced pumping rates, the utilization of smaller discharge pipe and/or throttled valves, and/or limited times of the day when pumping will be allowed.

It shall be unlawful to tamper with the municipal sewer system, or to break, damage, destroy, deface, alter, or tamper with any structure, appurtenance, or equipment which is part of the municipal sewer system, or without authority from the City, to break, damage, destroy, or deface any public walk, curb, or pavement, or to make openings or excavations in a public area for the purpose of connecting to the City municipal sewer system.

It shall be unlawful to disconnect or cause to be disconnected the electrical power source from the STEP tank, whether such tank is designed to serve multiple buildings or a single building, while the building or buildings are occupied and subject to continuing utilization or while the plumbing facilities in any of the connected structures are in use subject to continuing use. This prohibition shall not apply to gravity tanks that do not require electrical power for conveyance of the effluent. Nor shall it be deemed to apply to the actions of the electrical utility providing power to the tank, when such disconnection is necessitated by a failure of the responsible person to pay the electrical charges, or when the utility determines that such disconnections are necessary for the public safety.

Prohibited Uses:

- A. No person shall discharge or cause to be discharged any of the following described waters or wastes to any City sewers:
 - (1) Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive or liquid, solid, or gas.
 - (2) Any waters or wastes containing toxic or poisonous solids, liquids, or gases in sufficient quantity, either singly or by interaction with other wastes that injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving waters of the sewage treatment plant, including, but not limited to, cyanide in excess of two (2) mg/l as CN in the wastes as discharged to the City sewer system.
 - (3) Any waters or wastes having a Ph lower than (5.5) or in excess of (9.5) or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewage works.
 - (4) Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the sewage works such as, but not limited to, ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, unground garbage, whole blood, paunch manure, hair and fleshings, entrails, paper dishes, cups, or milk containers, either

whole or ground by garbage grinders.

- Β. No person shall discharge or cause to be discharged the following described substances, materials, waters, or wastes if it appears likely, in the opinion of the Director, that such wastes can harm either the sewers, the biological treatment in the STEP tank, sewage treatment process, or equipment, have an adverse effect on the receiving stream, or can otherwise endanger life, limb, public property, or constitute a nuisance. In forming his opinion as to the acceptability of these wastes, the Director will give consideration to such factors as the quantities of such wastes in relation to flows and velocities in the sewers, materials of construction of the sewers, nature of sewage treatment lagoons, degree of treatability of wastes in the lagoons, and other pertinent factors. The substances prohibited are:
 - (1) Any liquid or vapor having a temperature higher than 150 degrees F (65 degrees C).
 - (2) Any water or waste containing fats, wax, grease, or oils, whether emulsified or not, in excess of 100 mg/l or containing substances which may solidify or become viscous at temperatures between 32 and 150 degrees (0 and 65 degrees C). All food service establishments shall be required to have in place a Grease Interceptor with a minimum capacity of 1500 galons. Grease Interceptor size shall sized correctly to eliminate grease from entering the STEP tank.
 - (3) Any garbage that has not been properly shredded to meet such specifications as may from time-totime be established by the Director. The installation and operation of any garbage grinder equipped with a motor of 3/4 horsepower (0.76 hp metric) or greater shall be subject to the review and approval of the Director.
 - (4) Any waters or wastes containing strong acid iron pickling wastes or concentrated plating solutions whether neutralized or not.
 - (5) Any waters or wastes containing iron, chromium, copper, zinc, and similar objectionable or toxic

substances; or wastes exerting excessive chlorine requirements to such degree that any such material received in the composite sewage at the treatment plant exceeds the limits established by the City of Yelm or causes violation of the City's NPDES Discharge Permit for such materials.

- (6) Any waters or wastes containing phenols or other taste or odor producing substances, in such concentrations exceeding limits which may be established by the Director as necessary after treatment of the composite sewage to meet the requirements of state, federal, or other public agencies or jurisdiction for such discharge to the receiving waters.
- (7) Any radioactive wastes or isotopes of such halflife or concentration as may exceed limits which may be established by the Director in compliance with the applicable state or federal regulations.
- (8) Materials which exert or cause:
 - (a) Unusual concentrations of inert suspended solids (such as, but not limited to, Fuller's earth, lime slurries, and lime residues) or of dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate).
 - (b) Excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions).
 - (c) Unusual BOD, chemical oxygen demand or chlorine requirements in such quantities as to constitute a significant load on the sewage treatment works.
 - (d) Unusual volume of flow or concentration of wastes constituting "slugs" as defined herein.
- (9) Waters or wastes containing substances which are not amenable to treatment or reduction by sewage treatment processes employed.
- (10) Or any discharge that would be a violation of the

City's N.P.D.E.S. permit.

7A.080 Sewer Service Charges:

Hook-Up Fee Required.

At the time the Director certifies that the property owner has submitted an Application for connection and that the City concurs with such applications, the applicant shall pay to the City such hook-up fees as may from time-to-time be established by Resolution or Ordinance of the City Council. In the event that the connection is not in fact completed, such fees shall be refunded to the property owner.

Connection fees.

In the event of construction of a structure upon vacant land requiring a connection to the City's municipal sewer system, there shall be paid a connection fee in an amount established by the City, per equivalent residential unit (ERU), or such other amount as may hereafter be established by Resolution or Ordinance of the City Council, this amount being deemed to represent the per unit cost for pipeline and treatment plant improvements.

Service Rates.

Service rates, billings, and collection procedures shall be governed by the applicable provisions of the Yelm Municipal Code, as now existing or hereafter amended or supplanted.

Delinquent Charges.

All delinquent charges for sewer service, for electrical service paid for by the City, and for the costs of sewer system connection, together with the penalties and interest thereon as provided in this Chapter, shall be a lien upon the property upon which such connection is made or sewer or electrical service furnished, superior to all other liens or encumbrances except those for general taxes and special assessments. Enforcement of such lien or liens shall be in the manner provided by this ordinance and by other laws for the enforcement of the same and for delinquent sewer service and electrical service charges.

7A.090 Operational Authority

In addition to the authority granted to the Director to make rules and regulations, the City Council of Yelm may make rules and regulations implementing the provisions of this Chapter and may amend the same from time-to-time, but not in a manner inconsistent with the provisions of this chapter. In the event of an inconsistency between a rule or regulation established by the Director and one established by the City Council pursuant to the provisions of this Section, the rule or regulation established by the City Council shall be deemed to control.

The Director shall be authorized to issue such rules or regulations as he or she may from time-to-time determine appropriate in relation to matters of methodology, standards, techniques, and materials to be utilized in relation to the connection, repair, and replacement of systems upon individual properties. The authority granted by this Section shall be deemed supplemental to any authority granted to the Director pursuant to any other of the provisions of this chapter.

The Director is hereby authorized to establish by rule or regulation, such construction standards, rules, and regulations as may be necessary to govern the installation, improvement, repair, replacement, or operation of the sanitary sewer system of the City. The standards may include, but are not limited to, specification of materials and installation requirements, limitations upon materials to be permitted to enter the sewer system from a building served by the system, collection system and treatment plant capacity and such other matters as may be deemed necessary by the Director.

Any proposed rule or regulation to be issued by the Director shall be submitted to the Council prior to its implementation. The Council shall have twenty-one (21) days following the date of its initial submission to the Council at a regular meeting to approve, disapprove, or modify any proposed rule or regulation. In the event the Council does, in fact so act, such action shall be deemed to be effective immediately upon approval or modification by the Council. In the event of no action by the City Council, unless the time period established by this Section is extended by affirmative action of the Council, the proposed rule or regulation shall become effective upon the twenty-second (22nd) day following date of submission.

7B GENERAL CONSIDERATIONS

7B.010 General

The City of Yelm Technical Specifications were developed for use with onsite Septic Tank Effluent Pump (STEP) tank installations, onsite wastewater disposal system installations that are to be converted to STEP, and STEP collection line installations.

The City of Yelm Technical Specifications are subject to change as new regulations come into effect.

Within the corporate City limits where a public sewer is available it must be used. Where public sewer is not available within the City limits, connection is required provided that the premises are within 200 feet of the public sewer measured from the lot line closest to the existing portion of the City's collection system, except in the case of private residential or commercial developments. In this case, connection of all structures generating sewage shall be required to connect to the public sewer regardless of distance from the public sewer.

Anyone who wishes to extend or connect to the City's sewer system should contact the Department of Public Works for a sewer extension/connection fee estimate of the costs due the City for a sewer extension or connection.

Prior to the release of any water meters, or operation of any STEP systems, all Public Works improvements must be completed and approved and all applicable fees must be paid.

See Section 3.025 for definitions of specific sewers. Maintenance of the building or side sewer shall be the responsibility of the property owner. Maintenance of the lateral shall be the responsibility of the property owner.

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed as a Professional Engineer or Professional Land Surveyor by the State of Washington.

A preconstruction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.

Ownership, operation and maintenance of the tank, pump, and pump controls shall be the responsibility of the City only after the system has been inspected and approved and an easement is granted, and ownership of the STEP component conveyed to the City and the warranty period of one year has expired. It is required by the City that the easements for a new development be granted on the plat, otherwise, an easement for each lot will have to be granted at the time of connection.

Power shall be provided by the customer. The customer shall be responsible for notifying the City when the control panel alarm buzzer is activated. All sewer pipe, drains and plumbing between the tank and the building shall be the responsibility of the customer. The customer shall be responsible for curtailing water usage until City forces respond to the customers notification. The City will accept no responsibility for damages resulting from a plumbing backup, such as may occur if water usage is not curtailed during an alarm condition or if the customer disables the alarm.

Currently, only the Orenco STEP Pump System shown in the drawing section of this chapter has been approved by the City.

7B.020 Design Standards

The design of any STEP sewer system shall conform to City standards and the latest version of the Criteria for Sewage Works Design prepared by the Department of Ecology (hereinafter referred to as the DOE Design Manual). In case of conflict between the two Standards, the most stringent conditions shall apply.

The layout of extensions shall provide for the future continuation of the existing system as determined by the City. In addition, main extension shall be extended to and through the side of the affected property fronting the main. Individual service boxes shall be installed to serve each lot.

Pump, STEP tank, and pipeline sizing shall conform to the criteria as set forth herein.

The applicable General Notes in section 7I shall be included on any plans dealing with pressure sanitary sewer design.

7C STEP TANK SYSTEM

7C.010 STEP Tanks

STEP tanks shall be the size and type as denoted in these specifications and as shown on the standard drawings. Grease interceptors shall be sized in accordance with the EPA Design Manual (625/1-80-012) and shall be of a configuration consistent with industry standards. Grease interceptor vessels will be subject to requirements of the STEP tanks.

ALL STEP TANKS SHALL BE H-20 RATED TANKS. THIS POLICY SHALL TAKE EFFECT ON MAY 31, 2007

1. STEP tanks with an influent pipe invert elevation of less than or equal to 4 feet, which are not placed in traffic bearing areas shall meet the loading criteria listed in Section 7C.030.

All models of tanks will be certified by a licensed Structural Engineer that they will meet the loading conditions specified herein. The Structural Engineer certifying each model of tank shall submit drawings including but not limiting to the following:

- a. Plan view showing dimensions of tanks and the size and location of any openings in the tank.
- b. Side section of tank showing dimensions and thickness.
- c. End section of tank showing dimension and thickness.
- 2. STEP tanks with influent pipe inverts greater than 4 feet, and/or are subject to traffic bearing loading, shall meet the loading criteria listed in Section 7C.030.

All models of tanks will be designed by a licensed Structural Engineer. Calculations shall be submitted for review.

3. An inspection port will be required over the inlet baffle for all STEP tanks. A 21" diameter minimum riser inspection port/clean-out shall be required.

7C.020 STEP Tank Sizing

STEP tanks for the City of Yelm will be sized and configured as outlined, and shall meet the DOE Design Manual criteria for vessel sizing and configuration.

TABLE 1B - STEP TANK SIZING

Descriptions	Tank Size	
Up to 4 Bedroom Home	(minimum) 1,000 gallons (liquidcapacity)	3
5/6 Bedroom Home/Duplex	(minimum) 1,500 gallons (liquid capacity)	3

STEP tanks for any applications of institution, multi-family dwelling or, other structures not listed above shall be sized in accordance with the latest version of the DOE Design Manual. Peak-day flow for purposes of sizing STEP tanks shall be calculated using Table 2, Accepted Engineering Manual, or actual operating records, whichever is more stringent.All STEP tank configuration will be two compartment and shall meet requirements of the DOE Design Manual with the following additions:

- 1. All STEP tanks 1,000-4,500 gallons will be two compartment tanks divided by a baffle as shown in Drawing Detail 7-10 and 7-11. On 1,000-4,500 gallon tanks, install the equivalent of three each 4-inch diameter holes uniformly spaced across width of tank baffle 29 inches above floor of tank in each baffle.
- 2. On 6,000-gallon tanks, install three each 6-inch diameter holes uniformly spaced across width of tank baffle 40 inches above floor of tank in each baffle.
- 3. If approved by the Owner, 6,000-gallon tanks used in conjunction with a pump tank may not require a baffle.

TABLE 2 - ESTIMATED DAILY SEWER FLOWS

Type of Establishment **Gallons Per Person Per Day** (Unless Otherwise noted) Airports (per passenger) 5 Apartments - multiple family (per resident) 65 Bathhouses and swimming pools 10 Camps: Campground with central comfort stations 35 With flush toilets, no showers 25 50 Construction camps (semi-permanent) Day Camps (no meals served) 15 Resort camps (night and day) with limited plumbing 50 100 Luxury camps Cottages & small dwellings with seasonal occupancy 50 Country clubs (per resident member) 100 Country clubs (per non-resident member present) 50 Dwellings: **Boarding houses** 50 additional for non-resident boarders 10 Luxury residences and estates 150 Multiple family dwellings (apartments) 65 Rooming houses 40 Single family dwellings 75 Factors (gallons per person, per shift, exclusive of industrial wastes) 35 Hospitals (per bed space) 250 +Hotels with private baths (2 persons per room) 60 Hotels without private baths 50 Institutions other than hospitals (per bed space) 125 Laundries, self-service (gallons per wash, i.e., per 50 customer 250 Mobile home parks (per space) Motels with bath, toilet, and kitchen wastes (per bed space) 50 Motels (per bed space) 40 Picnic Parks (toilet wastes only) (per picnicker) 5 Picnic parks with bathhouses, showers, and flush 10 toilets Restaurants (toilet and kitchen wastes per patron) 10 Restaurants (kitchen wastes per meal serviced) 8 Restaurants additional for bars and cocktail lounges 2 Schools: 100 Boarding Day, without gyms, cafeterias, or showers 15 Day, with gyms, cafeterias, and showers 25 Day, with cafeteria, but without gyms, or showers 20 Service stations (per vehicle served) 10 10 Swimming pools and bathhouses Theaters: 5 5 Movie (per auditorium seat) Drive-in (per car space) Travel trailer parks without individual water and sewer hook-ups (per space) 50 Travel trailer parks with individual water and sewer hook-ups (per space) 100

Construction (at semi-permanent camps)	50
Day, at schools and offices (per shift)	15

All tanks install a 4-inch diameter hole within 1 inch of crown of baffle for venting.

Designers to consult with Pubic Works Director prior to design of commercial STEP installation and tanks 3,000 gallons and larger to verify tank sizing, vault configuration, pump requirements, and electrical requirements.

Underestimating the wastewater flow anticipated to be received by either the STEP tank or primary tanks by the property owner or the owner's designer based on estimated use will result in the property owner increasing the septic tank holding capacity to meet the above criteria. Refusal to increase the size of the septic tank to meet the design criteria will result in discontinuance of sewage collection services.

7C.030 Loading Criteria

- 1. 135 lb./cu. ft. weight of backfill.
- 2. The water table is at ground level. Lateral loading is 85 lb.cu. ft., which includes hydrostatic water pressure.
- 3. The tank will support a minimum 1000 lb. wheel load.
- 4. Tanks designated as traffic bearing tanks shall be designed to withstand HS-20 truck loading with appropriate impact factors. All tanks shall be structurally sound and watertight and shall be guaranteed in writing by the tank manufacturer for a period of two (2) years from the date of final acceptance. The tank guarantee/warranty shall be furnished at the time of submittal. Tank warranty shall not limit liability to replacement cost of the tanks.

