FACT SHEET FOR
STATE WASTE DISCHARGE PERMIT
ST-8031
for the City of Ephrata Reclaimed Water Facility

SUMMARY

The City of Ephrata is constructing a Reclaimed Water Facility to replace the existing wastewater treatment plant. The facility has been designed and is being constructed to comply with the Reclaimed Water Standards and the Department of Ecology's design criterion to protect public health and the environment.

The state waste discharge permit is conditioned to implement the agreed design criterion, the reclaimed water standards and the requirements of the Department's groundwater standards.

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INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No.

ST-8031. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of reclaimed water to groundwaters of the State of Washington. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the reclaimed water, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080, 90.48.162 and 90.46) requires that a permit be issued before discharge of wastewater or reclaimed water to waters of the state is allowed. Regulations adopted by the State include procedures for issuing permits (Chapter 173-216 WAC), technical criteria for discharges from municipal wastewater treatment facilities (Chapter 173-221 WAC) and water quality criteria for ground waters (Chapter 173-200 WAC); and standards for reclaimed waters as required by the statute for Reclaimed Water, Ch. 90.46 RCW. They also establish the basis for effluent limitations and other requirements which are to be included in the permit.

This fact sheet and draft permit are available for review by interested persons as described in Appendix A--Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Washington State Department of Health - Drinking Water Program, Eastern Regional Office, and by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix D--Response to Comments

GENERAL INFORMATION	
Applicant	City of Ephrata
Facility Name and Address	**Water Reclamation Facility** **13748 Dodson Rd** **Ephrata, WA. 98823**
Type of Treatment System:	Extended Aeration Activated Sludge with tertiary treatment
Discharge Location	Latitude: 47° 18' 46" N Longitude: 119° 33' 05" W.
Legal Description of Application Area	Section 16, township 21, range 26 E.W.M
Contact at Facility	Name: Paul Wasco Telephone #: (509)754-2992
Responsible Official	Name: Jim Cherf Title: City Manager Address: 121 Alder S.W., Ephrata, WA. 98823 Telephone #: (509) 754-4601 FAX # (509)754-0912

BACKGROUND INFORMATION

DESCRIPTION OF THE COLLECTION AND TREATMENT SYSTEM

HISTORY

The city has had a wastewater treatment facility since 1948 which has been upgraded several times since then. The current construction project will replace the existing wastewater treatment plant with a water reclamation facility. The reclaimed water will infiltrate and recharge the groundwater in the vicinity of the reclamation facility and occasionally be used to irrigate to the current land application area. The new facility is expected to be on line on or about July 2000.

TREATMENT PROCESSES

The new treatment works includes the construction and installation of influent lift station; headworks structure with grit channel, parshall flume and mechanical screen; oxidation ditch, clarifier and return sludge system, an operations/digester/filtration building, chemical coagulant feed system, filtration system, ultraviolet light disinfection system, lined bypass lagoon, infiltration lagoons, demolition; necessary appurtenances and other related, miscellaneous items.

DISTRIBUTION SYSTEM

The reclaimed water will recharge the shallow groundwater aquifer via infiltration basins or the existing sprinkler system land application area.

RESIDUAL SOLIDS

The treatment facilities remove solids during the treatment of the wastewater at the headworks (grit and screenings), and at secondary clarifiers, in addition to incidental solids (rags, scum, and other debris) removed as part of the routine maintenance of the equipment. Grit, rags, scum and screenings are drained and disposed of as solid waste at the local landfill. Solids removed from the secondary clarifier are treated in aerobic digesters and stored in a covered area before being land applied under a permit from the Grant County Health District. The Department of Ecology's Solid Waste Program will assume Biosolids permit functions in 1999.

GROUND WATER

The groundwater at the site was monitored during the planning phase of this project and found to have nitrates in the groundwater ranging in concentration from 10 mg/L (N) in an up gradient well to 2.62 mg/L (N) in a down gradient well.

PERMIT STATUS

The previous permit for this facility was issued on July 17, 1990. Being issued before the department established groundwater standards and implementation guideline, the permit did not have effluent limits for the parameter of interest though basic monitoring was required in a testing schedule including groundwater monitoring. The only effluent limitation was for flow.

