Fact Sheet for State Waste Discharge Permit ST0501288

Pristine Valley Farms Pickle, LLC

Public Notice of Draft Date: September 14, 2021

Purpose of this fact sheet

This fact sheet explains and documents the decisions the Department of Ecology (Ecology) made in drafting the proposed State Waste Discharge Permit for Pristine Valley Farms Pickle, LLC (PVFP) that will allow discharge of wastewater to a 16-acre spray field located across Dodge Valley Road from the facility.

State law requires any industrial facility to obtain a permit before discharging waste or chemicals to waters of the state, which includes groundwater.

PVFP reviewed the draft permit and fact sheet for factual accuracy. Ecology corrected any errors or omissions about the facility's location, history, product type or production rate, discharges or receiving water prior to publishing this draft fact sheet for public notice.

Ecology makes the draft permit and fact sheet available for public review and comment at least thirty (30) days before issuing the final permit. Copies of the fact sheet and draft permit for PVFP, State Waste Discharge Permit No. ST0501288, were available for public review and comment from September 14, 2021 until the close of business October 14, 2021.

After the public comment period closed, Ecology summarized substantive comments and our responses to them. Ecology includes our summary and responses to comments to this fact sheet as **Appendix E – Response to Comments**, and publish it when we issue the final State Waste Discharge Permit. Ecology generally will not revise the rest of the fact sheet. The full document will become part of the legal history contained in the facility's permit file.

Summary

PVFP is a new permit applicant on the site previously operated by Cascade Ag Services (CAS). PVFP operates at the previous CAS facility and will process cucumbers, peppers, and cabbage into pickles, pickled peppers, and sauerkraut, respectively. Production of cucumber pickles and sauerkraut began August 11, 2014. The new company will operate the old facility and will discharge process and stormwater similar in nature to the previous tenant and apply it to the same land application area as used by CAS.

Treatment consists of storage in a lagoon and land treatment of wastewater generated on-site and stormwater from the processing areas. The permit sets limits for flow, biochemical oxygen demand (BOD), total dissolved solids (TDS), total suspended solids (TSS), and chloride. The permit requires monitoring of wastewater, groundwater, and soil in the application field.

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I. Introduction

The legislature defined Ecology's authority and obligations for the Wastewater Discharge Permit Program in the Water Pollution Control law, chapter 90.48 RCW (Revised Code of Washington).

Ecology adopted rules describing how it exercises its authority:

- State Waste Discharge Program (chapter 173-216 WAC).
- Water quality standards for ground waters of the state of Washington (chapter 173-200 WAC).
- Submission of plans and reports for construction of wastewater facilities (chapter 173-240 WAC).

These rules require any industrial facility owner/operator to obtain a State Waste Discharge Permit before discharging wastewater to state waters. They also help define the basis for limits on each discharge and for performance requirements imposed by the permit.

Under the State Waste Discharge Permit Program and in response to a complete and accepted permit application, Ecology generally prepares a draft permit and accompanying fact sheet, and makes it available for public review before final issuance. When Ecology publishes an announcement (public notice), it tells people where they can read the draft permit, and where to send their comments, during a period of thirty days. (See **Appendix A – Public Involvement Information** for more detail about the public notice and comment procedures). After the public comment period ends, Ecology may make changes to the draft State Waste Discharge Permit in response to comment(s). Ecology will summarize the responses to comments and any changes to the permit in **Appendix E**.

II. Background Information

Table 1. General facility information

Facility Information	
Applicant	Pristine Valley Farms Pickle, LLC
Facility Name and Address	Pristine Valley Farms Pickle, LLC 13381 Dodge Valley Road Mount Vernon, WA 98273
Contact at Facility	Name: Jocelyn Staffanson Telephone #: 360-499-4563
Responsible Official	Name: Alfonso Cisneros Title: President Address: P.O. Box 207, La Conner, WA 98237 Telephone #: 360-499-4563

Facility Information	
Industry Type	Food Processing
Type of Treatment	Settling tank, settling pond, and land application
SIC Codes	2035; Pickled Fruits & Vegetables, Vegetable Sauces and Seasoning, and Salad Dressings
NAIC Codes	311999; Miscellaneous Food Processing
Permit Fee Category	Food Processing c. (10,000 - < 50,000 gpd)
Facility Location	Latitude: 48.37568° N Longitude: -122.456006° W
Legal Description of Application Area	Section, township, range Section 8 T33N, R3E Latitude: 48.371774° N Longitude: -122.455888° W

Permit Status	
Application Submittal Date	September 5, 2014
Date of Ecology Acceptance of Application	September 11, 2014

Inspection Status	
Date of Last Non-sampling Inspection Date	September 2, 2021

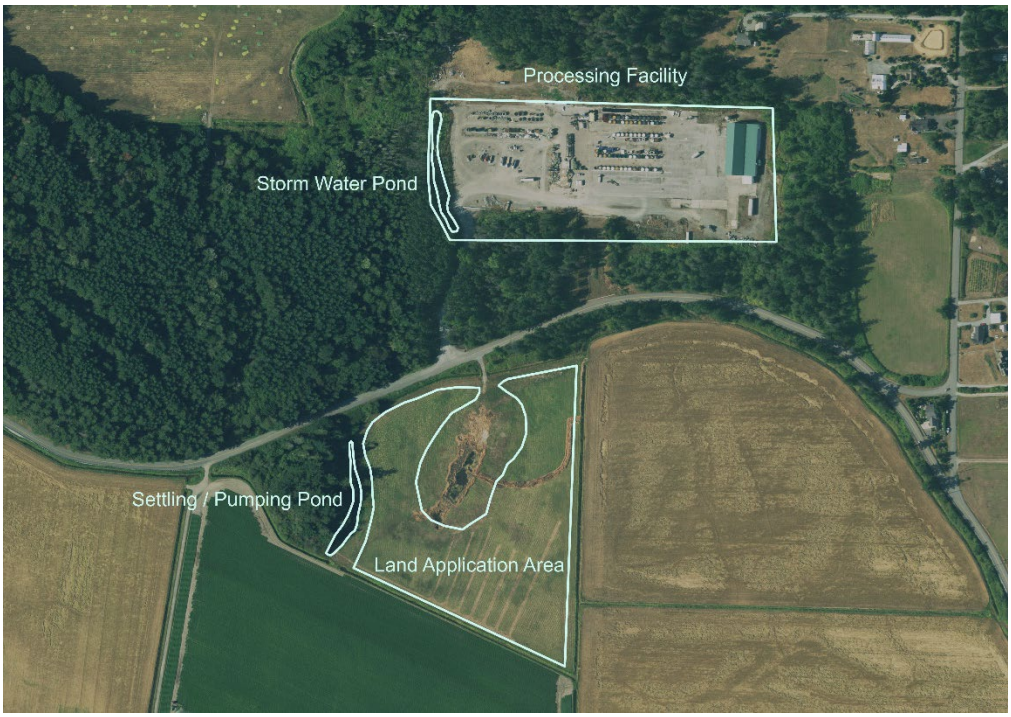


Figure 1 Facility location map

A. Facility description

History

Pristine Valley Farms Pickle (PVFP) is a new company created by a former employee of Cascade Ag Services (CAS) and operating for pickle, pickled pepper, and sauerkraut production located on property formerly utilized by CAS, who also produced pickles, peppers, and sauerkraut. CAS ceased operations in May 2014 after declaring Chapter 11 bankruptcy and had all its assets liquidated. Production of cucumber pickles and sauerkraut started up again on August 11, 2014. Ecology issued temporary permit coverage based on a complete application on December 4, 2014. This is a new company operating on the old CAS site that will discharge process wastewater and stormwater to the same application area as previously used by CAS.

PVFP is proposing to place approximately 200 fermentation tanks of various sizes (between 1,500 to 10,000 gallons) onto approximately 4 acres at the subject address. The larger tanks will be placed on the paved surface in the east side of the facility, while the other tanks will be placed directly on the ground. Currently the facility has between 70 and 80 vats, with about 75 percent in pickles and 25 percent in sauerkraut.