7C.040 Fiberglass Tanks

Unless superseded by the Standard Specifications, the fiberglass tanks will meet all requirements of IAMPO PS 1-87. If requested by the Owner, the manufacturer shall supply to the Owner, without charge, approved original laboratory report showing compliance with IAMPO PS 1-87 and requirements of the suppliers licensed Structural Engineer.

Method of Calculations

Fiberglass tanks shall be analyzed using finite element analysis for buried structures.

Calculations shall address the following:

- a. Strength with a safety factor of 2.5
- b. Buckling with a safety factor of 2.5
- c. Deflection of 5 percent of the tank diameter, based on service load (including long-term deflection lag).
- d. Buoyancy

Performance Testing

In lieu of calculations for fiberglass tanks, the supplier may elect for in situ performance testing.

In situ testing of each tank model shall include use of strain gauges and deflection gauges. The tank will be subjected to external forces equal to twice the actual load.

Maximum initial deflection based on service loading shall not exceed 2 percent of the tank diameter.

Performance testing will be evaluated by a licensed Structural Engineer registered in the State of Washington. The Owner will have the sole responsibility to determine the maximum external loading on any of the tank models.

- Inspections may be made by the Owner in the suppliers' 1. yard, within the plant, upon delivery and again after installation. The wall thickness shall average at least 1/4 inch unless superseded by the requirements of the When less than 3/16 inch in Structural Engineer. thickness or any delamination is suspected within any portion of the tank wall for inspection purposes. If the required minimum 3/16-inch thickness is not found, repair, if feasible, shall be the responsibility of the Contractor. If repair is judged not feasible, the tank shall be rejected. If twenty percent or more of the tanks are rejected for any of the aforementioned reasons, each tank under this bid will become suspect of substandard quality and subject to rejection by the Owner. If the required minimum 3/16-inch thickness is found, and no delamination is present, the repair shall be the responsibility of the Owner.
- 2. The Structural Engineer shall specify the minimum weight

of each tank model that will be allowed and submit those weights during the submittal process. The manufacturer will weight each tank and place that weight on the side of each tank in a manner that will not be affected by rain or inclement weather.

- 3. Holes required in the tank shall be provided by the manufacturer. Resin shall be properly applied to all cut or ground edges so that no glass fibers are exposed and all voids are filled.
- 4. Dual Tite or Ty-Seal neoprene gaskets, or equal, shall be used at the inlet to join the tank wall and the ABS inlet piping. ABS Schedule 40 pipe and fittings shall be used at the inlets.
- 5. Inlet plumbing shall penetrate 18-inches into the liquid from the inlet flow line.
- 6. Each tank shall be water tested on the project site after assembly by the manufacturer and witnessed by the Owner. Every tank shall be assembled by the manufacturer and water raised to the brim of the manhole for a minimum of two (2) hours. The tank shall show no leakage from section seams, pin-holes or other imperfections. Any leakage is cause for rejection.
- 7. When leakage occurs, if the tank is not rejected by the Owner, an additional water test for a minimum of two (2) hours shall be made on the tank after repairs have been completed, upon request by the Owner. The manufacturer shall be responsible for making all corrective measures in production or assembly necessary to ensure a completely watertight tank.
- 8. After installation of tank with riser is completed each tank shall be filled with water to the top of the riser for a two (2) hour period as per paragraph 6, to assure that there is no leakage. Every tank test shall be witnessed by the Owner.
- 9. Each tank will also include a serial number and date of manufacturer.
- 10. Installation shall be in accordance with the manufacturer's recommendations, and as shown on the contract plans, no variations.

7C.050 Concrete Tanks

- 1. Concrete tanks will be allowed in sizes up to 3,000-gallon capacity.
- 2. Wall, bottom and top of reinforced-concrete tanks shall be designed across the shortest dimension using one-way slab analysis. Stresses in each face of monolithically-constructed tanks may be determined by analyzing the tank cross-section as a continuous fixed frame.
- 3. The walls and bottom slab shall be poured monolithically; alternatively, water stops may be provided.
- 4. Reinforcing steel shall be ASTM A-615 Grade 60, fy=60,000 psi. Details and placement shall be in accordance with ACI-35 and ACI-318.
- 5. Concrete shall be ready mix with cement conforming to ASTM C-150, Type II. It shall have a cement content of not less than six (6) sacks per cubic yard and maximum aggregate size of 3/4 inch. Water/cement ratio shall be kept low (0.35+), and concrete shall achieve a minimum compression strength of 4000 psi in 28 days. The Contractor shall submit a concrete mix design to the Owner for review and approval. Three (3) concrete sample cylinders shall be taken and tested for each tank manufactured until the manufacturer and Owner are satisfied that the minimum compression strength is being obtained. To insure compliance, the manufacturer shall then make and test three (3) sample cylinders for a minimum of 20 percent of the remaining tanks at the discretion of the Owner. If the minimum compressive strength is not being obtained, the manufacturer shall be required to make and test sample cylinders for each tank manufactured. Calcium chloride will not be allowed in the mix design. The cost of testing cylinders shall be the tank manufacturer's responsibility. The tank manufacturer may supply a Swiss hammer for compressive testing in the field in lieu of sample cylinders.
- 6. Tanks shall be protected by applying a heavy cement-base waterproof coating (Thoroseal or equal), on both inside and outside surfaces, in compliance with Council of American Building Officials (CABO) report #NRB-168; 6181.
- 7. Form release used on tank molds shall be Nox-Crete or equal. Diesel or other petroleum products are not acceptable.
- 8. Tanks shall not be moved from the manufacturing site to the job site until the tank has cured seven (7) days or has reached two-thirds of the design strength.
- 9. Tanks shall be manufactured and furnished with access openings of the size and configuration to accommodate individual packaged pump systems. Modification of completed tanks will not be permitted.
- 10. The septic tank and the top slab shall be sealed with a performed flexible plastic gasket. The flexible plastic gasket shall be equal to the flexible butyl resin sealant conseal CS-102 or CS-202 as manufactured by Concrete Sealants, Inc. of New Carlisle, Ohio and shall conform to federal specification SS-S00210(210A) and AASHTO M-198.
- 11. Tanks shall be furnished without concrete access hole lids and equipped with tank riser adapters as manufactured by Orenco Systems. In order to demonstrate water tightness, the tanks shall be tested as follows:
- 12. Inlets to the septic tank will be water tight pipe seal as Ty Seal pipe seal or equal. Outlets for effluent filters shall be configured as shown on the contract plans.
 - a. Factory Test: All of the tanks supplied by the precast manufacturer will be hydrostatically tested in the factory. The tank shall be tested by filling with clean water to the soffit and let stand for a minimum of 24 hours. After the 24-hour period, the water will be replaced to soffit. The water level shall be checked after 2 hours. Any water loss will not be acceptable.
 - b. Field Tests: After the tanks have been set in place, but prior to backfilling, each tank shall be tested for a 2-hour period. Any tank that fails the test as outlined in 12a shall be repaired and/or replaced until the tank passes said test. After backfilling, the tank shall be filled with water to 4 inches above riser and tank connection and tested for exfiltration over a two (2) hour period. No tank will be accepted

if there is any leakage over the two (2) hour period.

7D STEP PIPELINES

7D.010 General

STEP pipelines constructed and sized within private developments and public Right-of-Way shall conform to the City of Yelm Sewer Comprehensive Plan and the DOE Design Manual, whichever is more stringent.

7E CONSTRUCTION REQUIREMENTS – STEP TANKS/PIPELINES

7E.010 General

Installation and materials used for construction of the City of Yelm STEP system shall conform to the requirements of Sections 7-10 through 7-12, 7-15, and 7-17 of the Standard Specifications, unless amended herein.

7E.020 Pipeline and Service Line Materials

A. All pipe less than 2 inches shall meet the following requirements:

Schedule 40 PVC pipe shall be designed for solvent weld joints and shall comply with ASTM D 1785.

All pipe 2 inches and above shall meet the following requirements:

PVC 1PS 1120 SDR 21 Class 200 pipe shall have rubber ring gasket joints, shall comply with ASTM D 1784 and have a working pressure rating of 200 psi.

2 inch sevice lines shall be schedule 40 PVC pipe designed for solvent weld joints and shall comply with ASTM D 1785.

- B. Bedding
 - 1. Bedding shall be sand.
 - 2. Bedding shall be installed as shown on the Standard Details.

- C. Joints
 - 1. Solvent Weld Joints

Solvent cements and primer for joining PVC pipe and fittings shall comply with ASTM D 2564 and be as recommended by the pipe and fitting manufacturers. Primer shall be required for use on all solvent weld joints.

2. Rubber Ring Gasket Joints

Rubber ring gaskets shall comply with ASTM D 1869 and ASTM D 3139 and shall be supplied by the pipe or fitting manufacturer with a sufficient amount of lubricant. The lubricant shall be water soluble, non-toxic, nonsupportive of bacterial growth and have no deteriorating effect on the PVC or gasket.

D. Fittings

All fittings shall have a minimum working pressure equal to the pipe with which they are connected.

1. Solvent Weld Fittings

Solvent weld fittings for pipe less than 2 inches shall be socket type Schedule 40 fittings and shall comply with ASTM D 2466 and 2467.

2. Rubber Ring Gasket Fittings

Rubber ring gasket fittings for pipe 2 inches and larger shall be PVC 1120 complying with ASTM F 477, as manufactured by Head Manufacturing Co., Preston, Idaho; Gault Fabrication Company, Stockton, California; Spears Fabrication, Stockton, California; or approved equal.

It is exceptable to use socket type T's on 2 inch Mainlines at the connection point for either a 2 Inch or 1 inch service connection.

7E.030 STEP Tank Installation

It shall be the Contractor's responsibility to verify the location and the elevation of all existing sewer lines prior to installing the individual tank. STEP tanks shall be located in front of building unless otherwise approved by the City of Yelm.

It is anticipated that existing utility lines will be encountered during installation of the STEP tank and appurtenances. Prior to starting construction the Contractor will notify the proper utility for underground locations and also contact the property owner to determine location of foundation drains, electrical lines, etc.

The Contractor shall be responsible to obtain all necessary permits for work on public Right-of-Way such as street opening permit available at City hall. All cost for permits will be the Contractor's responsibility.

Excavations for all tanks shall be sufficient to leave a minimum of 6 inches of bedding (see tank bedding Detail Drawings 7-16 and 7-17.

All tank installations shall adhere to the following:

- 1. Location of the STEP tank site will be submitted to the Owner upon request.
- 2. All excavation and backfill of tanks shall conform to standard specification. Compaction for non traffic areas shall be 85 percent of maximum density. Compaction for traffic areas shall be 95 percent of maximum density.
- 3. For work within public Right-of-Way, the contractor shall be responsible on a daily basis for providing ingress and egress for both pedestrian and vehicle traffic on all work sites. The contractor shall clean up his work area on a daily basis to avoid inconvenience to the public.
- 4. For work within public Right-of-Way, the contractor shall safeguard his work on a daily basis to prevent possible injuries. The contractor shall submit to the City his method of safeguarding his work prior to beginning any construction on public Right-of-Way.

7E.040 Pipeline and Service Line Installation

A. Grade and Alignment

Service lines shall be placed at a minimum of 18 inches of cover within private property. Deeper excavation may be required due to localized breaks in grade such as curbs, retaining walls, and terraced ground. Where required by the City of Yelm, the pipeline shall be laid to the profile or elevation shown, regardless of depth. Minimum cover of any mainline within public Right-of-Way or easement shall be 60".

Sewer main line gate valves at no time shall not exceed a distance of 500 feet.

All ductile iron fittings shall be epoxy coated or PE lined both inside and outside. The coating material shall be designed for use with corrosive materials.

B. Trench Excavation and Backfill

Native material from trenches and excavations may be considered unsuitable for trench backfill. The City of Yelm shall determine the suitability of native material for trench backfill. If the native material is deemed unsuitable by the City, "Bank Run Gravel for Trench Backfill" shall be used. Bank run gravel shall be equal to Section 9-03.19 of the Standard Specifications.

The Contractor has the option of jacking or boring pressure sewer lines under existing improvements. The Contractor's proposed method of construction and material type shall be submitted for the City's approval prior to commencing work. Pipeline material shall be approved by the manufacturer for jacking or boring application. No jacking operation shall exceed 40 feet unless authorized by the City.

At locations where paved or graveled streets, shoulders, alleys, parking lots, driveways, patios, and sidewalks will be reconstructed over the trenches, the backfill shall be spread in layers not exceeding 8 inches in loose thickness and be compacted by mechanical tampers to 95 percent of maximum density. At locations where lawn, landscaping, and unimproved surfaces will be reconstructed over the trench, the backfill shall be spread in layers not exceeding 8 inches in loose thickness and be compacted by mechanical tampers to 85 percent of maximum density.

Maximum density and optimum-moisture content shall be determined using the modified Proctor maximum dry density procedure (AASHTO T180 or ASTM D 1557). In place density shall be determined using the Washington Densimeter method or Nuclear Gauge as outlined in the WSDOT Construction Manual.

C. Detectable Marking Tape

Heavy duty fourteen-gage insulated copper toning wire designed for direct-bury applications, shall be placed directly over all non-metallic pressure sewer lines and service lines. The Contractor shall bring the toning wire to the surface of the valve box and service boxes for purposes of attaching a utility detection device. All connection of the toning wire for service connections shall be stripped of insulation and attached to the copper portion of the main line toning wire. The connection point shall be wrapped with heat shrink tape acceptable for direct bury in accordance with manufacturer's recommendations or D.B.Y. Direct Bury Splice Kits.

D. Hydrostatic Pressure Test

All sewer mains, service lines, and appurtenances shall be hydrostatically tested in lengths specified. All pumps, gauges, plugs, saddles, corporation stops, miscellaneous hose and piping, and measuring equipment necessary for performing the test shall be accompanied with certifications of accuracy from a laboratory approved by the Owner.

The sewer pipeline shall be backfilled sufficiently to prevent movement of the pipe under pressure. All thrust blocks shall be in place and time allowed for the concrete to cure before testing. Where permanent blocking is not required, the Contractor shall furnish and install temporary blocking and remove it after testing.

The sewer lines shall be filled with water and allowed to stand under pressure a sufficient length of time to allow the escape of air.

The test shall be accomplished by pumping the sewer line up to the required pressure, stop the pump for 15 minutes, and then pump the sewer line up to the test pressure again. During the test, the section being tested shall be observed to detect any visible leakage. There shall not be an appreciable or abrupt loss in pressure during the 15minutes test period.

The quantity of water required to restore the pressure shall be accurately determined by pumping through a positive displacement water meter with a sweep unit hand registering one gallon per revolution. The meter shall be approved by the Owner.

The maximum allowable leakage for sewer lines shall be, according to AWWA C600, Section 4 Hydrostatic Testing, as follows:

Test	P	ipe Dia	meter	
Pressure	<u>3″</u>	<u>4″</u>	<u>6″</u>	<u>8″</u>
150 psi	.28	.37	.55	.74
125 psi	.25	.34	.50	.67
100 psi	.23	.30	.45	.60

The above table values give the allowable loss in gallons per 1,000 feet of sewer pipe line per hour. The allowable loss can be calculated for any condition with the formula:

$$L = \frac{SD x "P}{133,200}$$

where:

- L = Allowable loss for push-on or mechanical joints (GPH).*
- S = The length of the pipe tested, in feet.
- D = The nominal diameter of the pipe, in inches.
- P = Average test pressure (psi), during the test duration.
- * Add .0078 GPH/inch of nominal valve size for metal seated gate valves pumped against.

Portions of the sewer line that are determined to be critical, or suspected of leaking, should be left with the joints exposed during the testing procedure to allow visual inspection. The use of dye in the testing water will assist the location of leaks if ground water is present in the trench. Any visible leakage detected shall be corrected by the Contractor regardless of the allowable leakage specified above. Should the tested section fail to meet the pressure test successfully as specified, the Contractor shall, at his expense, locate and repair the defects and then retest the pipeline.

Prior to calling out the Owner to witness the pressure test, the Contractor shall have all equipment set up completely, ready for operation and shall have successfully performed the test to assure himself that the pipe is in a satisfactory condition.

