



Oregon Department of Environmental Quality
Feb. 25, 2019
Oregon Environmental Quality Commission Special Meeting
Agency Staff Report
Temporary Rulemaking, Action Item A

Composting Special Pathogen Reduction Temporary Rule 2019

Accessibility information.....	2
DEQ recommendation to the EQC	2
Overview	3
Statement of need.....	5
Justification	6
Rules affected, authorities, supporting documents and proposed temporary rule language.....	10
Housing costs	11
EQC prior involvement.....	12
Implementation	13
Public involvement	14
Summary of public comments and DEQ responses.....	14

Accessibility information

You may review copies of all documents referenced in this announcement at:

Oregon Department of Environmental Quality
700 NE Multnomah St., Ste. 600
Portland, OR, 97232

To schedule a review of all websites and documents referenced in this announcement, please call Audrey Obrien 503-229-5072 (800-452-4011, ext. 5622 toll-free in Oregon).

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.

DEQ recommendation to the EQC

DEQ recommends that the Oregon Environmental Quality Commission:

1. Determine that failure to act promptly would result in serious prejudice to the public interest or the interests of the parties concerned as provided under the Justification section of this staff report.
2. Adopt temporary rules as shown on page 10 of this report as part of Chapter 340 of the Oregon Administrative Rules to be effective on filing with the Oregon Secretary of State.

Recommended motion language:

“I move that the Oregon Environmental Quality Commission determine that failure to act promptly would result in serious prejudice to the public interest or the interests of the parties concerned as provided under the Justification section of this staff report; and adopt temporary rules as shown on page 10 of this report as part of Chapter 340 of the Oregon Administrative Rules to be effective on filing with the Oregon Secretary of State.”

Overview

DEQ has identified a problem in the current DEQ solid waste compost rules. If this problem is not corrected, it will cause serious prejudice to the Port of Tillamook Bay (POTB), Tillamook Biogas, LLC, and parties to contracts associated with operating the POTB's anaerobic digester. DEQ proposes modifying its compost rules to ensure consistent requirements apply to the anaerobic digestion of manure. The rules currently require liquid digestate from anaerobic digesters not located at an agricultural operation to meet pathogen limits and testing requirements that are not operationally obtainable when processing manure. Digesters located at agricultural operations are not required to meet these same limits and testing requirements.

DEQ issued POTB a composting permit under the composting rules that had been updated to include anaerobic digesters in 2013. When issuing that permit, DEQ treated POTB as an agricultural operation that is exempt from the pathogen reduction requirements of the rules. Before 2013, the Port of Tillamook Bay's anaerobic digester operated under a DEQ solid waste treatment permit. The POTB had never been required to meet the pathogen reduction limits in the past and DEQ did not intend for the requirements to apply to facilities that send liquid digestate to farmland for land application.

In fall of 2018, POTB applied to DEQ for a permit modification in order to accept Type 3 feedstocks, such as fish processing waste, food waste and creamery processing wastes. The POTB digester has not been operating since 2017 because POTB considered operating the facility not to be economically viable. POTB requested the permit modification because adding Type 3 feedstock would allow the facility to operate and become economically viable. Tipping fees associated with the acceptance of Type 3 feedstocks provide a source of revenue, improving the commercial viability of the operations. The addition of Type 3 feedstocks would also increase methane generation, producing renewable energy and improving another revenue stream that would allow the facility to begin operations. POTB's contracted digester operator, Tillamook Biogas, LLC, has lined up feedstock and power purchase agreements in anticipation of the facility coming on line this spring.

In considering the permit modification, DEQ, in consultation with The Oregon Department of Agriculture, determined that the POTB facility was not an agricultural operation exempt from the pathogen reduction requirements of the composting rules. The pathogen reduction requirements are not operationally obtainable or economically viable for manure digesters. As explained below, and consistent with the original intent of the rules, it is not environmentally beneficial to apply the pathogen reduction limitations to land applied manure digestate. DEQ therefore issued the POTB permit modification with requirements that the digestate be appropriately land applied in order to ensure pathogen issues were addressed.

After issuing the permit modification, DEQ received a petition to reconsider the permitting decision. The petition cited the need for non-agricultural digesters to meet the pathogen reduction limits and testing requirements in the compost rules. DEQ granted the petition to reconsider on Jan. 31, 2019. The permit remains in effect pending reconsideration.

However, there is regulatory uncertainty regarding the application of the pathogen reduction requirements to the POTB facility. Applying the pathogen reduction limits would contradict DEQ's intention to treat anaerobic digesters consistently. It would also make operation of the facility not economically viable and failure to apply the limits could result in legal risk. As explained below, DEQ understands that failure to begin operations early this spring would result in the facility being unable to realize the various contracts that are currently in place that would allow the facility to begin operations. There is uncertainty whether circumstances would allow the facility to begin operations at a later date if it is unable to begin at this time.

DEQ intends to proceed with permanent rulemaking to address the inconsistency in the rules. However, in the interim, DEQ proposes that the Environmental Quality Commission address the regulatory and legal uncertainty by adopting this proposed temporary rule amendment.

The current rules apply the pathogen reduction requirements inconsistently and create prejudice against the public and affected parties. The regulatory uncertainty created by the inconsistent treatment of manure digesters in the rules will delay, or halt altogether, operations of the POTB's anaerobic digester and result in the POTB's public infrastructure remaining underutilized. The Governor's North Coast Regional Solutions Team has been working closely with the POTB and its contracted operator, Tillamook Biogas, LLC, to ensure this valuable community asset does not remain idle. The current alignment of contracts for operation, feedstocks, and power presents an opportunity to utilize the digester providing community benefits of odor and pathogen reduction provided by the digestion process. Residents of rural Tillamook County also stand to benefit from the green power promised to the local utility. Failing to meet these current contractual obligations creates the risk that the digester will not operate at all in the near future, which would result in prejudice to the community. This proposed rule change addresses both public and private prejudice by applying the pathogen reduction requirements consistently to all anaerobic digester operations.

