Permit Fact Sheet

Oregon Department of Environmental Quality
Western Region Office
4026 Fairview Industrial Drive SE
Salem OR 97302

Contact: Julie Ulibarri

Permittee:	Recology Valley View Inc. 170 Oak Street Ashland, OR, 97520
Existing Permit Information:	File Number: 104019 Permit Number: 102405 Expiration Date: 10/31/2019 EPA Reference Number: OR0035441
Source Contact:	Gary Blake, Phone Number: 541-552-5602 Title: General Manager
Facility Location:	3000 North Valley View Rd. Ashland, OR Jackson County
LLID/NHD:	LLID:1227507422509-1.41 NHD Reach Code: 17100308003507 (5.62%)
Receiving Stream/Basin:	Receiving Stream Name: Jeffery Creek WRD Basin Name: Rogue USGS Subbasin Name: Middle Rogue
Proposed Action:	Renew Permit Application Number: 952571 Date Received: April 16, 2019
Source Category:	NPDES Minor – Industrial
Sources Covered:	Landfill Leachate
Permit Type:	NPDES-IW-B15
Permit Writer:	Julie Ulibarri Water Quality Specialist/Western Region/Water Quality September 2020

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1.0 Introduction

The Department of Environmental Quality (DEQ) proposes to renew the National Pollutant Discharge Elimination System (NPDES) wastewater permit for Recology Valley View Inc. located at 3000 North Valley View Rd. This permit allows and regulates the discharge of landfill leachate to Jeffery Creek. The permit also authorizes permittee to land apply the landfill leachate as irrigation water.

The purpose of this permit evaluation report is to explain and provide justification for the permit.

The Federal Water Pollution Control Act of 1972 (also known as the Clean Water Act) and its subsequent amendments, as well as Oregon Revised Statutes (ORS 468B.050), require a NPDES permit for the discharge of wastewater to surface waters. This proposed permit action by DEQ complies with both federal and state requirements.

2.0 Permit History

2.1 Issuance, Renewal and Modifications

The current NPDES Permit expired on October 31, 2019. DEQ received renewal application number 952571 on April 16, 2019. Because the permittee submitted a renewal application to DEQ in a timely manner, the current permit will not expire until DEQ takes final action on the renewal application as per OAR 340-045-0040.

2.2 Compliance History

The facility was last inspected on September 26, 2017. During the inspection the following violations were noted:

- Exceeding the iron and phosphorous limits at outfall 001 as shown in Table 1;
- Failure to monitor *E.coli* bacteria at the permit specified location in January 2016;
- Failure to conduct re-sampling and re-analysis after QA/QC failure as required by Schedule B, Condition 1.b of the permit;
- Failure to collect a representative stormwater sample.

The following recommendations were made:

- Extend the diversion ditch around the sedimentation pond and directly into Jeffery Creek;
- Plug the lower slots on the sedimentation pond riser;
- Revise the SWPCP;

DEQ rejected Recology's request for a stormwater monitoring waiver, because the stormwater monitoring conducted was not representative of the discharge.

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Table 1: Enforcement Actions

Date of Enforcement	Type of Enforcement Action	Description
07/01/2016	Warning Letter	Violating Schedule A iron limits
04/19/2017	Pre-Enforcement Notice	Violating Schedule A iron and phosphorous limits
07/14/2017	Notice of Civil Penalty Assessment and Order	Issuance of civil penalty for violating Schedule A iron limits
12/08/2017	Mutual Agreement and Order	Settled 2016 and 2017 iron limit violations
04/28/2020	Pre-Enforcement Notice	Violating Schedule A iron, T-phosphorus and TSS limits

In September 2017, the permittee replaced two 6,000 gallon storage steel tanks with four 2,500 gallon closed plastic tanks. This was completed in response to the iron limit exceedances mentioned above.

In June 2018, the northwest diversion ditch (collecting off site run-on) was diverted to bypass the sedimentation pond and discharge directly into Jeffery Creek. The stand pipe in the sedimentation pond was raised to increase retention time in the sedimentation pond and decrease the frequency of discharges to Jeffery Creek.

The following were completed as required in the MAO:

- A revised stormwater pollution control plan was submitted to DEQ in January 2018. The plan was updated to reflect new sample locations.
- A plan for facility modification that would enable the permittee to meet the iron and phosphorus effluent limits at outfall 001 was submitted to DEQ in January 2018.
- Permittee implemented facility plan modifications in March 2018.

The permittee implemented the following corrective actions in regards to the violations in the April 28, 2020 Pre-Enforcement Notice:

- Modifications were made to the diversion ditch, to ensure that all runoff is properly routed to Jeffery Creek.
- Replaced the sedimentation standpipe, as a leak at the base caused the April 2019 discharge to Jeffery Creek.

3.0 Proposed Revisions to Permit

The proposed permit contains the following substantive changes from the 2014 permit:

- Schedule A
  Removed the following:
  - Regulatory mixing zone language, as there is no mixing zone.

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    - Stormwater outfalls, as the permittee has applied for the DEQ 1200Z industrial stormwater general permit.
    - Groundwater protection language
    - Re-opener language
    - Manganese limit

- Schedule B
  Addition of the following:
    - Temperature monitoring at Outfalls 001 and 003, as this is needed for the ammonia permit limit calculation.
    - Hardness monitoring at Outfalls 001 and 003, as this is needed for the zinc permit limit calculation.
    - Dissolved Zinc monitoring at Outfalls 001 and 003, as this is needed to calculate a zinc limit.
    - Ortho-Phosphorus, calcium, magnesium, sodium, sulfate, sodium adsorption ratio, conductivity monitoring at Outfall 002
    - Soil monitoring requirements

  Removed the following:
    - Manganese monitoring

- Schedule D
  Removed the following:
    - Management and maintenance of groundwater monitoring wells, as this is covered in solid waste permit #35.

  Addition of the following
    - Wastewater Irrigation Plan
    - Irrigation Site Report

4.0 Facility Description

4.1 Wastewater Facilities Description

The site was initially a municipal solid waste landfill that began operations sometime in the 1930's. The landfill closed to new waste in December 1996. At the same time, a transfer station was constructed to collect refuse for transfer to the Dry Creek Landfill. The transfer station continues operation to this time. The shop for Recology, which provides trash pickup for the city of Ashland, is also located at the site.

During the time that waste was accepted at the landfill, a natural spring at the toe of the landfill was covered. A spring box was installed to collect this water, and also any leachate generated by water flowing through the accumulated solid waste. The leachate flow rate depends on the recent precipitation in the area, and can vary widely. The leachate is collected in four 2,500 gallon closed plastic tanks, and then pumped to an irrigation field. During wet weather, run-off from the irrigation field can flow into a stormwater detention pond and then flow into Jeffery Creek.

When the leachate collection system was first constructed, the flow rate could range up to 25 gallons per minute (gpm). It was felt that part of this flow was a natural spring, and only a portion was landfill leachate. In an attempt to cut down on the flow through the spring box, a diversion ditch/French drain was dug around the upper part of the landfill. This has dramatically decreased flow through the spring box, and typical flows are often less than 1 gpm.

