

FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST-7439
CASCADE AG SERVICES, INC.

SUMMARY

Cascade Ag Services, Inc. has a site in Skagit County located on a geographic feature known as Pleasant Ridge, about 2 miles east of La Conner. The facility sits on about 10 acres, most of which is paved. Cucumbers are processed into pickles July to October, with the largest production occurring in August and September. Cabbage is processed in September and October. The rest of the year product is packaged as orders are received.

Cucumbers are delivered to the plant by truck from nearby fields. They are washed, sorted, and put into brine tanks for pickling. Cabbage arrives via truck from the fields. The outer leaves of the cabbage are stripped away, and the stem is cored from the cabbage head. The peeled cabbage head is shredded and lightly salted, submerged in cabbage juice, fermenting it to produce sauerkraut.

Wash water from the plant operations flows to a settling tank, then to a series of tanks prior to discharging to a ditch area adjacent to the land application field. Stormwater from the brine tank farm pad also discharges to a series of settling tanks prior to discharging to this blind ditch. A collection pond has been dug at the end of the ditch, where the accumulated water can be pumped onto the 10-acre land application field.

The proposed permit will require characterization of the wastewater, the submittal of an Operations and Maintenance Manual, Spill Plan, Solid Waste Management Plan, and Stormwater Pollution Prevention Plan.

The required Annual Irrigation and Crop Management Plan will be evaluated to assess each year's limitations for wastewater application and show compliance with the agronomic rate limitation in the permit and protection of the groundwater.

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INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST-7439. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to waters 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 wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.162) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. Regulations adopted by the state include procedures for issuing permits (Chapter 173-216 WAC) and water quality criteria for ground waters (Chapter 173-200 WAC). They also establish 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 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. Changes to the permit will be addressed in *Appendix D—Response to Comments*.

GENERAL INFORMATION	
Applicant	Cascade Ag Services, Inc. 13459 Dodge Valley Road Mount Vernon, WA 98273
Facility Name and Address	Pleasant Valley Farms 13459 Dodge Valley Road Mount Vernon, WA 98273
Type of Facility	Food Processing
Type of Treatment	Settling, Filtration, Land Application
Discharge Location	Groundwater via Land Application Latitude: 48° 22' 18" N Longitude: 122° 27' 29" W
Legal Description of Application Area	South ½ Section 5, Township 33N, Range 03E Latitude: 48° 22' 18" N Longitude: 122° 27' 29" W
Contact and Responsible Official at Facility	Name: Craig Staffanson, Owner Telephone #: 360-466-0491 FAX #: 360-466-5693

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

HISTORY

Cascade Ag Services, Inc. (CAS) started operation of a pickle and sauerkraut processing facility at the Dodge Valley Road site in the mid-1990s. The original facility used four 8,000-gallon brining tanks for product curing. In 1998, CAS expanded the facility's production capacity with the addition of 18 tanks. By 2003, the facility's production capacity had expanded to 440 brining tanks, each with capacities between 8,000 and 10,000 gallons.

The facility produces process wastewater from cucumber and cabbage preparation and from equipment wash down. Other wastewaters generated include domestic sewage from employee restrooms and stormwater that falls within the facility's work area. The proposed permit covers the land application treatment of process wastewater and stormwater. Sewage is disposed of through a septic system regulated by Skagit County Health.