The proposed temporary rule modification would provide an exemption from the pathogen reduction testing limits for liquid digestate from anaerobic digesters not located at agricultural operations, where the liquid digestate is applied to soil at agronomic rates. As a temporary rule, the proposed changes would be effective for a maximum of 180 days. DEQ staff are working on a proposed permanent rule amendment, which will include a public hearing and public notice and comment period before it is presented for commission consideration in summer 2019.

Statement of need

DEQ added anaerobic digestion requirements to the DEQ compost rules in 2013. The current rule language applies requirements inconsistently to anaerobic digesters based on where the facility is located. The proposed temporary rule amendment corrects this oversight until DEQ can adopt a permanent rule.

Before 2013, the Port of Tillamook Bay's anaerobic digester operated under a DEQ solid waste treatment permit. After adding anaerobic digester requirements to the compost rules, DEQ issued a new compost permit to POTB's anaerobic digestion facility in 2013. This permit allowed the facility, which is not located at an agricultural operation, to digest manure only. At the time, DEQ incorrectly considered the POTB digester an agricultural operation and the 2013 permit did not require POTB to meet the pathogen reduction limits or testing requirements because the liquid digestate was to be returned to farmland for land application.

In October 2018, DEQ issued a permit modification to authorize the POTB to accept additional feedstocks for digestion. While issuing the modification, DEQ, after consultation with the Oregon Department of Agriculture determined that the POTB digester did not meet the definition of an agricultural operation and identified the inconsistency in the rule that would subject the POTB facility to a standard that was not meant to apply to manure digesters. The result would create inconsistent regulation between similar operations. To address this issue, DEQ included a permit condition to allow the POTB to land apply liquid digestate at agronomic rates in compliance with an Oregon Department of Agriculture approved nutrient management plan.

In December 2018, DEQ received a petition to reconsider the POTB permit modification decision. DEQ determined that the rule amendment is urgent to provide regulatory and legal certainty to non-agricultural operations, ensuring they can manage liquid digestate in a manner similar to an agricultural operation. The proposed temporary rule would allow the POTB, and other digesters not located at agricultural operations, to be commercially viable while providing safe and effective manure management and the environmental benefits of pathogen reduction and methane capture.

DEQ has allowed the Oregon Department of Agriculture to regulate digesters located at agricultural operations under Confined Animal Feeding Operation water quality permits. Manure digesters located at CAFO-permitted agricultural operations are exempt from pathogen rule requirements while those not co-located with agricultural operations must meet the requirements. DEQ did not intend for this result when the compost rules were adopted. In fact, DEQ has treated off-farm digesters the same as on-farm digesters until learning that the off-farm digesters were not considered agricultural operations.

In most instances, liquid digestate from anaerobic digesters is applied on agricultural lands at agronomic rates under a CAFO permit and ODA-approved nutrient management plan. DEQ researched EPA and other states' digestate management requirements and consulted with the Oregon Department of Agriculture. Soil application of liquid digestate at agronomic rates is a safe and appropriate management method. Furthermore, the land application of digested manure is more environmentally protective than the land application of raw manure, given the pathogen and methane reduction benefits.

The proposed temporary rule modification would provide an exemption from the pathogen reduction testing limits for liquid digestate from digesters not located at agricultural operations, provided the liquid digestate is applied to soil at agronomic rates.

Justification

In the case of the Port of Tillamook Bay, DEQ has issued the permit modification in question and the permit is active. However, the regulatory uncertainty relating to this decision will delay operations of the DEQ-permitted facility. Failure to act promptly would result in the POTB's public infrastructure remaining underutilized, wasting a valuable community asset. Furthermore, regulatory uncertainty will delay or potentially halt operations indefinitely, postponing the odor and pathogen reduction benefits provided by the digestion process, and putting farmer, feedstock, and power purchase agreements at risk. Without this facility:

- Manure management options are limited for participating dairy farmers;
- Feedstock agreements for managing organic materials such as seafood processing waste are at risk, limiting alternatives to landfilling; and
- The local utility and its customers risk losing a sustainable source of green power promised by the power purchase agreement.

The POTB's community digester was built in 2003 to address the manure management needs of Tillamook County's dairy industry. The facility closed in 2017 for financial reasons and has remained idle. For the first time since the facility shuttered, all permits and agreements are in place for operations to resume. The Port entered into a third-party operator agreement with Tillamook Biogas, LLC in June 2018. DEQ modified the POTB permit in October 2018 to accept type 3 feedstocks, revenue from which makes the operation commercially viable. Manure agreements have been negotiated with participating dairy farms, manure hauling contracts are in place, and feedstock agreements have been secured. The power purchase agreement was the final critical component before beginning operations and it was fully executed with the local utility, Tillamook PUD, in December 2018. These agreements are at risk should this facility not become operational.

While the details of these agreements are proprietary, feedstock agreements are subject to non-performance clauses. One agreement provides for the facility to accept seafood processing waste beginning April 1, 2019. Seafood processing is seasonal in nature and missing this window of opportunity will place this feedstock agreement at risk. As stated earlier, the commercial viability of the operations is tied to the addition of type 3 feedstocks. Putting these feedstock agreements at risk places the entire project at risk.

As previously stated, the current rules treat similar operations differently. The standard is not economically viable for permittees processing manure to comply with, while at the same time, the current rule does not result in environmental benefit. This was not DEQ's intent when it originally proposed the rule. The proposed rule amendment will allow for the safe and effective management of liquid digestate from manure digesters, regulate all manure digesters equally regardless of location, and allow the POTB and other anaerobic digesters to be commercially viable while providing environmental benefits.

The legal certainty the temporary rule amendment provides will allow POTB's anaerobic digester to resume operations. This will enable the facility to begin receiving manure and additional organic wastes, providing pathogen reduction and methane capture benefits, and increasing biogas production, creating renewable energy while protecting the environment. Without this temporary rule amendment, the POTB digester will remain idle. This puts the operator, Tillamook Biogas, LLC, at risk of non-performance under contract agreements with the POTB, the Tillamook County Creamery Association, participating dairy farmers, Tillamook PUD, seafood processors and other type 3 feedstock providers.