Industrial processes

PVFP recently processed cabbage into sauerkraut at a Port of Skagit County facility located at 539 North 3rd Street, La Conner, Washington. PVFP has since moved its sauerkraut operation to the facility located at 13381 Dodge Valley Road, Mount Vernon, WA. PVFP

operations at the Dodge Valley Road site will include processing cabbage into sauerkraut, and processing cucumbers and peppers into pickles. PVFP will employ approximately 15 personnel initially, growing to between 20 and 40 employees at full build out. Operations will be dependent on the time of year and the product being brought in from the fields. A standard shift will be 5- to 8-hour days, however, shifts may increase to 10 hours and 6 days a week during peak harvest. Operations will be conducted throughout the year.

Cucumbers generally arrive from local farms between July and October, peppers generally arrive in September, and cabbage typically arrives during October and November. The following provides an overview of the production processes for the three product lines.

Water for the facility is provided by the Skagit County Public Utility District and two on-site wells. The connection to the public utility water is located on Dodge Valley Road. From the road, a 1.5-inch water line runs north to the tank farm. The wells are located along the southeast edge of the property.

In the tank yard, primarily well water is utilized for the initial filling of the brine tanks and topping-off as fluid evaporates from the tanks. There is naturally a higher rate of evaporation during the summer months on hot days. Depending on the outside temperature, it is estimated that a maximum of 75 gallons of water evaporate per day from each tank when temperatures are above 70^{o}F. During the harvest months, water is also used for the spray bars on the fresh cucumber grading line, the pepper line and the cabbage line, and to make salt stock brine to ferment the fresh cucumbers for future manufacturing.

At the time of permit issuance size-sorted cucumbers, pickles, and sauerkraut are sent to a facility in Burlington for processing and packaging. In the future, the production facility water supply will be utilized for small batch brine making, as well as facility wash down operations. In each 5-gallon pail of pickles, the production team uses approximately 2 to 3 gallons of water, i.e. cover brine. In the future, the production facility will be cleaned and washed down at the end of each production day. All wash down water from the future production facility will be collected in two 1,000-gallon underground holding tanks. In the holding tanks the organic solids settle to the bottom of the tank and the liquid flows from the holding tanks through the effluent line under Dodge Valley Road to the storage pond near the spray field, where the effluent water is applied to the spray field.

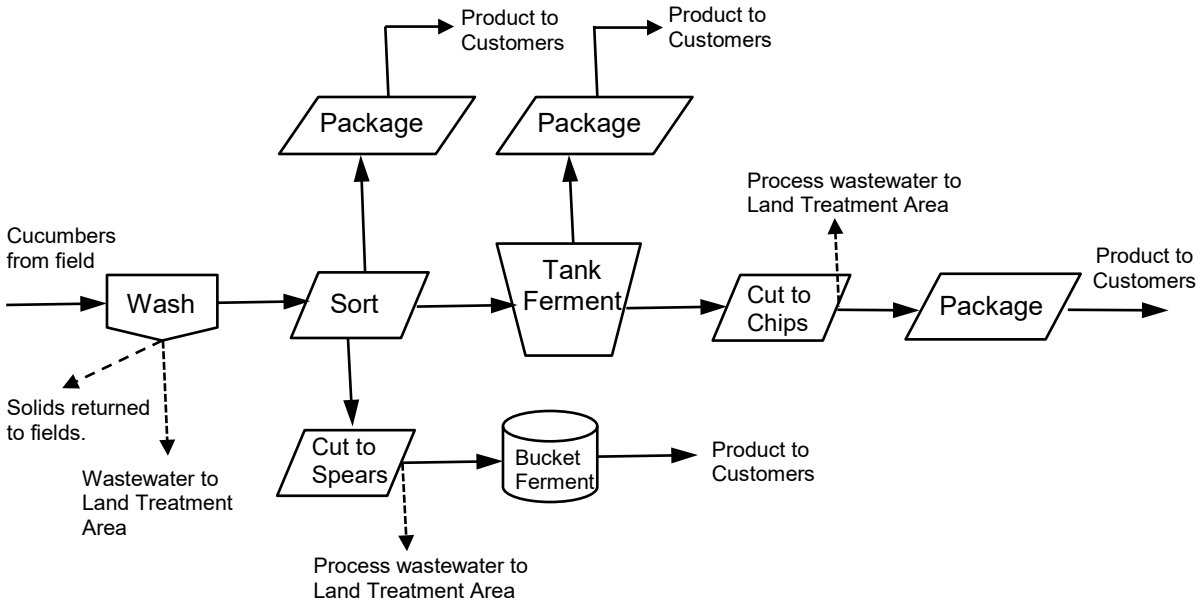
Stormwater from the facility and pad the vats sit on is collected in the catch basins and the ditch on the west end of the tank farm and then flows to an oil/water separator. Stormwater from the unpaved facility areas flows to a small storage pond that also discharges to the oil/water separator. From the oil/water separator a 4-inch PVC line runs under Dodge Valley Road to the spray field holding pond.

Cucumber pickling process

Cucumbers are trucked in from local fields and are unloaded onto a conveyor where cucumbers pass under a spray bar. Clean cucumbers are conveyed to the sorting system and placed into bins by size. After sorting, the cucumbers will follow one-of-four process routes. One route will send the cucumbers to the cutting room (located in the production facility)

where they are cut into various sizes and shapes before being placed into 5-gallon shipping containers with flavors, spices, and brine for pickling. In the second process route, whole cucumbers are placed in 1,500- to 10,000-gallon vats filled with brine for pickling. As orders arrive, pickled cucumbers are removed from the vats and sent to the cutting room where they are cut into various shapes and sizes before being placed into shipping containers with flavors, spices, and brine. The third process places whole pickled cucumbers into shipping containers. The fourth process route places whole fresh cucumbers in shipping containers without any pickling before being sent to customers. Figure 2 illustrates the general process used for pickling cucumbers and shipping fresh cucumbers.

Figure 2. Cucumber processing



Waste solids from this process is settled sediments, leaves, stems, and broken pieces of cucumbers. Wastes from the washing and sorting areas are returned to local fields. Solids from the cutting room settling tanks will be removed by vactor truck as needed, but no less than once a year and again returned to local fields.

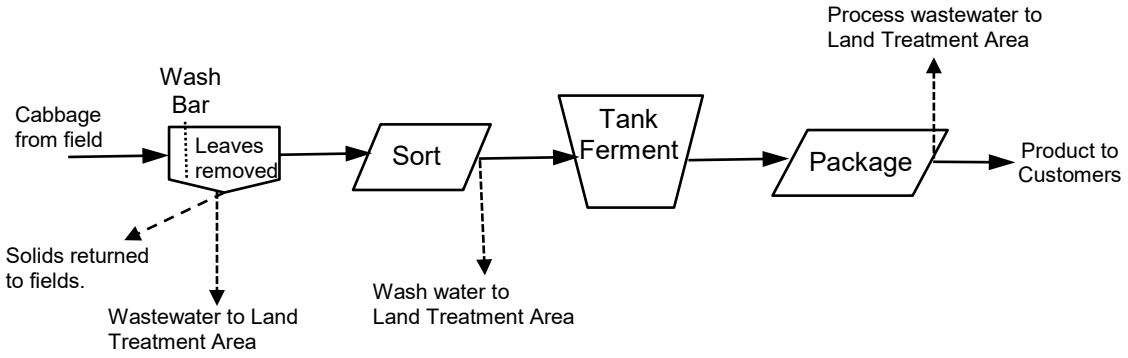
Sauerkraut process

Cabbages arrive from local farm fields via truck and are unloaded onto a conveyor where the cabbage passes under a spray bar and then the outer leaves are removed. Cleaned cabbage heads are conveyed to corers and shredders in the main process area. The shredded and cored cabbage is then transported to 1,500 - 10,000-gallon fermentation tanks for pickling. Finished product is packaged in various-sized containers before shipping to customers. Figure 3 illustrates the general sauerkraut production process.

Waste solids from cabbage processing includes settled sediment, and cabbage leaves and cores. Solid wastes from the washing area is returned to local fields. Solids from the cutting

room settling tanks will be removed by vactor truck as needed, but no less than once a year, and again returned to local fields.