Defective materials or workmanship, discovered as a result of a hydrostatic field test, shall be replaced by the Contractor at his expense. Whenever it is necessary to replace defective material or correct the workmanship, the hydrostatic test shall be rerun at the Contractor's expense until a satisfactory test is obtained.

The Contractor shall provide the water necessary to fill the pipelines for testing purposes. Water may be purchased from the Water Utility. Contractor to coordinate with the City of Yelm Water Utility. The Contractor will be responsible for transporting the water to the project site. The Contractor will also be responsible for furnishing a backflow prevention device or other Owner approved method to avoid contamination of the water supply during loading, an appropriate water meter and all appurtenances required. other Water meter and appurtenances shall be approved by the Owner.

The Contractor shall demonstrate to the satisfaction of the Owner that the air release valves and vacuum release valves are operating correctly.

1. Sewer Main Line Testing.

Sewer Main Lines shall be tested under a hydrostatic pressure equal to 150 psi.

After the sewer main test has been completed, each mainline valve shall be tested by closing valves in turn and relieving the pressure beyond. This test of the valves will be acceptable if there is no immediate loss of pressure on the gauge when the pressure comes against the valve being checked. The Contractor shall verify that the pressure differential across the valve does not exceed the rated working pressure of the valve.

The ball valve (or self-tapping saddle if used) at the sewer main shall be opened during testing of the sewer main so that the main is tested with pressure against the service line check valves.

Prior to any main line testing, all service lines within the main line test area shall be installed, tested, and approved. The Contractor shall test no more than 5,000 linear feet for the first test to qualify crews and materials. Sections of collection main line to be tested shall not exceed 10,000 linear feet per each individual test. Once successful test results have been achieved, the Contractor may request in writing test sections greater than 10,000 linear feet for the Owner's approval. The Contractor is required to keep his pipe testing and service line testing concurrent with his pipeline laying operations.

2. Sewer Service Line Testing.

In order to test the service line, the ball valve (or selftapping saddle if used) at the sewer main shall be closed and the test pump shall be attached at the end of service line. This portion of the service line shall be tested under a hydrostatic pressure of 70 psi. The test will be deemed successful if the pressure is constant for a minimum of 1 minute.

E. Air and Vacuum Release Valves

Air release valves and air/vacuum valves shall be located at the high points of the line. Profiles for each pipe run shall be submitted with the hydraulic gradeline for both static and dynamic flow conditions to show where the critical points are for air release valves. Vehicular access to air/vacuum valves is required for maintenance.

Because the air released by these valves will contain hydrogen sulfide, the valves and their enclosures have to be constructed of corrosion resistant materials. The air released from the valve will be quite odoriferous, thus, each vent will be equipped with an odor control system such as activated carbon filters impregnated with sodium hydroxide. Air Release assembly shall be Orenco Model # ARB05 Dual air release/vacuum release shall be Orenco Model # ARB15

F. Pigging Ports/Cleanouts

A pipeline pig is a projectile that is forced through the inside of a pipe to clean pressure pipelines. A pigging port/cleanout is used as a point to send the pig (see Standard Detail 7-20).

Pigging ports are required:

- 1. At every 2-inch diameter change in pipeline size;
- 2. At the end of every dead end line;

Specific locations are subject to review and approval by the city.

G. Thrust Blocking

Location of thrust blocking shall be shown on plans. Thrust block concrete shall be Class B poured against undisturbed earth. A plastic barrier shall be placed between all thrust blocks and fittings.

See drawing numbers 6-14 and 6-15 in Chapter 6. Designed and approved restraining joint systems may be allowed in lieu of thrust blocking. Restraining joint brand, type and size shall be specified on the plans.

H. Service Connections

This work consists of installing the service line and appurtenances. The service connection at the sewer main includes a check valve and ball valve, without valve boxes, and a saddle or tee at the sewer main.

I. Service Interruption/Line Connections

The contractor shall give the City a minimum of 72 hours notice of any planned connection to an existing pipeline. This includes all cut-ins and live taps. Notice is required so any disruptions to existing services can be scheduled. The City will notify customers involved or affected of the sewer service interruption. The contractor shall make every effort to schedule sewer main construction with a minimum interruption of sewer service. In certain situations, the City may dictate scheduling of sewer main shutdowns so as not to impose unnecessary shutdowns during specific periods to existing customers.

All connections made to sewer lines 3" or larger shall be Live taps, and shall be performed by a professional company that specializes in this work, and the company doing this work will first be approved by the sewer department. When tapping smaller size main lines (6" or less), "Hot Tap Saddles" as manufactured by Spears are exceptable and can be used by the underground sewer main installer with prior approval from the Sewer dept.

7F STEP PUMP ASSEMBLIES

7F.010 Materials and Installation

A. General

This work shall include but not be limited to providing and installing pump assemblies, effluent filters, risers, electrical equipment and pump control and alarm assemblies in accordance with the plans and these specifications. The pump assemblies provided shall restrict the discharge to low flow over a wide range of head conditions to assure that solids remain in the STEP tank and not be transmitted into the pressure line. Pumps installed shall be protected by a screen to prevent solids greater than 1/8 of an inch entering the pressure line and prevent plugging the intake to the impeller or the flow restriction device.

B. Ball Valves

One-inch ball valves shall be PVC ball valves shall comply with ASTM D 2846. It shall be designed for use with corrosive fluids, for low torque manual operation, and for a working pressure of 150 psi. The PVC material shall be Type 1 (NSF). The valve shall be Model No. LT-1000-S as manufactured by KBI (King Brothers Industries), or equal approved by the City.

C. Gate Valves

Gate valves for sewer systems shall be NRS gate valves,

complying with AWWA C509. Buried valves shall have 2inch square AWWA Standard operating nuts. Valve stem extensions, if necessary, shall be provided by the same supplier as the gate valves. All Gate valves to be Resilient Wedge apoxy coated

All gate valves shall be equipped with operator extensions that bring the operating nut to within 24" inches of the surface.

D. Check Valves

Check valves for sewer systems shall be PVC swing check valves designed for use with corrosive fluids and shall have a Buna-N seal on a swing gate which lifts to allow for unobstructed flow. The PVC material shall be Type 1 (NFS). The valve shall have no metallic parts. It shall have a working pressure of 150 psi and shall require only 1/2 psi back pressure for complete closure. It shall be as manufactured by KBI (King Brothers Industries), or equal approved by the Owner.

E. Valve Boxes

The word Sewer shall be cast into the lid. The top section shall be made of cast iron conforming to the following specifications: ASTM A 4876; WWP 401; and CS-88. It shall be slip type with top flange, weight 40 pounds or more, be 10 inches in length, have an inside diameter sufficient to house the bottom section, and have an average material tensile strength of 30,000 psi. It shall be Rich Model 910 heavy duty, or equal approved by the City. The bottom section of the valve box shall be 6-inch PVC pipe (ASTM 3034), white in color. the entire valve box top and bottom shall perform as a unit that has the ability to extend.

F. Saddles

Standard saddles shall be band-type saddles designed for use on PVC pipe. The material shall be UNS S 30400 stainless steel for the shell, bolts, washers, nuts, and tapped outlet. Gaskets shall be NBR compounded rubber complying with ASTM D 2000-343K515_E34. Saddles shall be Style 304, manufactured by Romac Industries, Inc., or equal approved by the City. Self tapping saddles shall have a PVC body and be secured in place by four stainless steel bolts and nuts. After tapping, the tapping mechanism shall retain the coupon from the pipe and serve as a shut-off valve. The tapping mechanism shall be operated by a 5/8" allen head wrench and have a PVC cover to prevent fouling of the mechanism when not in use. The saddle shall have an O-ring seal glued in place by the manufacturer.

G. Standard Service Box

The Standard Service Box shall be made from a structural plastic, have extensions as required, and have a bolt down cover. It shall be Model No. 1419, as manufactured by Carson Industries, Inc. or equal approved by the City.

H. Traffic Bearing Service Boxes

Traffic Bearing Service Boxes shall conform to 7F.010 E - "Valve Boxes"

- 7F.020 Effluent Pump 4" Submersible Pumps
 - A. Simplex Pumps: Systems for tanks 1,500 gallons or less.
 - 1. General For Discharge to a STEP Collection System provide Orenco Model P10 05 11 or approved equal. Pumps shall be listed by an approved testing laboratory, e.g., UL or CSA or use as an effluent pump.

Pumps shall be stainless steel and/or thermoplastic.

All wetted fasteners shall be 300-series stainless steel.

2. Motors

Motors shall be permanent split phase-type operating at 3450 RPM. Motors shall be 1/2 HP, 115 volt, single phase, 60 Hz.

Motors shall be thermally-protected with an automatic-reset feature.

3. Operating Conditions

The effluent pump shall be of the submersible turbine type capable of delivering 5 gpm against a TDH of 105 feet, and with a shut-off head of not less than 160 feet. Pumps will be provided with an orifice installed in the discharge piping to restrict flow to a maximum of 9 gpm over any head condition. The supplier shall provide a head curve showing performance of the pump with the orifice installed.

4. Bypass

A 1/8" bypass orifice shall be drilled in the discharge head of the pump to allow for cooling pump motor during periods of no discharge.

- B. Duplex Pump Systems and Triplex Pump Systems for 3,000 Gallon Tanks or Larger.
 - 1. General For Discharge to a STEP Collection System

Provide Orenco Model P20 05 11 or approved equal.

Pumps shall be listed by an approved testing laboratory e.g., UL or CSA for use as an effluent pump.

Pumps shall be stainless steel and/or thermoplastic. All wetted fasteners shall be 300-series stainless steel.

2. Motors

Motors shall be permanent split phase-type operating at 3450 RPM. Motors shall be 1/2 HP, 115 volt, single phase, 60 Hz. The supplier shall provide a head curve showing performance of the pump with the orifice installed.

Motors shall be thermally-protected with an automatic-reset feature.

3. Operating Conditions

The effluent pump shall be of the submersible turbine type capable of delivering 20 gpm against a TDH of 105 feet, and with a shut-off head of not less than 160 feet.

4. Bypass

A 1/8'' bypass orifice shall be drilled in the discharge head of the pump to allow for cooling pump motor during periods of no discharge.

- 7F.030 Pump Vault, Riser, and Lid
 - A. General

Provide an internal pump vault which will be of sufficient size and structural integrity to house and support the pumping equipment necessary for transportation of effluent. The pump vault will have a screen to prevent solids larger than 1/8" from entering the pipeline and to protect the pump and flow restriction device from plugging. The internal vault will be removable for access into the STEP tank for septage pumping. All risers and connections to the septic tank with risers shall be water tight.

B. Internal Vault

Simplex pump assemblies shall be a Biotube Pump Vault as manufactured by Orenco Systems, Inc., Model Number X4S 1254-18 19. Vaults for duplex 4" submersible pump assemblies shall be a Biotube Pump Vault Model Number X4D 12xx-18 19 as manufactured by Orenco Systems, Inc., or equal.

C. Risers

Risers shall be required for access to internal vaults and access into the septic tanks for septage pumping. All risers shall be constructed of PVC, fiberglass, or polyethylene and shall be constructed water tight. Risers over pump vault shall be a minimum of 24-inches in diameter and shall be of sufficient diameter to allow removal of internal vaults without removing splice boxes, etc. All risers shall be of sufficient length to meet minimum requirement of the latest version of the National Electric Code (NEC) and shall vary depending on the depth of bury on the various tanks. The risers shall be attached to the tanks such that a watertight seal is provided. Epoxy required to adhere the PVC or fiberglass risers to fiberglass or concrete tanks shall be a two part epoxy as supplied by the manufacturer of the riser.

When applicable, Neoprene grommets shall be installed by the manufacturer for discharge piping, vent piping and/or the electrical conduit to assure a watertight seal. Neoprene grommets will not be allowed on risers not requiring discharge piping, etc.

Risers shall be Model RR24 (length as required) for simplex systems and RR30 (length as required) for duplex systems as manufactured by Orenco Systems, Inc., or approved equal.

- D. Lids
 - a. Standard Lid: The standard lid shall be a flat fiberglass lid, green in color, with a non skid aggregate finish. The lid shall be the diameter required to fit the required riser and shall be supplied with a minimum of two stainless steel bolts and the lid shall have a gasket. Allen wrench will not be included as part of the pump packages but 2 wrenches will be included in the spare parts. Lids shall be as manufactured by Orenco Systems, Inc., Model Number FL24-4B or FL30G or approved equal.
 - b. Traffic Bearing Lid: The traffic bearing lid shall be an HS-20 loading frame and cover. The cover shall have the word "SEWER" cast into it. Frame and cover for 24---inch-diameter lids shall meet requirements of Section 9-05.15(1) of the Standard Specifications, and 30- and 36-inch lids-(covers) shall be HS-20 and shall be constructed of aluminum.

7F.040 Internal Splice Box

For applications with 5 or less residential units, each residential riser requiring electrical connections shall have a PVC splice box located in the interior of the riser. All splice boxes shall be installed within 1'0" of the riser lid for access purposes. The splice box shall be complete with cord grips and dual wall heat

shrink with butt connectors. Splice boxes shall be UL listed for the application. The number of cord grips and heat shrink connectors shall be equivalent to the number of floats and electrical leads within the pump vaults. The splice box and accessories shall meet all requirements of labor and industries and shall be UL listed for wet locations.

For all Class I, Division I installations more than 5 residential units or non-residential applications, risers requiring electrical connections shall have two separate splice boxes. All splice boxes shall be installed within 1'0" of the riser lid for access purposes. One splice box shall be for the pump wire and one splice box shall be for the low voltage wire for the float system. The splice boxes for the pump leads shall meet all requirements of the Department of Labor and Industries for a Class I, Division I, Type D gas application. The splice box for the low voltage float leads on an intrinsically safe relay shall be a non-metallic PVC splice box. The PVC splice box shall be complete with cord grips and dual wall heat shrink butt connectors. The number of cord grips and wire nuts within the PVC splice box shall be equivalent to the number of floats. The pump wire splice box simplex assemblies shall be single gang Model SBX-S as supplied by Orenco Systems, Inc., and the splice box for duplex assemblies shall be two gang Model SBX-D as supplied by Orenco Systems, Inc. or equal as approved by the Owner. Mounting box shall be mounted to riser with stainless steel bolts. An explosion proof EY fitting shall be provided directly outside of the mounting box for the pump wire connection. The pump wires shall be fitted with a watertight plug Model B Model ECP-2023 as manufactured by Appleton Electric Company or equal as approved by the Owner.

7F.050 Level Control and Alarm Floats

Level control floats shall be UL or CSA listed for use in effluent on an adjustable or preset PVC stem which attaches directly to the pump vault. Floats shall consist of high level alarm, on, off, and redundant off. Level control floats shall be Model MF-ABT for simplex pump assemblies and Model MF-A2GT for duplex pump assemblies and Model MF-A3GT for triplex pump applications as manufactured by Orenco System, Inc. or equal as approved by the City.

A. Pump control and alarm panels for simplex pump assemblies shall be Model S1 RO ETMCT as manufactured by Orenco Systems, Inc. or equal as approved by the City.

Pump control panels for simplex commercial and intrinsically safe applications shall be Model S1 1R RO ETMCT as manufactured by ORENCO or equal.

- B. Pump control and alarm panels for duplex pump assemblies shall be Model DAX1 IR2 RO ETMCT as manufactured by Orenco Systems, Inc. or equal as approved by the City.
- C. Pump control and alarm panels for triplex pump assemblies shall be Model TA1 IR3 RO ETM CT as manufactured by Orenco Systems, Inc., or equal.
- D. All pump control panels shall have NEMA 4x fiberglass enclosures, an audio and visual alarm, an elapsed time meter, event counter, stainless steel latch and internal 120volt, 20-amp circuit breaker.

7F.060 Hose and Valve Assembly

A. Hose and valve assembly for a 4" submersible shall include 1" diameter 100 psi PVC hose with PVC union and ball valve and anti-siphon valve Model Number HV100BASX as manufactured by Orenco Systems, Inc., or approved equal.