The proposed temporary rule amendment as presented for the commission's consideration would:

- Eliminate the inconsistent application of the pathogen reduction rule, regulating all facilities that digest manure equally, regardless of location;
- Encourage the anaerobic digestion of manure and the associated environmental benefits of pathogen reduction and biogas capture; and
- Limit regulatory and legal uncertainty related to the inconsistency in DEQ's rules, providing for the Port of Tillamook Bay's anaerobic digester to resume operations.

Prejudice to the public and affected parties

The current rule applies the pathogen reduction requirements inconsistently and creates prejudice against the public and affected parties.

The POTB's Hooley Digester was constructed in 2003, following a collaborative community effort including the dairy industry and local governments in Tillamook County convened to address manure management concerns. The dairy industry is critical to Tillamook County's economy. Regulations and coastal climate considerations required raw manure to be processed prior to land application. A centralized community digester was designed to treat manure from area farms, create power for the local community and provide compost fiber for fertilizer and animal bedding.

The community digester has been subsidized by the POTB for many years. Costs associated with hauling manure have increased and manure alone does not produce sufficient power revenue to ensure financial viability. The introduction of type 3 feedstocks improves methane generation, increasing revenue from power as well as tipping fees, and improving the commercial viability of the operation.

Significant public investment was made in the construction and operation of the POTB anaerobic digester. The Governor's North Coast Regional Solutions Team has been working closely with the POTB and its contracted operator, Tillamook Biogas, LLC, to ensure this valuable community asset does not remain idle. The current alignment of contracts presents an immediate and viable opportunity. Should this facility not become operational, these agreements and the entire project are at risk.

This proposed rule change addresses prejudice by reducing legal uncertainty and applying the pathogen reduction requirements consistently to all anaerobic digester operations. DEQ intends to address this inconsistency through permanent rulemaking. However, this matter is urgent given the current permit consideration and warrants this temporary rule amendment.

Consequences of not taking immediate action

- Underutilization or closure of public infrastructure at the POTB would continue without the proposed temporary rule and permanent rule changes.
- Anaerobic digesters not located at agricultural operations will remain subject to pathogen reduction limits that are not operationally obtainable. This is inconsistent with requirements for anaerobic digesters located at agricultural operations. This inconsistency in how the pathogen reduction rule is applied affects the commercial viability of facilities not located at agricultural operations, without environmental benefit.
- Failure to act promptly will result in the POTB's public infrastructure remaining underutilized. Delayed or halted operations will postpone the odor and pathogen reduction benefits provided by the digestion process, creating prejudice against the public. Residents of rural Tillamook County also stand to benefit from the green power promised to the local utility. The project's power purchase agreement, as well as farmer and feedstock agreements, will be at risk if this facility remains idle, creating prejudice against the public and affected parties.
- Potential environmental damage may occur from raw manure being applied to farmland without the environmental benefits gained from the process of pathogen reduction that occurs during anaerobic digestion.
- Potential environmental damage may occur from increased methane release due to increased storage and land application of raw manure that is not processed through anaerobic digestion. In contrast, biogas captured at anaerobic digestion facilities is not vented to the atmosphere, can be flared, upgraded to renewable natural gas for use in vehicles, or burned to create electricity, mitigating this potent greenhouse gas.

Affected parties

- Anaerobic digesters that land apply their digestate
- Port of Tillamook Bay
- Tillamook Biogas, LLC
- Tillamook PUD
- Tillamook County Creamery Association
- Participating dairy farmers
- Other feedstock providers

How temporary rule would avoid or mitigate consequences

The proposed temporary rule change would eliminate the inconsistent application of the pathogen reduction rule and provide regulatory and legal certainty to all parties. This will allow the POTB digester to resume operations with clear rule and permit direction. This temporary rule amendment would regulate facilities that digest manure equally and allow for soil application of liquid digestate from anaerobic digesters not located at agricultural operations. The temporary rule would avoid potential negative environmental consequences by allowing all anaerobic digesters to manage manure similarly, regardless of location. The proposed temporary rule would eliminate costly equipment and operations upgrades necessary for manure anaerobic digesters to meet the current liquid digestate pathogen

reduction limit and testing requirements. The proposed temporary rule would encourage the anaerobic digestion of manure and the associated environmental benefits of pathogen reduction and biogas capture.

Rules affected, authorities, supporting documents

Land Division

Materials Management

OAR 340-096-0140

- Amend OAR 340-096-0140 (1) and 140 (2) (*new language is in bold font*):

(1) All composting facilities must comply with this rule, except that agricultural operations as defined by ORS 467.120(2)(a) producing composted material and digestate only for on-farm use are not subject to the requirements of this rule. The department may require that an agricultural operation **or other facility whose digestate is excluded under section 2 of this rule** comply with this rule if the department determines that such compliance is necessary to protect human health or the environment.

(2) All composted material and digestate, excluding: **1) composted material and digestate that is sent as feedstock to a composter possessing either a composting permit or registration, or 2) digestate applied to soil at agronomic application rates and consistent with site restrictions in 40 C.F.R. §503.32(b)(5)**, must meet the following limits:

Statutory authority

ORS 459.045, 459A.025, 468.020, 468.065

Statute implemented

ORS 459.005, 459.015, 459.205

Legislation

Does not apply

Documents relied on for rulemaking

Document title	Document location
Safe Management of Liquid Digestate from Anaerobic Digestion – White Paper	40 Code of Federal Regulations Part 503 – Standards for the Use or Disposal of Sewage Sludge; Subpart D – Pathogens and Vector Attraction Reduction
Letter in support of temporary rule from ODFA	EPA Environmental Regulations and Technology Guidance Document – <i>Control of Pathogens and Vector Attraction in Sewage Sludge Under CFR Part 503</i>
Washington Dept. of Ecology <i>Guidelines: Operating an Anaerobic Digester Exempted From Solid Waste Handling Permit</i>	Washington Administrative Code 173-350 Solid Waste Handling Standards including sections: 220 Composting Facilities; 225 Other Organic Material Handling Activities; 230 Land Application; and 250 Anaerobic Digesters

Housing costs

As ORS 183.534 requires, DEQ evaluated whether the proposed rules would have an effect on the development cost of a 6,000-square-foot parcel and construction of a 1,200-square-foot detached, single-family dwelling on that parcel.