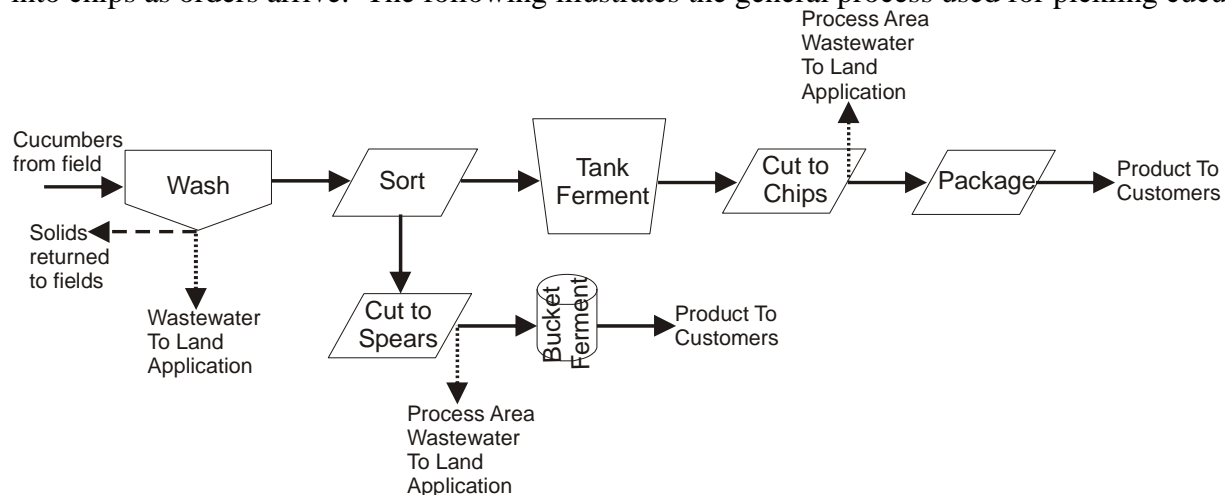
Up to 2003 the facility operated without discharge permits for stormwater or process wastewater. On August 14, 2003, Ecology issued a temporary permit to cover the existing discharges.

INDUSTRIAL PROCESSES

CAS, doing business as Pleasant Valley Farms, processes cucumbers into pickle spears and chips and cabbage into sauerkraut. Cucumbers generally arrive from local farms from July through October while cabbage arrives in September and October. The following provides a brief overview of the production processes for the two raw product lines.

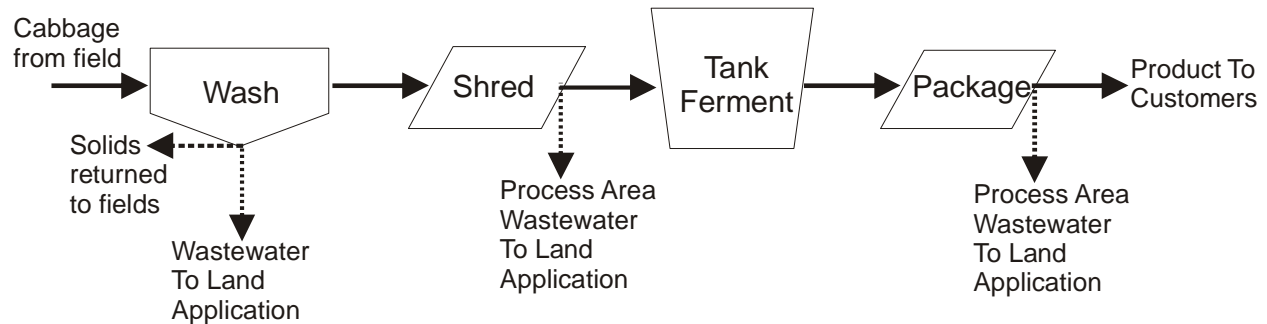
Cucumber Pickling Process:

Cucumbers are trucked in from local fields and unloaded into a stainless steel wash tank. Cleaned cucumbers are conveyed to the sorting system and placed into bins by size. After sorting, the cucumbers will follow one of two process routes. One route will send the cucumbers to the cutting room where they are cut into spears before being placed into 5-gallon buckets with flavors, spices, and brine for pickling. In the second process route, whole cucumbers are placed in 8,000-gallon vats filled with brine for pickling. Pickled cucumbers are later removed and sent to the cutting room where they are sliced into chips as orders arrive. The following illustrates the general process used for pickling cucumbers.