7F.070 Additional Material Requirements

All equipment including but not limited to pump vault, riser, standard lid, bonding epoxy, splice box, discharge piping, control float assembly, pump(s), pump control and alarm panels, etc. shall be supplied by one single supplier or manufacturer as a packaged unit. The supplier or manufacturer shall upon request by the City, submit information on availability of replacement parts, maintenance records of operating pump assemblies. The package as supplied by the manufacturer or supplier will have a standard guarantee against material defect for a period of not less than 1 year. The date of guarantee shall begin on the date equipment is delivered on a particular site and may be a single guarantee incorporating all the components or individual guarantees on the various components. The manufacturer or supplier will be responsible to handle replacement or repair of defective parts.

7F.080 Electrical Connections

All electrical equipment and materials shall be installed in conformance to requirements of the latest edition of the National Electrical Code as enforced by the State of Washington Labor and Industries Electrical Section. The Contractor shall be required to acquire all necessary permits and coordinate directly with the appropriate authority on the necessary inspection.

Splice boxes shall be installed in the STEP tank riser in accordance with the instruction from the supplier or manufacturer. The control panel shall be installed either on a remote pressure-treated $8'' \ge 4''$ post or on the garage wall, unless approved by the City of Yelm. The panel shall be affixed by stainless steel wood screws to either the structure or the post. The wood screws shall be of sufficient size and length to securely fasten the panel.

Power and control wire from the splice box in the riser to the pump control shall be UL approved for direct bury with a minimum of 12 gauge for each control or power wire. Power and control wire shall be color-coded for ease of tracing between the alarm panel and pumps and float switches. The Contractor shall submit type and size of cable for review and approval by the City and Labor & Industries. Cable attached to the exterior of the building shall be contained in approved electrical conduit. All wire connections shall be made with heat shrink butt connectors.

Power and control wire for commercial or intrinsically safe applications shall be contained in two IMC or rigid metal conduits for separation of low and high voltage lines between the control panel and pump vault and shall meet the requirements of Labor & Industries.

All exterior electrical wire shall be contained within PVC conduit.. Exterior conduit and wire will only be allowed on the exterior of the house directly above or below the control panel and will be installed plumb and vertical. Underground electrical cable shall have a minimum of 24 inches of earth cover. All above ground cable shall be contained in PVC conduit.

Electrical: All materials used for control and electrical connections shall meet requirements of labor and industries and the Uniform Electrical Code.

The Pumping Assemblies shall comply with the latest State of

Washington's Department of Labor and Industries Electrical Inspection Section Policy.

Power supply to the pump control panel shall be a 20 amp dedicated circuit for each pump with separate neutral wires. A dedicated 10 amp circuit shall be required for the control system for duplex and triplex pump systems.

Disconnects are required for power to all Pump Control Panels. Symplex (non I.R.) applications shall us a model B-5V one gang weatherproof outlet box as manufactured by Intermatic and a single pole switch rated for 20 amp.

Duplex systems (2 pumps) shall use a Deep, one gang outlet box with 3 threaded outlets Model # DB-75V as manufactured by Intermatic. The switch shall be a three pole single throw, AC manual motor starting switch. Model # MS303 as manufactured by Leviton.

Triplex systems (3 pumps) shall use 2 Model DB-75V (Internatic) boxes and 2 MS303 switches (Leviton). 1 Switch will disconnect the power to the 3 pumps, and the other switch disconnects the control circuit.

All disconnect switches shall include a Rayntite single Gang Weatherproof cover Model # 5031-0 as manufactured by Bell.

Surge arrestors shall be installed in the Pump Conrtrol Panel For all Class I Division I installations. Surge arrestors shall be a Model # AG2401 as manufactured by Intermatic, and shall be installed on the power wire supplying power to the control circuit, and be installed within the pump Control Panel.

7G GRAVITY SEWER

7G.010 General

The use of gravity sewer lines shall be limited to the collections of transport of sewerage to the City STEP system. All gravity sewers shall be privately maintained. The City will maintain gravity sewer lines with prior arrangements and approval from the Director of Public Works.

7G.030 Side Sewers

Minimum slope for any 4" gravity side sewer lines shall be no less than 2 percent or 1/4 inch of rise to 1 foot of run. Slopes less than 2 percent will only be allowed if approved by the City. Installation of gravity clean-outs shall meet the requirements of the City of Yelm, the uniform plumbing code (see Standard Detail 7-7). At a minimum, a gravity clean-out will be required two feet from the foundation of the structure.

Grade stakes will not be provided by the City for side sewers. It shall be the Contractor's responsibility to determine the differential in elevation between the invert to the STEP tank and the invert at the building side sewer. Based on that information the Contractor shall determine the percent of fall between the STEP tank and the connection point at the side sewer.

7H RESTORATION

7H.010 General

This work shall consist of various types of surface restoration. As required by the City of Yelm for all work on public Right-of-Way, all surfaces and surface improvements effected by the Contractors operations shall be restored to conditions equal to or better than preconstruction conditions. The City shall be the sole judge as to the equality of materials and work when comparing post-construction conditions to preconstruction conditions.

Cement concrete sidewalk and driveway repair shall conform to the Standard Specifications and Standard Detail 7-3, except that the finish, dimensions, and joints shall be the same as the original work. Cement concrete driveways shall be defined so as to include cement concrete alleys and parking lots. Curb repair shall conform to the Standard Specifications, except that the finish, dimensions, and joint shall be the same as the original work.

7H.020 Crushed Surfacing

Shoulders, driveways and other graveled or crushed surfaced areas which are disturbed by the Contractor's operations shall be resurfaced with 2 inches of crushed surfacing. All work and material shall conform to the requirements of the Standard Specifications.

7I GENERAL NOTES (SANITARY SEWER MAIN INSTALLATION)

- 1. All workmanship and materials shall be in accordance with City of Yelm standards and the most current copy of the State of Washington Standard Specifications for Road, Bridge and Municipal Construction (WSDOT/APWA).
- 2. All approvals and permits required by the City of Yelm shall be obtained by the contractor prior to the start of construction.
- 3. If construction is to take place in the County Right-of-Way, the contractor shall notify the County and obtain all the required approvals and permits.
- 4. A preconstruction meeting shall be held with the City of Yelm prior to the start of construction.
- 5. The City of Yelm shall be notified a minimum of 48 hours in advance of a tap connection to an existing main. A City representative shall be present at the time of the tap.
- 6. The contractor shall be fully responsible for the location and protection of all existing utilities. The contractor shall verify all utility locations prior to construction by calling the Underground Locate Line at 1-800-424-5555 a minimum of 48 hours prior to any excavation.
- 7. Side sewer services shall be PVC, ASTM D 3034 SDR 35 with flexible gasketed or solvent weld joints.
- 8. All plastic pipe and services shall be installed with continuous tracer tape, installed 12" to 18" under the proposed subgrade. The marker shall be plastic non-biodegradable, metal core or backing marked "SEWER" which can be detected by a standard metal detector. In addition, step systems and force mains shall be installed with 14 gauge UF direct bury copper wire wrapped around all plastic pipe, brought up and tied off at valve body. Tape shall be Terra Tape "D" or approved equal. The tape and wire shall be furnished by the contractor.
- 9. All buried power for STEP systems shall be installed with continuous tracer tape installed 12" above the buried power. The marker shall be plastic non-biodegradable, metal core backing marked "power". Tape shall be furnished by contractor.

- 10. Bedding of the sewer main and compaction of the backfill material shall be required in accordance with the above mentioned specification (See note 1).
- 11. Temporary street patching shall be allowed for as approved by the City engineer. Temporary street patching shall be provided by placement and compaction of 2 inch minimum asphalt concrete cold mix. Contractor shall be responsible for maintenance as required.
- 12. Erosion control measures shall be taken by the contractor during construction to prevent infiltration of existing and proposed storm drainage facilities and roadways.
- 13. Provide traffic control plan(s) in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) as required.
- 14. It shall be the responsibility of the contractor to have a copy of these approved plans on construction site at all times.
- 15. Any changes to the design shall first be reviewed and approved by the City of Yelm.
- 16. All STEP mains shall be hydrostatically tested in conformance with the above-referenced specification for testing water mains. (See note 1.) In addition, all STEP mains shall be pigged/cleaned in the presence of the City Inspector prior to placing STEP main in service.
- 17. Prior to backfill all mains and appurtenances shall be inspected and approved by the City of Yelm. Approval shall not relieve the contractor for correction of any deficiencies and/or failures as determined by subsequent testing and inspections. It shall be the contractor's responsibility to notify the City of Yelm for the required inspections.
- 18. Pump control panels shall be located on garage wall or remote post, unless otherwise authorized by the City of Yelm.
- 19. In the event that the Department of Labor and Industries or the city should require a separate "on-off" switch controlling power to the Pump Control Panel, said switch shall have a locking cover model # 5031-0 Rayntite Single Gang Weatherproof Cover 1.406" diameter.
- 20. Inspections for onsite STEP installations are required. A 48 hour notice to the sewer department is required prior to the

inspection.

Items needing inspection are:

- a) Tank installation, ie; bedding and location
- b) Tank infiltration, exfiltration test
- c) S.S. pressure test
- d) Service line pressure test
- e) Final Inspection
- 21. All lumber (plywood, etc.) used to mount either pump control panel or power meter must be pressure treated.

7J INSPECTION GUIDE FOR S.T.E.P. SEWER INSTALLATION

A basic sketch of the proposed installation must be submitted to the Public Works Office prior to issuance of permit.

The City of Yelm Sewer Department will perform the following required inspections:

- 1) Tank placement (See tech. spec. for req)
- 2) Leak test tank (2 hours, no loss)
- 3) Pressure test service line. (70 p.s.i. water for 1 minute)
- 4) All pipe before backfill. (See bedding and toning wire req)
- 5) A final inspection is required after all work (including electrical) has been completed. A record drawing is required before system can be excepted.

We try to combine these 5 inspections into 3 trips to the site if possible. 24 hours notice is required for inspection. *We do however make every effort to be out within 2 to 3 hours*. For inspection call: 458-8411 If no answer leave a detailed message.

LIST OF DRAWINGS

CHAPTER 7 SEWER

<u>Title</u>

Drawing

Typical 1" Service Connection	7	- 1	
Typical Double Service Connection	7	- 2	
Typical Pipe Trench	7	- 3	
Remote Post - Residential Pump Control Panel Installation	7	- 4	
Typical Pump Control Panel Installation on Existing House	7	- 5	
Typical Pump Control Panel	7	- 6	
Typical Connection	7	- 7	
Vacant	7	- 8	
Typical Simplex STEP Tank Installation	7	- 9	
1,000-Gallon STEP Tank	7	- 10	0
1,500, 3,000, 4,500 Gallon STEP Tank/Pump Tank	7	- 1	1
Typical Sewer Automatic Air Release Valve	7	- 12	2
Float Setting Vault Dimensions for a Simplex Pump Vault	7	- 13	3
Float Setting Vault Dimensions for a Duplex Pump Vault	7	- 14	4
Float Setting Vault Dimensions for a Triplex Pump Vault	7	- 1	5
Fiberglass Tank Bedding	7	- 10	6
Concrete Tank Bedding	7	- 1'	7
Typical Riser	7	- 18	8
Traffic Bearing Lid	7	- 19	9
Typical End of Line Cleanout	7	- 20	0
Typical Sewer Mainline Gate Valve	7	- 2	1
Mainline Cleanout Plan	7	- 22	2
Mainline Pig Port Detail	7	- 23	3
Pig Launcher	7	- 24	4

LIST OF DRAWINGS

CHAPTER 7 SEWER

<u>Title</u>

Drawing

Typical 1" Service Connection	7	1
Typical Double Service Connection	7	1 2
Typical Double Service Connection	· · ·	4
Typical Pipe Trench	7	3
Remote Post - Residential Pump Control Panel Installation	7 - 4	4
Typical Pump Control Panel Installation on Existing House	7 - 3	5
Typical Pump Control Panel	7 - 0	6
Typical Connection	7 - 1	7
Vacant	7 - 2	8
Typical Simplex STEP Tank Installation	7 - 9	9
1,000-Gallon STEP Tank	7 -	10
1,500, 3,000, 4,500 Gallon STEP Tank/Pump Tank	7 -	11
Typical Sewer Automatic Air Release Valve	7 -	12
Float Setting Vault Dimensions for a Simplex Pump Vault	7 -	13
Float Setting Vault Dimensions for a Duplex Pump Vault	7 -	14
Float Setting Vault Dimensions for a Triplex Pump Vault	7 -	15
Fiberglass Tank Bedding	7 -	16
Concrete Tank Bedding	7 -	17
Typical Riser	7 - 1	18
Traffic Bearing Lid	7 - 1	19
Typical End of Line Cleanout	7 - 3	20
Typical Sewer Mainline Gate Valve	7 - 3	21
Mainline Cleanout Plan	7 - 2	22
Mainline Pig Port Detail	7 - 2	23
Pig Launcher	7 - 2	24







	TYPICAL				
F	PIPE 1	FRENC	Н		
APPROVED	7	_	DWG. NO.		
PUBLIC WO	RKS DIRECTO	R DATE	- /)		
DES.	DWN.	CKD.	DATE		
JY	JEG	TP	4/2007		





TABLE FOR FEEDER WIRE RUN			
WIRE SIZE	MAXIMUM DISTANCE		
#12 AWG COPPER	150 FEET		
#10 AWG COPPER	250 FEET		
#8 AWG COPPER	350 FEET		

(SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION).






































1C: Shoreline Permit



COUNTY COMMISSIONERS Judy Wilson District One Diane Oberquell District Two Dick Nichols District Three

PLANNING

Fred Knosuman Acting Director

September 15, 1993

Department of Ecology Shorelands and Coastal Zone Management Program Management Section Mail Stop PV-11 Olympia, WA 98504

SUBJECT: SH-TCO-92-012

Dear Sir/Madam:

We are enclosing a Shoreline Management Permit recently issued by Thurston County. The permit is accompanied by relevant information from the case file.

Should you have any questions, please feel free to contact our office.

Sincerely,

Fred Knostman, Acting Director

12:sm

Enclosures

cc/enc: Attorney General Department of Fisheries Thurston County Construction and Fire Safety Applicant



SHORELINE MANAGEMENT ACT OF 1971 PERMIT FOR SHORELINE MANAGEMENT SUBSTANTIAL DEVELOPMENT

THURSTON

Type of Action

X Substantial Development Permit

X Conditional Use

Variance

Administering Agency: Planning Dept Date Received: October 14, 1992 Approved: X Denied: Date: September 15, 1993

Application No.: SH-TCO-92-012

Pursuant to RCW 90.58, a Permit is hereby granted to:

City of Yelm 404 Yeim Avenue P.O. Box 476 Yeim, WA 98597

to undertake the following development:

To construct a Sewage Treatment Outfail Lines to the Centralia Power Canal and the Nisqually River.

upon the following property: East along the Burlington Northern Railroad right-of-way to the Centralia Power Canal and the Nisqually River.

The project will be within two shorelines of state and state-wide significance (RCW 90.58.030). The project will be located within an <u>Rural and Conservancy</u> shoreline designation. Development pursuant to this permit shall be undertaken pursuant to the following terms and conditions:

SEE ATTACHED

Construction or substantial progress toward construction of a project for which a permit has been granted pursuant to this program must be undertaken within two (2) years after the approval of the permit by the Legislative Body or the end of appeal processes, if such have been initiated, or the permit shall terminate.

No permit authorizing construction shall extend for a term of more than five (5) years. If a project for which a permit has been granted has not been completed within five (5)years after the approval of the permit by the local government, a single extension of up to one year may be authorized. A request for extension must be filed before the expiration of the five year permit period.

This Permit is granted pursuant to the Shoreline Management Act of 1971, and nothing in this Permit shall excuse the applicant from compliance with any other federal, state or local statutes, ordinances or regulations applicable to this project, but not inconsistent with the Shoreline Management Act (Chapter 90.58 RCW).

This Permit may be rescinded pursuant to RCW 90.58.140(7) in the event the permittee fails to comply with the terms or conditions hereof.

CONSTRUCTION PURSUANT TO THIS PERMIT WILL NOT BEGIN OR IS NOT AUTHORIZED UNTIL THIRTY (30) DAYS FROM THE DATE OF FILING THE FINAL ORDER OF THE LOCAL GOVERNMENT WITH THE REGIONAL OFFICE OF THE DEPARTMENT OF ECOLOGY AND THE ATTORNEY GENERAL. OR UNTIL ALL REVIEW PROCEEDINGS INITIATED WITHIN THIRTY (30) DAYS FROM THE DATE OF SUCH FILING HAVE TERMINATED.