Figure 3. Cabbage processing

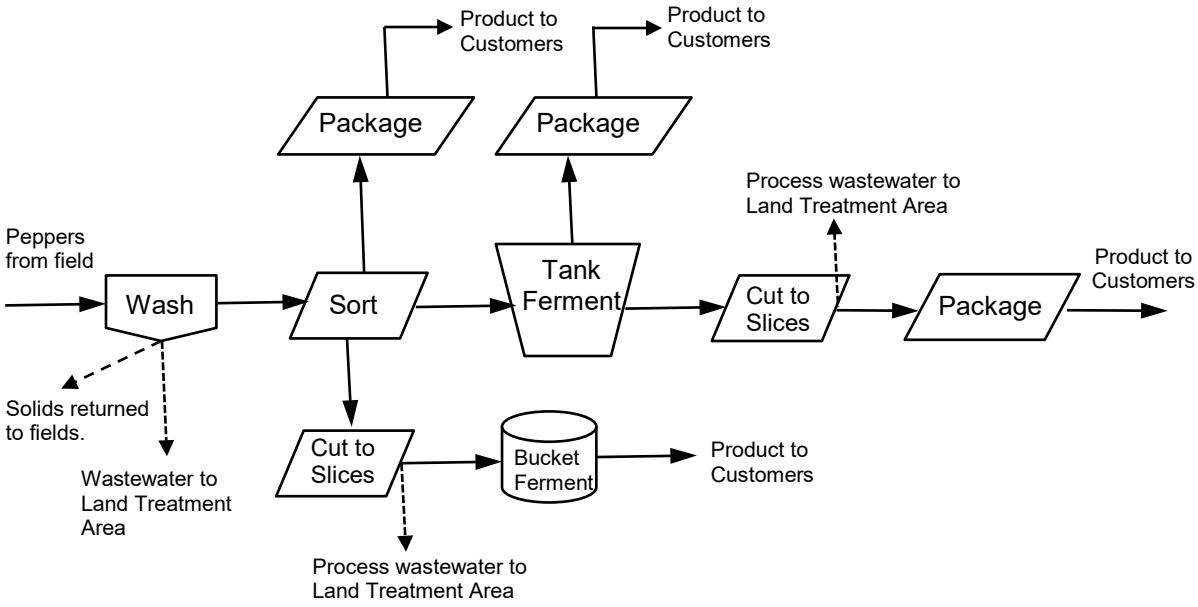


Pepper process

Peppers are trucked in from farm fields and are unloaded onto a conveyor where the peppers pass under a spray bar. Clean peppers are conveyed to a sorting line separate from the cucumber sorting line and placed into bins. After sorting, the peppers will follow one-of-four process trains. One route will send the peppers to the cutting room (future processing facility) where they are cut into slices or left whole and then placed into shipping containers with flavors, spices, and brine for pickling. In the second process route, whole peppers are placed in 1,500 - 10,000-gallon vats filled with brine for pickling. As orders arrive, pickled peppers are removed and sent to the cutting room where they may be left whole or cut into slices and then placed into shipping containers with flavors, spices, and brine. The third process route places whole pickled peppers into bulk shipping containers. In the fourth process route, whole fresh peppers are placed in shipping containers and sent to customers without any pickling. Figure 4 illustrates the general process used for pickling peppers.

Waste solids from this process are settled sediment, leaves, stems, and broken pieces of peppers. Solid wastes from the washing and sorting areas are returned to local fields. Solids from the cutting room settling tanks will be removed by vactor truck as needed, but no less than once a year and again returned to local fields.

Figure 4. Pepper processing



Wastewater treatment processes (prior to land treatment)

Wash water associated with pickle, pepper, and sauerkraut production is generated at the initial raw product wash stage and from equipment wash down in the process area. Solids generated during the washing process are returned to local agricultural fields. The wash water from the pad area gravity flows to a trench drain along the west edge of the pavement. From there the wastewater is directed to a small holding pond on the west edge of the facility. Wastewater from this small holding pond may be removed by a diesel irrigation pump and applied directly to the land treatment area or directed into the small stormwater pond before discharge to the land treatment area.

An estimated annual water balance for the operation breaks down as follows (all values are in gallons):

2,115,000 Process water discharged to application field
1,000,000 Fermentation tanks usage
1,000,000 Finished goods usage (cutting room)
1,008,000 Landscaping irrigation

5,123,000 Potable Water Usage

In the future, the process facility cutting room equipment wash down water will be collected in floor drains with grit traps, and then conveyed to settling tanks. The facility will use two 1,000-gallon settling tanks in series to remove settleable solids. The accumulated liquid will be pumped through a pipe to the small holding pond on the west of the facility. Solids that accumulate in the settling tanks will be removed with a vactor truck as needed, but no less than once a year and land applied to nearby agriculture fields. Figure 5

illustrates the basic treatment process for future cutting room wash water. Figures D-1 and D-2 diagram the various wastewater flow paths.

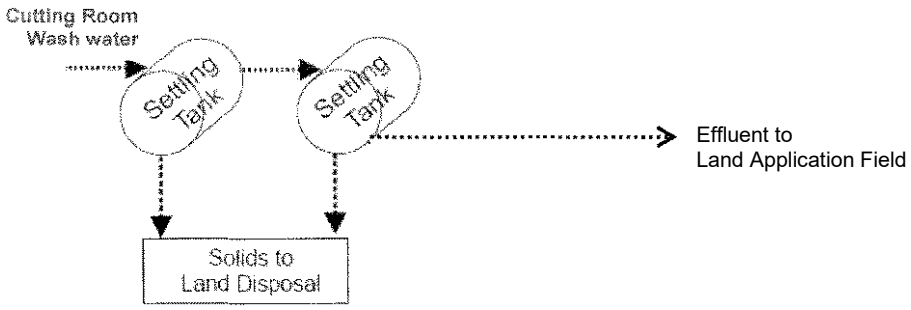


Figure 5. Processing facility flow chart

Land treatment and distribution system (spray field)

PVFP has an area of approximately 9 acres for land treatment of process water and stormwater generated at the facility. This property is leased from an adjacent land owner. Wash water from cucumber/cabbage/pepper washing and processing, and from the future cutting room area, treatment system will be collected in a small holding pond in the northwest of the facility. Wastewater from this small holding pond is removed by a diesel irrigation pump and conveyed to the application field through a dedicated 2-inch PVC pipeline to the large storage/settling pond.

The land application area is covered by ten 240-foot fixed irrigation lines and four 320-foot fixed lines. The 240-foot lines are 3-inch diameter with six sprinkler heads on 40-foot centers. The 320-foot lines are also 3-inch diameter with eight heads also on 40-foot centers. All 14 lines are attached to a common 6-inch header line along the south side of the application field and extending 880 feet from the irrigation pump. A 60-foot buffer will be maintained between the nearest line and the edge of the application field.

Soils of the land application area are described by the Natural Resources Conservation Service as Skagit silt loam. The Skagit silt loam is described as a very deep, poorly drained soil with a moderately high to high hydraulic conductivity on flood plains and deltas. It is formed on recent alluvium and volcanic ash.

No land application is allowed during periods of high groundwater or when the ground is snow covered or frozen. Application at other times during the wet season will be restricted so as not to cause ponding on or runoff from the application area.

The NRCS identifies soils beneath the facility as the following three types: Bellingham silt loam; Bow gravelly loam, 3 to 8 percent slopes; and Laconner very gravelly loamy sand, 0 to 8 percent slopes. The East Tank Farm area is mostly pavement over the Bow gravelly loam. This soil is described as deep, somewhat poorly drained soil with a moderately low to moderately high hydraulic conductivity found on river terraces and hillslopes. This soil is derived from volcanic ash, glacial drift, and glaciomarine deposits. The West Tank Farm is largely unpaved and is divided more-or-less equally among the three soil types. The aforementioned Bow gravelly loam covers most of the southeast portion and a small part of

the southwest of the area, the Laconner very gravelly loamy sand covers the west of the area and underlays the small holding pond and stormwater ditch, and the Bellingham silt loam covers the northeast of the area. The Bellingham silt loam is a shallow, poorly drained soil derived from glaciomarine and alluvial deposits. It has a moderately low to moderately high hydraulic conductivity. The Laconner very gravelly loamy sand is a moderately deep, moderately well drained soil with a low to moderately low hydraulic conductivity derived from glacial drift and volcanic ash. Unlike the other soils, it has a large percentage of gravel and coarse sand (30 to 65 percent) and only 5 to 30 percent fines (fine sand, silt, and clay).

Stormwater system

Stormwater from the pad area is collected in a series of catch basins. This stormwater is routed through an oil/water separator, then gravity flows via a dedicated 12-inch PVC pipeline to a holding pond south of Dodge Valley Road (see Figure 1). Stormwater from the unpaved West Tank Yard flows to a collection ditch at the southwest of the facility. From here it is piped through the oil/water separator and on to the holding pond. A flood gate installed in the storage pond prevents the wastewater from entering the adjacent agricultural ditch. Combined stormwater and wastewater is pumped from the storage pond to the sprinklers in the spray field. Figures D-1 and D-2 diagram the various wastewater and stormwater flow paths.