An application for permit renewal was submitted to the Department on January 13, 1995 and accepted by the Department on July 13, 1995.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an compliance inspection on October 14, 1997. During the history of the previous permit, the Permittee has remained in compliance based on Discharge Monitoring Reports (DMRs) and other reports submitted to the Department and inspections conducted by the Department.

WASTEWATER CHARACTERIZATION

The proposed wastewater discharge prior to infiltration or land application is characterized by the following parameters in the approved Facility Plan dated September 1996 in Table 6-8.

Table 1: Wastewater Characterization

Parameter	Concentration
BOD5, monthly average	< 10 mg/L
TSS, monthly average	< 15 mg/L
Total Nitrogen, Daily	< 10 mg/L
Turbidity, monthly average	< 2 NTU
Turbidity, continuous	< 5 NTU
Total Coliform, average	< 2.2 CFU/100 mL
Total Coliform, single sample	< 23 CFU/100 mL

SEPA COMPLIANCE

SEPA and NEPA (through the State Environmental Review) were complied with as part of the planning (Facility Plan) document approval process and design and construction funding process.

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be either technology- or water quality-based. Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not pollute the waters of the State. The minimum requirements to demonstrate compliance with the AKART standard are derived from the *Water Reclamation and Reuse Standards*, the *Design Criteria for Municipal Wastewater Land Treatment*, and Chapter 173-200 WAC.

The permit also includes limitations on the quantity and quality of the wastewater applied to the infiltration basins that have been determined to protect the quality of the ground water. The approved engineering report includes specific design criteria for this facility. Water quality-based limitations are based upon compliance with the Ground Water Quality Standards (Chapter 173-200 WAC).

The more stringent of the water quality-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110).

Class A Reclaimed Water Limits

The state of Washington passed legislation in 1992 which provided for the development of a process to encourage and implement water reclamation and reuse. In response to this legislation, RCW 90.46, and subsequent amendments, the Departments of Health and Ecology developed the Water Reclamation and Reuse Standards, 1997. These standards outline requirements for the level of treatment technology as well as technology-based water quality limits necessary to **protect public health** in the reuse of reclaimed water. These standards include requirements for four classes of reclaimed water, Classes A, B, C and D. Class A is the highest quality of reclaimed water, and therefore, provides the broadest range of reuse opportunities. Conversely, Class A reclaimed water requires the most stringent treatment and water quality limitations.

The technology and water quality requirements for the production of Class A reclaimed water, as cited in the Water Reclamation and Reuse Standards, 1997, are as follows:

> "Class A Reclaimed Water" is reclaimed water that, at a minimum, is at all times an oxidized, coagulated, filtered, disinfected wastewater.

1. Oxidized wastewater is defined as a wastewater in which the organic matter has been stabilized such that the biochemical oxygen demand (BOD_5) does not exceed 30 mg/l and the total suspended solids (TSS) do not exceed 30 mg/l, is nonputrescible, and contains dissolved oxygen.

2. Coagulated wastewater is defined as an oxidized wastewater in which colloidal and finely divided suspended matter have been destabilized and agglomerated prior to filtration by the addition of chemicals or by an equally effective method.

3. Filtered wastewater is defined as an oxidized, coagulated wastewater which has been passed through natural undisturbed soils or filter media, such as sand or anthracite, so that the turbidity as determined by an approved laboratory method does not exceed an average operating turbidity of 2 nephelometric turbidity units (NTU), determined monthly, and does not exceed 5 NTU at any time.

4. Adequate disinfection is defined as the median number of total coliform organisms in the wastewater after disinfection does not exceed 2.2 per 100 milliliters, as determined from the bacteriological results of the last seven (7) days for which analyses have been completed, and the number of total coliform organisms does not exceed 23 per 100 milliliters in any sample.

GROUND WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's ground waters including the protection of human health, WAC 173-200-100 states that waste discharge permits shall be conditioned in such a manner as to authorize only activities that will not cause violations of the Ground Water Quality Standards. Drinking water is the beneficial use generally requiring the highest quality of ground water. Providing protection to the level of drinking water standards will protect a great variety of existing and future beneficial uses.