Signature of Authorized Local Government Officiai

ATTACHMENT

SHORELINE MANAGEMENT ACT OF 1971 PERMIT FOR SHORELINE SUBSTANTIAL DEVELOPMENT THURSTON

CASE NO. SH-TCO-92-012

- 1. Within three years of operation of the city's sewage treatment facility, the City shall remove the standby outfall to the Nisqually River.
- 2. Within five years of operation of the City's sewage treatment facility, the City shall convert the Centralia Power Canal to its standby outfall.
- 3. In the event the City cannot fulfill the above two conditions, it shall perition the Board for a public meeting on the issue of whether or not the conditional approval of the shoreline permits can be extended.
- 4. Prior to or in conjunction with the issuance of any building permit, all regulations and requirements of the Thurston County Environmental Health Department, Thurston County Roads and Transportation Services, Thurston County Planning Department and the Mitigated Determination of Non-Significance shall be met.
- 5. Prior to approval of any building permit, the applicants are required to get approval for a hydraulics permit from the Washington Department of Fisheries.
- 6. All development on the site shall be in substantial compliance with the approved site plan.

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BEFORE THE BOARD OF COUNTY COMMISSIONERS

THURSTON COUNTY, WASHINGTON

In Re the Matter of

SH-TCO-92-012 (City of Yelm's Sewage Outfall Line into the Nisqually River)

DECISIÓN

ORIGINAL

THIS MATTER came before the Board of County Commissioners (Board) on September 13, 1993 as a result of the City of Yelm's (City) appeal of the hearing examiner's denial of a shoreline substantial development permit and a shoreline conditional use permit for the standby sewage outfall line into the Nisqually River.

The Board reviewed the hearing examiner's decisions and the evidence presented to the hearing examiner, and listened to audio recordings of the hearings before the hearing examiner and viewed the site.

Based on the above record, the Board finds that the City has diligently and in good faith tried to comply with the various state and federal regulations in order to construct a sewage treatment facility to deal with the public health threats to groundwater presented by on-site septic systems. The Board further finds that, while the Nisqually River is not designated in Yelm's Wastewater Facility Plan as an available alternative for effluent discharge, all the other environmental documents that the City has prepared for the proposed sewage treatment system identifies the Nisqually River as a standby outfall. The Board further finds that since the City started the process to construct the sewage treatment facility in 1988, it was impossible for it to explore the alternatives listed in the Washington State Department of Health's Water Reclamation and Reuse Interim Standards, dated February, 1993. Finally the Board finds that the City and the Nisqually Delta Association, National Fish & Oyster Co., Black Hills Audubon Society, Ed Kenney and Herbert Olsen have entered into a settlement agreement regarding the City's outfall line into the Nisqually River.

IT IS HEREBY ORDERED that the hearing examiner's decision, dated August 2, 1993, denying the substantial development and the conditional use permit for the sewage outfall line into the Nisqually River is reversed. The Board hereby conditionally approves the substantial development permit and the conditional use permit for the sewage outfall line into the Nisqually River subject to the following conditions:

Within three years of operation of the City's sewage 1. treatment facility, the City shall remove the standby outfall to the Nisqually River.

Within five years of operation of the City's sewage 2. treatment facility, the City shall convert the Centralia Power Canal to its standby outfall.

In the event the City cannot fulfill the above two 3... conditions, it shall petition the Board for a public meeting on the issue of whether or not the conditional approval of the shoreline permits can be extended.

not.13 1993 DATED:

ATTEST: Boar

BOARD OF COUNTY COMMISSIONERS Thurston County, Washington Х

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Chairman

Commissioner

Vice

CHAIRMAN DIANE OBERQUELL WAS NOT PRESENT - ON MEDICAL LEAVE.

Commissioner

(WORK\PLD\YELM.ORD)(EP/Lio)



COUNTY COMMISSIONER Judy Wilson District One Diane Oberqueil District Two Dick Nichols District Three



Fred Knostman Acting Director

September 15, 1993

Department of Ecology Shorelands and Coastal Zone Management Program Management Section Mail Stop PV-11 Olympia, WA 98504

SUBJECT: SH-TCO-92-012

Dear Sir/Madam:

We are enclosing a Shoreline Management Permit recently issued by Thurston County. The permit is accompanied by relevant information from the case file.

Should you have any questions, please feel free to contact our office.

Sincerely,

Fred Knostman, Acting Director

12:sm

Enclosures

cc/enc: Attorney General Department of Fisheries Thurston County Construction and Fire Safety Applicant



SHORELINE MANAGEMENT ACT OF 1971

PERMIT FOR SHORELINE MANAGEMENT SUBSTANTIAL DEVELOPMENT THURSTON

 Type of Action
 Application No.: SH-TCO-92-012

 X Substantial Development Permit
 Administering Agency: Planning Dept

 X Conditional Use
 Date Received: October 14, 1992

 Variance
 Approved: X Denied:

 Date: September 15, 1993

Pursuant to RCW 90.58. a Permit is hereby granted to:

City of Yelm 404 Yelm Avenue P.O. Box 476 Yelm, WA 98597

to undertake the following development:

To construct a Sewage Treatment Outfall Lines to the Centralia Power Canal and the Nisqually River.

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upon the following property: East along the Burlington Northern Railroad right-of-way to the Centralia Power Canal and the Nisqually River.

The project will be within two shorelines of state and state-wide significance (RCW 90.58.030). The project will be located within an <u>Rural and Conservancy</u> shoreline designation. Development pursuant to this permit shall be undertaken pursuant to the following terms and conditions:

SEE ATTACHED

Construction or substantial progress toward construction of a project for which a permit has been granted pursuant to this program must be undertaken within two (2) years after the approval of the permit by the Legislative Body or the end of appeal processes, if such have been initiated, or the permit shall terminate.

No permit authorizing construction shall extend for a term of more than five (5) years. If a project for which a permit has been granted has not been completed within five (5) years after the approval of the permit by the local government, a single extension of up to one year may be authorized. A request for extension must be filed before the expiration of the five year permit period.

This Permit is granted pursuant to the Shoreline Management Act of 1971, and nothing in this Permit shall excuse the applicant from compliance with any other federal, state or local statutes, ordinances or regulations applicable to this project, but not inconsistent with the Shoreline Management Act (Chapter 90.58 RCW).

This Permit may be rescinded pursuant to RCW 90.58.140(7) in the event the permittee fails to comply with the terms or conditions hereof.

CONSTRUCTION PURSUANT TO THIS PERMIT WILL NOT BEGIN OR IS NOT AUTHORIZED UNTIL THIRTY (30) DAYS FROM THE DATE OF FILING THE FINAL ORDER OF THE LOCAL GOVERNMENT WITH THE REGIONAL OFFICE OF THE DEPARTMENT OF ECOLOGY AND THE ATTORNEY GENERAL OR UNTIL ALL REVIEW PROCEEDINGS INITIATED WITHIN THIRTY (30) DAYS FROM THE DATE OF SUCH FILING HAVE TERMINATED.

Signamire of Authorizzei Locai Government Official

ATTACHMENT

SHORELINE MANAGEMENT ACT OF 1971 PERMIT FOR SHORELINE SUBSTANTIAL DEVELOPMENT THURSTON

CASE NO. SH-TCO-92-012

- 1. Within three years of operation of the city's sewage treatment facility, the City shall remove the standby outfall to the Nisqually River.
- 2. Within five years of operation of the City's sewage treatment facility, the City shall convert the Centralia Power Canal to its standby outfall.
- 3. In the event the City cannot fulfill the above two conditions, it shall petition the Board for a public meeting on the issue of whether or not the conditional approval of the shoreline permits can be extended.
- 4. Prior to or in conjunction with the issuance of any building permit, all regulations and requirements of the Thurston County Environmental Health Department. Thurston County Roads and Transportation Services, Thurston County Planning Department and the Mitigated Determination of Non-Significance shall be met.
- 5. Prior to approval of any building permit, the applicants are required to get approval for a hydraulics permit from the Washington Department of Fisheries.
- 6. All development on the site shall be in substantial compliance with the approved site plan.

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BEFORE THE BOARD OF COUNTY COMMISSIONERS

ORIGINAL

THURSTON COUNTY, WASHINGTON

In	Re the Matter of)	
	SH-TCO-92-012 (City of Yelm's Sewage Outfall Line into the Nisqually River))	DECISION
)	

THIS MATTER came before the Board of County Commissioners (Board) on September 13, 1993 as a result of the City of Yelm's (City) appeal of the hearing examiner's denial of a shoreline substantial development permit and a shoreline conditional use permit for the standby sewage outfall line into the Nisqually River.

The Board reviewed the hearing examiner's decisions and the evidence presented to the hearing examiner, and listened to audio recordings of the hearings before the hearing examiner and viewed the site.

Based on the above record, the Board finds that the City has diligently and in good faith tried to comply with the various state and federal regulations in order to construct a sewage treatment facility to deal with the public health threats to groundwater presented by on-site septic systems. The Board further finds that, while the Nisqually River is not designated in Yelm's Wastewater Facility Plan as an available alternative for effluent discharge, all the other environmental documents that the City has prepared for the proposed sewage treatment system identifies the Nisqually River as a standby outfall. The Board further finds that since the City started the process to construct the sewage treatment facility in 1988, it was impossible for it to explore the alternatives listed in the Washington State Department of Health's Water Reclamation and Reuse Interim Standards, dated February, 1993. Finally the Board finds that the City and the Nisqually Delta Association, National Fish & Oyster Co., Black Hills Audubon Society, Ed Kenney and Herbert Olsen have entered into a settlement agreement regarding the City's outfall line into the Nisqually River.

IT IS HEREBY ORDERED that the hearing examiner's decision, dated August 2, 1993, denying the substantial development and the conditional use permit for the sewage outfall line into the

.

Nisqually River is reversed. The Board hereby conditionally approves the substantial development permit and the conditional use permit for the sewage outfall line into the Nisqually River subject to the following conditions:

1. Within three years of operation of the City's sewage treatment facility, the City shall remove the standby outfall to the Nisqually River.

2. Within five years of operation of the City's sewage treatment facility, the City shall convert the Centralia Power Canal to its standby outfall.

3. In the event the City cannot fulfill the above two conditions, it shall petition the Board for a public meeting on the issue of whether or not the conditional approval of the shoreline permits can be extended.

ant.13 1993 DATED:

ATTEST:

BOARD OF COUNTY COMMISSIONERS Thurston County, Washington X

Chairman Vice

Commissioner

CHAIRMAN DIANE OBERQUELL WAS NOT PRESENT - ON MEDICAL LEAVE.

Commissioner

(WORK\PLD\TELH_ORD)(EP/lla)

City of Yelm

Staff Report

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Shelly Badger, City Administrator	
Ed Kenney (representative for the Parties to the Agreement)	
gust 19, 2002 for August 28, 2002 City Council Meeting	
date on Shoreline Permit for Wastewater Treatment and Reclamation Facility ID approval of Agreement between City of Yelm and specific Parties	

Background:

Due to concerns of a wastewater effluent discharge to the Nisqually River, in 1993, a Settlement Agreement was reached between the City of Yelm and the Nisqually Delta Association, National Fish & Oyster Co., Black Hills Audubon Society, Ed Kenney and Herbert Olsen that was incorporated into the City's original Shoreline Permit (and approved by the Thurston County Board of Commissioners) to construct two wastewater outfall lines, one to the Centralia Power Canal and the other, an emergency outfall, to the Nisqually River. This Agreement and the Shoreline Permit set conditions for the outfalls to be removed within 5 years (Canal) and 3 years (River) allowing the City to operate its newly constructed secondary wastewater treatment facility, but requiring that a water reclamation facility to reuse the water be constructed.

In 1997, the City requested an amendment to its original Shoreline Permit to allow additional time to complete the water reclamation facility. The parties to the original Settlement Agreement agreed to an extension of time via an amendment to the Agreement which was also incorporated into the Shoreline Permit amendment and was approved by the Thurston County Hearings Examiner.

On June 11, 2002, the City submitted an application to Thurston County for a Shoreline Substantial Development Permit (<u>Notice of Application – Exhibit 1</u>) requesting 1) that the time constraints on the removal of the discharges to the Canal and River be removed; 2) that the Centralia Power Canal be utilized as an alternate reuse point and the Nisqually River as an alternate emergency reuse point; and 3) that the Centralia Power Canal be utilized for the discharge and the Nisqually River for an alternate emergency discharge of water not meeting Class A reclaimed water standards during the interim time the treatment facility is being adjusted or repaired.

A more thorough background and description of the Shoreline Permit proposal is attached as <u>Exhibit 2.</u>

On July 23rd, Stephanie Conners, Jon Yanasak, Tom Skillings and I met with representatives from the original Settlement Agreement (Ed Kenney, Fred Michelson from the Nisqually Delta Association, Sue Danver, Black Hills Audubon Society and the National Fish and Oyster Co.) at the Reclamation Facility for an informational meeting.

Jon conducted a tour of the plant, discussed the use patterns of the reclaimed water as far as how much is used upland, to the Canal and to the River and the water quality of the reclaimed water. The water quality parameters from the City's State Department of Ecology NPDES (National Pollutant Discharge Elimination System) permit were reviewed which allows for 3 use points of the treated water: 1) upland use of the Class A reclaimed water for beneficial consumptive purposes and groundwater recharge; 2) the Centralia Power Canal for reclaimed water and for secondary treated effluent should the water not meet Class A standards due to problems at the plant and; 3) the Nisqually River for reclaimed water and for secondary treated effluent should the water not for secondary treated effluent should the water and for secondary treated use to problems at the plant and; 3) the Nisqually River for reclaimed water and for secondary treated user is only used if the plant's storage capacity has been exceeded AND the Centralia Power Canal is unavailable.

Staff and Tom Skillings explained the need for the Shoreline Permit that is currently under review by Thurston County to "mirror" the State DOE NPDES permit allowing all 3 outfall points to remain in use. Class A Reclaimed Water is currently used to augment the Centralia Power Canal on a regular basis when 100% of the water cannot be used upland (irrigation, bus washing, groundwater recharge, etc.). If equipment should malfunction at the plant making the production of reclaimed water impossible, it is critical to have an alternate or emergency outfall location. The Centralia Power Canal and Nisqually River serve that function. To date, we have never had a malfunction at the plant that has resulted in the discontinuance of service to our reclaimed water customers AND the discharge of secondary effluent to either water body.

Options to amend the original Settlement Agreement were discussed and it was agreed that a new Agreement would be favorable to the parties (versus a complete release) to incorporate into the new Shoreline Permit currently being reviewed by Thurston County.

Present:

Since the meeting with the parties to the Settlement Agreement in July, I have been working with Ed Kenney (the designated person to represent the Parties) on a new Agreement (attached as <u>Exhibit 3</u>) which is ready for Council review and approval. The formation of the Agreement has been a very positive experience that has resulted in the proposed Agreement which 1) recognizes the accomplishments of the City in upgrading to a Class A Reclaimed Water facility;

2) allows for the 3 outfall locations to remain as depicted in the State DOE NPDES permit; 3) emphasizes that the primary and preferred use of the reclaimed water is for upland consumptive purposes and groundwater recharge; 4) spells out notification requirements should the City need to direct Class A water or effluent to the Nisqually River; 5) states that the City and Parties agree to meet within 10 years to evaluate the feasibility of the Nisqually River outfall's removal; 6) releases all conditions of the original Settlement Agreement other than those specified in this Agreement; and 7) directs its filing with Thurston County and incorporation into Shoreline Substantial Development Permit #SSDP020463. Review of the document has been conducted by Shawn Newman (legal counsel for the Parties), Brent Dille (city attorney), Tom Skillings, Tim Peterson, Stephanie Conners and Jon Yanasak. All suggested modifications have been made.

Recommended Council Action:

Staff recommends that Council authorize Mayor Rivas to sign the Agreement (presented as <u>Exhibit 3</u>) between the City of Yelm and Nisqually Delta Association, National Fish and Oyster Co., Black Hills Audubon Society and Ed Kenney related to the City of Yelm Shoreline Substantial Development Permit #SSDP020463 regarding the City's Reclaimed Water/Sewage Outfall and submit it to Thurston County for inclusion in the above referenced Shoreline Permit.