Sauerkraut Process:

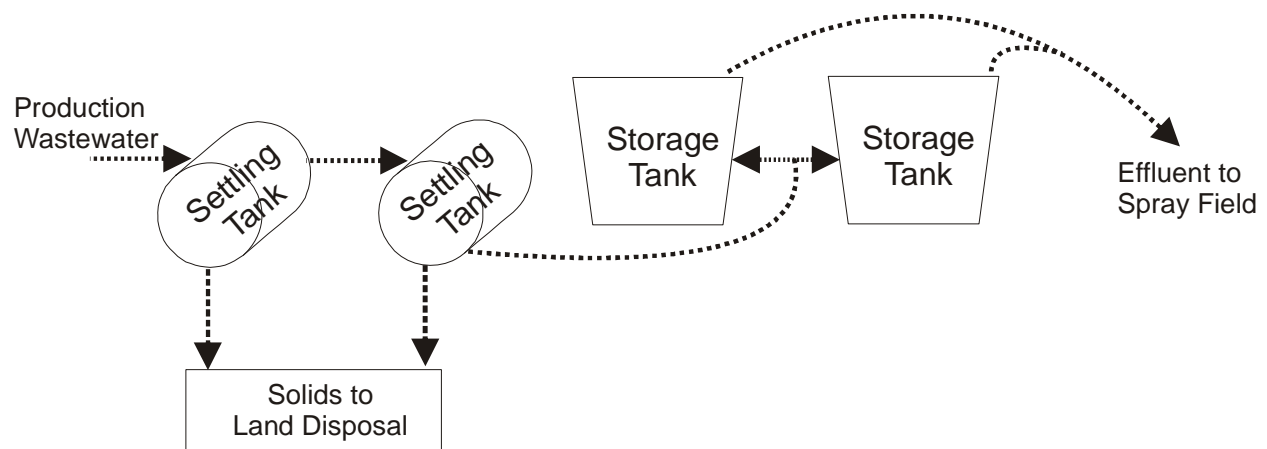
Cabbages arrive from local farm fields via truck and are unloaded into a stainless steel wash tank. Cleaned cabbage heads are conveyed to shredders in the main process area. The shredded cabbage is then transported to 8,000-gallon fermentation tanks for pickling. Finished product is packaged in various-sized jars before shipping to customers. The following diagram illustrates the general sauerkraut production process.



TREATMENT PROCESSES

Wastewater associated with pickle and sauerkraut production is generated at the initial raw product wash stage and from equipment wash down in the process area. Wastewater generated during cabbage and cucumber washing does not require significant treatment. Solids generated during the washing process quickly settle out in the wash tank. The clarified wash water is drained from the wash tank and gravity flows is piped to an irrigation pump for spray field application; solids that accumulate in the wash tank are returned to local agriculture fields.

Wastewater generated in the process area receives a slightly higher degree of treatment. Equipment wash down water is collected in floor drains with grit traps, then conveyed to settling tanks. The facility uses two 8,000-gallon settling tanks in series to remove settleable solids. Liquids are pumped from the second settling tank into two 8,000-gallon storage tanks. Every 2-3 production days the accumulated liquids are sent to the spray field through a pipe connected to the irrigation pump. Solids that accumulate in the settling tanks are removed with a vector truck twice a year and land applied to nearby agriculture fields. The following diagram illustrates the basic treatment process for production area wastewater.



STORMWATER SYSTEM

Stormwater is collected in a number of catch basins throughout the facility site and is routed to a central oil-water separator for treatment. From the oil-water separator the stormwater is conveyed to a drainage ditch adjacent to the land application site. A barrier has been installed in the ditch to prevent the stormwater from leaving the vicinity of the spray field, effectively converting a section of the ditch into a storage basin. During 10 months of the year, water is pumped from this basin and applied to the spray field.