Solid wastes

Under this permit, PVFP will be required to prepare and maintain a solid waste control plan. This plan will cover the proper disposal of off-specification/spoiled raw materials (cucumbers, peppers, and cabbage), product (pickles, pickled pepper, and sauerkraut), disposal of solids from the settling tank, and material removed from the stormwater oil-water separator.

B. Description of the groundwater

No groundwater monitoring has been performed in this area. Groundwater flow is likely to the west-southwest towards the irrigation ditch and the Skagit River.

Ecology has determined that it should issue a State Waste Discharge Permit and not an NPDES permit for this site because there is no evidence of groundwater beneath the application area being in hydraulic continuity with surface waters of the State.

C. Wastewater characterization

PVFP reported the concentration of pollutants in the discharge in the permit application. Discharge monitoring reports from CAS were also used as the waste streams are identical. The tabulated data represents the quality of the wastewater discharged from the CAS site between August 2012 and August 2013. The wastewater prior to land application is characterized as follows:

Table 2. Wastewater characterization

Parameter	Units	# of Analyses	Average Value	Maximum Value
Ammonia – Nitrogen [a]	mg/L	44	19.42	41
Biochemical Oxygen Demand (BOD_5) [a]	mg/L	48	695.604	2,244
Chloride [a]	mg/L	52	2,645.02	10,805
Copper, (Total) [b]	mg/L	14	0.067	0.241
Nitrate + Nitrite – Nitrogen [b]	mg/L	20	0.92	9.2
Total Nitrogen [a]	mg/L	47	41.64	177
Potassium [a]	mg/L	48	5.59	29.9
Sodium [b]	mg/L	11	3,417	3,923
Total Dissolved Solids (TDS) [a]	mg/L	51	4,811.67	13,460
Total Suspended Solids (TSS) [a]	mg/L	50	88.8	410
Total Kjeldahl Nitrogen (TKN) [b]	mg/L	14	33.14	47.2
Total Phosphorous [b]	mg/L	18	5.995	19.6
Zinc, (Total) [b]	mg/L	14	0.092	0.241

a	Derived from Cascade Ag Services discharge monitoring report data from 2008 to 2013.
b	Derived from data collected during facility liquidation from 2012 to 2014.

Parameter	Units	# of Analyses	Minimum Value	Maximum Value
pH [a]	standard units	48	4.3	7.2

D. State environmental policy act (SEPA) compliance

State law exempts the issuance, reissuance, or modification of any wastewater discharge permit from the SEPA process as long as the permit contains conditions that are no less stringent than federal and state rules and regulations (RCW 43.21C.0383). The exemption applies only to existing discharges, not to new discharges.

Although a new company, this permit is for conducting the same industrial processes and using the same land application area as the previous company. Therefore, for purposes of this permit, this is considered an existing discharge. A SEPA Mitigated Determination of Non-Significance (MDNS) was made for the previous operation in March 2003. The mitigation measures of that MDNS will also be applied to the current operation.

III. Proposed Permit Limits

State regulations require that Ecology base limits in a State Waste Discharge Permit on the:

- Technology and treatment methods available to treat specific pollutants (technology-based). Dischargers must treat wastewater using all known, available, reasonable methods of prevention, control, and treatment (AKART). Ecology has developed guidance describing technology-based (AKART) criteria for industrial/commercial systems that discharge to ground (Ecology, 1993; 2004).
- Operations and best management practices necessary to meet applicable water quality standards to preserve or protect existing and future beneficial uses of the groundwater.

- Groundwater quality standards (Ecology, 1996).
- Applicable requirements of other local, state, and federal laws.

Ecology applies the most stringent of technology- and water quality-based limits to each parameter of concern and further describes the proposed limits below.

The limits in this permit reflect information received in the application and from supporting reports (engineering, hydrogeology, monitoring, and irrigation/crop management). Ecology evaluated the permit application and determined the limits needed to comply with the rules adopted by the state of Washington. Ecology does not develop effluent limits for all reported pollutants. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, and are not listed in regulation.

Ecology does not usually develop permit limits for pollutants not reported in the permit application but may be present in the discharge. The permit does not authorize the discharge of the non-reported pollutants. During the five-year permit term, the facility's effluent discharge conditions may change from those conditions reported in the permit application. The facility must notify Ecology if significant changes occur in any constituent. Until Ecology modifies the permit to reflect additional discharges of pollutants, a permitted facility could be violating its permit.

A. Technology-based effluent limits

Waste discharge permits issued by Ecology specify conditions requiring the facility to use AKART before discharging to waters of the state (RCW 90.48).

Ecology received the engineering report submitted by CAS titled "*Abridged Engineering Report for a Wastewater Discharge Permit from State of Washington, Department of Ecology for Cascade Ag Services*," on April 8, 2003, and prepared by the Natural Resources Conservation Service.

Ecology evaluated the report using the:

- *Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems*, Ecology, May 1993.

Ecology determined that the CAS facility met the minimum requirements demonstrating compliance with the AKART standard. PVFP will operate the treatment and disposal system as described in the approved engineering report for CAS and any subsequent Ecology approved reports, so AKART has been met.

Ecology also evaluated the report for water quality-based requirements which is described in the next section of the fact sheet.

Wastewater treatment requirements

Technology-based limits for BOD_5, TSS, and pH for PVFP effluent are detailed in 40 CFR 407.62. These technology-based limits are listed in Table 3 and are set as enforcement limits in the permit. Additional constituents may receive permit limits based on results of monthly sampling. At that time a review of the wastewater characteristics will be conducted and a permit modification will be issued with the resulting permit limits and parameters.

During the first year of operations, PVFP must meet the following land treatment requirements to satisfy the requirement for AKART:

- Application of wastewater via spray irrigation must not exceed agronomic rates (as defined in Ecology's groundwater implementation guidance) for total nitrogen and water. Wastewater application rates for other wastewater constituents must protect the background groundwater quality.
- Apply total nitrogen and water to the spray field as determined by an Ecology-approved and current irrigation and crop management plan.
- Operate the system to protect the existing and future beneficial uses of the groundwater and not cause a violation of the groundwater standards.

Table 3. Technology-based effluent limits

Effluent Limits [a]				
Parameter	**Units**	**Average Monthly**	**Maximum Daily**	**Annual Average**
BOD_5 [b]	mg/L	69	109	51
Total Suspended Solids [c]	mg/L	143	197	96
BOD_5 [d] (Sauerkraut)	mg/L	22	37	24
Total Suspended Solids [e]	mg/L	47	67	43
		Daily Minimum	**Daily Maximum**	
pH	Standard Units (SU)	6.0	9.0	

a	Effluent limits are based on a production rate of 10,000 pounds of raw product per day and an average flow of 16,000 gallons per day (gpd).
b	Effluent limit from 40 CFR 407.62(a) pickle process pack with a monthly average of 0.92 lb./1,000 pounds processed, a daily maximum of 1.45 lb./1,000 pounds processed, and an annual average of 0.68 lb./1,000 pounds processed.
c	Effluent limit from 40 CFR 407.62(b) pickle process pack with a monthly average of 1.91 lb./1,000 pounds processed, a daily maximum of 2.63 lb./1,000 pounds processed, and an annual average of 1.28 lb./1,000 pounds processed.
d	Effluent limit from 40 CFR 407.72(a) sauerkraut cutting with a monthly average of 0.05 lb./1,000 pounds processed, a daily maximum of 0.08 lb./1,000 pounds processed, and an annual average of 0.04 lb./1,000 pounds processed.
e	Effluent limit from 40 CFR 407.72(b) sauerkraut cutting with a monthly average of 0.11 lb./1,000 pounds processed, a daily maximum of 0.14 lb./1,000 pounds processed, and an annual average of 0.08 lb./1,000 pounds processed.