RECEIVED

JUL 192002

Per..... ,

EXHIBIT 1 COUNTY COMMISSIONERS

Cathy Wolfe District One

Diane Oberquell District Two

Kevin J. O'Sullivan District Three

DEVELOPMENT SERVICES

NOTICE OF APPLICATION Mailed On July 18, 2002

Project Name & Location: City of Yelm Wastewater Treatment and Reclamation Facility

Land Use Case #: SSDP020463

An application for the project listed above was submitted to Thurston County on June 11, 2002 by Shelly Badger, City Administrator. The application was deemed to be complete for the purpose of beginning the project review on July 18, 2002. This application and any related documents are available for public review during normal business hours at the Permit Assistance Center on the second floor of Building #1, Thurston County Courthouse, 2000 Lakeridge Drive SW, Olympia, Washington. For additional information, please contact Nancy Pritchett by calling 754-3355 ext. 6474.

Project Description: Shoreline amendment to 1) remove two conditions from SSDP970952; 2) utilize the Centralia Power Canal as an alternate reuse point and the Nisqually River as an alternate emergency reuse point; and 3) utilize the Centralia Power Canal for the discharge and the Nisqually River for the alternate emergency discharge of water not meeting Class A reclaimed water standards during the interim time the treatment facility is being adjusted or repaired.

Permits Requested by the Applicant: Shoreline Substantial Development Permit

Environmental and Other Documents Submitted with the Application: Department of Ecology NPDES Permit No. WA0040762, Fact Sheet for NPDES Permit No. WA0040762.

No preliminary determination of consistency with County development regulations has been made. At minimum, this project will be subject to the following plans and regulations: Thurston County Comprehensive Plan, Zoning Ordinance (TCC 20), Critical Areas Ordinance (TCC 17.15), Stormwater Drainage Design and Erosion Control Manual (TCC 15.05), Uniform Building Code (TCC 14), State Environmental Policy Act (SEPA) Ordinance (TCC 17.09), and the Shoreline Master Program.

Thurston County invites your comments early in the review of this proposal. Comments should be directed to Nancy Pritchett at the address listed below.

THE 20-DAY PUBLIC COMMENT PERIOD ENDS AT 5:00 PM ON AUGUST 7, 2002

This notice has been provided to appropriate local and state agencies, tribes, sub-area project list subscribers, and property owners within 300 feet of the project site. These recipients, and any others who submit a written request to be placed on the mailing list, will also receive the following items when available: Notice of Public Hearing. The Hearing Examiner decision will be mailed to all those who participate in the public hearing and to anyone else requesting the decision in writing. Opportunities for appeal occur within fourteen (14) days of the Hearing Examiner decision for any aggrieved party.

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City of Yelm

Request for change to Shoreline Substantial Development Permit

Background

The City of Yelm received a Shoreline Substantial Development Permit (SH-TCO-920012) and Shoreline Conditional Use Permit on September 13, 1993. The permit allowed construction of two outfall lines, one to the Centralia Power Canal and the other, an emergency outfall, to the Nisqually River with the following conditions:

- 1. Within three years of operation of the City's treatment facility, the City shall remove the standby outfall to the Nisqually River.
- 2. Within five years of operation of the City's sewage treatment facility, the City shall convert the Centralia Power Canal to its standby outfall

On November 25, 1997, the City of Yelm received an extension of time to achieve compliance of the two conditions stated above, (Application No.: SSDP-97-0952). This extension of time allowed the City to complete the water reclamation project that was under construction at that time.

The City has now completed the construction of the water reclamation facility. The facility reclaims 100% of the wastewater generated by the city and reuses the water for beneficial purposes. The wastewater is treated by a state-of-the-art treatment facility that includes continuous filtration and complete disinfection prior to reuse of the reclaimed water. The facility is designed and operated to DOH and DOE standards for Class A Reclaimed Water. It continuously and reliably produces the highest classification of reclaimed water. The reclaimed water is an extremely high quality product which, by state law, is not considered wastewater.

The City's water reclamation plan and NPDES Permit provides for three (3) alternate use points for the reclaimed water. The NO. 1 area is upland reuse components such as irrigation of churches, school play grounds and streetscapes, street washing, vehicle washing, groundwater recharge, concrete production, firefighting, constructed wetlands, fish ponds, as well as other approved consumptive beneficial uses. For a significant portion of the year, the City reuses 100% of all the water it generates for these consumptive beneficial reuse components. During those times of the year when not used for the above purposes, the water is used for stream-flow augmentation and power generation at use point NO. 2, the Centralia Power Canal. When the Canal is shut down for maintenance, the reclaimed water is used for stream-flow augmentation at use point NO. 3, the Nisqually River. This use point would only be used while the Canal is shut down for maintenance. As soon as the maintenance on the canal is completed, stream-flow augmentation and power generation and power generation would resume at use area NO. 2.

Washington State Legislature has indicated that "reclaimed water shall not be considered wastewater". Therefore the City no longer discharges treated wastewater. It reclaims 100% of its wastewater and produces reclaimed water. The reclaimed water standards provide for several options for the use of reclaimed water. In addition to the upland uses, such as irrigation, street washing, vehicle washing and concrete production, other uses such as stream-flow augmentation and power production are considered beneficial uses of reclaimed water. While the Centralia Power Canal and the Nisqually River are not the preferred uses of the reclaimed water, they never the less, enjoy the beneficial use of reclaimed water.

How is the City's new Reclaimed Water Treatment Facility different than the previous wastewater treatment facility?

The City's previous wastewater treatment facility was a two-cell lagoon treatment facility that produced secondary treated effluent. It was a very basic wastewater treatment facility. The primary discharge of the secondary treated effluent was to the Centralia Power Canal. System operation and monitoring of performance was done manually by the system operators. The system worked very well, and in fact obtained an award from the Department of Ecology for outstanding performance. This is a testament to the facility's design and the dedication of the operator that ensured a high quality effluent that met or exceeded the discharge requirements.

The new water reclamation facility is a state of the art facility that was designed and constructed to meet the highest standards for the production of Class A reclaimed water. A reclaimed water treatment facility differs from its wastewater counterpart in that the reclamation facility's design and operation provides for the "continuous and reliable" production of Class A reclaimed water. In order to achieve continuous and reliable production of Class A reclaimed water, the facility is designed with a high order of reliability and redundancy. For every major process that is required to produce reclaimed water, the City has constructed or provided for a backup facility. There is an additional sequence batch reactor to provide secondary treatment, an additional airblower system, additional filtration system, back-up chemical treatment systems, etc. The purpose of this redundancy is to ensure continuous treatment should one of the primary facilities fail. The treatment systems will <u>automatically</u> switch over to the standby facility should any component fail.

The City's reclaimed water treatment facility is highly automated in both operation and in monitoring of the quality of the treated water. Should the quality of the treated water fall below the quality parameters set by the Reclaimed Water Standards, the system will shut down and alarms will activate, noticing the operator of the malfunction. This is a 24X7 response system. The operator has the ability to monitor and to a certain extent operate the facility from his home computer. The system is designed in a way to allow all the water not meeting the reclaimed water discharge criteria to be stored on site for up to 48 hours, or longer, depending on the operational parameters being used at the time. This storage allows repairs or adjustments to be completed without the discharge of any water to the NO. 1 use area that does not meet the Class A requirements.

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The system is designed in such a way, and the NPDES permit allows for, the discharge of water to the Centralia Power Canal that does not meet Class A reclaimed water standards. This design feature allows the operator time to fix any problem that may exist while maintaining a discharge that meets the requirements of the new NPDES permit. Because there is the potential for the Canal to be shut down for maintenance, the NPDES permit does provide for a discharge of secondary treated effluent to the Nisqually River in the event the water reclamation facility had a malfunction or an alarm condition that would shut down the reclaimed water use area NO. 1.

In Summary

The City of Yelm's water reclamation system provides for the 100% reuse of all the wastewater it generates. The three reuse points are:

- 1. Upland within the City limits for beneficial purposes: (irrigation, vehicle washing, etc.)
- 2. Centralia Power Canal for beneficial purposes: (stream-flow augmentation and power generation) only when NO. 1 does not use all of the water.
- 3. Nisqually River for beneficial purposes: (stream-flow augmentation) only when NO.1 does not use all of the water <u>and</u> the Centralia Power Canal is shut down for maintenance or repair.

All of the above are considered reuse elements and are designed to receive highly treated and filtered reclaimed water. If there is a treatment system malfunction and the facility can not produce reclaimed water, NO. 1 use area will shut down automatically, and after 48 hours, use areas NO. 2 or NO. 3 would receive a quality of water less than Class A until the repairs or adjustment were accomplished at the treatment facility.

The water quality standards for reclaimed water are "technology based" standards. The standards addressed in the reclaimed water standards are equal to, or more stringent than technology-based or water quality-based standards required by federal or state law.

By design, the Power Canal and the Nisqually River will not be discharge points for treated wastewater. Should the treatment system fail to produce Class A water, the Canal and the River would receive a product that is of higher quality than the original facility produced. Should there be a major upset, the City has the ability to store all the water, with no discharge of any water, for up to 48 hours.

Future Expansion

The City is planning future expansion of the reclaimed water system to provide for even more uses of reclaimed water. In addition, the City plans to develop additional groundwater infiltration sites throughout the city that will provide for groundwater recharge using all of the reclaimed water produced in the City. Once these future phases are complete, the primary use of the water would be 100% upland beneficial uses, at use area NO. 1, with the option of providing for stream-flow augmentation at use area NO 2 or NO. 3, upon request, during low stream flow conditions.

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AGREEMENT BETWEEN

THE CITY OF YELM AND NISQUALLY DELTA ASSOCIATION, NATIONAL FISH AND OYSTER CO., BLACK HILLS AUDOBON SOCIETY AND ED KENNEY RELATED TO THE CITY OF YELM SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT #SSDP020463 RE: CITY OF YELM RECLAIMED WATER/SEWAGE OUTFALL

WHEREAS, the City of Yelm and Appellants in 1993 entered into a Settlement Agreement as part of the City's Shoreline Permit #SH-TCO-92-012 related to timelines for removal of the sewage outfall lines to the Centralia Power Canal and Nisqually River; and

WHEREAS, the City of Yelm and Appellants in 1997 approved an amendment to the original Settlement Agreement as part of the City's Shoreline Substantial Development Permit #SSDP-97-0952 extending timelines to allow for completion of the City of Yelm's Class A Reclaimed Water Facility; and

WHEREAS, the Nisqually Delta Association, National Fish and Oyster Co., Black Hills Audubon Society and Ed Kenney agree that all conditions, other than those stated below, as stipulated by the 1993 Settlement Agreement and its subsequent 1997 Amendment have been fully settled, resolved or compromised;

NOW THEREFORE, this agreement serves to replace the 1993 Settlement Agreement and its subsequent 1997 Amendment and provides for the following:

Section One. The Parties

1.1 This Agreement is between:

- 1.1.1 The City of Yelm, its successors, assigns and representatives (collectively referred to as "the City") and
- 1.1.2 Nisqually Delta Association, National Fish & Oyster Co., Black Hills Audubon Society and Ed Kenney, in their individual and organizational capacities, their successors and assigns (collectively referred to herein as "the Parties.")
- 1.1.3 The undersigned individuals warrant that they have the authority necessary to bind the organizations and entities for and on behalf of whom they are signing.

Section Two. Definitions

- 2.1 For purposes of this Agreement, the following terms are defined as provided herein:
 - 2.1.1. Class "A" Reclaimed Water is that which exceeds all federal and state advanced (tertiary) wastewater treatment standards through extensive redundancy and reliability capabilities. The State of Washington in RCW 90.46.010 and WAC 246-290-010 has determined that "reclaimed water is no longer considered wastewater".
 - 2.1.2. "MGD" is the average gallons per day of Class "A" Reclaimed Water or effluent produced by the City's sewage treatment facility as further defined in the City's operating NPDES permit.
- 2.1.3. "Outfall # 001-Reclaimed Water" as described in the 1999-2004 NPDES permit refers to the Yelm uplands used for beneficial consumptive purposes and for groundwater recharge. It is the <u>primary and preferred</u> endpoint for the City's reclaimed water system under normal operating circumstances.
- 2.1.4 "Outfall # 002 Centralia Power Canal" as described in the 1999-2004 NPDES permit refers to the standby use area which is utilized when there is:
 - a. insufficient demand for the beneficial consumptive use of reclaimed water;
 - b. or Outfall # 001 as defined in Section 2.1.3 herein is unavailable by reason of emergency, failure, or regular maintenance, repair or improvement.
- 2.1.5 "Outfall # 003 Nisqually River" as described in the 1999-2004 NPDES permit refers to the emergency use area which is utilized when the standby Centralia Power Canal is not available due to regular maintenance, repair or improvement.

Section Three. Terms and Conditions of Settlement

3.1. The City agrees to notify Ed Kenney or his designee, on behalf of the Parties, when it reaches 85% of its Reclaimed Water Plant's 1mgd plant capacity and begins the Phase II planning as envisioned in its 1995 Water Reuse Facilities Plan.

3.2 The City agrees to notify Ed Kenney or his designee, on behalf of the Parties, within a reasonable time, but not more than five (5) working days, after the City has made the decision, but not necessarily before the City has actually carried out the decision, to direct Class "A" Reclaimed Water or effluent to Outfall # 003 - Nisqually River. The City also agrees that, within a reasonable time, but not more than five (5) working days, after the City has reverted back to its use of Outfall #001 or Outfall # 002, it will notify Ed Kenney or his designee, on behalf of the Parties, concerning the extent to which the standby outfall was used during that occurrence.

3.3 The Parties agree that the City has actively demonstrated its pursuit of an alternative standby outfall other than to the Nisqually River, as stipulated in the 1993 Settlement Agreement and its 1997 subsequent Amendment.

3.4 The City agrees that the Parties have demonstrated their support for the City's pursuit of alternatives to the standby outfall as stipulated in the 1993 Settlement Agreement and its 1997 subsequent Amendment.

3.5 The City of Yelm will continuously utilize the Water Reclamation Treatment Facility and any future sewage treatment plants constructed with the upland uses (Outfall # 001) as the Primary use of reclaimed water, with the intent of achieving 100% upland beneficial consumptive uses. The standard operation mode will be to produce and use Class "A" Reclaimed Water.

3.6 Should the treatment plant not be able to produce Class "A" Reclaimed water due to an equipment failure at the facility, or should changes in the State's regulations regarding the use of Class "A" Reclaimed Water result in the City of Yelm's inability to utilize the upland beneficial uses, the Parties agree to the temporary use of the Centralia Power Canal as the standby outfall and, as a last option, the Nisqually River as the emergency outfall.

3.7 Both the Parties and the City recognize that one of the most important goals of the Clean Water Act and its National Pollutant Discharge Elimination System (NPDES) permitting process is to eliminate outfalls and discharges of pollutants to American rivers and agree to meet within ten years of this agreement to evaluate the feasibility of Outfall # 003's removal.

3.8 Release

- 3.8.1. Other than those conditions stipulated herein, it is hereby agreed that all of the conditions as stipulated by the original 1993 Settlement Agreement and its subsequent Amendment dated October 27, 1997 have been fully settled, resolved or compromised.
- 3.8.2 The City and the Parties hereby agree, authorize and direct their respective counsel or governing boards to execute and file this agreement with the Thurston County Board of Commissioners, and incorporate it in Land Use Case # SSDPO2O463 - SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT.
- 3.8.3 The Parties specifically reserve the right, notwithstanding Section 3.7.1 herein, to assert any claims arising from the operation of the City's Water Reclamation Treatment Facility and from any amendments to Yelm's Water Reuse Facilities Plan.

Section Four. Miscellaneous Terms and Conditions

4.1. <u>Arbitration</u>. The City and Parties agree to submit any controversy arising out of the terms of this Agreement, including any claim that its terms are impossible to comply with for financial or other reasons, to arbitration according to the provisions of RCW 7.04. Any decision of a properly appointed arbitrator shall be final and binding upon all of the Parties and City.

4.2 <u>Plan Amendment.</u> The City fully intends and agrees to amend its Water Reuse Facilities Plan to incorporate this Agreement by reference at the next amendment cycle.

4.3 <u>Further Acts.</u> The City and Parties agree to perform any other acts and execute and deliver any other documents that may be reasonably necessary to carry out the terms and conditions of this Agreement.