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Figure 1: Facility Location

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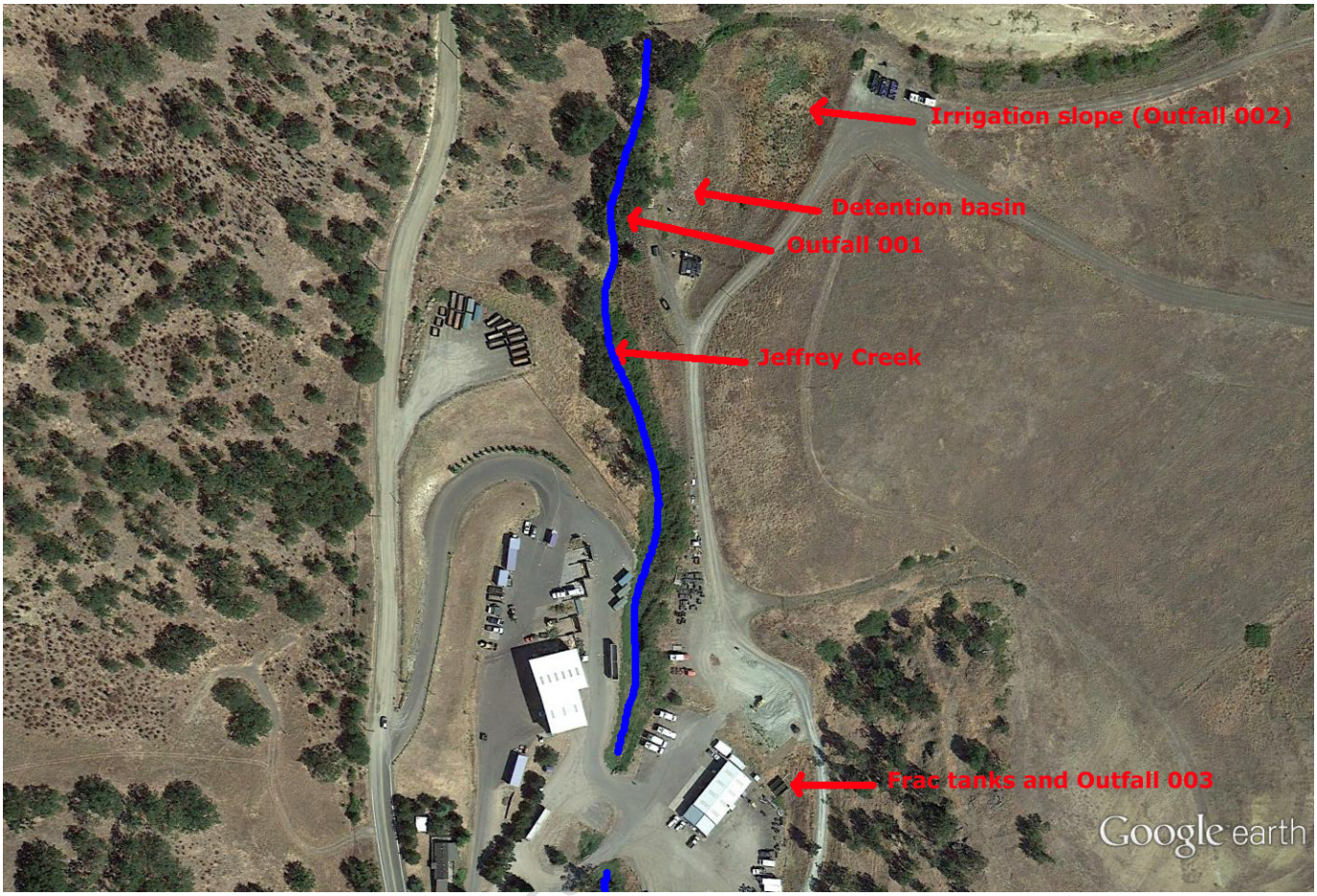
Figure 2: Site Overview



4.2 Outfalls

Outfall 001 discharges to Jeffery Creek. North of the former landfill cell is a stormwater detention basin. This basin receives stormwater flow, as well as any leachate from Outfall 002 that does not soak into the irrigation field (see below). The basin is equipped with a riser pipe that provides the detention capacity, as well as allowing the basin to act as a settling basin. If the liquid level in the basin reaches the top of the riser pipe, the pipe discharges to Jeffery Creek through Outfall 001. The creek is immediately downslope of the basin.

Outfall 002 is the spray irrigation field, located north of the former landfill cell and upslope from the stormwater detention basin. Leachate from the storage tanks is pumped as needed to the irrigation field, using a single pump that is under manual control. Leachate is distributed by four sprinkler heads.

Most of the time, all irrigated leachate soaks into the ground. During very wet winters, the leachate may flow overland to accumulate in the stormwater detention basin. If the basin fills sufficiently, it then discharges through Outfall 001 as described above.

Outfall 003 is the emergency overflow from the storage tanks. Any overflow from the tanks leads to an adjacent drainage ditch, which in turn discharges to Jeffery Creek downstream of the transfer station and shop.

This outfall has never been used, as the facility has always been able to manage the liquid level in the tanks by pumping to the irrigation field.

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4.3 Solids

Solids have never been removed from the stormwater detention pond.

4.4 Stormwater

The current 2014 permit has the 1200-Z stormwater requirements included in Schedules Z.A through Z.D. DEQ reissued the 1200-Z industrial stormwater general permit in October 2018. Since the reissuance of the 1200-Z, DEQ has moved to separating individual NPDES permits and 1200-Z industrial stormwater general permits. The 1200-Z industrial stormwater general permit requirements have been removed from the proposed permit. The permittee now has coverage under the 1200-Z industrial stormwater general permit.

4.5 Groundwater

As required in DEQ solid waste permit 35, the permittee submits an annual environmental monitoring report to the DEQ solid waste hydrogeologist. The 2019 report was reviewed by the DEQ hydrogeologist and a report of the review was compiled on April 20, 2020. The DEQ review stated that the groundwater data continues to support the recommended remedial strategy to improve the water quality in and around the landfill.

The 2019 environmental monitoring report submitted by the permittee included monitoring data for Outfall 002. Outfall 002 was sampled for several parameters as part of a nitrate exceedance evaluation. Outfall 002 had elevated concentrations of total alkalinity, chloride, dissolved bicarbonate alkalinity, potassium, sodium, and sulfate relative to compliance wells MW-1R and MW-6. Detection well MW-4R had elevated concentrations of total alkalinity, chloride, dissolved bicarbonate alkalinity, potassium, sodium, and sulfate, which suggests there might be a correlation between Outfall 002 and groundwater detection well MW-4R. To insure irrigation from Outfall 002 is not impacting groundwater soil sampling and additional monitoring at Outfall 002 is being added to the proposed permit.

4.6 Spray Irrigation Field

Total dissolved solids in the wastewater at outfall 002 is consistently greater than 1,500 mg/L. Additional monitoring at Outfall 002 will help determine what is driving the high TDS. Soil sampling will help ensure that salts are not being over applied and accumulating in the soil profile. Over applying salts to soil effects the way water moves through the soil and causes the breakdown of soil structure.

5.0 Receiving Water

5.1 Flows

The parameter most commonly used for critical low flow conditions is the 7Q10, which is the lowest stream flow that occurs over 7 consecutive days and has a 10-year recurrence interval period, or a 1 in 10 chance of occurring in any one year. The lowest stream flows typically occur during the August to October timeframe, depending on climatic conditions that year.

Typically DEQ uses this low flow condition to evaluate the available stream dilution and set permit limits appropriately. The facility is located near the headwaters of Jeffery Creek and as such flows in the stream are very intermittent. No gauging station is available to measure flows in this area. Because of the low stream flows in this area, no dilution is available, and all permit limits must be met at the point of discharge.

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5.2 Designated Uses

Under the Clean Water Act, DEQ is required to identify the beneficial uses of every waterbody in Oregon. The intent of this requirement is to insure that the water quality standards DEQ develops are consistent with how the waterbody is used. Permits issued by DEQ must in turn reflect the water quality standards that apply to the basin in which permits are issued.

The Valley View facility discharges to Jeffery Creek at approximately river mile 1.41. Jeffery Creek is a tributary to Bear Creek, entering at approximately river mile 18.75. Bear Creek is a tributary of the Rogue River, entering at approximately river mile 126.7, in the Middle Rogue sub-basin. OAR 340-041-0271 (Table 271A) lists the beneficial uses for which water quality will be protected. Included in Table 271A for *All other tributaries to Rogue River and Bear Creek* are:

- public and private domestic water supply,
- industrial water supply, irrigation,
- livestock watering,
- fish and aquatic life (including salmonid rearing and migration),
- wildlife and hunting,
- fishing,
- boating,
- water contact recreation,
- aesthetic quality,
- hydro-power.