Applicable ground water criteria as defined in Chapter 173-200 WAC and in RCW 90.48.520 for this discharge include the following:

Table 2: Ground Water Quality Criteria

Total Coliform Bacteria	1 Colony/ 100 mL
Total Dissolved Solids	500 mg/L
Chloride	250 mg/L
Sulfate	250 mg/L
Nitrate	10 mg/L
pH	6.5 to 8.5 standard units
Manganese	0.05 mg/L
Total Iron	0.3 mg/L
Toxics	No toxics in toxic amounts

The Department will use the criteria expressed in the regulation in the proposed permit. The discharges authorized by this proposed permit are not expected to interfere with beneficial uses.

Proposed Effluent limitations

Beginning on the effective date of the permit and lasting through the completion of construction and start up of water reclamation, on or about October 1, 2000, the Permittee is authorized to discharge wastewater effluent at the existing permitted location, a sprayfield, subject to the following interim limitations.

Parameter	INTERIM EFFLUENT LIMITATIONS
Flow	0.6 MGD

The above limitation is in accord with the existing permit and allows the new facility a start up period to come on line and produce reclaimed water. The final effluent limitations below are intended to take effect after start up of the reclamation facility when it is reasonable to expect compliance with the limitations.

	FINAL EFFLUENT LIMITATIONS	
Parameter	**Average Monthly[a]**	**Maximum Daily [b]**
Flow	.93 mgd	1.96 mgd
BOD_5	10 mg/L	15 mg/L
TSS	15 mg/L	23 mg/L
Turbidity	2 NTU	5 NTU
Total Nitrogen[c] as N	<10 mg/L	NA
[a] The average monthly effluent limitation is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.		
[b] The 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.		
[c] Sum of organic nitrogen, ammonia, nitrite and nitrate		

	EFFLUENT LIMITATIONS	
Parameter	**Median of last 7 days[d]**	**Single Sample [e]**
Total Coliform	2.2	23
[d] The median number of total coliform in the reclaimed water after disinfection does not exceed 2.2 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed.		
[e] The number of total coliform organisms shall not exceed 23 per 100 milliliters in any single sample.		

The controlling parameter for the biological treatment process is the removal of total nitrogen to a standard of less than 10 mg/L. The controlling parameter for the additional treatment process needed to protect public health is the Total Coliform standard. The requirement for the reclaimed water to be protective of public health defines the reliability requirements for the facility.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, that ground water criteria are not violated, and that effluent limitations are being achieved (WAC 173-216-110).

INFLUENT AND EFFLUENT MONITORING

The monitoring and testing schedule is detailed in the proposed permit under Condition S1 and S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

GROUND WATER MONITORING

The monitoring of ground water at the site is required in accordance with the Ground Water Quality Standards, Chapter 173-200 WAC. The Department has determined that this discharge has a potential to alter the characteristics and quality of the local ground water. Therefore the Permittee is required to evaluate the impacts on ground water quality. Monitoring of the ground water at the site boundaries and within the site is an integral component of such an evaluation.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3. are based on the authority to specify any appropriate reporting and record keeping requirements to prevent and control waste discharges (WAC 273-216-110).

FACILITY LOADING
The design criteria for this treatment facility are taken from 1996 engineering report prepared by Gray & Osborne and are as follows:

Average flow for the maximum month:	1.12 mgd
Annual Average Flow (1)	0.933 mgd
BOD_5 loading for maximum month:	1,890 lbs/day
TSS loading for maximum month:	2,070 lbs/day
TKN loading for maximum month:	233 lbs/day

(1) For the purposes of this permit the annual average flow and the average monthly flow will be considered the same.

The permit requires the Permittee to maintain adequate capacity to treat the flows and waste loading to the treatment plant (WAC 173-216-110[4]). The Permittee is required to submit an engineering report when the plant reaches 85% of its flow or loading capacity. (For example 1) when 85% of the average monthly flow reaches 85% of 0.933 MGD or 0.793 MGD, 2) when maximum monthly flow reaches 85% of 1.12 MGD, 3) when BOD_5 loading for maximum month reaches 85% of 1,890 lbs/day or 1,606.5 lbs/day.) For significant new discharges, the permit requires a new application and an engineering report (WAC 173-216-110[5]). The permit requires the Permittee to submit annual reports comparing the actual flow and waste loadings to the design criteria for the plant.

OPERATIONS AND MAINTENANCE
The proposed permit contains condition S.5 and S.8 as authorized under RCW 90.48.110, WAC 173-220-150, Chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture, treatment and water reclamation.