4.4 <u>Duplicate Originals.</u> The City and Parties agree that this Agreement will be executed in two counterparts and that each such counterpart shall be deemed an original.

4.5 <u>Entire Agreement.</u> This Agreement contains the entire Agreement by and between the City and the Parties hereto relating to this subject matter and may be modified or amended only by the written agreement between the City and the Parties hereto.

4.6 <u>Severance</u>. In the event that any portion of this Agreement is determined to be illegal or invalid, the remainder of this Agreement is deemed to be severable and may otherwise be deemed valid and legal.

Section Five. Effective Date

5.1 This agreement shall become effective on the date set forth below, which shall be the last date a party to the Agreement executes it.

Effective this ______day of _____, <u>2002</u>.

Nisqually Delta Association

By:

Fred Michelson, 9224 52nd Lane NE, Olympia, WA 98516, 360-456-5282

National Fish and Oyster Co.

Ву_____

Black Hills Audubon Society

Ву_____

Ed Kenney

By

Ed Kenney, P.O. Box 545, Rainier, WA 98576, 360-894-2968

City of Yelm

By_

Adam Rivas, Mayor, P.O. Box 479, Yelm, WA 98597, 360-458-3244

Approved as to form:

By_

Brent Dille, Owens Davies (City of Yelm Legal Counsel)

Approved as to form:

By_

/_____ Shawn Newman (Legal Counsel for Parties)



1D: City of Yelm Comprehensive Plan (Chapter V. Public Facilities & Utilities)

V. Public Facilities & Utilities

A. Introduction

Note: A list of the goals and policies applicable to the unincorporated portion of the Yelm Urban Growth Area is located in Exhibit G.

The purpose of this section is to identify relevant plans for public facilities (sewer and water) and private utilities (electricity, gas, phone, cable, and garbage) and to assure such plans serve the urban area in a manner consistent with this Plan.

B. County-Wide Planning Policies

. . .

The following county-wide policies are adopted within the Urban Growth Area to guide utility development:

- 2.1 Concentrate development in growth areas by:
 - a. Encouraging infilling in areas already characterized by urban growth that have the capacity to provide public services and facilities to serve urban development;
 - *b.* Phasing urban development and facilities outward from core areas;
 - e. Where urban services & utilities are not yet available, requiring development to be configured so urban growth areas may eventually infill and become urban.
- 2.2 Coordinate urban services, planning and standards through:
 - a. Coordinated planning and implementation of urban land use, parks, open space corridors, transportation, and infrastructure within growth areas;
 - e. Phasing extensions of urban services and facilities concurrent with development; and
 - f. No extensions of urban services and facilities, such as sewer and water, beyond urban growth boundaries except to serve existing development in rural areas with public health or water quality problems.

- 2.3 Provide capacity to accommodate planned growth by:
 - a. Assuring that each jurisdiction will have adequate capacity in transportation, public and private utilities, storm drainage systems, municipal services, parks and schools to serve growth that is planned for in adopted local comprehensive plans;
- . . .
- 5.1 Develop financing methods for infrastructure which minimize the taxpayer's overall burden and fairly divide costs between existing and new development.

. . . .

Thurston County-Wide Policies, adopted August 16, 1993.

C. Public Facilities

- 1. General Policies
 - a. Location of Facilities

The City of Yelm is the sewer and water provider within the Urban Growth Area. It is the policy of the City to extend sewer and water facilities only within the City limits and to require annexation of unincorporated areas to receive public facilities. Exemptions will be made on a case-by-case basis, but only when (1) necessary to solve an existing environmental problem, (2) approved by Thurston County, and (3) adequately funded to avoid any costs to City, taxpayers, and ratepayers.

b. Funding of New Facilities

Development regulations must provide for adequate financing tools, including local improvement districts, latecomer agreements, impact fees, and other devices to assure that the cost of growth is fairly apportioned between existing and new development.

- 2. City Water
 - a. Current System/Capacity

The City of Yelm is served by three wells, two storage tanks, and a combination of old and newer distribution pipes. There is currently a need to repair some of the older distribution pipes. There is also an existing need for improvements to the disinfection system.

Water supply and storage capacity meet the present demand, since the City can physically serve 1,542 connections and has existing storage for at least 2,000 connections. A detailed description of the system is included in the Water Comprehensive Plan, dated August 1994, which is adopted as Appendix B, to this Comprehensive Plan.

As Yelm's population increases, however, new water sources, storage, and water lines will need to be expanded, upgraded, or acquired. Additionally, there are existing deficiencies in the fire flow capacity of properties located at the eastern and northwest ends of the service zone, as well as certain specialized uses, such as schools and industrial areas. The City has an ongoing program to acquire water rights to assure adequate capacity to serve the growing population. Yelm currently has adequate water rights in process to serve the existing population and the anticipated growth for at least 20 years. If adequate water cannot be obtained due to lack of resources, annexations would not proceed and development would be limited to existing rights. Under such circumstances the land use plans would have to be reconsidered.

Certain administrative improvements are recommended which will benefit the existing system as well as future expansion. These include establishing well-head protective zones around the City's wells in the Urban Growth Area in order to prevent contamination of the wells by incompatible land uses or activities conducted within the aquifer recharge area of the wells.

b. Proposed System Improvements

The water system improvements are identified in Chapter 3.0 of the Water Comprehensive Plan and funding sources are in Chapter 4.0 of the Plan. To summarize, there is in the near term a need for a fourth well, second and third storage reservoirs, and additional distribution lines to accommodate the anticipated population growth during the first part of this 20-year planning cycle. Mid-way through the 20-year planning cycle, it is anticipated that new population growth will require a fifth, high-yield well.

c. Levels of Service (LOS)

For planning and concurrency purposes, the City requires 300 gallons per day per connection and 750 gallons per minute peak fire flow capacity in residential areas and Uniform Fire Code criteria for industrial and commercial areas, together with a reserve capacity of 15%. Thirty percent of the City's existing water rights

are set aside for industrial development. Commercial and institutional users are required to meet Uniform Fire Code minimums and demonstrate capacity in the system without infringing on residential reserve and light industrial reserve flows.

- 3. City Sewer
 - a. Current System/Capacity

Detailed information about Yelm's sewage system can be found in the Comprehensive Sewer Plan, dated August 1994, which is incorporated herein as a stand-alone, Volume 4, Appendix C.

Yelm is presently served by a Septic Tank Effluent Pump (STEP) sewer plant permitted for 3 million gallons per day of discharge to the Centralia Power Canal. The system serves only a portion of the existing city limits. Thirty percent of the system capacity is allocated to non residential uses. The balance of the present system is designed to meet corrective needs in the existing city limits due to old or failing septic tanks.

b. Proposed System

Future waste water disposal to serve new growth outside the presently-sewered area is intended to be through reuse and recycling. The program is intended to be accomplished by treating the effluent to a reusable level and then recycling throughout the City. Irrigation, industrial use, and wetland recharge are all targeted uses. The plan is described in greater depth in the Pilot Project description outlined in Yelm's Comprehensive Sewer Plan (see Volume 4/ Appendix C.)

A priority of the City is to identify a variety of permitted disposal/irrigation sites which will allow growth areas to be designated for sewered growth. Site-specific reuse/recycle areas should be identified within all sewered Sub-Areas to reduce transportation costs. Up to 10% of the land area in a Sub-Area may be used to recycle treated water. Such land area may be in parks, open spaces, or critical areas, and will often be incorporated into a specific project.

The City is developing the treatment and storage facilities. These facilities serve the existing system and form the core of the new system. The key to system expansion will be identification and approval of recycle-reuse discharge areas. As new areas inside the City are identified for development and permitted for recycled

water discharge, land use designations identified on Map 3 will become effective.

Different strategies for waste water disposal will be used throughout the City. The mitigation and concurrency strategy for every proposed development will be to identify and fund a fair share of the costs of developing an approved discharge area.

The City will develop guidelines and mitigation requirements, as well as compensation and reimbursement mechanisms (such as local improvement districts and latecomers agreements) to facility development of such areas.

c. Level of Service (LOS)

Each residential unit will require the City to collect, treat, and discharge approximately 240 gallons per day per unit, together with an appropriate reserve area and buffers where required for discharge. Each commercial or light industrial user, outside the present discharge service area, shall be assessed based on the Equivalent Residential Unit (ERU) daily rate. Development standards shall identify the correlation to be used for industrial and commercial users.

d. Non-Sewered Areas

The City considers a septic system a temporary system within the urban area and incompatible with long-term urban densities. Development standards shall be developed to identify the timing and nature of funding and conversion obligations for septic systems in the urban area. Groundwater monitoring is appropriate in areas under septic tank management.

Most of Yelm is in an area of extreme aquifer sensitivity. The current sewage treatment plan was required due to groundwater pollution concerns. For this reason, development at urban levels of density on septic tanks is not in the public interest.

Many areas within the Urban Growth Area are already on septic tanks. In addition, some development will likely occur at one unit per five acres density on septic tanks within the unsewered areas of the City and the Urban Growth Area.

The City will permit development in non-sewered areas with low densities on septic tanks. Such installations must be prepared to transfer to the sewer line when facilities are available and hook-up required under the criteria set forth in the development standards. The County would follow similar guidelines in the unincorporated Urban Growth Area.

The City should consider developing a septic tank maintenance program, directly or in connection with Thurston County, to monitor and maintain the septic systems in place or allowed in the urban areas. The City considers septic tanks in the Urban Growth Area as an interim use to be changed to sewer as identified in appropriate development regulations.

On a case-by-case basis, the County may identify areas proposed for outside the Urban Growth Area where existing development patterns are such that long-term septic service, with adequate public maintenance and supervision, may continue in the long term without sewer service. Such areas may require City water or sewer service should a public health problem arise and adequate funding be identified to avoid fiscal impact to the City.

4. Stormwater

Stormwater control is important for both flood protection and water quality and groundwater protection. Yelm has no specific detention/retention facilities as existing soils and ditches are adequate to meet present need. Development regulations should identify criteria for stormwater discharge, retention, and treatment on all new development. Such regulations should be coordinated with the wastewater reuse/recycling plans presently under study.

The basic stormwater program principles identified by the Puget Sound Water Quality Authority and the DOE-approved Thurston County Drainage Design and Erosion Control Manual should be considered a guide in the development regulations in establishing the Yelm Area Drainage Design and Erosion Control Manual for stormwater treatment, detention, and release.

5. School Districts

The Yelm School District and the Rainier School District serve the Urban Growth Area. The Rainier School District jurisdiction will be developed in conjunction with the overall plan for the Thurston Highlands' portion of the Southwest Sub-Area. The remaining planning area is within Yelm School District No. 2. That District currently has a high school, a middle school, an intermediate (grades 5-6) school, an alternative high school and three elementary schools within Yelm's Urban Growth Area. The Yelm School District has an additional elementary school in Pierce County and approximately 20% of the students live in Pierce County. In 1994, the Yelm School District's growth was 180 students from last year and the District now instructs a total enrollment of 4,000 students. Based on current growth projections, student population will grow by approximately 6,000 students during the next 20 years. All future schools will need to be constructed within Yelm's Urban Growth Area to meet the requirements of utilities and land use. Within the next six years, a new intermediate school and a new elementary school will need to be built.

The District intends to identify and recommend appropriate and reasonable mitigation measures to be imposed upon approvals given and permits issued to those residential single-family and multi-family developments within the District boundaries that adversely impact the District. The City's policy is to encourage the adequate and timely development of facilities and will work with the District to identify development regulations to accomplish the District's objectives within the guidelines of Chapter 28.02 RCW.

6. Libraries

Yelm is served by the Timberland Regional Library. The City supports efforts to obtain levels of service established by the Timberland program for Yelm and surrounding rural areas. Target facilities for Yelm will include about 1.66 square feet of library space per capita or 20,000 feet to serve the 11,999 projected population. Yelm also supports innovative technology to achieve wider distribution without fixed facilities, including mobile programs and computer access technology.

D. Private Utilities

The purpose of this section is to identify the general existing location, proposed location, and capacity of all existing and proposed utilities affecting the Urban Growth Area, including but not limited to electrical lines, telecommunication lines, and natural gas lines (RCW 36.70A.070(4)). For Yelm, these utilities are provided by state regulated utilities, federally licensed communications companies, and a municipally franchised cable TV company. The electric utility that serves Yelm is Puget Sound Power & Light Company (Puget Power); the natural gas utility is Washington Natural Gas (WNG); the telephone utility is Yelm Telephone Company (YTC); cable services are provided under municipal franchise by VIACOM Cablevision and the Yelm Telephone Company. The electric, natural gas, and telephone utilities are regulated by the Washington Utilities and Transportation Commission (WUTC).

1. Electrical Utility

Puget Power builds, operates, and maintains the electrical system serving the City of Yelm. Puget Power is a private, investor-owned utility with the responsibility for providing service to approximately 800,000 metered customers in a nine county service area in Western and Central Washington.

The system serving Yelm is part of a larger service area called the Thurston County area, which is roughly the boundaries of Thurston County. The area includes the entire cities of Bucoda, Lacey, Olympia, Rainier, Tenino, Tumwater, and Yelm; and unincorporated Thurston County.

Puget Power imports electrical energy from generation sources in Canada, on the Columbia River, and from other generation sites inside and outside of Puget Power's service territory. Puget Power also owns and operates generation facilities.

Based on Thurston Regional Planning Council population and employment forecasts for the next 20-30 years, Puget Power estimates that there will be a peak winter load of approximately 753 MVA (Mega or million volts amperes) in the Thurston County area in the year 2010. In comparison, the winter peak load today is approximately 500 MVA. New facilities, including transmission lines and substations, and distribution systems, may have to be added or expanded in order to reliably transmit the electrical energy projected to be required in Puget Power's service areas.

The existing location of Puget Power facilities and lines is shown on the attached map, Appendix G-1A. A general estimate of current capacity of the Puget Power system within the Yelm Urban Growth Area is 17 MVA, plus or minus 2 MVA. Since the substations serving the Yelm proposed Urban Growth Area also supply power to customers outside of the area, a precise estimate is not available.

The general location of proposed future electrical transmission lines and substations are schematically depicted on the maps contained in Volume 5/Appendix G-1A. The exact locations of future facilities and transmission lines may vary. The proposed facilities are intended to improve both service reliability to existing customers and to accommodate future growth. It reflects Puget Power's projected future demand of approximately 30 MVA for a peak winter load in Yelm's proposed Urban Growth Area.

Descriptions, maps, and inventories of existing, in-progress, and proposed electrical transmission facilities improvements intended to serve local and

regional needs are presented and described more fully in Puget Power's <u>Thurston County Draft GMA Electrical Facilities Plan, 1992</u>" (see Volume 5/Appendix G-1).

2. Natural Gas Utility

Washington Natural Gas (WNG) builds, operates, and maintains natural gas facilities serving the City of Yelm. WNG is an investor-owned utility serving nearly 400,000 customers in five western Washington counties including King, Snohomish, Pierce, Thurston, and Lewis Counties.

Natural gas is supplied to the City of Yelm through a gate station from Northwest Pipeline Corporation. At the station, the gas is metered and becomes the responsibility of the Washington Natural Gas Company (WNG).

Yelm is served from the Yelm gate station through two inch mains operating at supply pressures between 200 and 250 pounds per square inch (psi). Distribution pressures are decreased to between 20 and 60 psi. The pressure varies depending on the weather and time of day.

Washington Natural Gas Company records show 176 customers in June 1982 and 278 customers as of June 1992. WNG's existing distribution is shown on the map included in Volume 5/Appendix G-2A. WNG's proposed improvements and expansion are shown on the map included in Volume 5/Appendix G-2B.

Generally, WNG engages in two types of construction activities:

- a. Supplying natural gas to a new building
- b. Converting a building from an alternate fuel to natural gas

Because the timing of this type of construction is difficult to predict, WNG responds on a case-by-case basis. Therefore, precise figures on the amount and type of new building or conversion-related construction are not available.