B. Groundwater quality-based effluent limits

In order to protect existing water quality and preserve the designated beneficial uses of Washington's groundwater including the protection of human health, WAC 173-200-100 requires Ecology to condition discharge permits in such a manner as to authorize only activities that will not cause violations of the groundwater quality standards. The goal of the groundwater quality standards is to maintain the highest quality of the State's groundwater and to protect existing and future beneficial uses of the groundwater through the reduction or elimination of the discharge of contaminants to groundwater [WAC 173-200-010(4)]. Ecology achieves this goal by:

- Applying all known available and reasonable methods of prevention, control, and treatment (AKART) to any discharge.
- Applying the antidegradation policy of the groundwater standards.
- Establishing numeric and narrative criteria for the protection of human health and the environment in the groundwater quality standards.

Ecology approved the engineering report as noted above in the technology based limits section. In addition, Ecology evaluated the report to ensure compliance with groundwater standards using the:

Guidance on Land Treatment of Nutrients in Wastewater, with Emphasis on Nitrogen, Ecology, November 2004.

Antidegradation Policy

The state of Washington's groundwater quality standards (GWQS) require preservation of existing and future beneficial uses of groundwater through the antidegradation policy, which includes the two concepts of antidegradation and non-degradation. Antidegradation is not the same as non-degradation (see below). Put simply antidegradation means if the existing groundwater is of better quality than the GWQS (constituent concentrations are less than the GWQS) don't add pollutants that raise constituent concentrations. Non-degradation means if the existing groundwater is bad (constituent concentrations are greater than the GWQS) one can't add pollutants that would make the existing groundwater quality worse (can't add pollutants that raise constituent concentrations beyond current levels).

Antidegradation

Antidegradation applies to the calculation of permit limits in groundwater when background (see below) contaminant concentrations are less than criteria in the GWQS. Ecology has discretion to allow the concentrations of contaminants at the point of compliance to exceed background concentrations but not exceed criteria in the GWQS. Ecology grants discretion through an approved AKART engineering analysis of treatment alternatives. If the preferred treatment alternative predicts that discharges to groundwater will result in contaminant concentrations that fall between background concentrations and the criteria, then the preferred treatment alternative should protect beneficial uses and meet the antidegradation policy. In this case, the predicted concentrations become the permit limits. If the preferred alternative will meet background contaminant concentrations, background concentrations become the permit limits. Permit limits must protect groundwater quality by preventing degradation beyond the GWQS criteria. If discharges will result in exceedance of the criteria, facilities must apply additional treatment before Ecology can permit the discharge.

Non-degradation

Non-degradation applies to permit limits in groundwater when background contaminant concentrations exceed criteria in the GWQS. Non-degradation means that discharges to groundwater must not further degrade existing water quality. In this case, Ecology considers

the background concentrations as the water quality criteria and imposes the criteria as permit limits. To meet the antidegradation policy, the facility must prepare an AKART engineering analysis that demonstrates that discharges to groundwater will not result in increasing background concentrations. Ecology must review and approve the AKART engineering analysis.

You can obtain more information on antidegradation and non-degradation by referring to the *Implementation Guidance for the Ground Water Quality Standards* (*Implementation Guidance*), Ecology Publication #96-02.

Background water quality

Background water quality is determined by a statistical calculation of contaminant concentrations without the impacts of the proposed activity. The calculation requires an adequate amount of groundwater quality data and determining the mean and standard deviation of the data, as described in the *Implementation Guidance*. Following the procedure in the *Implementation Guidance,* Ecology then defines background water quality for most contaminants as the 95 percent upper tolerance limit. This means that Ecology is 95 percent confident that 95 percent of future measurements will be less than the calculated upper tolerance limit. There are a few exceptions to the use of the upper tolerance limit. For pH, Ecology will calculate both an upper and a lower tolerance limit resulting in an upper and lower bound to the background water quality. If dissolved oxygen is of interest, Ecology will calculate a lower tolerance limit without an upper tolerance limit.

Ecology has reviewed existing records for the facility's land treatment site and is unable to determine background groundwater quality. The proposed permit does not presently include establishment of up gradient (background) groundwater quality. There is the possibility that groundwater beneath the application field may have been impacted by previous use by an identical facility. Therefore, until Ecology establishes background water quality, or makes a final determination that groundwater monitoring is not necessary PVFP must operate within the approved design parameters and comply with all conditions in the permit.

It is known that pollutant concentrations in the proposed discharge exceed groundwater quality criteria. Operations during the first year must meet the minimum requirements Ecology has determined to be AKART listed in the permit. The proposed permit may establish a limit based on groundwater criteria, which will apply at the end of treatment, if data collected during the first year of operations indicate such limits are warranted.

The table below includes preliminary groundwater enforcement limits for the discharge if determined necessary after completion of the hydrogeologic survey. Two consecutive exceedances of an enforcement limit for the same parameter at the same well constitutes a violation. For constituents that appear twice (ones separated by a dashed line) are the potential limits calculated from existing data and the groundwater quality standard. For those parameters where the calculated limit is far above the groundwater standard the limit will be set at the standard.

Table 4. Groundwater/Wastewater quality-based effluent limits

Parameter	Units	Wastewater Water Quality [a]	Groundwater Enforcement Limits [b]	
			Daily Max	Average Monthly
Ammonia [c]	mg/L	19.42	34.74	25.08
BOD [c]	mg/L	695.60	1,136.23	725.76
Flow [c]	gpd	22,441.5	22,441.5	22,441.5
Nitrate (as nitrogen) [d]	mg/L	0.92	42.34	5.37
Nitrate (as nitrogen) [e]	mg/L			10
Total Dissolved Solids [c]	mg/L	4,811.67	5,889	4,848.57
Total Dissolved Solids [e]	mg/L			500
Total Suspended Solids [c]	mg/L	88.8	155.09	93.98
TKN [e]		33.14	48.06	38.78
Total Phosphorous [e]		5.99	8.58	7.17
Chloride [c]	mg/L	2,645.02	3,910.77	2,694.66
Chloride [e]	mg/L			250
Potassium [c]		5.59	9.42	6.57
Sodium [c]	mg/L	3,417	3,938.50	3,689.34
Sodium [e]	mg/L			20

a	Background water quality is the average value taken from available data (e.g., Discharge Monitoring Reports).
b	Two consecutive exceedances of an enforcement limit for the same parameter at the same well constitutes a violation.
c	Limit values as calculated from monthly discharge monitoring reports for the previous operation.
d	Limit values as calculated from sampling data collected during previous site liquidation.
e	Limit values are the groundwater quality standard.

Parameter	Units	Background	Daily Minimum	Daily Maximum
pH [a]	SU	5.66	5.48 SU	5.92 SU
pH [b]	SU	5.66	6.5 SU	8.5 SU

a	Limit values as calculated from monthly discharge monitoring reports for the previous operation.
b	Limit values are the groundwater quality standard.

As can be seen in the table above some form of treatment will be required to meet the permit limits for chloride, TSS, and sodium. For this particular facility dilution through the addition of clean groundwater is likely the most effective treatment.

IV. Monitoring Requirements

Ecology requires monitoring, recording, and reporting (WAC 173-216-110) to verify that the treatment process functions correctly, the discharge meets groundwater criteria and that the discharge complies with the permit's effluent limits.

If a facility uses a contract laboratory to monitor wastewater, it must ensure that the laboratory uses the methods and meets or exceeds the method detection levels required by the permit. The permit describes when facilities may use alternative methods. It also describes what to do in certain situations when the laboratory encounters matrix effects. When a facility uses an alternative method as allowed by the permit, it must report the test method, detection level (DL), and quantitation level (QL) on the discharge monitoring report or in the required report.

A. Lab accreditation

Ecology requires that facilities must use a laboratory registered or accredited under the provisions of chapter 173-50 WAC, Accreditation of Environmental Laboratories, to prepare all monitoring data (with the exception of certain parameters).

B. Irrigated Wastewater monitoring

Ecology details the proposed monitoring schedule under Special Condition S2.A. 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.

C. Groundwater Monitoring

Ecology has determined that this discharge has a potential to pollute the groundwater. Since there was a similar facility at this location in the past, there is the possibility that groundwater may already be impacted. Therefore, Ecology will not initially require groundwater monitoring at the site.

There are indications of soil and potential groundwater contamination associated with operation of an identical facility at the same location. For this reason Ecology is requiring a detailed hydrogeologic study and collection and analysis of soil samples from both the facility location and the spray field.

Ecology will reconsider the need for monitoring of the groundwater after completion of the hydrogeologic study and sufficient soil sampling has been performed. Any groundwater monitoring proposed in the future is detailed in the monitoring schedule under Special Condition S2.B. 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.