RESIDUAL SOLIDS HANDLING
To prevent water pollution the Permittee is required in permit condition S7. to store and handle all residual solids (grit, screenings, scum, sludge, and other solid waste) in accordance with the requirements of RCW 90.48.080 and State Water Quality Standards.

The final use and disposal of biosolids from this facility is regulated by U.S. EPA under 40 CFR 503. The disposal of other solid waste is under the jurisdiction of the local health district. Requirements for monitoring biosolids and record keeping are included in this permit. This information will by used by Ecology to develop or update local limits and is also required under 40 CFR 503.

PRETREATMENT
WAC 173-216-110 requires that the list of prohibitions in WAC 173-216-060 be included in the permit.

Federal pretreatment requirements in 40 CFR 403 and Sections 307(b) and 308 of the Clean Water Act apply to this facility. Therefore notification to the Department is required when pretreatment prohibitions are violated and when new sources of commercial or industrial wastewater discharge are added to its system.

During the preparation of the engineering report a listing of major water users was furnished. The few industrial users are not major water users nor are they categorical industries or likely to discharge categorical pollutants. However, the engineering report did document that growth is likely in Ephrata and the potential for commercial and industrial development should be anticipated. The reclaimed water standards require that wastewater receive adequate and prescribed treatment **at all times**. The potential for upset due to toxicants or inhibitory substances in the wastewater influent must be acknowledged and avoided. Nor is it desirable to have undetected toxicants pass through the system. Therefore, preparation and submission of a local sewer ordinance regulating discharges into the collection is a requirement of the permit and the construction funding agreements.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to ground water permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to submit written notice of significant increases in the amount or nature of discharges (typically new industrial discharges) into the sewer system tributary to the permitted facility. Condition G6 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G7 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Condition G8 requires application for permit renewal 60 days prior to the expiration of the permit. Condition G9 requires the payment of permit fees. Condition G10 describes the penalties for violating permit conditions.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, and to protect human health and the beneficial uses of waters of the State of Washington. The Department proposes that the permit be issued for five (5) years.

REFERENCES FOR TEXT AND APPENDICES

Faulkner, S.P., Patrick Jr., W.H., Gambrell, R.P., May-June, 1989. Field Techniques for Measuring Wetland Soil Parameters, Soil Science Society of America Journal, Vol. 53, No.3.

Washington State Department of Ecology, 1993. Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems, Ecology Publication # 93-36. 20 pp.

Washington State Department of Ecology and Department of Health, 1993. Water Reclamation and Reuse Interim Standards, Ecology Publication # 93-21. 23 pp.

Washington State Department of Ecology, 1996. Implementation Guidance for the Ground Water Quality Standards, Ecology Publication # 96-02.

Washington State University, November, 1981. Laboratory Procedures - Soil Testing Laboratory. 38 pp.

Washington State Department of Ecology Home Page
http://www.wa.gov/ecology/
Laws and Rules web site
http://www.wa.gov/ecology/leg/laws-etc.html

APPENDICES

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

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

Public notice of application was published on July 24, 1995 and July 31, 1995 in the Grant County Journal to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on May 6, 1999 in the Grant County Journal to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Eastern Regional Office
4601 N Monroe Street, Suite 202
Spokane, WA 99205-1295

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

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

Further information may be obtained from the Department by telephone, (509)456-6162, or by writing to the address listed above.

This permit was written by Richard A. Koch, P.E..

APPENDIX B--GLOSSARY

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

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

Average Monthly Discharge Limitation--The average of the measured values obtained over a calendar month's time.

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

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

Bypass--The intentional diversion of waste streams from any portion of the collection or treatment facility.

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

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

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

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

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

Distribution Uniformity--The uniformity of infiltration (or application in the case of sprinkle or trickle irrigation) throughout the field expressed as a percent relating to the average depth infiltrated in the lowest one-quarter of the area to the average depth of water infiltrated.

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

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

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

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

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

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.
pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.
Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).
Soil Scientist--An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of 30 semester hours or 45 quarter hours professional core courses in agronomy, crops or soils, and have 5,3,or 1 years, respectively, of professional experience working in the area of agronomy, crops, or soils.
State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.
Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.
Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.
Total Coliform Bacteria--A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.
Total Dissolved Solids--That portion of total solids in water or wastewater that passes through a specific filter.
Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.
Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent pollution of the receiving water.