DEQ determined the proposed rules would have no effect on the development costs because the DEQ Solid Waste Composting rules only affect DEQ permitted composting facilities.

EQC prior involvement

DEQ presented proposed temporary rule amendments to the EQC at the Jan. 25, 2019, meeting, at which time the commission tabled the item for future consideration. At the commission's request, DEQ held a public comment period on the temporary rule. DEQ also added additional information to this report in response to EQC questions.

Implementation

Notification

The proposed temporary rules would become effective upon filing with the Secretary of State, immediately after EQC adopts them. DEQ would notify affected parties immediately after EQC adoption.

Compliance and enforcement

- Affected parties – DEQ permitted Solid Waste facilities
- DEQ staff – Materials Management regional staff
- Oregon Dept. of Agriculture Confined Animal Feeding Operation staff

Measuring, sampling, monitoring and reporting

- Affected parties – DEQ permitted Solid Waste facilities
- DEQ staff – Material Management regional staff
- Oregon Dept. of Agriculture Confined Animal Feeding Operation staff

Systems

None to update at this time

Training

- Affected parties – DEQ permitted Solid Waste facilities
- DEQ staff – Material Management staff
- Oregon Dept. of Agriculture Confined Animal Feeding Operation staff

Public involvement

Public comment period

DEQ held a public comment period for the proposed temporary rules from Thursday, Feb. 7, 2019, through 4 p.m. on Thursday, Feb. 14, 2019. DEQ did not consider any comments submitted after 4 p.m. on Feb. 14, 2019.

Summary of public comments and DEQ responses

DEQ received 16 comments from five individuals during the public comment period. DEQ did receive one comment after the close of the public comment period, as noted below. DEQ's response follows each comment. Original comments are on file with DEQ. DEQ changed the proposed temporary rules in response to comments described in DEQ's response to Comment 1 below.

List of Commenters			
#	Name	Organization	Comment Number
1	Thomas Benke	ECO LLC, The Environmental Compliance Organization LLC	1, 2, 3, 4, 5, 6, 7
2	Kevin Maas	Farm Power Northwest LLC	8, 9, 10, 11, 12, 13
3	Sarah Beaubien	Tillamook County Creamery Association	14
4	Anwar Shareef	BioGas Corp.	15
5	Tammy Dennee	Oregon Dairy Farmers Association	16
6	Thomas Benke		<i>Email received after the close of the comment period, not considered and no response provided</i>

Comment 1

There is a disconnect in the temporary rule between Section 1 referencing "other facility excluded under Section 2" and Section 2 excluding compost material and digestate, not a facility.

"If it is the DEQ's intention to exclude "off-farm" *facilities* that land apply their digestate (like the POTB facility) then the amendments as drafted do not accomplish that goal because ... the section (2) exclusion referenced in section (1) pertains only to *digestate*. If the DEQ intends to exclude from the Composting: Pathogen Reduction rule *facilities* that land apply their digestate, rather than just the digestate, then the proposed rule amendments must be redrafted and resubmitted for public comment."

- **DEQ response:** DEQ agrees that Section 1 could be clearer. DEQ has changed the language in Section 1 of the proposed temporary rule to read "other facility whose digestate is excluded under section 2." DEQ does not view this as a substantive change to the rule.

Comment 2

"DEQ states that amendments to the Composting: Pathogen Reduction rule are necessary "to ensure consistent requirements apply to the anaerobic digestion of manure" (meaning, as compared to excluded "agricultural operations"). The POTB unit is similar to "on-farm" digesters in that it will treat Type 2 (manure) feedstock, but it is NOT similar to them in that it will also treat Type 3 (food waste) feedstocks. By excluding from the Composting: Pathogen Reduction rule only "off-farm" Type 3 (food waste) composters that land apply their digestate, the Department is actually creating an unfair regulatory inconsistency between the POTB digester and other Type 3 composters that don't land apply their digestate but dispose of it in some other manner that is equally or more effective at pathogen reduction (like a municipal sewage treatment plant or an industrial waste water treatment unit)."

- **DEQ response:** The proposed temporary rule excludes any liquid digestate from the pathogen limit and testing if land applied at agronomic rates and in compliance with federal biosolids requirements, not just liquid digestate from manure digestion. There are anaerobic digesters both on farm and off farm that accept Type 3 feedstocks in the state, land apply liquid digestate, and test for pathogens and meet pathogen limits. This is because Type 3 feedstocks, such as food waste, contain significantly lower amounts of fecal coliform bacteria (pathogen indicator) as compared to manure. Research has shown that, if applied properly at agronomic rates and in compliance with federal biosolids requirements, soil application of digestate is not an environmental concern for pathogens. To address any risks associated with nutrient loading, digestate must be applied to soil at agronomic rates and in compliance with federal biosolids requirements. EPA, through federal law, recognizes soil application of digestate and biosolids from municipal sewage treatment plants as an appropriate pathogen reduction strategy. Sewage treatment sludge in Oregon is applied to soil as an approved management strategy. In addition, the DEQ compost rules do allow liquid digestate to be sent to wastewater treatment plants or managed under an NPDES permit (such as a CAFO NPDES permit).

Comment 3

"Any *post hoc* amendment to OAR 340-096-0140 should not apply retroactively to the existing POTB permit. If the POTB requests a permit modification to avoid any of the fecal coliform limits

of subsection (2) of the rule (as reflected in paragraph 3.2(1) of the permit), or to avoid any of the other requirements of subsections (3), (4) and (5) of the rule, Hayes must be given an opportunity to comment on and challenge the permit.” Temporary rule change should not apply to solid waste permits issued before the temporary rule change.