DEQ utilises fish use designation maps and salmon and steelhead spawning use designation maps to identify applicable temperature criteria for each basin. The Rogue Basin maps are contained in OAR 340-041. According to DEQ's fish use maps for Jeffery Creek (OAR 340-041-0028, Figures 271A and 271B), the fish use designation at this location is Salmon and Trout rearing and migration year-round (Figure 271A). Bear Creek is listed for salmon and steelhead spawning from October 15th through May 15th, while Jeffery Creek is listed as "no spawning" (Figure 271B).

The water quality standards for all water-bodies (Oregon Administrative Rules - OAR 340-41) and specifically the Rogue Basin (OAR 340-041-0271) were developed to protect these beneficial uses.

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5.3 Receiving Stream Water Quality

Jeffery Creek is not specifically listed on the Department's 2012 list of water quality limited water bodies (also called the 303(d) list) for a variety of parameters. Bear Creek is listed for the following parameters:

Table 2: Water Quality Limited Parameters

Waterbody Name	River Mile	Parameter	Season
Bear Creek	0 to 34.3	Temperature	Summer
Bear Creek	0 to 26.3	Aquatic Weeds or Algae	Undefined
Bear Creek	0 to 27.4	Arsenic	Year Around
Bear Creek	0 to 27.4	Dissolved Oxygen	October 15 to May 15 (spawning)
Bear Creek	0 to 26.3	Dissolved Oxygen	Year Around
Bear Creek	0 to 26.3	E.coli	Year Around
Bear Creek	0 to 26.3	pH	Summer
Bear Creek	0 to 26.3	Phosphorous	Spring, Summer, Fall

The 2018/2020 303(d) list was submitted to EPA in April 2020 and was still a draft during the writing of this permit. One new listing for total iron has been added to the 2018/2020 listing for Bear Creek. Additional arsenic data from 2011 to 2016 was reviewed in 2018 as part of the 2018/2020 303(d) list. All of the sample results are below the aquatic life water quality criteria and DEQ has proposed delisting arsenic for Bear Creek.

A total maximum daily load (TMDL) was developed in 1992 for pH, aquatic weeds & algae and dissolved oxygen. A second TMDL was developed in 2007 that covered bacteria and temperature. At that time, the 1992 TMDL was re-evaluated and determined to still be sufficient to address the initial parameters.

A TMDL can be thought of as an estimate of the total amount of pollution a waterbody can assimilate without exceeding water quality standards.

Chapter 1 of the 2007 Bear Creek Middle Rogue Sub-basin TMDL addresses temperature and individual NPDES permittees are assigned the point source thermal waste load allocation (WLA) of "No significant cumulative increase above the applicable criteria (Significant is defined as 0.005ºC)." This section of the TMDL mentions Valley View Landfill as part of the small NPDES point sources:

> *Analysis of the NPDES monitoring reports for these sources indicated that if these small individual point sources were all discharging directly into Bear Creek in the same location (Medford) under average summer river flow conditions an increase of less than 0.005°C would be expected. Using this very conservative approach the thermal impact on Bear Creek was considered insignificant from a thermal impact perspective.*

Chapter 2 of the 2007 TMDL addresses bacteria in the watershed. The bacteria WLA assigned to point sources is the numeric criterion of 126 or 406 *E. coli* organisms / 100mL. This is the current *E. coli* limit in the Valley View Landfill permit. Appendix B, Bear Creek Bacteria Assessment, of this TMDL does not include Jeffery Creek in the study. This section of the TMDL mentions Valley View Landfill:

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Valley View Landfill Inc. operates in the watershed under a DEQ issued NPDES permit. The permit allows the discharge of treated leachate into Jeffery Creek, a Bear Creek tributary from December 1 through April 30. There is no allowed discharge May 1 – November 30. Monitoring has confirmed that the landfill is not exceeding its permit limits and is therefore not a significant source of fecal bacteria. The Waste Load Allocation that applies to the Valley View Landfill is 126 E. coli organisms per 100 ml expressed as a monthly average.

5.4 Mixing Zone Analysis

The permittee does not have a mixing zone.

6.0 Overview of Permit Development

6.1 Existing Permit Limits

The existing permit limits are as follows:

Parameter	Limitation		Limitation Source
	Daily Maximum	Monthly Average	
Iron	1.643 mg/l	1.125 mg/l	RPA
Manganese	0.087 mg/l	0.050 mg/l	RPA
Zinc	0.12 mg/l	0.082 mg/l	RPA
Biochemical Oxygen Demand (BOD_5)	140 mg/l	37 mg/l	ELG
E. coli Bacteria	406 organisms per 100 ml	126 organisms per 100 ml	TMDL/Bacteria standard
Total Suspended Solids (TSS)	88 mg/l	27 mg/l	ELG
Total Dissolved Solids (TDS)	-	500 mg/l	Basin standard
Ammonia (as N)	1.26 mg/l	1.26 mg/l	RPA
Phosphorus	-	0.08 mg/l	TMDL
a-Terpineol	0.033 mg/l	0.016 mg/l	ELG
Benzoic acid	0.12 mg/l	0.071 mg/l	ELG
p-cresol	0.025 mg/l	0.014 mg/l	ELG
Phenol	0.026 mg/l	0.015 mg/l	ELG
pH	6.5-8.5 S.U.	6.5-8.5 S.U.	Basin standard

6.2 Types of Permit Limits

Effluent limitations serve as the primary mechanism in NPDES permits for controlling discharges of pollutants to receiving waters. Effluent limitations can be based on either the technology available to control the pollutants or limits that are protective of the water quality standards for the receiving water. These two types of permit limits are referred to as technology-based effluent limitations (TBELs) and water quality-based effluent limits (WQBELs) respectively. When a TBEL is not restrictive enough to

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protect the receiving stream, a WQBEL must be placed in the permit. More explanation of each is provided below.

- TBELs:
  - The intent of TBELs is to require a minimum level of treatment of pollutants based on available treatment technologies, while allowing the discharger to use any available control technique to meet the limits.
- WQBELs:
  - The intent of WQBELs is to ensure the water quality standards of a receiving stream are met. The water quality standards are developed to protect the beneficial uses of the receiving stream such as swimming and fishing. In many cases TBELs are not restrictive enough to ensure the receiving stream meets water quality standards. In these cases, WQBELs need to be established to protect the receiving stream.

TBELs are likely to be the most stringent if the receiving stream is large relative to the discharge, and WQBELs are likely to be the most stringent when the receiving stream is small or does not meet water quality standards.

In some cases, both a TBEL and a WQBEL will be developed for a particular parameter. Permit writers must include the more stringent of the two in the permit.

Permit limits for bacteria are WQBELs when they are derived from the water quality standards found in OAR 340-041-0009 for freshwater, marine, and estuarine waters or 40 CFR § 131.41 for coastal recreation waters. Bacteria limits are designed to protect human health when swimming or eating shellfish. Note: When enforcing permit limits, the department categorizes bacteria exceedances in OAR 340-012 as technology-based effluent limitation violations because bacteria violations are typically due to the failure of disinfection equipment.

Each time a permit is renewed, the permit writer evaluates the existing limits to see if they need to be modified as a result of changes to technology based standards or water quality standards that may have occurred during the permit term. Antibacksliding provisions (described in CFR 122.44(l)) generally do not allow relaxation of effluent limits in renewed/reissued permits. The more stringent of the existing or new limits must be included in the renewal permit.

6.3 Overview of Whole Effluent Toxicity (WET) Analysis

Appendix E, Figure 5 of the reasonable potential analysis for toxic pollutants internal management directive was used to determine if there is a risk of aquatic toxicity in the receiving stream due to the permittee's discharge. The discharge from the permittee does not meet any of the conditions in Appendix E, Section 7.3 of the RPA IMD. Therefore, no WET monitoring requirements are included in the proposed permit.

6.4 Irrigation of Landfill Leachate

Annual irrigation is summarized in the following table.

Table 3: Annual Total Irrigation from 2017, 2018 and 2019

Year	Volume (gallons)
2017	295,820
2018	17,300
2019	60,500

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The proposed permit includes a Schedule D condition to develop and maintain an operation and maintenance manual for the irrigation site.

6.5 Antidegradation

As part of renewing a permit, DEQ must demonstrate that the discharge does not lower water quality from the existing condition. DEQ is required to make this demonstration as required under Oregon's Antidegradation Policy for Surface Waters found in OAR 340-041-0004.