DISTRIBUTION SYSTEM (SPRAY FIELD, DRAINFIELD, INFILTRATION BASIN)

Cascade Ag Services, Inc. has access to a 15-acre field for land application of wastewater and stormwater generated at the facility; they are currently using approximately 10 acres. Wastewater from cucumber/cabbage washing and from the production area treatment system is conveyed to the field through a dedicated PVC pipeline. This pipeline connects directly to the irrigation pump located at the application site. Stormwater collected at the facility accumulates in a dammed portion of a drainage ditch that serves as a temporary storage basin. During 10 months of the year, stormwater is pumped from this basin and applied to the spray field using the same irrigation pump.

Currently a large irrigation gun is employed that pumps at a rate of 200-300 gpm. The application rate is ¼" per acre. The fields are planted in a fescue/rye grass and rye orchard mix. There are 15 acres total with another 45 acres available if needed. Only about 10 acres were used in 2007.

Stormwater is land applied about 10 months out of the year. The receiving ditch area has been dammed so the water can be collected and land applied.

Soils in the land application area are Tacoma Silt Loam (drained) on the crop ground. Characteristics of Tacoma Silt Loam include very deep, very poorly drained soils on flood plains. Drainage has been altered by use of tile and open ditches. They formed in materials recently deposited by rivers with a mixture of volcanic ash and thin layers of organic matter. Typically, the surface layer is silt loam about 9 inches thick. The underlying material is silt and silt loam to a depth of 60 inches. This layer contains a layer of very acidic decomposed plant material to a depth of 60 inches. Available water capacity is high. Water movement through these soils is moderately slow. A seasonal high water table is at a depth of 1 to 3 feet from November to April. Most areas of these soils are protected from flooding by dikes. Unprotected areas are subject to frequent, long periods of flooding.

Winter discharges will consist of stormwater runoff from the asphalt pad and very little if any washwater discharge. Washing and sorting occurs during the months of July through October.

Permit Status

An application for a permit was submitted to the Department on February 14, 2003, and accepted by the Department on February 24, 2003. A temporary "permit-by-rule" was issued on August 14, 2003.

The facility last received an inspection on June 19, 2007.

WASTEWATER CHARACTERIZATION

The concentration of pollutants in the discharge has not been characterized. The goal of this permit is to characterize the washwater and stormwater associated with this site and the efficiency of the land application treatment. Anticipated pollutants of concern are solids, salinity, BOD₅, and nutrients.

SEPA COMPLIANCE

SEPA (State Environmental Policy Act) was completed in March 2003. A Mitigated DNS was assigned by the lead agency, Skagit County. The MDNS was appealed in June 2003. That appeal was denied.

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 were determined in the engineering report (*Abridged Engineering Report for a Wastewater Discharge Permit for CAS*, April 2003), in conformance with *Guidelines for the Preparation of Engineering Reports for Industrial Wastewater Land Application Systems*, May 1993.

The permit also includes monitoring of the quantity and quality of the wastewater applied to the spray field. The engineering report includes specific design criteria for this facility.

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). The following permit limitations are necessary to satisfy the requirement for AKART:

- Settling of wash water to remove solids prior to land application.
- Compliance with the Annual Irrigation and Crop Management Plan.

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 1: 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 has reviewed existing records and is unable to determine if background ground water quality is either higher or lower than the criteria given in Chapter 173-200 WAC, therefore, 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 or adversely impact groundwater quality.

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).

CAS is required to monitor the discharge to the land application site at the end of the conveyance system and prior to land application. The specific sampling location will be at the pipe that leaves the CAS site prior to discharging and mingling with ditch water.

WASTEWATER MONITORING

The monitoring schedule is detailed in the proposed permit under Condition 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.

Monitoring for BOD₅, TSS, pH, NO₃, ammonia, Total Phosphorous, TDS, and chlorides is being required to characterize the effluent. These pollutants could have a significant impact on the quality of the ground water.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110).

IRRIGATION AND CROP MANAGEMENT PLANS

The annual Irrigation and Crop Management Plan is required to support the engineering report and Operations and Maintenance Manual. This plan shall include a consideration of wastewater application at agronomic rates and should describe and evaluate various irrigation controls.

