



Oregon Department of Environmental Quality
July 18-19, 2019
Oregon Environmental Quality Commission Meeting
Agency Staff Report
Rulemaking, Action Item No.

Composting Permanent Rules 2019

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DEQ Recommendation

DEQ recommends that the Environmental Quality Commission adopt the proposed rules in Attachment A as part of Chapter 340 of the Oregon Administrative Rules.

Proposed motion language:

“I move that the Oregon Environmental Quality Commission adopt the rule amendments for pathogen reduction standards in composting, as seen in Attachment A of this report, as part of Chapter 340 of the Oregon Administrative Rules.”

Introduction

DEQ requests that the Oregon Environmental Quality Commission approve the proposed permanent rule relating to pathogen reduction standards in composting. The proposed rule is identical to, and would make permanent, the temporary rule amendment EQC adopted Feb. 25, 2019.

Brief history

DEQ added anaerobic digester regulations to DEQ composting rules during the 2012 Conversion Technology Rulemaking. These regulations included OAR 340-096-0140, Special Rules Pertaining to Composting: Pathogen Reduction. This rule established methods for pathogen reduction, as well as testing schedules and pathogen limits. DEQ intended these provisions to ensure that facilities are designed and operated in a manner that protects public health and the environment and that compost and digestate available to the public will meet pathogen reduction limits.

In the fall 2018, DEQ reviewed an application for a permit modification to the Port of Tillamook Bay’s anaerobic digester permit. DEQ identified an inconsistency in the pathogen reduction requirements of OAR 340-096-0140. In particular, that rule required different pathogen reduction requirements for digestate based on whether or not the generating digester was considered an “agricultural operation,” as defined by ORS 467.120(2)(a). As a result, digestate produced on an agricultural operation, such as a farm, did not have to meet a specified pathogen reduction limit. However, digestate produced in locations other than on a farm had to meet the limit in OAR 340-096-0140, despite the fact that digestate from all anaerobic digesters in Oregon is applied to farm soil for crop production. EPA research indicates soil application of digestate completes the pathogen reduction process and renders the digestate safe for human health and the environment as long as it is applied at agronomic application rates.

On Feb. 25, 2019, EQC adopted a temporary rule amendment to ensure that testing requirements for any digestate applied to land as a fertilizer, otherwise known as “land applied,” were the same regardless of whether the anaerobic digester producing the digestate qualifies as an agricultural operation by definition. The temporary rule amendment exempts digestate from having to meet the pathogen limits of OAR 340-096-0140 if the digestate is land applied at agronomic rates in compliance with federal requirements for biosolids under 40 C.F.R. §503.32(b)(5). These federal biosolids requirements consist of site restrictions on

applying digestate to ensure that biological processes within soil, and exposure to sun and weather, further reduce pathogens in digestate to safe levels for public health and the environment. They restrict farming practices, such as animal grazing and public access, on land where the digestate is applied for a period of time, to allow further pathogen reduction. Compliance with these federal site restrictions, coupled with land application at agronomic rates, ensures that pathogen reduction for digestate occurs at safe levels that are environmentally protective.

The temporary rule will expire Aug. 24, 2019. The proposed rule would make the temporary rule amendment permanent.

Regulated parties

The proposed rule would affect anaerobic digesters that are not considered “agricultural operations” as the term is defined by ORS 467.120(2)(a). These affected anaerobic digesters would not have to meet the limit and testing requirements in OAR 340-096-0140 when producing digestate that is land applied at agronomic application rates and consistent with site restrictions in 40 C.F.R. §503.32(b)(5).

Statement of need

What need would the proposed rule address?

The proposed rule would address the need for a consistent approach to pathogen reduction standards for digestate applied to soil on farms.