DEQ has performed an antidegradation review for this discharge. The proposed permit contains the same discharge loadings as the existing permit. Permit renewals with the same discharge loadings as the previous permit are not considered to lower water quality from the existing condition. DEQ is not aware of any information that existing limits are not protective of the designated beneficial uses listed in Section 5.2. DEQ is also not aware of any existing uses present within the waterbody that are not currently protected by standards developed to protect the designated uses. Therefore, DEQ has determined that the proposed discharge complies with DEQ's antidegradation policy (see Antidegradation Review Worksheet in Attachment 3).

7.0 Permit Draft Discussion

7.1 Face Page

The face page provides information about the permittee, description of the wastewater, outfall locations, receiving stream information, permit approval authority, and a description of permitted activities. The permit allows discharge to Jeffery Creek within limits set by Schedule A and the following schedules. It prohibits all other discharges.

In accordance with state and federal law, NPDES permits will be effective for a fixed term not to exceed 5 years. Upon issuance, this permit will be effective for no more than 5 years.

7.2 Permit Limit Derivation

7.2.1 Technology-Based Effluent Limits (TBELs)

Technology-based effluent limits are developed by applying the national Effluent Limitation Guidelines (ELGs) established by EPA for specific industrial categories. These limits were established to require a minimum level of treatment for specific industrial or municipal sources using available treatment technology. Valley View is in the *40 CFR Part 445 – Landfills Point Source Category, Subpart B – RCRA Subtitle D Non-Hazardous Waste Landfill*. The limits are shown in the following table.

Table 4: Effluent Limitation Guidelines

Parameter	Monthly Average (mg/l)	Daily Maximum (mg/l)
BOD_5	37	140
TSS	27	88
Ammonia-N (mg/L)	4.9	10
Alpha Terpineol	0.016	0.033
Benzoic Acid	0.071	0.12
p-Cresol	0.014	0.025
Phenol	0.015	0.026
Zinc	0.11	0.20
pH	Shall be within the range of 6.0 – 9.0	

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These technology limits were applied to Valley View when it was an active landfill. There are no specific ELGs for closed landfills. However, DEQ is maintaining these effluent limits to ensure the facility continues to treat their wastewater effectively.

7.2.2 Water Quality-Based Effluent Limits

Once TBELs and applicable basin standards have been established for the treatment facility, WQBELs must be developed. DEQ has developed several tools for calculating WQBELs. The table below provides a summary of these tools.

Table 5: Summary of Tools to Calculate WQBELs

Parameter	Link to Analytical Tool/Description	Application
Ammonia	For ammonia: Reasonable Potential Analysis Calculation ; Revision 2.0-2020	Ammonia: • Use for facilities that discharge over 0.1 mgd, to insure no toxicity. • Use for facilities that have an ammonia limit when conditions have changed.
Other toxics listed in Tables 20, 33A, 33B and 40 of OAR 340-041	For toxics: Reasonable Potential Analysis toxics v5.5-2020	Other toxics: • Use for facilities that discharge over 1 mgd. • Use for facilities where pollutant is known to be present.

As can be seen from the above table, WQBELs are generally developed as a result of a Reasonable Potential Analysis (described in more detail in subsequent sections). An exception to this is when DEQ has developed a TMDL for the receiving stream. When there is a TMDL, the permit limit(s) must be developed based on the waste load allocation (WLA) developed for the facility as part of the TMDL.

7.2.2.1 General Discussion of Reasonable Potential Analysis

EPA has developed a methodology called Reasonable Potential Analysis (RPA) for determining if there is a reasonable potential for a discharge to cause or contribute to violations of water quality standards for a particular parameter. It takes into account effluent variability, available dilution (if applicable), receiving stream water quality and water quality standards for the protection of aquatic life and human health. If the RPA results indicate that there is a potential for the discharge to cause or contribute to exceedances of water quality standards, the methodology is then used to establish permit limits that will not cause or contribute to violations of water quality standards.

DEQ has adopted EPA's methodology for RPA, and has developed spreadsheets that incorporate this analysis.

The parameters for which a RPA must be performed will vary with the size and type of discharge. They are listed in the NPDES Permit Application Testing Requirements contained in Appendix D of 40 CFR Part 122, and are reproduced in Sections 2.2.4 and 2.2.5 of DEQ's Internal Management Directive (IMD) entitled "Reasonable Potential Analysis Process for Toxic Pollutants" (RPA IMD).

A list of the tables in the RPA IMD that identify the parameters for which a RPA must be performed for the permittee is as follows:

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Table 6: Toxic Monitoring Requirements for Industrial Facilities

Table	NPDES Permit Application Testing Requirements
3	Other Toxic Pollutants (Metals and Cyanide) and Total Phenols if Expected to be Present
4	Conventional and Nonconventional Pollutants Required to be Tested if Expected to be Present

Each of the parameters for which a RPA was performed is discussed in the following sections.

7.2.2.2 Reasonable Potential Analysis for Aquatic Weeds, Algae and Phosphorous

Aquatic weeds, algae and phosphorous are listed on the 2012 303(d) list for Bear Creek. The 1992 TMDL addresses aquatic weeds and algae by assigning Valley View a phosphorus waste load allocation of 0.08 mg/l as a monthly median. This limit was in the previous permit and is retained in the proposed permit. Therefore, a RPA analysis was not completed.

7.2.2.3 Reasonable Potential Analysis for Bacteria

Bear Creek is listed on the 2012 303(d) list for not meeting the *E. coli* water contact recreation criterion. The 2007 TMDL assigned a wasteload allocation as discussed in Section 5.3. A monthly geometric mean of 126 *E. coli* organisms per 100 mL and a daily maximum of 406 *E. coli* organisms per 100 mL are being retained in the proposed permit. Therefore, a RPA analysis was not completed.

7.2.2.4 Reasonable Potential Analysis for Dissolved Oxygen

Bear Creek is listed on the 2012 303(d) list for not meeting Dissolved Oxygen aquatic life criterion. The 1992 TMDL addresses dissolved oxygen by assigning a BOD wasteload allocation for some point sources that discharge to Bear Creek. The TMDL indicates that a wasteload allocation is not needed for the permittee. Therefore, a RPA analysis was not completed.

7.2.2.5 Reasonable Potential Analysis for pH

The pH of water is a measure of how acidic or basic a solution is. At a pH of 7.0, the solution is considered neutral. Most aquatic organisms can tolerate a fairly narrow range around 7.0.

Bear Creek is listed on the 2012 303(d) list for not meeting the pH aquatic life criterion. Oregon Administrative Rule 340-041-0275 (1) (b) sets the fresh water pH standard for the Rogue Basin as 6.5 to 8.5. This is more stringent than the ELG limit. The basin standard is used in the existing permit, and is retained in the proposed permit. Therefore, a RPA analysis was not completed.

7.2.2.6 Reasonable Potential Analysis for Temperature

Water temperatures affect the life cycles of aquatic species and are a critical factor in maintaining and restoring healthy salmonid populations. The purpose of the temperature criteria in OAR 340-041-0028 is to protect designated, temperature-sensitive beneficial uses (including salmonid life cycle stages) from adverse warming caused by human activities.

The 2007 TMDL considered Valley View an insignificant source of heat into the Bear Creek watershed, and a specific waste load allocation for heat was not assigned.

A review of temperature data during the 2014 permit renewal resulted in no reasonable potential to exceed the 18.0°C criteria. Therefore, temperature monitoring at Outfall 001 was not required.

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Temperature is not a pollutant of concern. Therefore, a reasonable potential analysis was not conducted.