- **DEQ response:** The POTB requested a permit modification in order to accept type 3 feedstocks. The POTB permit modification request did not propose to alter fecal coliform limits or testing requirements in its permit. Fecal coliform limits were not included in the POTB permit before the POTB request to modify the permit to receive type 3 feedstocks. DEQ added the language to permit condition 3.2 (1) of the permit when DEQ recognized the inconsistency in the rules regarding how liquid digestate is managed. DEQ granted a request for reconsideration of the POTB permit modification decision and will be issuing a decision on reconsideration in the near future. If EQC adopts the proposed temporary rule, DEQ will evaluate whether any additional changes to the permit modification are necessary before issuing its decision on reconsideration.

Comment 4

DEQ has not considered nutrient loading or water quality issues in the Tillamook Bay watershed when issuing this permit.

“If land applied, digestate and other composted material from the POTB composting facility will contribute to the load of nutrients received by Tillamook Bay and other waters within the Tillamook Bay watershed. As Type 3 (food waste) feedstocks are introduced, nutrient loads will necessarily increase relative to loads from composting of manure only. There has apparently been no consideration of the impact on water quality in the watershed of importing food waste from outside the watershed or of substituting composting for biological reduction of food waste generally. Simply put, there is already a shortage of land suitable for land disposal of manure in Tillamook County and the introduction of composted food waste will only exacerbate pollution (including, for example, low dissolved oxygen) in the basin.

The waters of the Tillamook Bay Watershed are water quality limited for bacteria, including fecal coliform where the standards of the National Shellfish Sanitation Program apply in the estuarine shellfish growing waters of Tillamook Bay. Chronic bacterial contamination is pervasive in spite of the fact that every dairy in the watershed is required to apply manure at agronomic rates and in accordance with an Animal Waste Management Plan ("AWMP") developed for each dairy individually. The POTB digester was originally constructed to address this problem as part of the Methane Energy and Agricultural Development ("MEAD") program. The MEAD digester was built and operated to reduce the pathogen loading in the watershed from the use of manure as fertilizer.

The pathogen reduction function was in addition to, not instead of, best management practices for utilization of manure as fertilizer. This function will become increasingly important as DEQ and ODA implement the zero (load) allocation for fecal coliform from Tillamook's dairies that DEQ established in the 2001 Tillamook Bay Watershed TMDL.”

- **DEQ response:** DEQ agrees that anaerobic digestion of manure will significantly reduce pathogens before land application and that land application of liquid digestate at agronomic rates will further reduce pathogens to safe levels. DEQ's water quality program and the Oregon Department of Agriculture consider that anaerobic digestion of

manure before land application is environmentally preferable to land application of undigested manure.

DEQ also consulted with ODA on the POTB permit modification over how nutrient loading of additional feedstocks will affect the CAFO permit Nutrient Management Plans. ODA will work with participating farms to ensure appropriate application within nutrient loading restrictions of each farm. DEQ has considered nutrient loading in the watershed and inserted conditions in POTB's permit that require nutrients to be applied at agronomic rates and in compliance with a nutrient management plan approved by ODA. DEQ rules and DEQ's permit require that Tillamook Biogas, LLC ensure that they have the locations and a structure set up for this digestate as they begin to accept Type 3 feedstocks. DEQ must approve the types of feedstocks received and the disposition of the digestate removed from the digester.

In addition, DEQ understands that participating farms will only receive digestate that contains the equivalent nutrient content as contained in the manure that was originally sent to the POTB for anaerobic digestion. DEQ must approve the disposition of digestate at participating farms and also must approve the disposition of excess digestate that is not going to participating farms.

The temporary rules allow land application of liquid digestate at agronomic rates and in compliance with federal biosolids regulations to meet pathogen requirements. Type 3 feedstocks do not contribute significantly to pathogen levels.

Comment 5

“Amending the Composting: Pathogen Reduction rule to exclude the POTB digester from compliance with the rule in order to resolve an inconsistency between "off-farm" manure digesters and "on-farm" manure digesters ("agricultural operations") takes the State of Oregon in the wrong direction. The present inconsistency should be resolved by amending the Composting: Pathogen Reduction rule to remove the exception for agricultural operations.

The final report for the MEAD project prepared by the POTB dated March 15, 2006 concluded: *The project has been successful in demonstrating the substantial removable of pathogens and diseases from raw manure and the beneficial use of liquid effluent for field application.*

If the 1,000 MPN limit for fecal coliform is not actually "operational obtainable," then the POTB should be required to establish what amount of pathogen reduction *is* feasible rather than avoid any operational limit at all.”

- **DEQ response:** The report the commenter cites asserts that anaerobic digestion reduces pathogens but does not provide analytical evidence of pathogen reduction, particularly whether digestate results meet the 1000 MPN pathogen reduction limit. DEQ agrees and supports anaerobic digestion of manure before land application because anaerobic digestion significantly reduces pathogens. In addition, based on research of other states and federal requirements and consultation with ODA, DEQ considers that liquid digestate that is land applied at agronomic rates will result in a safe level of pathogens that meets or exceeds the pathogen limit of 1000 MPN because pathogens are further reduced as the digestate moves through soil. Digestion of manure significantly reduces pathogens and

soil application further reduces pathogens. Application at agronomic rates provides control such that liquid digestate is not over applied and reduces the risk of surface and groundwater pollution.

The pathogen reduction limit of 1,000 MPN fecal coliform per gram solids is taken from EPA biosolids rules as a standard for safe use by the public. Under the current Pathogen Reduction rule, agricultural operations are exempted from meeting that standard because farms apply digestate to soil as a fertilizer and in the soil application, pathogens are further reduced to safe levels. Digestate from the POTB digester is also applied to soil as a fertilizer and obtains a similar level of safe pathogen reduction.