WNG also plans construction aimed at improving service to an area showing a need for increased capacity. From an engineering design standpoint, the minimum pressure at which natural gas can be delivered is 15 pounds per square inch (psi). If the pressure drops below 15 psi, there are several ways to increase the pressure in the line. Each method requires construction activity. Following are common methods for increasing supply to an area:

- a. "Looping" the distribution and/or supply lines to provide an alternate route for the natural gas to travel to an area needing additional supply. This method often involved construction of high pressure mains, district regulators, and intermediate pressure gas mains.
- b. Installing lines parallel to existing lines to supplement supply of natural gas to a particular service area.
- c. Replacing existing gas mains to increase the volume of natural gas that can be supplied to a particular service area. However, this type of construction is rare, since it is usually more economical to loop gas mains. This increases the potential service area, and provides an alternate route for the natural gas to travel.
- d. Recently, WNG has replaced existing gas mains if they are older and street resurfacing or widening would make it difficult to get to the gas mains at a later time.

There are plans to replace the two-inch supply main with an eight-inch main and loop the two-inch distribution main with a six-inch main from the south when developments south of Yelm justify the cost of construction.

There are also plans to service McKenna from the Yelm gate when main extensions are required. No date has been set for either plan.

3. Telephone Utilities

The entire Yelm Urban Growth Area is served by a single, independent telephone company: the Yelm Telephone Company (YTC). YTC has developed a five-year plan for its facilities and their growth and expansion. The five-year plan is included in Volume 5/ Appendix G-3. Because of uncertainty in the timing of growth and the resulting need for utility services, YTC has not planned beyond the five-year horizon.

4. Cable Utilities

Cable telephone services in the City of Yelm are generally provided by Viacom Cablevision. This service provides television broadcasting via a network of overhead and/or underground coaxial cables. Virtually all channels carried on the Yelm cable system originate at Viacom's primary transmitter site located in Tacoma.

Viacom's Yelm cable system has the technical capacity to serve any anticipated new development in the City, as well as any potential areas of annexation. The Viacom system in Yelm was designed at 550 mghz and

built to 450 mghz capacity. The total number of customers in the Yelm city limits, as of August 6, 1994 is 1,235.

The City of Yelm recently approved a franchise for the addition of a second cable utility, owned by Yelm Telephone Company. YTC has not yet developed a plan for its cable facilities.

5. Solid Waste Utility

The City of Yelm currently contracts with a private company for the collection and disposal of garbage and recyclables. Any and all properties within the City's limits are and will continue to be served by the services rendered under a solid waste contract. The City is presently exploring commercial recycling opportunities and alternatives.

The City's expansion of its city limits is dependent upon availability of adequate capacity for disposal of solid waste.

E. Overall Goals and Policies

- GOAL 1: To facilitate the development and maintenance of all public facilities and utilities at the appropriate levels of service to accommodate the growth that is anticipated to occur in the City of Yelm.
 - Policy 1-1: The serving utility shall determine the sequence of implementing components of the utility plan as contained herein.
- GOAL 2: To facilitate the provision of public facilities and utilities and to ensure environmentally sensitive, safe, and reliable service, that is aesthetically compatible with the surrounding land uses and results in reasonable economic costs to consumers.
 - Policy 2-1: Promote when reasonably feasible co-location of new public and private utility distribution facilities in shared trenches and coordination of construction timing to minimize construction-related disruptions to the public and reduce the cost to the public of utility delivery. Provide timely effective notice to utilities to encourage coordination of public and private utility trenching activities for new construction and maintenance and repair of existing roads.
 - Policy 2-2: Promote the joint use of transportation rights of way and utility corridors, where possible, provided that such joint use is consistent with limitations as may be prescribed by applicable law and prudent utility practice.

- Policy 2-3: Require the undergrounding of all new electrical distribution and communication lines where reasonably feasible. Encourage the undergrounding of all existing electrical distribution and communication lines when it is reasonably feasible. Undergrounding shall be in accordance with rates and tariffs applicable to the serving utility.
- Policy 2-4: Require the reasonable screening and/or architecturally compatible integration of all new site-specific above ground facilities.
- Policy 2-5: Encourage directional pruning of trees and phased replacement of improperly located vegetation planted in the right-of-way. Pruning and trimming of trees should be performed in an environmentally sensitive and aesthetically acceptable manner and according to professional arboricultural specifications and standards.
- Policy 2-6: Encourage the consolidation of utility facilities and communication facilities where reasonably feasible.
- Policy 2-7: Facilitate the conversion to cost effective and environmentally sensitive alternative technologies and energy sources.
- Policy 2-8: Facilitate and encourage conservation of resources.
- Policy 2-9: Follow County guidelines in Chapter 7 of the County Comprehensive Plan for utility coordination between the Urban Growth Areas and rural areas within the unincorporated area.
- GOAL 3: To process permits and approvals for public facilities and utilities in a fair and timely manner and in accord with development regulations which encourage predictability.
 - Policy 3-1: Encourage the cooperation with other jurisdictions in the planning and implementation of multi-jurisdictional public facility and utility additions and improvements. Decisions made regarding utility facilities shall be made in a manner consistent with and complementary to regional demand and resources and shall reinforce an interconnected regional distribution network.
 - Policy 3-2: Consideration of public facility and utility permits simultaneously with the proposals requesting service and, when

possible, approval of utility permits when the project to be served is approved.

- Policy 3-3: Coordination among adjacent planning jurisdictions to ensure the consistency of each jurisdiction's utilities element and regional utility plans including: (i) coordinate the formulation and periodic update of the utilities element and relevant implementing development regulations and (ii) coordinate procedures for making specific land use decisions to achieve consistency of timing and substantive requirements.
- Policy 3-4: Ensure that development regulations are consistent with and do not otherwise impair the fulfillment of public service obligations imposed by federal and State law.
- Policy 3-5: Make decisions with respect to utility facilities so that safe, adequate, and efficient availability of electrical service in other jurisdictions is not negatively affected.
- Policy 3-6: Interpret the map designations depicting the general location of proposed facilities as applying to a general corridor rather than to a specific site. Coordinate with utility providers to obtain updated information and, if necessary, revise the maps accordingly.

1E: Maps from the City of Yelm Comprehensive Plan







1F: Sewer Local Improvement Districts ERU's Remaining

Parcel No Acct. N	Vo Owner	Address	Start Amt	Amt. Due	Status of Pmt	ERU purchased	ERU's Remaining	Notes
								DOT
21713240102 01-044	Gary G & Leslie J Hutson	LOT 3 LL-0466 VOL 3 PG 238	\$71,102.85	\$0.00	Paid in Full	39	39	ROW
21713310100 01-035	Ruth Gardner	9003 Mountain View Rd	\$1,823.15	\$0.00	Paid in Full	-	-	
21713310400 01-060	Henrietta L Morey	8818 SE Burnett Rd	\$12,762.05	\$0.00	Paid in Full	7	2	
21713310401 01-061	Henrietta L Morey	8812 SE Burnett Rd #A	\$20,054.65	\$0.00	Paid in Full	11	11	
21713310402 01-062	Henrietta L Morey	Unassigned	\$12,762.05	\$0.00	Paid in Full	7	2	
21713330200 01-063	Charles & Marianne Overaa		\$5,469.45	\$0.00	Paid in Full	3	8	
21713340000 01-042	George & Merle Hom	Bella Housa	\$7,292.60	\$0.00	Paid in Full	4	2	
21713340100 01-030	Nancy J Scharfe	9131 Mountain View Rd SE	\$3,646.30	\$0.00	Paid in Full	2	2	
21713340200 01-043	George & Merle Hom	Bella Housa	\$7,292.60	\$0.00	Paid in Full	4	7	
21713340300 01-046	James A & Frances Kitchen	14730 SE Yelm Ave	\$27,347.25	\$0.00	Paid in Full	15	15	
21713340402 01-078	David V Wilson	14802 Yelm Ave SE	\$1,823.15	\$0.00	Paid in Full	1	L	
21713340502 01-037	Floyd A & Appolonia Gray	9339 Mountain View Rd	\$1,823.15	\$486.20	Current	1	L	
21713340601 01-045R	Burnett Road Commercial Park LLC	9138 & 9144 Burnett Rd SE	\$9,115.75	\$0.00	Paid in Full	5	4	
21724110100 01-077	Donald J & Olga S Findlay	9329 Cullens Rd SE	\$3,646.30	\$0.00	Paid in Full	2	2	
21724110700 01-039	Paul N Hoffman	9405 SE Cullens Rd	\$3,646.30	\$0.00	Paid in Full	2	2	
21724120402 01-040	Hollamer Investments LLC	Tract A BLA 008257YL Doc #3317913	\$12,762.05	\$3,402.69	Current	7	2	
21724120404 01-041	MWSH Yelm LLC	215 Killion Rd NW	\$7,292.60	\$0.00	Paid in Full	4	4	
21724130100 01-065	Killion Crossing LLC	9548 Killion St SE	\$5,469.45	\$0.00	Paid in Full	3	3	
21724130302 01-088	James Ramirez	15010 Berry Valley Rd SE	\$3,646.30	\$972.31	Current	2	2	
21724130800 01-085	Yelm Village Development Co. LLC	(Deutcsher BLA with Golden Dragon0	\$10,938.90	\$0.00	Paid in Full	6	9	
21724130900 01-094	Ruth C Trull	15231 Yelm Ave SE	\$5,469.45	\$0.00	Paid in Full	3	3	
21724131000 01-089	James Ramirez	Unassigned	\$27,347.25	\$7,290.60	Current	15	15	
21724131200 01-091	James Ramirez	Unassigned	\$3,646.30	\$0.00	Paid in Full	2	2	
21724142001 01-081	Wesley & Marie Goss Trust		\$9,115.75	\$0.00	Paid in Full	5	5	
21724210100 01-055	James & Frances Kitchen	1404 Yelm Ave W	\$1,823.15	\$486.21	Current	1	1	
21724210101 01-027	Margarita & Christopher Street	1314 Yelm Ave W	\$1,823.15	\$0.00	Paid in Full	1	1	
21724210102 01-031	Nisqually Indian Tribe	1318 Yelm Ave W	\$1,823.15	\$0.00	Paid in Full	1	1	
21724210104 01-054	James & Frances Kitchen	1410 Yelm Ave W	\$1,823.15	\$0.00	Paid in Full	1	1	
21724420300 01-093	Rosemont Park LLC	15025 Tahoma Blvd SE (HUTCHESON)	\$89,334.35	\$23,822.53	Current	49	49	
21724420501 01-084	Crest Builders Inc.	9910 Durant St SE (Rainier View Estates)	\$7,292.60	\$0.00	Paid in Full	4	4	
21724420502 01-080	Mary Louise Clemens	15030 Longmire St SE	\$1,823.15	\$0.00	Paid in Full	1	1	
21724420503 01-092	Mustang Development LLC	15050 SE Longmire St	\$1,823.15	\$486.20	Current	1	1	
21725140300 01-101	John Dotson		\$1,823.15	\$0.00	Paid in Full	-	-	

March 4, 2011 - 411 ERU's Remaining - Current Cost \$3,179

March 4, 2011

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Notes	Mt. Shadow	did not use the LIDs																																		
ERU's Remaining	10	9	19	9	L	4	11	14	3	1	3	1	1	1	L	1	2	2	2	2	6	8	L	3	с	60	-	26	L	1	1	-	1	1	L	
ERU purchased	10	9	19	9	١	4	11	14	3	1	3	1	1	1	L	1	2	2	2	2	6	8	L	3	3	100	-	35	L	L	1	1	1	1	1	
Status of Pmt	Paid in Full	Paid in Full	Current	Current	Paid in Full	Paid in Full	Current	Current	Current	Paid in Full	Paid in Full	Current	Current	Current	Paid in Full	Current	Paid in Full	Paid in Full	Paid in Full	Paid in Full	Paid in Full	Current	Current	Paid in Full	Paid in Full	Current	Current	Paid in Full	Paid in Full	Current	Current	Current	Current	Current	Current	
Amt. Due	\$0.00	\$0.00	\$6,570.59	\$2,430.83	\$0.00	\$0.00	5,347.87	6,806.39	1,458.52	0.00	0.00	486.21	486.21	486.21	0.00	486.21	0.00	0.00	0.00	0.00	0.00	1,458.52	486.21	0.00	0.00	48,617.37	486.21	0.00	0.00	486.21	486.21	486.21	486.21	486.21	486.21	
Start Amt	\$18,231.50	\$10,938.90	\$34,639.85	\$9,115.75	\$1,823.15	\$7,292.60	20,054.65	25,524.10	5,469.45	1,823.15	5,469.45	1,823.15	1,823.15	1,823.15	1,823.15	1,823.15	3,646.30	3,646.30	3,646.30	3,646.30	16,408.35	5,469.45	1,823.15	5,469.45	5,469.45	182,315.00	1,823.15	63,810.25	1,823.15	1,823.15	1,823.15	1,823.15	1,823.15	1,823.15	1,823.15	
Address	9045 Wilkinson Rd SE	9211 Wilkinson Rd SE	10533 SE State Hwy 507	10609 SE Morris Rd	10123 SE Grove Rd	10143 SE Grove Rd	McKenna Irrigated Tracts BLA-0163 Tract B	McKenna Irrigated Tracts Block 9 Lot 2	16638 Canal Rd SE	16630 SE Canal Rd	10616 SE Bald Hill Rd	16507 SE State Hwy 507	16507 SE State Hwy 507	16507 SE State Hwy 507	16533 SE State Hwy 507	16601 SE State Hwy 507	10615 Bald Hill Rd SE (J&I - didn't use the LIDs)				10520 Creek St SE	16628 Hwy 507 SE	10246 SE West Rd		407 103rd Ave NE	701 Prairie Park Ln SE	Tr A BLA-8028 9/385 4-54-32	Tahoma Terra Phase II, Div 1 - 9 homes built	16662 Greenleaf Loop SE	16704 Greenleaf Loop SE	9935 Locust Ct SE	9936 Locust Ct SE	9942 Locust Ct SE	9948 Locust Ct SE	9954 Locust Ct SE	
Owner	Leonard Julson Trust	Leonard Julson Trust	Leo A Lefebvre	S & S Joint Ventures LLC	Robert D Glass	John B Casavant	Irving & Minnie Sternoff	O'Rear Family LLC	John C Sweaney	Joseph C Rothwell	Linda M Hull	Hassan Corp	Hassan Corp	Hassan Corp	Linda M Hull	Larry W Neilsen	Warren J Lasher	Raymond L Wilson	Cornelia N Damitio	Cornelia N Damitio	Judy Butler & Evelyn G Christensen	Richard Christensen Jr.	Timothy & Cathryn Abbey	Three B & C Lands Llc	Desmond J Iverson	C Sisters LLC	C Sisters LLC	Tahoma Terra LLC	Yelm Property Development LLC	Yelm Property Development LLC	Yelm Property Development LLC	Yelm Property Development LLC	Yelm Property Development LLC	Yelm Property Development LLC	Yelm Property Development LLC	
Acct. No	01-020	01-021	01-014	01-016	01-137	01-128	01-024	01-022	01-025	01-023	01-011	01-009	01-008	01-010	01-012	01-015	01-013	01-017	01-004	01-005	01-003	01-006	01-113	01-175	01-146-A	01-168	01-180	01-083-B	01-173-A11	01-173-A12	01-173-A13	01-173-A14	01-173-A15	01-173-A16	01-173-A17	
Parcel No	22718440100	22718440600	22730140300	22730140400	51540201200	51540302700	64300900100	64300900200	64301000402	64301000403	64303200700	64303200701	64303200701	64303200701	64303200704	64303200705	64303300100	64303300200	64303300300	64303300400	64303400400	64303400501	64303601602	64303601701	64303601800	64303700100	64303700205	78640000022	84070008800	84070008900	84070009000	84070009100	84070009200	84070009300	84070009400	



1G: Citizen Action Request



City of Yelm

Fee	NONE
Date Rece	ived
By	
File No.	

CITIZEN ACTION REQUEST

NAME:	-
PHONE: Home Business	-
EMAIL:	-
ADDRESS:	-
MAILING ADDRESS (if different than above:	-
DATE:TIME:	-
SITUATION DESCRIPTION:	- - - -
	-

For City of Yelm Official Use Only:	
Routed to:On:	
Response/Information Given:	
Suggested Action to be Taken:	
Compleint and suggested action to Dept. Head	
Action assigned to:	
Action to be initiated by / /	
Action taken if other than above:	
·	
Satisfactorily resolved/Completed on: / /	
Ву:	