D. Soil monitoring

Ecology details the proposed monitoring schedule under Special Condition S2.C. Soil samples will be collected from the land application area and the processing area. Sampling at the processing area is to monitor for BMP implementation and effectiveness.

Soil sampling will be performed once a year preferably in September/October, as this will be representative of conditions at the end of the growing season. One (1) composite sample shall be collected for the spray field, and two (2) composite samples shall be collected from the West Tank Farm area. The West Tank Farm area shall have one sample location from within the unpaved area containing the processing vats. The other sample location shall be on the east

side of the small wastewater holding pond, between the processing vats and the pond itself. Each location shall have one composite for each one-foot increment to a total depth of four feet (increments to be 0-12 in., 12-24 in., 24-36 in., and 36-48 in.). Each depth sample shall be a composite of soils collected at the center and at four random locations within the spray-field. Appendix D, Figure 8 shows an example of soil sample locations. The sampling process envisioned should be similar to the following:

1. Select four random locations in the spray field.
2. Using a hand auger or shovel collect half to one pound of soil from 0-12 inches at random location 1.
3. Repeat for each of the remaining three random locations and the center of the spray field.
4. Place all the soils collected from 0-12 in. into a large bowl.
5. Mix thoroughly.
6. Place a portion of the 0-12 in. composited soils into the required sample jar(s).
7. Repeat steps 2 through 6 for the remaining depths (12-24 in., 24-36 in., and 36-84 in.) at each location.
8. As example, using a standard 4-in. ID x 6-in. long hand auger (all depths are approximate)
    - Go to the center of the spray field
    - Auger from 0 to 3 inches
    - Discard material
    - Auger from 3 to 9 inches
    - Place material in a clean container [preferably a large clean mixing bowl]
    - Auger from 9 to 15 inches
    - Discard material
    - Auger from 15 to 21 inches
    - Place material in a clean container [preferably a large clean mixing bowl]
    - Auger from 21 to 27 inches
    - Discard material
    - Auger from 27 to 33 inches
    - Place material in a clean container [preferably a large clean mixing bowl]
    - Auger from 33 to 39 inches
    - Discard material
    - Auger from 39 to 45 inches
    - Place material in a second clean container
    - Repeat the above for each of the remaining four locations selected in the spray field
    - When all five locations in the spray field have been sampled, take all the soil collected from 3 to 9 inches (five containers worth) and place in a clean single large bowl
    - Mix the soils thoroughly

- Fill the requisite sample jars for the analysis listed in Permit Condition S2.C
- Repeat the above three steps with the soil collected from 15 to 21 inches, 27 to 33 inches, and 39 to 45 inches.

The facility and Ecology use the soil monitoring data to monitor and evaluate wastewater application rates and to determine if salts and nutrients are flushing through the root zone and potentially reaching the groundwater. The presence and concentration of certain wastewater related parameters in the soils (e.g., nitrogen and salts) can indicate over application of wastewater. The facility must follow the analytical methods provided in *Soil, Plant and Water Reference Methods for the Western Region* (2003).

As the proposed facility and land application sites are the same as that used by a previous pickle processing facility that had its assets liquidated, therefore any elevated constituents measured in the initial soil sampling event will be attributed to previous activity at the site. These levels will be considered baseline concentrations, and soil limits will be established based on those values. Soil samples will be collected from both the land application area and the area surrounding the stormwater collection ditch at the west end of the facility.

V. Other Permit Conditions

A. Reporting and record keeping

Ecology based Special Condition S3 on its authority to specify any appropriate reporting and record keeping requirements to prevent and control waste discharges (WAC 173-216-110).

B. Irrigation and crop management plans

Ecology requires the irrigation and crop management plan, Special Condition S10, to support the engineering report(s) and operations and maintenance manual. This plan must include a consideration of wastewater application at agronomic rates as required by Special Condition S1 and should describe and evaluate various irrigation controls.

Plans must comply with the requirements for an irrigation and crop management plan given in Ecology's guidance, *Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems.* (1993).

C. Operations and maintenance

Ecology requires dischargers to take all reasonable steps to properly operate and maintain their wastewater treatment system in accordance with state regulations (WAC 173-240-080 and WAC 173-216-110). The facility must prepare and submit an operation and maintenance (O&M) manual for the wastewater facility.

Implementation of the procedures in the operation and maintenance manual ensures the facility's compliance with the terms and limits in the permit and ensures the facility provides AKART to the waste stream.

D. Solid waste control plan

PVFP could cause pollution of the waters of the state through inappropriate disposal of solid waste or through the release of leachate from solid waste.

This proposed permit requires this facility to develop a solid waste control plan to prevent solid waste from causing pollution of waters of the state. The facility must submit the plan to Ecology for approval (RCW 90.48.080). You can obtain an Ecology guidance document on Developing a Solid Waste Control Plan.

F. Best management practices

Best management practices (BMPs) are the actions identified to manage, prevent contamination of groundwater by process wastewater or spills. BMPs include 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 also include treatment systems, operating procedures, and practices used to control plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage.

G. Best management practices – land treatment site

Best management practices (BMPs) are the actions identified to manage, prevent contamination of groundwater by land treatment of process wastewater. BMPs include 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.

H. Groundwater quality evaluation (hydrogeologic study)

In accordance with WAC 173-200-080, the proposed permit requires the facility to prepare and submit a hydrogeologic study of the land treatment site for Ecology review and approval. The facility must base the hydrogeologic study on soil and hydrogeologic characteristics and assess impacts on the groundwater. The study must also determine whether the groundwater beneath the land application area is in hydraulic continuity with surface waters. To prepare the study, the facility must use *Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems*, (Ecology 1993) and *Implementation Guidance for the Ground Water Quality Standards* (Ecology, 2005).

I. General conditions

Ecology bases the standardized general conditions on state law and regulations. They are included in all individual industrial state waste discharge permits issued by Ecology.

VI. Permit Issuance Procedures

A. Permit modifications

Ecology may modify this permit to impose numerical limits, if necessary, to comply with water quality standards for groundwater, based on new information from sources such as inspections, effluent monitoring, outfall studies, and hydrogeologic studies.

Ecology may also modify this permit to comply with new or amended state regulations.

B. Proposed permit issuance

This proposed permit meets all statutory requirements for Ecology to authorize a wastewater discharge. The permit includes limits and conditions to protect human health and aquatic life, and the beneficial uses of waters of the state of Washington. Ecology proposes to issue this permit for a term of 5 years.

VII. References for Text and Appendices

Gavlak, R., D. Horneck, R.O. Miller, and J. Kotuby-Amacher.

3rd edition 2005. *Soil, Plant and Water Reference Methods for the Western Region*

Washington State Department of Ecology.

1993. *Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems*, Ecology Publication Number 93-36. 20 pp.

Laws and Regulations
https://ecology.wa.gov/About-us/How-we-operate/Laws-rules-rulemaking

Permit and Wastewater Related Information
https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-quality-permits

Revised October 2005. *Implementation Guidance for the Ground Water Quality Standards*, Ecology Publication Number 96-02.

December 2011. *Permit Writer's Manual*, Publication Number 92-109

February 2007. *Focus Sheet on Solid Waste Control Plan, Developing a Solid Waste Control Plan for Industrial Wastewater Discharge Permittees*, Publication Number 07-10-024.

November 2004. *Guidance on Land Treatment of Nutrients in Wastewater, with Emphasis on Nitrogen*, Ecology Publication #04-10-081;

Appendix A--Public Involvement Information

Ecology proposes to issue a permit to Pristine Valley Farms Pickle, LLC. The permit includes wastewater discharge limits and other conditions. This fact sheet describes the facility and Ecology's reasons for requiring permit conditions.

Ecology placed a Public Notice of Application on November 24, 2014 and December 4, 2014 in the Skagit Valley Herald to inform the public about the submitted application and to invite comment on the issuance of this permit.

Ecology placed a Public Notice of Draft on September 14, 2021 in the Skagit Valley Herald to inform the public and to invite comment on the proposed draft State Waste Discharge Permit and Fact Sheet.

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 State Waste Discharge 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.

You may obtain further information from Ecology by telephone, 425-649-7000, or by writing to the address listed below.

Water Quality Permit Coordinator
Department of Ecology
Northwest Regional Office
PO Box 330316
Shoreline, WA 98133-9716

The primary author of this permit and fact sheet is Christopher Martin.