7.2.2.7 Review of Existing WQBEL for Ammonia

Water quality criteria for ammonia vary with pH and temperature, and with the presence of salmonids. The permittee currently has ammonia limits. DEQ calculated limits using the DEQ reasonable potential spreadsheet using current data. Effluent ammonia and pH data was taken from 2016 and 2017 DMRs. Effluent temperature data from 1995 to 1998 was used because temperature monitoring has not been required in previous permits. Temperature monitoring is being required in the proposed permit so that more recent data is available for the ammonia limit calculation during the next permit renewal. Alkalinity data from 1993, 1995, 1996, 1997 and 1999 was used because alkalinity monitoring has not been required in previous permits. Alkalinity data does not impact the permit limit calculation because there is no mixing zone. However, data is needed for the worksheet to complete the calculation. Ambient ammonia, pH, temperature and alkalinity data was taken from Bear Creek at Valley View Road (North of Ashland), Valley View (Ashland) Landfill New SW-1 and Valley View (Ashland) Landfill New SW-2.

DEQ calculated ammonia limits based on updated information. The effluent limit calculation resulted in a monthly average of 1.8 and a daily maximum of 2.6. These limits are less stringent than the existing limits. Therefore, to satisfy antibacksliding, the existing limits (monthly average of 1.26 mg/L and a daily maximum of 1.26 mg/L) are being retained in the proposed permit.

Permit limit calculations are included in Attachment 2.

7.2.2.8 Review of Existing WQBEL for Toxic Pollutants

As discussed at the beginning of this section, the permittee is required to test their effluent to determine if it contains specific toxic substances at levels sufficient to cause toxicity to aquatic organisms or to impact human health.

For iron, the current permit already contains limits. These limits were calculated based on an acute criterion of 2,000 ug/L and a chronic criterion of 1,000 ug/L. DEQ has since removed the acute criterion and only has the 1,000 ug/L chronic criterion. The chronic criterion is based on a 4-day duration. In the past three years the permittee has not discharged for more than 24 hours. The permittee has also completed the corrective actions outlined in section 2.2, which should result in less frequent discharges. The discharge does not have the reasonable potential to exceed the chronic criterion, because duration of the discharge is much less than the 4-day chronic criterion duration. The current permit limits are being retained in the proposed permit to satisfy antibacksliding regulations. Therefore, the proposed permit is retaining a monthly average limit of 1.125 mg/L and daily maximum of 1.643 mg/L. If the discharge becomes more frequent or increases in duration the permit limits will be reassessed during the next permit renewal.

For zinc, the current permit already contains limits. DEQ could not review zinc limits because the aquatic life water quality criteria is expressed as a function of hardness and because it's based on the dissolved form. Hardness monitoring is not required in the current permit and effluent hardness data is not available. In addition, paired dissolved and total zinc is needed to calculate an effluent limit and that data is not available. Therefore, the existing limits (monthly average 0.082 mg/L and daily maximum of 0.12 mg/L) are being retained in the current permit and monitoring for hardness and dissolved zinc is being required in the proposed permit.

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For phenol, the current permit already contains limits. DEQ calculated phenol limits based on updated information. The effluent limit calculation resulted in a monthly average of 10.9 mg/L and a daily maximum of 15.9 mg/L. These limits are less stringent then the existing limits. Therefore, to satisfy antibacksliding the existing limits (monthly average 0.026 mg/L and daily maximum of 0.015 mg/L) are being retained in the current permit. These existing limits are based on the ELG limit from 40 CFR 445.

For manganese, the fresh water human health criteria was withdrawn. The current permit contains limits and these limits are being removed from the proposed permit because the criteria was withdrawn. Section 303(d)(4)(B) of the CWA allows the removal of limits as long as the action is consistent with antidegradation. As discussed above the permittee discharges infrequently for short durations and corrective actions completed in 2020 should result in less frequent discharges. DEQ expects a decreased manganese discharge and therefore antidegradation is satisfied.

See Attachment 2.

7.2.2.9 Reasonable Potential Analysis for Mercury and Copper

Bear Creek is not listed as impaired for mercury or copper, the permittee does not believe these parameters are present in the discharge and there is not an effluent limitation guideline for mercury and copper in *40 CFR Part 445 – Landfills Point Source Category, Subpart B – RCRA Subtitle D Non-Hazardous Waste Landfill*. Mercury and copper are not pollutants of concern, therefore a reasonable potential analysis was not completed for mercury and copper.

7.2.2.10 Total Dissolved Solids

DEQ does not have surface water quality standards for TDS. Oregon Administrative Rule 340-041-0275 (2) sets a guide concentration for total dissolved solids concentration as not to exceed 500 mg/L. This parameter does not appear in the ELG. The basin standard is used in the existing permit, and is retained in the proposed permit.

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7.3 Schedule A - Waste Discharge Limits

The proposed permit limits for the permittee are included in Schedule A of the permit. The numeric limits in Schedule A are reproduced below. These limits are the result of the analyses described in Section 7.2.

The proposed effluent limits for Outfall 001 and Outfall 003 are as follows:

Table 7: Permit Limits

Parameter	Units	Average Monthly	Daily Maximum
Effluent Flow (May 1 to Nov 30)	MGD	No discharge (Daily max limit = 0 MGD)	
BOD_5	mg/L	37	140
TSS	mg/L	27	88
Total Dissolved Solids	mg/L	500	-
Iron	mg/L	1.125	1.643
Zinc	mg/L	0.082	0.12
Ammonia	mg/L	1.26	1.26
Phosphorous	mg/L	0.08	-
a-Terpineol	mg/L	0.016	0.033
Benzoic acid	mg/L	0.071	0.12
p-cresol	mg/L	0.014	0.025
Phenol	mg/L	0.015	0.026
pH	SU	Instantaneous limit between a daily minimum of 6.5 and a daily maximum of 8.5	
E. coli See note a.	#/100 mL	Must not exceed a monthly geometric mean of 126, no single sample may exceed 406	
Notes: a. The permittee may take at least 5 consecutive re-samples at 4 hour intervals beginning within 28 hours after the original sample was taken and the geometric mean of the 5 re-samples is less than or equal to 126 *E. coli* organisms/100 mL to demonstrate compliance with the limit.			

7.3.1 Discussion of Table A Permit Limits

The limits in Tables A1 are discussed in detail below:

a. BOD_5 and TSS Concentration

BOD_5 and TSS can be thought of as indicators of the "strength" of the effluent. The development of concentration limits for BOD_5 and TSS was described in Section 7.2.1. As explained, these are TBELs.

b. Bacteria

Limits for bacteria are considered to be WQBELs. Since the permittee discharges to freshwater, the permit limit for bacteria is based on E. coli.

E. coli

The development of the bacteria limits is discussed in Section 7.2.2.3.

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c. pH
The derivation of pH limits is described in Section 7.2.2.5. These limits are equivalent to the basin standards and must be met at the end of the pipe and are therefore TBELs.

d. Ammonia
Nitrogen compounds (including ammonia) are nutrients that can contribute to excessive biological growth that cause violations of water quality standards. The problems could manifest as visual or aesthetic impairment or could be the cause of excessive dissolved oxygen or pH fluctuations.

If ammonia is discharged at a level which will cause, has the reasonable potential to cause, or contribute to an excursion above any state water quality standard (either as a nutrient or to prevent dissolved oxygen depletion or toxicity), ammonia must be limited by the permit.

The development of ammonia limits is discussed in Section 7.2.2.7.

The permit does not contain mass load limits for ammonia. The primary purpose for mass limits is to prevent water quality violations from cumulative effects of conservative pollutants. Mass-based limits are particularly important for control of bioaccumulative pollutants. Ammonia, however, is neither a conservative nor a bioaccumulative pollutant since microbes in the receiving stream rapidly oxidize ammonia into nitrate.

7.3.2 Discussion of Other Schedule A Requirements

In addition to permit limits for specific parameters, Schedule A also contains requirements pertaining to the following:

a. Use of Landfill Leachate for Irrigation
The permit describes the treatment criteria and management practices the permit holder must satisfy to irrigate. The requirements in Schedule A of the permit are derived from OAR 340-055.

7.4 Schedule B – Minimum Monitoring and Reporting Requirements

Section 2 of Schedule B describes monitoring and reporting protocols for the permit and includes the following:

a. Sampling, Test Methods and Laboratory Quality Assurance and Quality Control (QA/QC)
b. Re-analysis and Re-sampling if QA/QC Requirements Not Met
c. Significant Figures and Rounding Conventions
d. Reporting of Detection Levels and Quantitation Limits
e. Reporting Sample Results

Schedule B also describes the minimum monitoring and reporting necessary to demonstrate compliance with the conditions of this permit. The authority to require periodic reporting by permittees is included in ORS 468.065(5). Self-monitoring requirements are the primary means of ensuring that permit limits are being met. Other parameters may also need to be monitored when insufficient data exist to establish a limit, but where there is a potential for a water quality concern.