Before the temporary rule adoption, OAR 340-096-0140 required all digestate produced by anaerobic digesters to meet certain pathogen reduction standards. However, agricultural operations producing digestate only for on-farm use were not subject to this rule. This created an inconsistency: digestate produced for on-farm use by anaerobic digesters not considered agricultural operations had to meet pathogen reduction standards that digestate produced for on-farm use by agricultural operations were exempt from. These pathogen reduction requirements were modeled on EPA’s Biosolids 503 regulations for Class A biosolids and were intended for composting operations. The goal of Class A processes is to reduce the level of pathogens below the level at which they may cause disease when exposed to the public. Class A biosolids may be used without site restrictions, and must be tested to show that the microbiological requirements are met. As a result, in producing digestate for on-farm use, anaerobic digesters not located on agricultural operations, in order to meet pathogen reduction limits, would need to operate the digester for a longer period of time or at hotter temperatures, or both, than a digester located at an agricultural operation.

In February 2019, the commission adopted a temporary rule amendment to correct this inconsistency. The temporary rule ensured that digestate would be exempt from the pathogen reduction limits, regardless of whether the digester is considered an agricultural operation or not, if the digestate is applied to land at agronomic rates and consistent with site restrictions set forth in 40 C.F.R. §503.32(b)(5). These site restrictions are taken from

federal Biosolids 503 regulations for Class B biosolids, which do not have to meet Class A biosolids pathogen reduction requirements but are restricted to application to the land as fertilizer. These site restrictions include, for instance, restricting for a period of time public access and certain farming practices (such as animal grazing) on land to which Class B biosolids have been applied. Without a permanent rule change, the temporary rule will expire in August 2019.

How would the proposed rule address the need?

The proposed rule addresses the need described above by ensuring that digestate is exempt from pathogen reduction testing limits when it is applied to soil at agronomic application rates and under federal site restrictions, regardless of whether or not the digester is located on an agricultural operation.

The temporary rule will expire in August 2019, as any temporary rule may be in effect for no more than 180 days. If the rule expires, it will re-introduce regulatory inconsistency of how digestate is treated based on the location, on-farm or not, of the anaerobic digestion unit.

How will DEQ know the rule addressed the need?

DEQ will know the need was met if digester operators can operate safely without being subject to inconsistent or unnecessary pathogen reduction requirements.

There is currently one DEQ permitted anaerobic digester this rule change directly affects. DEQ expects another to be directly affected in spring 2020. DEQ will work with the Oregon Department of Agriculture in monitoring these anaerobic digesters, along with anaerobic digesters located on agricultural operations, to ensure that pathogen reduction standards of their digestate is consistent.

Rules affected, authorities, supporting documents

Lead division

Land Quality

Program or activity

Materials Management

Chapter 340 action

Amend – OAR

340-096-0140 (permanent)

Repeal – OAR

340-096-0140 (temporary)

Statutory authority – ORS

468.020

468.065

459.045

459A.025

Statutes Implemented – ORS

459.005

459.015

459.205

Documents relied on for rulemaking

| Document title | Document location |
|---|--|
| EQC Staff Report for Composting Special Pathogen Reduction Temporary Rule 2019 (Feb. 25, 2019) | EQC Staff Report for Composting Special Pathogen Reduction Temporary Rule 2019 |
| 40 Code of Federal Regulations Part 503 – Standards for the Use or Disposal of Sewage Sludge; Subpart D – Pathogens and Vector Attraction Reduction | 40 Code of Federal Regulations Part 503 |
| EPA Environmental Regulations and Technology – <i>Control of Pathogens and Vector Attraction in Sewage Sludge</i> | Control of Pathogens and Vector Attraction in Sewage Sludge |
| Washington Dept. of Ecology - <i>Guidelines: Operating an Anaerobic Digester Exempted From Solid Waste Handling Permit</i> | Washington Dept. of Ecology - Guidelines |

Fee Analysis

This rulemaking does not involve fees.

Statement of fiscal and economic impact

Fiscal and Economic Impact

This rulemaking's purpose is to permanently adopt the temporary rule amendments to the compost rules that the Environmental Quality Commission adopted Feb 25, 2019. Adopting the proposed rule amendments will not have any fiscal impact different from, or in addition to, the impact the temporary rule amendments imposed. The temporary rule amendments corrected an inconsistency in the treatment of digestate under OAR 340-096-0140.