The proposed temporary rule change is intended to treat digestate applied to soil at agronomic rates the same regardless of whether the digester is located on an agricultural operation or not. There is no need to establish a feasible level of pathogen reduction because research reveals digestate soil application at agronomic rates further reduces pathogens to safe levels. Research also indicates because of pathogen reduction within the digestion process, digestate contains much lower pathogen levels when applied to soil than raw manure. “Wet” anaerobic digesters, such as POTB, typically reduce fecal coliform levels from tens of millions per gram solids for raw manure to the two to three thousand per gram solids for digestate.

If the temporary rule is adopted as proposed, POTB will be exempt from meeting the pathogen reduction standard but will still be subject to the time and temperature operating requirements of section 3 of the rule and the pathogen reduction testing requirements for digestate in sections 4 and 5 of the rule. The time and temperature operating requirements are intended to promote optimal digester operation and increase pathogen reduction. Testing digestate for success in pathogen reduction provides an operational management tool necessary for successful digester operation.

Comment 6

“At a minimum, the time and temperature requirements of OAR 340- 96-0140(3) Methods of Pathogen Reduction are operationally attainable and there is no basis for their avoidance by the POTB.”

- **DEQ response:** POTB's permit does not exempt the anaerobic digestion facility from pathogen reduction time and temperature requirements identified in section 3 of the Pathogen Reduction rule. POTB is expected to meet the requirements of OAR 340-096-0140(3) and this process is described in their operations plan that DEQ has approved.

Comment 7

The commenter does not agree that meeting the pathogen reduction requirements is not economically viable for manure digesters.

- **DEQ response:** Operators with Biogas Corporation have indicated the POTB digester operations would need to be adjusted to increase operating temperature or increase manure retention time, or both, in order to meet the pathogen reduction standard. The increased costs to do so would not be economically viable. The land application of liquid digestate at agronomic rates and in compliance with federal biosolids rules will assure that pathogen reduction is to safe levels that are environmentally protective.

Comment 8

“The central motivation behind DEQ’s temporary rule is to legitimate its issuance of a modified solid waste disposal permit to the Port of Tillamook Bay (POTB) for its anaerobic digester. DEQ has plainly stated this rationale in its Notice of Proposed Temporary Rulemaking (the Notice) relating to the Composting Special Pathogen Reduction Temporary Rule.... The POTB’s modified permit would allow the POTB digester to accept not only manure, which was allowed under its original permit, but also “Type 3” non-manure feedstocks. Farm Power Northwest and its subsidiaries (collectively referred to herein as “Farm Power”) have opposed POTB’s modified permit on numerous grounds, both in comments submitted before DEQ issued the POTB permit, subsequently in a Petition for Reconsideration, and during the Environmental Quality Commission’s (EQC’s) public forum held on January 24, 2019. All arguments as outlined in Farm Power’s Petition for Reconsideration and in the written comments submitted previously to the EQC are incorporated herein by reference.”

- **DEQ response:** DEQ agrees that the proposed changes in the temporary rule ensure that the permit conditions related to land application of liquid digestate from digestion of manure in the Port of Tillamook Bay DEQ solid waste compost permit will be supported by rule. However, more comprehensively stated, this temporary rule would codify DEQ’s longstanding intent for regulating anaerobic digesters. Moreover, the rule amendment would apply to any anaerobic digester that land applies its digestate, not just the POTB’s facility.

Comment 9

The proposed rule change, and the Port of Tillamook Bay’s modified permit are not about the digestion of manure.

“The temporary rule overview states that “DEQ proposes modifying the compost rules to ensure consistent requirements apply to the anaerobic digestion of **manure**.” (Emphasis ours.) However, the temporary rule does not actually require that a digester excluded from compost rules must digest any manure. A digester could operate entirely from non---manure “Type 3” feedstocks and still be excluded from the rule’s pathogen limitations requirements. The temporary rule thus starts out by ignoring DEQ’s own distinction of Type 3 feedstocks, as “determined by the Department to pose...a higher level of risk from physical contaminants and humans pathogens” compared to manure. Although manure is different than Type 3 feedstocks, the temporary rule attempts to treat them the same simply because they can both be placed in a digester.

After describing the revenue possibilities of allowing Type 3 feedstocks, DEQ states “it is not environmentally beneficial to apply the pathogen reduction limitations to land applied **manure** digestate.” (Emphasis ours.) However, the temporary rule exempts digestate from pathogen testing without including any requirement that it contain any manure at all. DEQ offers no analysis of the environmental benefits of pathogen reduction limitations on digestate derived from Type 3 feedstocks, which can include putrescent meat and egg disposal, compostable food from curbside bins, slaughterhouse waste, and almost any other organic material short of diseased cow bodies. DEQ also does not address the additional cost to responsibly dispose of digestate from Type 3 feedstock, including larger winter storage tanks, added land base, and additional hauling by truck.”

- **DEQ response:** DEQ permittees may submit permit modification applications to DEQ for review and determination if the proposal is protective of public health and the environment. If after review and a public comment period DEQ determines the proposal complies with state law and protects public health and the environment, DEQ will issue the permit modification. In the case of POTB, DEQ considered the proposed acceptance of type 3 feedstocks to be protective as proposed and issued the permit with a permit requirement that digestate applied to soil must be done so at agronomic application rates and in accordance with an ODA approved nutrient management plan. The POTB anaerobic digester permit does not limit the types or quantities of feedstocks accepted, but the facility must be operated in a manner that is protective of public health and the environment, including the disposition of digestate. DEQ rules and the POTB permit require that POTB obtain DEQ approval of the operations plan including feedstocks accepted by the anaerobic digester and disposition of digestate.

The temporary rule language applies to digestate from any anaerobic digester that takes any type of feedstock that is to be applied to soil. The POTB digester uses manure as its primary feedstock and sends it back to farms for soil application. During the permit modification process, DEQ discovered that POTB is not an agricultural operation and was subject to meeting a pathogen reduction standard of 1000 MPN. Agricultural operations (farms) that have anaerobic digesters digesting manure also apply digestate to soil but are exempt from meeting that standard. This presented a discrepancy in the rules.