APPENDIX C--RESPONSE TO COMMENTS

Pertaining to the Permit

Comment: The City asked for clarification of the date for compliance with the final permit limits.

Response: The date of October 1, 2000 was based on the original bid documents and allowing an adequate start up period for the biological processes. The contractor is ahead of schedule and currently projects November 1, 1999 for completion of construction. Allowing a period for plant startup for all processes and system is appropriate. A date of February 1, 2000 for compliance with the final limits is appropriate at this time.

Comment: The city asked for clarification of the reporting of results for the particle counter.

Response: The Department believes the best vehicle for explaining this is in the Discharge Monitoring Report. A draft DMR will discussed with the city.

Comment: The city asked for clarification of when a plan to maintain adequate capacity is required

Response: Add an example to the paragraph in the fact sheet: "The permit requires the Permittee to maintain adequate capacity to treat the flows and waste loading to the treatment plant (WAC 173-216-110[4]). The Permittee is required to submit an engineering report when the plant reaches 85% of its flow or loading capacity. (For example 1) when 85% of the average monthly flow reaches 85% of 0.933 MGD or 0.793 MGD, 2) when maximum monthly flow reaches 85% of 1.12 MGD, 3) when BOD_5 loading for maximum month reaches 85% of 1,890 lbs/day or 1,606.5 lbs/day.)"

Comment: The City pointed out that Biosolids Rules do not require testing of the biosolids to identify the priority pollutants listed in Tables II and III of Appendix D, 40 CFR Part 122.

Response: The City is correct. At times, the Department may use priority pollutant monitoring of biosolids quality to supplement the pretreatment program requirements. However, it is premature to requirement monitoring of priority pollutants for that purpose at the present time. The monitoring of priority pollutants in the biosolids will be deleted from condition S2. MONITORING REQUIREMENTS.

Comment: The City requested clarification in condition S5. OPERATION AND MAINTENANCE on when bypass is acceptable as a means of protecting public health and complying with the reliability provisions of the reclaimed water standards.

Response: A sentence was added to subsection F. Bypass Procedure and an additional paragraph was added

"G. Use of Short Term Reclaimed Water Bypass Lagoon to Maintain Reliability of Public Health Protection

The use of the Short Term Reclaimed Water Bypass Lagoon shall be reported by phone with a follow up written note as part of the monthly discharge monitoring report submitted to the department."

Comment: The City has noted that condition S8. RECLAIMED WATER USE requires submission of an engineering report when additional uses of reclaimed water is proposed. The City points out that in some cases a traditional engineering report meeting all regulatory requirements may be more than is appropriate.

Response: The City is correct. However, the Department is not in a position to predict the appropriate level of engineering documentation required with out additional information. The Department invites the City to approach the Department with the proposal for additional reclaimed water uses and request from the Department input on an appropriate scope of work for the engineering report, addendum to the existing engineering report/facility plan or technical memorandum as seems best.

Pertaining to the Fact Sheet:

Comment: The city pointed out that Jim Cherf is City Manager not City Administrator

Response: Change the title

Comment: The city reminded the Department that primary clarifiers will not be used and therefore will not generate biosolids or residual solids.

Response: Corrections were noted.

Comment: The city informs the Department of Ecology that recent monitoring shows that nitrates in the local groundwater monitoring well have reached 10 mg/L. The nitrate level previously noted was 7.13 mg/L.

Response: Comment noted and appreciated.

Comment: The city informs the Department of an interpretation that the reclaimed water standards are only required to comply with the primary drinking water standards.

Response: Chapter 90.46 RCW Reclaimed Water Use gives the definition: "Ground water recharge criteria" means the contaminant criteria found in the drinking water quality standards adopted by the state board of health pursuant to chapter 43.20 RCW and the department of health pursuant to chapter 70.119A RCW.

Chapter 43.20 RCW and chapter 70.119A RCW do not give the criteria themselves. They authorize DOH to develop the criteria. Neither RCW differentiates between primary and secondary criteria. The implementing regulation, Chapter 246-290 WAC Public Water Supplies, authorizes the use of both the primary and secondary criteria. The secondary criteria are for contaminants unlikely to affect public health but likely to affect public acceptance of and the beneficial use of the reclaimed water. It is in the public interest to monitor for secondary contaminant as listed in the Department of Ecology's regulation Chapter 173-200 WAC Water Quality Standards for Ground Waters of the State of Washington.