When compared to the version of OAR 340-096-0140 in effect before Feb. 26, 2019, the temporary and proposed permanent rule amendments could have a positive fiscal impact on DEQ-permitted anaerobic digesters that do not meet the standards for being considered an agricultural operation. Such anaerobic digesters, when producing digestate for land application, would not have to operate their anaerobic digestion technologies either for as long of a time, or at as high of a temperature, or both, in order to meet the previously more stringent pathogen reduction requirements. This may result in a savings in energy and labor costs.

The remainder of this fiscal impact statement will further describe the impact that adopting the proposed changes could cause, when compared to the version of OAR 340-096-0140 that was in effect before Feb. 26, 2019.

Statement of Cost of Compliance

State and federal agencies

DEQ anticipates no direct or indirect impact on state or federal agencies.

DEQ

Direct Impacts

There are no anticipated direct impacts to DEQ.

Indirect Impacts

There are no anticipated indirect impacts to DEQ.

Local governments

Direct Impacts

There are no anticipated direct impacts to local governments.

Indirect Impacts

There are no anticipated indirect impacts to local governments.

Public

Direct Impacts

DEQ does not anticipate direct impacts to members of the public because they are not subject to the rule.

Indirect Impacts

There are no anticipated indirect impacts to the public.

Large businesses - businesses with more than 50 employees

Direct Impacts

DEQ anticipates a direct impact to one large business. The rule amendment will directly affect Shell New Energies, a DEQ-permitted anaerobic digester in Oregon. While Shell New Energies has fewer than ten employees, it is a subsidiary of Shell Oil, a national company.

The direct impact on Shell New Energies would likely be a decrease in facility operational costs, if the facility starts to process manure, as planned in the future. For digestate that will be land applied at agronomic rates in compliance with federal biosolids site restrictions, the digester would not have to process its feedstock (e.g., the material that is used in anaerobic digestion) for either as long or at as high of a temperature, or both, as would be required in order to achieve the pathogen reduction limits set forth in OAR 340-096-0140.

Indirect Impacts

There are no indirect impacts to large businesses.

Small businesses – businesses with 50 or fewer employees

Direct Impacts

DEQ anticipates a direct impact to the anaerobic digester of at least one small business, the Port of Tillamook Bay. The rule amendment would likely prevent an increase in facility operational costs because the anaerobic digester would likely not need to process the feedstock for either as long, or at an increased temperature, or both, to achieve pathogen reduction limits.

Indirect Impacts

There are no anticipated indirect impacts to small businesses.

a. Estimated number of small businesses and types of businesses and industries with small businesses subject to proposed rule.

The proposed rule amendment will affect the anaerobic digester of at least one small business, the Port of Tillamook Bay.

b. Projected reporting, recordkeeping and other administrative activities, including costs of professional services, required for small businesses to comply with the proposed rule.

The proposed rule change will not require any additional administrative activities by the Port of Tillamook Bay's anaerobic digester.

c. Projected equipment, supplies, labor and increased administration required for small businesses to comply with the proposed rule.

The proposed amendments will not require any business to use additional resources.

d. Describe how DEQ involved small businesses in developing this proposed rule.

DEQ spoke with the two affected anaerobic digester operators about the amendment. DEQ conducted a public comment period during which any person was able to comment about the rule changes.

Documents relied on for fiscal and economic impact

DEQ did not use any documents to determine fiscal impact. DEQ discussed the fiscal impact of this rule with affected anaerobic digester facility operators in developing its staff report for the temporary rule.

Advisory committee fiscal review

DEQ appointed an advisory committee. As ORS 183.33 requires, DEQ asked for the committee's recommendations on:

- Whether the proposed rules would have a fiscal impact,
- The extent of the impact, and
- Whether the proposed rules would have a significant adverse impact on small businesses; if so, then how DEQ could comply with ORS 183.540 reduce that impact.

The committee reviewed the draft fiscal and economic impact statement. The committee agreed with DEQ that the proposed rule, when compared to the version of OAR 340-096-0140 in effect before the temporary rule's adoption, would likely result in a decrease in the cost of compliance for anaerobic digesters not considered agricultural operations. The committee reviewed and discussed the fiscal impact statement and determined that the proposed rule would not have a significant adverse impact on small businesses in Oregon.