That the POTB digester uses manure as a feedstock and was subject to the pathogen reduction standard under existing rules, pointed out this discrepancy. Manure contains a very high fecal coliform count (in the 10s to 100s of millions). Food waste generally has a significantly lower fecal coliform count (hundreds to low thousands). Food waste digesters in Oregon are not exempt and test and meet the standard.

The temporary rule will allow any digestate that is applied to soil at agronomic rates to be exempted from meeting the pathogen reduction limits regardless of the digester's location. Liquid digestate from digestion of type 3 feedstocks and manure may contain a higher nutrient content. The temporary rules require that all liquid digestate that is applied to soil must be applied at agronomic rates. These are rates at which nutrients are applied to soil to optimize plant growth and minimize excess application to avoid runoff.

The costs described above regarding disposal of digestate from type 3 feedstocks including larger winter storage tanks, added land base, and additional hauling by truck are not the subject of this rulemaking. Operational requirements for storage and hauling are to be addressed within operations plans for individual anaerobic digesters permitted by DEQ. Operations plans must be reviewed and approved by DEQ.

Comment 10

“DEQ continues to refer to the “inconsistent treatment of manure digesters” without disclosing that exempted on---farm digesters **MUST** operate primarily on manure (no less than 85%) and operate within other agricultural CAFO permitting restrictions. There is no similar requirement in the temporary rule-----it simply allows the POTB digester the benefit of agricultural exemptions without any of the attendant requirements. The temporary rule even allows disposal of effluent under a “nutrient management plan”—not on a permitted dairy farm and not covered by any permit at all.

Given DEQ's description that the POTB digester was unable to operate economically without Type 3 feedstocks, a reasonable person could conclude that the most profitable mix would be no manure and 100% imported waste. Indeed, the recently issued ODEQ permit for the POTB digester puts **no limit whatsoever** on the total volume of Type 3 feedstocks that could be imported into this exempted digester.

Ultimately, this temporary rule does not maintain a link between a traditional, manure---based agricultural digester and what would be allowed by the rule. The temporary rule allows a non---agricultural digester such as POTB to import unlimited non---manure feedstocks, while operating under rules that should only apply to agricultural operations. Accordingly, under the temporary rule, DEQ--- permitted digesters in rural communities will be given incentive to import as much waste as possible from regulated urban facilities. The consequences of this outcome would have devastating effects on Tillamook---area agricultural operations.”

- **DEQ response:** DEQ-permitted anaerobic digester operators may propose to accept any type of feedstock and any amount that can be demonstrated to work for the digestion process, and can be stored, processed and removed in an environmentally sound manner; including management and disposition of digestate.

Anaerobic digesters operated under an ODA CAFO permit are limited by zoning restrictions and ODA CAFO permit limitations to operating as an agricultural operation. This means managing farm manure, farm wastes and small amounts of off-farm feedstocks. Commercially operated anaerobic digesters that receive various feedstocks including manure, food waste, grease and sludge, are not considered agricultural operations and require a DEQ anaerobic digester permit.

Comment 11

The POTB digester does not require a modified permit in order to operate.

“Since 2013, the Port of Tillamook Bay (POTB) digester has operated under a solid waste permit that permitted only manure feedstock with reduced digestate testing requirements. This permit was valid and reasonable and could have allowed the POTB digester to continue operation with manure feedstock through December 31, 2024. The sole reason for POTB's request to amend the permit almost seven years before its expiration—and the entire reason behind this hurried rulemaking—was to allow Type 3 feedstocks into the POTB digester without any corresponding increase in operational restrictions or regulations.

DEQ claims “[f]or the first time since the facility was shuttered, all permits and agreements are in place for operations to resume.” This ignores the fact that the facility had an active solid waste permit during the entire period of its shutdown.

The availability of manure was never in doubt, and there was always the option of renewing the previous power---purchase arrangements with Portland General Electric. DEQ's focus on now quickly rewriting rules to allow unfettered operations at a specific facility seems to conflict with its mission of “restoring, maintaining, and enhancing the quality of Oregon's air, land, and water.””

- **DEQ response:** In response to an application to modify POTB's permit to accept type 3 feedstocks, DEQ issued a modified permit to POTB. POTB requested this modification to

assure the financial viability of the digester. During the permit modification process DEQ recognized an inconsistency in our Pathogen Reduction rules, as explained earlier in this document, which if unaddressed could jeopardize the start-up and operation of the POTB digester. DEQ established a permit condition with the permit modification to ensure that land application of liquid digestate will achieve similar pathogen reduction as liquid digestate that is land applied from on-farm anaerobic digesters.

DEQ agrees that the previous permit, as well as the permit modification, treats digestate from manure similar to how on-farm digesters land apply digestate from manure. The existing rules treat digestate differently depending on the location of the digester. The temporary rule change corrects an unintended inconsistency in the existing rule, ensuring that digestate is treated similarly regardless of the location of the digester and align the permit conditions rule. DEQ determined the inconsistency can be addressed through a temporary rule process.

Comment 12

The urgency of this temporary rulemaking is based on the need to commence POTB's unspecified, undisclosed feedstock agreements.

"The Notice indicates that "Feedstock agreements for managing organic materials such as seafood processing waste are at risk, limiting alternatives to landfilling," and that "One agreement provides for the facility to accept seafood processing waste beginning April 1, 2019." DEQ is thus directing, as a matter of urgent public policy, the modification of its regulations on the basis of one or more unspecified feedstock agreements.

These agreements, which have been deemed confidential and private, should not dictate public environmental policy for the following reasons:

- 1) DEQ implies that these private "agreements" could be lost without emergency rulemaking, but carefully avoids providing any additional information about those agreements, including whether POTB is bound by active non-performance clauses, or how these agreements must be immediately protected for the project's economic viability.
- 2) The developer may have entered into agreements to take Type 3 Feedstocks when it did not in fact possess the permits to do so.
- 3) The waste to be disposed of at the POTB is presumably being disposed of elsewhere at present without creating an economic or environmental danger. In fact, some of the wastes anticipated by the Port digester are likely already being disposed of at other digesters—or could be if the waste producers desired.
- 4) No party possessing said waste has provided public comments in favor of the permit or detailing the need for it to be granted urgently, and without a limit on feedstock intake or any of the protections we are requesting. Essentially, it appears that ODEQ is undertaking this rulemaking effort on behalf of silent anonymous parties to further their business interests.