OPERATIONS AND MAINTENANCE

The proposed permit contains Condition S5 as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment. The proposed permit requires submission of an updated O&M manual for the entire wastewater system.

SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste.

This proposed permit requires, under authority of RCW 90.48.080, that the Permittee develop and submit to the Department a Solid Waste Management Plan to prevent solid waste from causing pollution of waters of the state.

NON-ROUTINE AND UNANTICIPATED DISCHARGES

Occasionally, this facility may generate wastewater which is not characterized in their permit application because it is not a routine discharge and was not anticipated at the time of application. These typically are waters used to pressure test storage tanks or fire water systems or leaks from drinking water systems. These are typically clean waste waters but may be contaminated with pollutants. The permit contains an authorization for non-routine and unanticipated discharges. The permit requires a characterization of these waste waters for pollutants and examination of the opportunities for reuse. Depending on the nature and extent of pollutants in this wastewater and opportunities for reuse, Ecology may authorize a discharge via the process wastewater outfall, require the wastewater to be placed through the facility's wastewater treatment process or require the water to be reused.

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under Section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The proposed permit requires the Permittee to develop and implement a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

In accordance with 40 CFR 122.44(k) and 40 CFR 122.44(s), this permit includes requirements for the development and implementation of a site-specific SWPPP along with best management practices (BMPs) to minimize or prevent the discharge of pollutants to waters of the state, including groundwater. BMPs constitute Best Conventional Pollutant Control Technology (BCT) and Best Available Technology Economically Achievable (BAT) for stormwater discharges. Ecology has determined that development of a SWPPP and implementation of adequate BMPs in accordance with this permit constitutes “all known, available, and reasonable methods of prevention, control, and treatment” (AKART).

A site-specific SWPPP requires implementation of actions necessary to manage stormwater to comply with the state’s requirement under Chapter 90.48 RCW to protect the beneficial uses of waters of the state. The SWPPP must identify potential sources of stormwater contamination from industrial activities and how those sources of contamination are managed to prevent or minimize contamination of stormwater. The SWPPP must be a “living” document that the Permittee continuously reviews and revises as necessary to assure that stormwater discharges do not degrade water quality. The facility must retain the SWPPP on-site or within reasonable access to the site so that it is available for review by Ecology.

The SWPPP identifies actions or BMPs to manage, prevent contamination of, and treat stormwater. BMPs include prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. Treatment BMPs are required when operational and source-control BMPs are not sufficient to assure compliance with water quality standards.

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 construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes, or regulations. Conditions G7 and G8 relate to permit renewal and transfer. 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 a term of 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 No. 93-36. 20 pp.
- Washington State Department of Ecology.
- Laws and Regulations (<http://www.ecy.wa.gov/laws-rules/index.html>)
- Permit and Wastewater Related Information
(<http://www.ecy.wa.gov/programs/wq/wastewater/index.html>)
- Washington State Department of Ecology, 1996. Implementation Guidance for the Ground Water Quality Standards, Ecology Publication No. 96-02.
- Washington State University, November 1981. Laboratory Procedures - Soil Testing Laboratory. 38 pp.

APPENDICES

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to issue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on August 15 and August 22, 2003, in *The Skagit Valley Herald* to inform the public that an application had been submitted and to invite comment on the issuance of this permit.

The Department published a Public Notice of Draft (PNOD) on July 1, 2008, in *The Skagit Valley Herald* to inform the public that a draft permit and fact sheet were available for review. Interested persons were invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents were available for inspection and copying between the hours of 8:00 a.m. and 4:30 p.m. weekdays, by appointment, at the regional office listed below. Written comments were mailed to:

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

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30)-day comment period to the address above. The request for a hearing shall indicate the interest of the party and 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.

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

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

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

This permit was written by Lori LeVander and Shawn McKone.

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.

BOD₅—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 BOD₅ 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.

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.

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

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.

Grab Sample—A single sample or measurement taken at a specific time or over as short a 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 percent 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 year(s), 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 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

There were no comments during the public comment period.