In addition to monitoring and reporting requirements, Schedule B includes the following:

Table B1: Reporting Requirements and Due Dates
This table summarizes, for the convenience of the permit holder, the required reports along with the due date for each specific report.

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Table B2: Effluent Monitoring
This table specify the parameters to be monitored on a regular basis in the effluent, along with associated monitoring frequencies, sample types and related reporting requirements.

Table B3: Landfill Leachate Irrigation Monitoring Requirements
This table specifies the parameters to be monitored on a regular basis in the irrigation water, along with associated monitoring frequencies, sample types and related reporting requirements.

Table B4: Landfill Area Soil and Root Zone Monitoring Requirements
This table specifies the parameters to be monitored in the soil, along with associated monitoring frequencies, sample types and related reporting requirement.

7.5 Schedule C - Compliance Schedules and Conditions

A compliance schedule is not included in the permit.

7.6 Schedule D - Special Conditions

7.6.1 Emergency Response and Public Notification Plan

All facilities are required, under General Condition B.8. in Schedule F, to have an Emergency Response and Public Notification Plan.

7.6.2 Wastewater Irrigation Plan

The permittee is required to develop and maintain an Irrigation Plan.

7.6.3 Annual Irrigation Site Report

The permittee must submit an annual irrigation report by the date listed in Table B1 of the permit. The format of the annual report may be approved by DEQ before after the submission of the report.

7.6.4 Outfall Inspection

This general condition was removed from the permit because the outfall consists of a concrete anchored pipe that discharges to the side of the creek.

7.7 Schedule E - Pretreatment

A Pretreatment schedule is not included in the permit.

7.8 Schedule F - NPDES General Conditions

These conditions are standard to all industrial NPDES permits and include language regarding operation and maintenance of facilities, monitoring and record keeping, and reporting requirements. The General Conditions for all individual permits issued by DEQ were substantially revised in August 2009. Minor modifications have been made since then. A summary of the changes is as follows:

- There are additional citations to the federal Clean Water Act and CFR, including references to standards for sewage sludge use or disposal.
- There is additional language regarding federal penalties.
- Bypass language has been made consistent with the Code of Federal Regulations and with other EPA Region 10 states.
- Overflow language has been eliminated.

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- Requirements regarding emergency response and public notification plans have been made more explicit.
- Language pertaining to duty to provide information has been made more explicit.
- Confidentiality of information is addressed.
- A definition of CBOD has been added.

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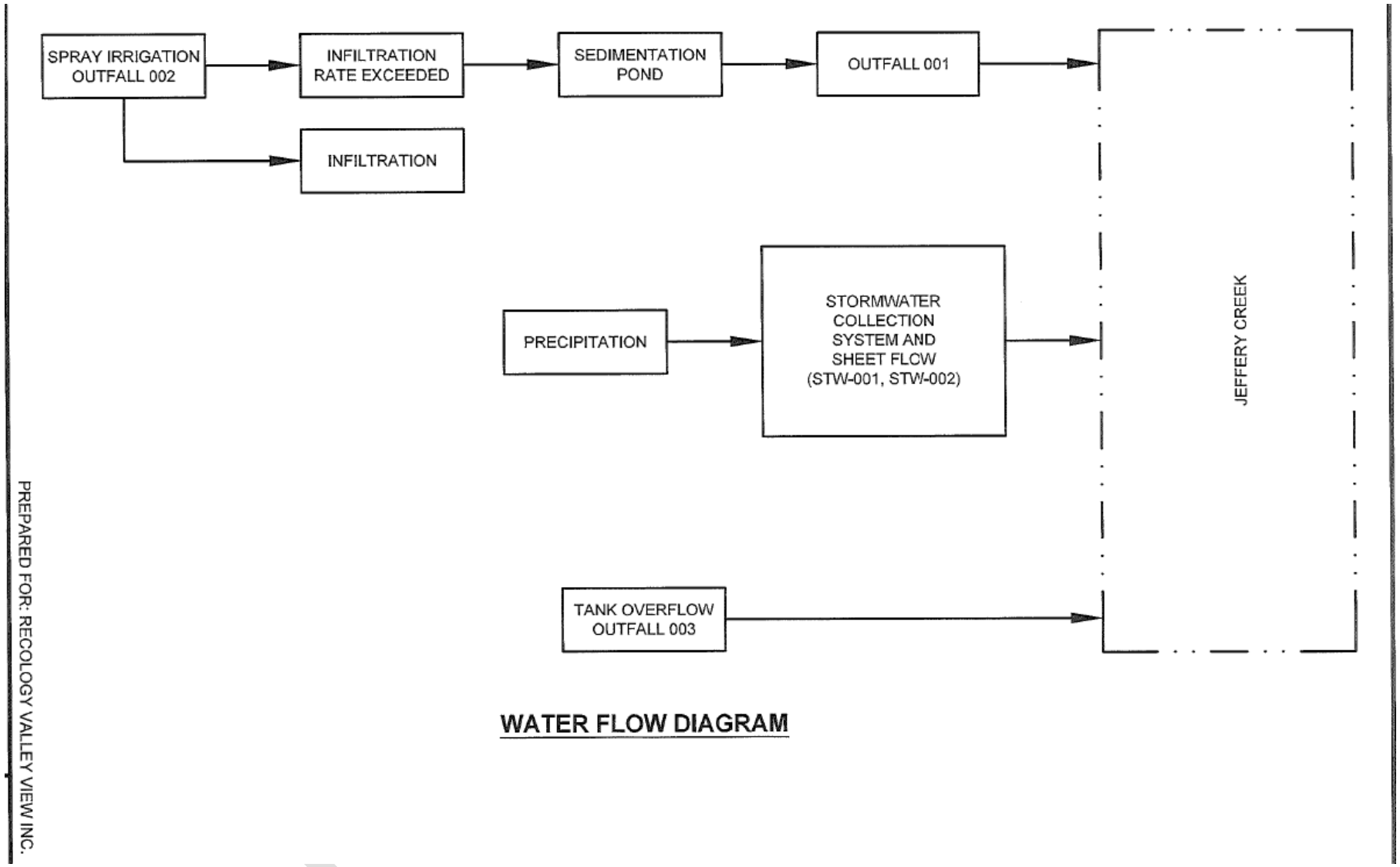
Attachment 1: Water Flow Diagram



Attachment 2: Review of Existing WQBEL

Ammonia

Ammonia RPA Calculation (2013 Criteria) Revision 1.7

RPA Run Information

Facility Name:	Recology Valley View Landfill
Outfall Number:	1
Permit Writer Name:	Julie Ulibarri
Date of RPA Run:	5/20/2020
RPA Run Notes:	
KEY:	-- Intermediate calc.s
Enter data here	-- Calculated results

Enter Information Below

Enter Dilution Values			
Dilution @ ZID (from study)			1
Dilution @ MZ 7Q10 (from study)			1
Dilution @ MZ 30Q5 (from study)			1
Is waterbody fresh or salt water? (Fresh/Salt)			Fresh
If Saltwater, then enter salinity (ppt)			
Ambient Salinity		ppt	
Effluent Salinity		ppt	
Are Salmonid present? (Yes/No)			Yes
Confidence Level and Probability Basis			
Confidence Level		%'ile	99%
Probability Basis		%'ile	95%

Dilution Calculations

Inputs

		ZID	MZ (7Q10)	MZ (30Q5)
Dilution Factors		1.0	1.0	1.0
Upstream Characterization			Acute	Chronic
Temperature	deg. C		11.8	10.6
pH			8.4	8.3
Alkalinity	mg/L $CaCO_3$		412.6	412.6
Effluent Characterization				
Temperature	deg. C		23.3	18.0
pH			8.0	7.9
Alkalinity	mg/L $CaCO_3$		541.5	541.5

*Calculation of pH of a mixture of two flows based on the procedure in EPA's DESCON program (EPA, 1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water,

** Selection of acute alkalinity %ile is based on pH of effluent vs ambient. For the chronic criteria, average alkalinity values are used.