Appendix B--Your Right to Appeal

You have a right to appeal this permit to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of the final permit. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2) (see glossary).

To appeal you must do the following within 30 days of the date of receipt of this permit:

- File your appeal and a copy of this permit with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this permit on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW STE 301 Tumwater, WA 98501	**Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

Appendix C--Glossary

AKART -- The acronym for "all known, available, and reasonable methods of prevention, control and treatment." AKART is a technology-based approach to limiting pollutants from wastewater discharges, which requires an engineering judgment and an economic judgment. AKART must be applied to all wastes and contaminants prior to entry into waters of the state in accordance with RCW 90.48.010 and 520, WAC 173-200-030(2)(c)(ii), and WAC 173-216-110(1)(a).

Alternate point of compliance -- An alternative location in the groundwater from the point of compliance where compliance with the groundwater standards is measured. It may be established in the groundwater at locations some distance from the discharge source, up to, but not exceeding the property boundary and is determined on a site specific basis following an AKART analysis. An "early warning value" must be used when an alternate point is established. An alternate point of compliance must be determined and approved in accordance with WAC 173-200-060(2).

Ambient water quality -- The existing environmental condition of the groundwater.

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.

Annual average design flow (AADF) -- The average of the daily flow volumes anticipated to occur over a calendar year.

Average monthly discharge limit -- The average of the measured values obtained over a calendar months' time.

Background water quality -- The concentrations of chemical, physical, biological or radiological constituents or other characteristics in or of groundwater at a particular point in time up gradient of an activity that has not been affected by that activity [WAC 173-200-020(3)]. Background water quality for any parameter is statistically defined as the 95% upper tolerance interval with a 95% confidence based on at least eight hydraulically up gradient water quality samples. The eight samples are collected over a period of at least one year, with no more than one sample collected during any month in a single calendar year.

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 five-day 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 receiving waters 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_5 is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

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

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

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 for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations. In addition it includes 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. Ecology may conduct additional sampling.

Continuous monitoring -- Uninterrupted, unless otherwise noted in the permit.

Date of receipt -- This is defined in RCW 43.21B.001(2) as five business days after the date of mailing; or the date of actual receipt, when the actual receipt date can be proven by a preponderance of the evidence. The recipient's sworn affidavit or declaration indicating the date of receipt, which is unchallenged by the agency, constitutes sufficient evidence of actual receipt. The date of actual receipt, however, may not exceed forty-five days from the date of mailing.

Detection limit -- The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the pollutant concentration is above zero and is determined from analysis of a sample in a given matrix containing the pollutant.

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.

Enforcement limit -- The concentration assigned to a contaminant in the groundwater at the point of compliance for the purpose of regulation, [WAC 173-200-020(11)]. This limit assures that a groundwater criterion will not be exceeded and that background water quality will be protected.

Engineering report -- A document that thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report must 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.

Groundwater -- Water in a saturated zone or stratum beneath the surface of land or below a surface water body.

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 stormwater and, also, leachate from solid waste facilities.

Maximum daily discharge limit -- 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) -- See Detection Limit.

pH -- The pH of a liquid measures its acidity or alkalinity. It is the negative logarithm of the hydrogen ion concentration. A pH of 7 is defined as neutral and large variations above or below this value are considered harmful to most aquatic life.

Point of compliance -- The location in the groundwater where the enforcement limit must not be exceeded and a facility must comply with the Ground Water Quality Standards. Ecology determines this limit on a site-specific basis. Ecology locates the point of compliance in the groundwater as near and directly down gradient from the pollutant source as technically, hydrogeologically, and geographically feasible, unless it approves an alternative point of compliance.

Quantitation level (QL) -- Also known as Minimum Level of Quantitation (ML) – The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that the lab has used all method-specified sample weights, volumes, and cleanup procedures. The QL is calculated by multiplying the MDL by 3.18 and rounding the result to the number nearest to (1, 2, or 5) x 10^n, where n is an integer (64 FR 30417).

ALSO GIVEN AS:

The smallest detectable concentration of analyte greater than the Detection Limit (DL) where the accuracy (precision & bias) achieves the objectives of the intended purpose. (Report of the Federal Advisory Committee on Detection and Quantitation Approaches and Uses in Clean Water Act Programs Submitted to the US Environmental Protection Agency, December 2007).

Reasonable potential -- A reasonable potential to cause a water quality violation, or loss of sensitive and/or important habitat.

Responsible corporate officer -- A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Sample Maximum -- No sample may exceed this value.

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.

Solid waste -- All putrescible and non-putrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials.

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 stormwater drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based effluent limit -- A permit limit 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 maximum daily load (TMDL) -- A determination of the amount of pollutant that a water body can receive and still meet water quality standards.

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.

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

Water quality-based effluent limit -- A limit imposed on the concentration of an effluent parameter to prevent the concentration of that parameter from exceeding its water quality criterion after discharge into receiving waters.

Appendix D--Technical Calculations

Figure 6. East Tank Farm Area and Future Processing Building

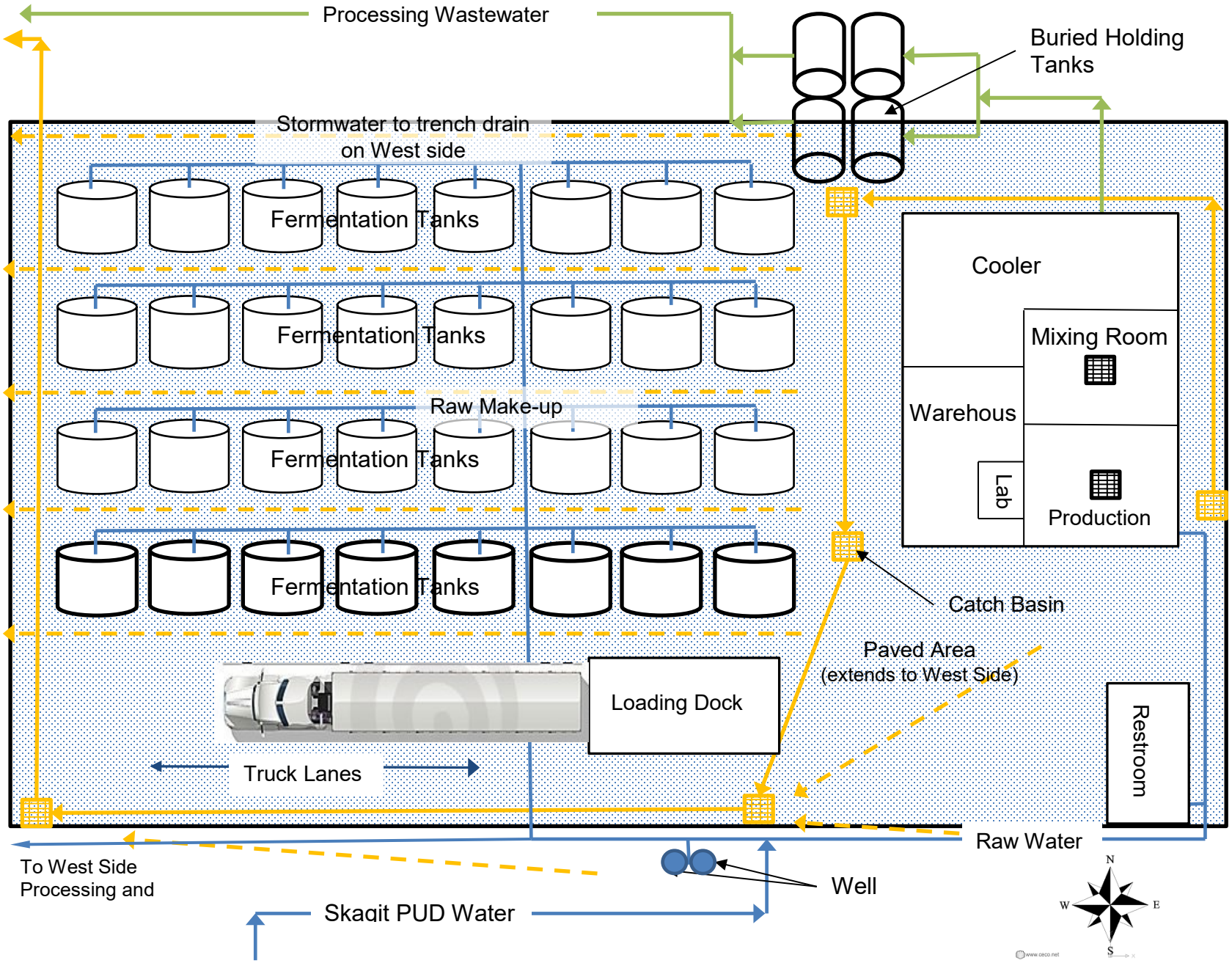


Figure 7. West Tank Farm Area and stormwater and wastewater holding ponds.