Oregon law requires that, in enacting temporary rules, an agency must demonstrate that "a failure to act promptly would result in serious prejudice to the public interest or the interest of the parties concerned." ORS 183.403(2)(b)(C).

With regard to this temporary rulemaking, DEQ has only suggested, without any supporting documentation, that POTB's business and financial interests could potentially be affected in the absence of this temporary rule. By contrast, the rule itself would have considerable financial and environmental impacts the digester industry, as well as the farming community and residents of Tillamook County. In short, temporary rulemaking is *not* the appropriate mechanism by which to address the deficiencies associated with the POTB modified permit."

- **DEQ response:** DEQ agrees that the temporary rules will allow the Port of Tillamook Bay anaerobic digester to operate as intended under DEQ rules. The rule change is necessary to rectify an inconsistency in the rule. DEQ did not intend to treat liquid digestate applied to soil at agronomic application rates from off-farm digesters differently than on-farm digesters. DEQ believes a temporary rule is an appropriate response to this unintended consequence of its rules, as explained in the staff report. DEQ has identified that financial implications from the unintended consequences of a rule are avoided through adoption of the temporary rule. As further explained in the staff report, other reasons supporting the need for the temporary rule include environmental benefits and public benefits resulting from the operation of the POTB digester.

Comment 13

DEQ's proposed rule does not align with Washington State's anaerobic digestion composting rules or EPA's rules.

"Safe Management of Liquid Digestate from Anaerobic Digestion—White Paper," a document relied on for this rulemaking, concludes "DEQ should consider language used in Washington state anaerobic digester rules *WAC 173---350---250*." We are very familiar with this language, having helped write it and having operated under it for almost a decade. However, DEQ does not make any attempt to follow the white paper's recommendation; DEQ's temporary rule does not require any manure (WAC 173 requires at least 50%), place any restrictions on Type 3 feedstock volumes (WAC 173 limits them to 30%), or ensure sufficient digestate capacity on associated agricultural operations (WAC 173 requires dairy nutrient management plans to be updated for additional digestate before an exempt digester can begin operations). While DEQ is correct to look to Washington's rule for guidance, given that it applied under the same circumstances at a half---dozen digesters for ten years, DEQ should follow the Washington rule *in full*, including all the protections developed for this situation.

40 C.F.R. §503.32(b)(5), the EPA regulation referenced in the temporary rule, places harvesting and access restrictions on land that receives exempted digestate. It is highly unlikely that any POTB digester agreements that exist with dairy farmers include these restrictions, and it is also unlikely that dairy farmers will accept such harvesting and access limitations on their operations. The POTB modified permit includes no such requirement. Similarly, the temporary rule does not require CAFO permits to be updated to accept off---farm digestate as a condition of operation, which means that dairy farmers will have to receive more digestate than what is specified in their permits, or the digestate will have to be spread at non---permitted operations."

- **DEQ response:** DEQ agrees that Oregon treats regulation of anaerobic digesters differently than Washington State. DEQ referenced Washington's regulations to evaluate pathogen reduction requirements, not feedstock limitations. DEQ agrees that liquid digestate applied to soil must be at agronomic rates and in compliance with federal

biosolids requirements that limit animals on fields for a time period where digestate has been applied.

Comment 14

“The Tillamook County Creamery Association supports the temporary rule change. Because TCCA supports development of manure digesters in a variety of locations and sizes, we believe that the pathogen reduction rule should be consistent whether the digester is on-farm or off-farm. There is public infrastructure that is currently sitting idle, which could be providing social and environmental benefits. While that asset sits idle, our farms and fisheries have limited capacity for their manure and food waste. We appreciate your consideration of a temporary rule change to accelerate positive environmental outcomes.”

- **DEQ response:** Thank you for the comment.

Comment 15

“This letter supports the proposed temporary amendment of the administrative rule. Under the current rules there could be two digesters located on adjacent properties both of which process dairy manure from one or more dairies along with food waste. Both digester facilities process the manure and food waste through their system and then return the digestate to the dairy farmers that supplied the manure for land application according to the dairies nutrient management plan. However, depending on the property the facility is located on, one could be required to meet additional pathogen reduction requirements that could make the facility infeasible. This is the case in Tillamook where we are trying to restart the Port of Tillamook Bay digester facility. In order to be able to run a viable business, this facility needs to be able to process food waste. Co-digestion of dairy cow manure and food waste is common practice for digesters of this size and location in relation to several dairy farms. The way the current rules are written put the extra burden of additional pathogen reduction on our proposed facility making the facility economically inviable. This rule change is necessary to provide consistent rules for facilities that process dairy cow manure and food waste.

Our facility cannot restart until there is certainty that we will be able to process food waste along with dairy manure. All other agreements and permits have been finalized waiting on this one last item. .. We are also concerned about meeting our commitments to process certain quantities of material (some of which is seasonal) and to deliver power on a timely basis to the various community stakeholders in this project. ODEQ’s desire to provide consistent requirements for pathogens with this temporary rule change makes great sense and is appreciated.”

- **DEQ response:** Thank you for the comment.

Comment 16

“The Oregon Dairy Farmers Association wishes to place on record support for the change to existing rulemaking because the current rules apply the pathogen reduction requirements in an inconsistent manner. An alignment and consistent rulemaking process will be beneficial to those who are seeking new permits and allows for existing permit holders to request a reconsideration of their permits, should they so choose. Thank you for your consideration and prompt attention to bring consistency to the pathogen reduction requirements through this rulemaking process.”

- **DEQ response:** Thank you for the comment.