Outputs

		ZID	MZ (7Q10)	MZ (30Q5)
Upstream				
pKa		6.4	6.5	6.5
Ionization Fraction		1.0	1.0	1.0
Total Inorganic Carbon	mg/L $CaCO_3$	417.0	419.1	419.1
Effluent				
pKa		6.4	6.4	6.4
Ionization Fraction		1.0	1.0	1.0
Total Inorganic Carbon	mg/L $CaCO_3$	553.7	559.7	559.7
Mixing Zone				
Temperature	deg. C	23.3	18.0	18.0
Alkalinity	mg/L $CaCO_3$	541.5	541.5	541.5
Total Inorganic Carbon	mg/L $CaCO_3$	553.7	559.7	559.7
pKa		6.4	6.4	6.4
pH		8.0	7.9	7.9
Salinity	ppt	--	--	

Effluent Limits

Pollutant Parameter	# of Req's Samples	Waste Load Allocations				Long Term Average					Effluent Limits	
		Acute WLA	Chronic WLA (4 day avg.)	Chronic WLA (7Q10)	Chronic WLA (30Q5)	Acute LTA	Chronic LTA (4 day avg.)	Chronic LTA (7Q10)	Chronic LTA (30Q5)	Min. LTA	Max Daily (MDL)	Monthly (AML)
	#/month	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	99%	95%
Ammonia (Freshwater Salmonids)	1	2.9	2.6		1.1	0.9	1.4		0.8	0.8	2.6	1.8
Ammonia (Freshwater, Salmonids absent)	--	--	--		--	--	--		--	--	--	--
Ammonia (Salt Water)	--	--		--		--		--		--	--	--

Pu

Phenol

RPA Run Information	
Facility Name:	Valley View Landfill
DEQ File Number:	104019
EPA Identification #:	OR-003544-1
Permit Number:	102405
Permit Writer Name:	Julie Ulibarri
Preparation Date:	5/20/2020
Facility Flow Rate (MGD):	0.0594
Outfall Number:	1
Determination Date:	enter det. Date

Color Key:	"*" = Enter data
Intermediate Calc.s	"--" = Will calculate
Calculation Results	

Facility Information				
1. Do I have dilution values from a mixing zone study? (Yes/No)				Yes
2. If answered "No" to Question 1, then fill in the following table				
Eff. Flow Rate	MGD	1	Calculated dilution Factors	
Stream Flow: Harmo	CFS	1	Dilution @ Harmonic Me	N/A
Stream Flow: 30Q5	CFS	1	Dilution @ 30Q5	N/A
% dilution at MZ	%	25%		
3. If answered "Yes" to Question #1, then fill in		Dilution @ RMZ: Harmonic Mean		1
		Dilution @ RMZ: 30Q5 flow		1
4. Please enter statistical values (note: defaults already entered)		Confidence Level: Mo	%	95%
		Confidence Level: Dai	%	99%
		Probability Basis	%	95%
RPA Run Notes:				

Pollutant Parameter	Water + Fish	Fish	ogen Status	Water + Fish	Fish	Ambient Conc.	Water + Fish	Fish	CV	Monitoring Req.	Monthly (AML)	Max. Daily (MDL)
	Yes/No	Yes/No	(Yes/No)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)		#/month	(µg/l)	(µg/l)
Table 2: Acid-extractable compounds												
Phenol	yes	yes	no	9400	86000	0	9400	86000	0.6	1	9400	13717

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Attachment 3: Antidegradation Review Sheet

Applicant: Recology Valley View Inc.

1. What is the name of the surface water that receives the discharge? Jeffery Creek

Briefly describe the proposed activity: Landfill Leachate

This review is for a: ☒ Renewal ☐ New

Go to Step 2.

2. Are there any existing uses associated with the water body that are not included in the list of designated uses? Example: DEQ's Fish Use Designation Maps identify the waterbody as supporting salmonid migration; however ODFW has determined that it also supports salmonid spawning.

☐ Yes. Identify additional use(s), the basis for conclusion, and the applicable criteria: . Go to Step 3.

☒ No. Go to Step 3.

3. Was the analysis of the impact of the proposed activity performed relative to criteria applicable to the most sensitive beneficial use?

☒ Yes. Go to Step 4.

☐ No. Re-do analysis to develop permit limits using correct criteria, and modify permit as necessary. Go to Step 4.

4. Is this surface water an **Outstanding Resource Water** or **upstream** from an **Outstanding Resource Water**? Note: OAR 340-041-0004(8)(a) contains criteria for designating such waters. Example: North Fork Smith River

☐ Yes. Go to Step 7. ☒ No. Go to Step 5.

5. Is this surface water a **High Quality Water**? A High Quality Water is one for which none of the pollutants are Water Quality Limited. To determine, go to the database at http://www.deq.state.or.us/wq/assessment/rpt2010/search.asp and under Listing Status, select "Water Quality Limited – All (Categories 4 and 5)".

☐ Yes. Go to Step 10. ☒ No. Go to Step 6.

6. Is this surface water a **Water Quality Limited Water**? To determine, use the same database query as Step 5.

☒ Yes. Go to Step 16. ☐ No. Go to Step 4. (you must answer "yes" to either question 4, 5, or 6)

Note: The surface water must fall into one of 3 categories: Outstanding Resource Water (Step 4), High Quality Water (Step 5), or Water Quality Limited Water (Step 6).

7. Will the proposed activity result in a permanent new or expanded source of pollutants directly to or affecting the **Outstanding Resource Water**? [see OAR 340-041-0004(3)-(5) for a description in rule of discharges that do not result in lowering of water quality or do not constitute a new and/or increased discharge or are otherwise exempt from antidegradation review; otherwise see "Is an Activity Likely to Lower Water Quality?" in *Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and Section 401 Water Quality Certifications*.]

☐ Yes, Recommend Preliminary Decision to **deny** proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 23.

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☐ No. Please provide basis for conclusion: . Go to Step 8.

8. Will the proposed activity result in a lowering of water quality in the **Outstanding Resource Water**? [see OAR 340-041-0004(3)-(5) for a description in rule of discharges that do not result in lowering of water quality or do not constitute a new and/or increased discharge or are otherwise exempt from antidegradation review; otherwise see "Is an Activity Likely to Lower Water Quality?" in *Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and Section 401 Water Quality Certifications*.]

☐ Yes. Provide basis for conclusion: Go to Step 9.

☐ No. Provide basis for conclusion: Go to Step 20.

9. If the proposed activity results in a non-permanent new or expanded source of pollutants directly to or affecting an **Outstanding Resource Water**, will the lowering of water quality in the **Outstanding Resource Water** be on a short-term basis in response to an emergency or to protect human health and welfare?

☐ Yes. Proceed with Application Process to Interagency Coordination and Public Comment. Go to Step 23.

☐ No. Recommend Preliminary Decision to **deny** proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 20.

10. Will the proposed activity result in a Lowering of Water Quality in the **High Quality Water** [see OAR 340-041-0004(3)-(5) for a description in rule of discharges that do not result in lowering of water quality or do not constitute a new and/or increased discharge or are otherwise exempt from antidegradation review; otherwise see "Is an Activity Likely to Lower Water Quality?" in *Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and Section 401 Water Quality Certifications*.]

☐ Yes. Go to Step 11.

☐ No. Proceed with Permit Application. Applicant should provide basis for conclusion: Go to Step 23.

11. OAR 340-041-0004(6)(c) of the *High Quality Waters Policy* requires that the Department evaluate the application to determine that all water quality standards will be met and beneficial uses protected after allowing discharge to **High Quality Waters**. Will all water quality standards be met and beneficial uses protected?

☐ Yes. Provide basis for conclusion: Proceed with Application Process to Interagency Coordination and Public Comment. Go to Step 12.

☐ No. Provide basis for conclusion. Recommend Preliminary Decision to **deny** proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 23.