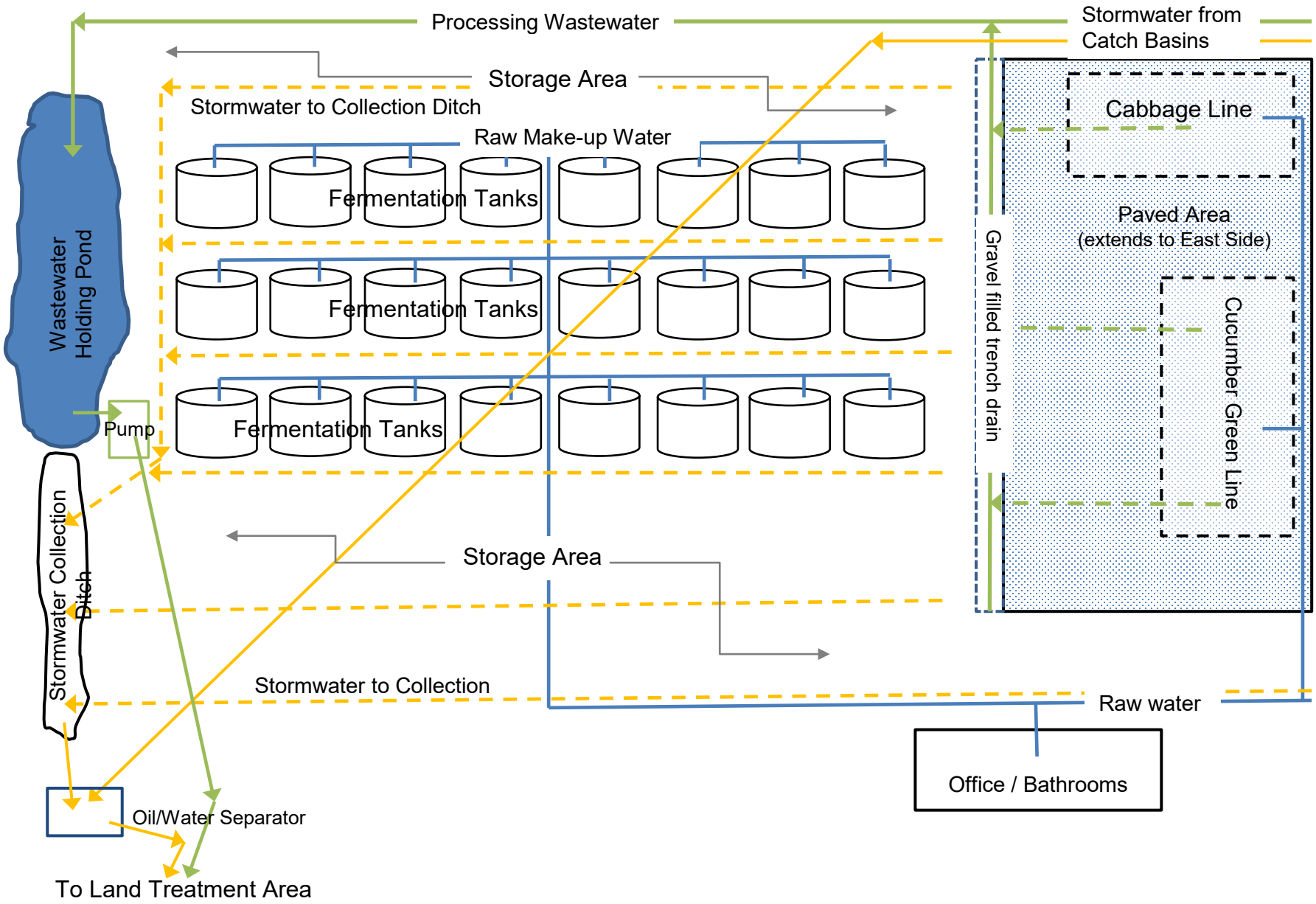


Figure 8. Example soil sample locations.

Calculation of Technology-Based limits for pickles

Effluent Limits [a]				
Parameter	**Units**	**Average Monthly**	**Maximum Daily**	**Annual Average**
BOD_5 [b]	mg/L	0.92	1.45	0.68
Total Suspended Solids [c]	mg/L	1.91	2.63	1.28
	Units	**Daily Minimum**		**Daily Maximum**
pH	Standard Units (SU)	6.0		9.0

[a] Effluent limits are in pounds per 1,000 pound of raw product.

[b] Effluent limit from 40 CFR 407.62(a).

[c] Effluent limit from 40 CFR 407.62(b).

Limits are calculated based on a production rate of 10,000 pounds per day (lbs./day) of raw product (total cucumbers, cabbage, and peppers), an average flow of 16,000 gallons per day (gpd).

BOD			
	Average Monthly	**Daily Max**	**Annual Average**
lbs. processed =	10,000	10,000	10,000
1,000 lbs. processed =	10	10	10
Effluent limit from 40 CFR 407.62(a) =	0.92	1.45	0.68
lbs. per 1,000 lbs. processed =	9.20	14.5	6.80
gallons wastewater =	16,000	16,000	16,000
Lbs./gal =	0.000575	0.00090625	0.000425
lbs./gal - mg/L conversion =	119,826.43	119,826.43	119,826.43
Permit Limit concentration =	68.90	108.593	50.93

TSS			
	Average Monthly	**Daily Max**	**Annual Average**
lbs. processed =	10,000	10,000	10,000
1,000 lbs. processed =	10	10	10
Effluent limit from 40 CFR 407.62(b) =	0.11	0.14	0.08
lbs. per 1,000 lbs. processed =	19.10	26.3	12.80
gallons wastewater =	16,000	16,000	16,000
Lbs./gal =	0.00119375	0.00164375	0.0008
lbs./gal - mg/L conversion =	119,826.43	119,826.43	119,826.43
Permit Limit concentration =	143.04	196.96	95.86

Calculation of Technology-Based limits for sauerkraut

Effluent Limits [a]				
Parameter	**Units**	**Average Monthly**	**Maximum Daily**	**Annual Average**
BOD_5 [b]	mg/L	0.30	0.50	0.21
Total Suspended Solids [c]	mg/L	0.63	0.89	0.40
	Units	**Daily Minimum**		**Daily Maximum**
pH	Standard Units (SU)	6.0		9.5

[a] Effluent limits are in pounds per 1,000 pound of raw product.
[b] Effluent limit from 40 CFR 407.72(a).
[c] Effluent limit from 40 CFR 407.72(b).

Limits are calculated based on a production rate of 10,000 pounds per day (lbs./day) of raw product (total cucumbers, cabbage, and peppers), an average flow of 16,000 gallons per day (gpd).

BOD			
	Average Monthly	**Daily Max**	**Annual Average**
lbs. processed =	10,000	10,000	10,000
1,000 lbs. processed =	10	10	10
Effluent limit from 40 CFR 407.72(a) =	0.30	0.50	0.21
lbs. per 1,000 lbs. processed =	3	5	2.1
gallons wastewater =	16,000	16,000	16,000
Lbs./gal =	0.0001875	0.0003125	0.00013125
lbs./gal - mg/L conversion =	119,826.43	119,826.43	119,826.43
Permit Limit concentration =	22.47	37.45	15.73

TSS			
	Average Monthly	**Daily Max**	**Annual Average**
lbs. processed =	10,000	10,000	10,000
1,000 lbs. processed =	10	10	10
Effluent limit from 40 CFR 407.72(b) =	0.63	0.89	0.40
lbs. per 1,000 lbs. processed =	6.30	8.9	4.00
gallons wastewater =	16,000	16,000	16,000
Lbs./gal =	0.00039375	0.00055625	0.00025
lbs./gal - mg/L conversion =	119,826.43	119,826.43	119,826.43
Permit Limit concentration =	47.18	66.65	29.96

Appendix E--Response to Comments

Ecology did not receive any comments during the public notice of draft comment period.