12. OAR 340-041-0004(6)(a) of the High Quality Waters Policy requires that the Department evaluate the application to determine if no other reasonable alternatives exist except to discharge to High Quality Waters. At a minimum, the following list must be considered:

- Improved operation and maintenance of existing treatment system
- Recycling or reuse with no discharge
- Discharge to on-site system
- Seasonal or controlled discharges to avoid critical water quality periods
- Discharge to sanitary sewer
- Land application

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Were any of the alternatives feasible?

☐ Yes. Provide basis for conclusion (see below for information requirements):
Recommend Preliminary Decision that applicant use alternative. Go to Step10.

☐ No. Provide basis for conclusion (see below for information requirements): Go to Step 13.

In a separate statement to this application, please explain the **technical feasibility** of the alternative, explain the **economic feasibility** of the alternative, and provide an **estimated cost** of NPDES permit alternative for a five-year period from start-up.

13. OAR 340-041-0004(6)(b) of the *High Quality Waters Policy* requires that the Department evaluate the application to determine if there are social and economic benefits that outweigh the environmental costs of allowing discharge to High Quality Waters. Do the social and economic benefits outweigh the environmental costs of lowering the water quality?

☐ Yes. Provide basis for conclusion (see below for information requirements): Go to Step 14.

☐ No. Provide basis for conclusion (see below for information requirements): Go to Step 23.

The basis for conclusion should include a discussion of whether the lowering of water quality is necessary and important. "Necessary" means that the same social and economic benefits cannot be achieved with some other approach. "Important" means that the value of the social and economic benefits due to lowering water quality is greater than the environmental costs of lowering water quality.

Benefits can be created from measures such as:

- Creating or expanding employment (provide current/expected number of employees, type & relative amount of each type)
- Increasing median family income
- Increasing community tax base (provide current/expected annual sales, tax info)
- Providing necessary social services
- Enhancing environmental attributes

Environmental costs can include:

- Losing assimilative capacity otherwise used for other industries/development
- Impacting fishing, recreation, and tourism industries negatively
- Impacting health protection negatively
- Impacting societal value for environmental quality negatively

14. OAR 340-041-0004(6)(d) of the *High Quality Waters Policy* requires that DEQ prevent federal threatened and endangered aquatic species from being adversely affected. Will lowering the water quality likely result in adverse effects on federal threatened and endangered aquatic species?

☐ Yes, please provide basis for conclusion (see below for information requirements): Go to Step 23.

☐ No, please provide basis for conclusion (see below for information requirements): Go to Step 15.

15. Will lowering water quality in the **High Quality Water** be on a short-term basis in response to an emergency or to protect human health and welfare?

☐ Yes, go to Step 20.

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☐ No, recommend Preliminary Decision to **deny** proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 23.

16. Will the proposed activity result in a lowering water quality in the **Water Quality Limited Water**? [see OAR 340-041-0004(3)-(5) for a description in rule of discharges that do not result in lowering of water quality or do not constitute a new and/or increased discharge or are otherwise exempt from anti-degradation review; otherwise see "Is an Activity Likely to Lower Water Quality?" in *Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and Section 401 Water Quality Certifications*.]

☐ Yes, go to Step 17.

☒ No, proceed with Permit Application. Permit writer should provide basis for determination in permit evaluation report: Go to Step 23.

17. OAR 340-041-0004(9)(a)(A) of the *Water Quality Limited Waters Policy* requires that the Department evaluate the application to determine that all water quality standards will be met. Will all water quality standards be met?

☐ Yes, please provide basis for conclusion: Go to Step 18.

☐ No, please provide basis for conclusion. Recommend Preliminary Decision to **deny** proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 23.

18. OAR 340-041-0004(9)(a)(C) of the *Water Quality Limited Waters Policy* requires that the Department evaluate the application to determine that all recognized beneficial uses will be met and that threatened or endangered species will not be adversely affected. Will all beneficial uses be met and will threatened or endangered species be protected from adverse effects?

☐ Yes, please provide basis for conclusion: Go to Step 19.

☐ No, please provide basis for conclusion: Recommend Preliminary Decision to **deny** proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 23.

19. OAR 340-041-0004(9)(a)(D)(i-iv) of the *Water Quality Limited Waters Policy* requires that the Department evaluate the application for **one of the following**:

19A. Will the discharge be associated (directly or indirectly) with the pollution parameter(s) causing the waterbody to be designated a Water Quality Limited Water?

☐ Yes, please provide basis for conclusion: . Recommend Preliminary Decision to **deny** proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 23.

☐ No, please provide basis for conclusion: Go to Step 20.

19B. Have TMDLs, WLAs, LAs, and reserve capacity been established, compliance plans been established, and is there sufficient reserve capacity to assimilate the increased load under the established TMDL?

☐ Yes, please provide basis for conclusion: Go to Step 20.

☐ No, please provide basis for conclusion: Recommend Preliminary Decision to **deny** proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 23.

19C. Will the proposed activity meet the requirements, as specified under OAR 340-041-0004(9)(a)(D)(iii), for dissolved oxygen?

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☐ Yes, please provide basis for conclusion: Go to Step 20.

☐ No, please provide basis for conclusion: Recommend Preliminary Decision to **deny** proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 23.

19D. Will the activity solve an existing, immediate, and critical environmental problem?

☐ Yes, please provide basis for conclusion: Go to Step 20.

☐ No, please provide basis for conclusion: Recommend Preliminary Decision to **deny** proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 23.

20. Is the proposed activity consistent with local land use plans?

☐ Yes, go to Step 21.

☐ No, please provide basis for conclusion: Recommend Preliminary Decision to **deny** proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 23.

21. OAR 340-041-0004(9)(c)(A) requires the Department to consider alternatives to lowering water quality. At a minimum, the following list must be considered:

- Improved operation and maintenance of existing treatment system
- Recycling or reuse with no discharge
- Discharge to on-site system
- Seasonal or controlled discharges to avoid critical water quality periods
- Discharge to sanitary sewer
- Land application

Were any of the alternatives feasible?

☐ Yes, please provide basis for conclusion (see below for information requirements): Recommend Preliminary Decision that applicant **use alternative**. Go to Step 16.

☐ No, please provide basis for conclusion (see below for information requirements): Go to Step 22.

In a separate statement to this application, please explain the **technical feasibility** of the alternative, explain the **economic feasibility** of the alternative, and provide an **estimated cost** of NPDES permit alternative for a five-year period from start-up.

22. OAR 340-041-0004(9)(c)(B) of the *Water Quality Limited Waters Policy* requires the Department to consider the economic effects of the proposed activity, which in this context consists of determining if the social and economic benefits of the activity outweigh the environmental costs of allowing a lowering of water quality.
Do the social and economic benefits outweigh the environmental costs of lowering the water quality?

☐ Yes. Provide basis for conclusion: Proceed with Application Process to Interagency Coordination and Public Comment. Go to Step 23.

☐ No. Provide basis for conclusion: Recommend Preliminary Decision to **deny** proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 23.

The basis for conclusion should include a discussion of whether the lowering of water quality is necessary and important. "Necessary" means that the same social and economic benefits cannot be achieved with some other

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approach. “Important” means that the value of the social and economic benefits due to lowering water quality is greater than the environmental costs of lowering water quality.

Benefits can be created from measures such as:

- Creating or expanding employment (provide current/expected number of employees, type & relative amount of each type
- Increasing median family income
- Increasing community tax base (provide current/expected annual sales, tax info)
- Providing necessary social services
- Enhancing environmental attributes

Environmental Costs can include:

- Losing assimilative capacity otherwise used for other industries/development
- Impacting fishing, recreation, and tourism industries negatively
- Impacting health protection negatively
- Impacting societal value for environmental quality negatively

23. On the basis of the Antidegradation Review, the following is recommended:

☐ Proceed with Application to Interagency Coordination and Public Comment Phase.

☐ Deny Application; return to applicant and provide public notice.

☒ ACTION APPROVED

Review prepared by:

Name: Julie Ulibarri

Phone: 541-687-7437

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