Advisory committee members' comments are summarized in written meeting minutes posted on the advisory committee web page here: [Composting Pathogen Reduction 2019](#).

Housing cost

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.

Federal relationship

ORS 183.332, 468A.327 and OAR 340-011-0029 require DEQ to attempt to adopt rules that correspond with existing equivalent federal laws and rules unless there are reasons not to do so.

The proposed rules are not different from or in addition to federal requirements.

Land use

Land-use considerations

In adopting new or amended rules, ORS 197.180 and OAR 340-018-0070 require DEQ to determine whether the proposed rules significantly affect land use. If so, DEQ must explain how the proposed rules comply with state wide land-use planning goals and local acknowledged comprehensive plans.

Under OAR 660-030-0005 and OAR 340 Division 18, DEQ considers that rules affect land use if:

- The statewide land use planning goals specifically refer to the rule or program, or
- The rule or program is reasonably expected to have significant effects on:
 - Resources, objectives or areas identified in the statewide planning goals, or
 - Present or future land uses identified in acknowledged comprehensive plans

DEQ determined whether the proposed rules involve programs or actions that affect land use by reviewing its Statewide Agency Coordination plan. The plan describes the programs that DEQ determined significantly affect land use. DEQ considers that its programs specifically relate to the following statewide goals:

| Goal | Title |
|-------------|---|
| 5 | Natural Resources, Scenic and Historic Areas, and Open Spaces |
| 6 | Air, Water and Land Resources Quality |
| 11 | Public Facilities and Services |
| 16 | Estuarine Resources |
| 19 | Ocean Resources |

Statewide goals also specifically reference the following DEQ programs:

- Nonpoint source discharge water quality program – Goal 16
- Water quality and sewage disposal systems – Goal 16
- Water quality permits and oil spill regulations – Goal 19

Determination

DEQ determined that the rule being amended in this rulemaking affects programs or activities that the DEQ State Agency Coordination Program considers a land-use program.

DEQ's statewide goal compliance and local plan compatibility procedures adequately cover the proposed rule. Under OAR 340-018-0050(2)(a), ensuring compatibility with acknowledged comprehensive plans may be accomplished through a Land Use Compatibility Statement. The proposed rule change to OAR 340-096-0140 would affect pathogen reduction standards that a composting facility must meet for its compost or digestate. OAR 340-096-0080, requires a Land Use Compatibility Statement to obtain a composting facility permit.

EQC Prior Involvement

DEQ initially presented the proposed temporary rule amendments to the EQC at its Jan. 25, 2019, meeting. At the EQC's request, DEQ held a public comment period on the temporary rule. Following the public comment period and revisions to the proposed temporary rule, the EQC approved the temporary rule at a special meeting on Feb. 25, 2019.

Advisory Committee

Background

DEQ convened the Composting Pathogen Reduction 2019 Advisory Committee. The committee included representatives from an agricultural operation that operates an anaerobic digester, water interests from Tillamook County, where an off-farm anaerobic digester is expected to become operational soon, and dairy farmers. The committee met once.

The committee's web page is located at: [Composting Pathogen Reduction 2019](#).

The committee members were:

| Composting Pathogen Reduction 2019 Advisory Committee | |
|--|--|
| Name | Representing |
| Tim Bielenberg | Oak Lea Dairy, agricultural operations and anaerobic digesters |
| Tammy Dennee | Oregon Dairy Farmers Association, dairy farmers |
| Kristan Mitchell | Oregon Refuse and Recycling Association, composting facilities |
| Ray Monroe | Tillamook County Soil and Water Conservation District, water |
| Rob Russell | Tillamook Bay Watershed Council, water |

Meeting notifications

To notify people about the advisory committee's activities, DEQ:

- Sent GovDelivery bulletins, a free e-mail subscription service, to the following lists:
 - Rulemaking
 - Composting
- Added advisory committee announcements to DEQ's calendar of public meetings at [DEQ Calendar](#).
- On April 15, 2019, provided notice of meetings and links to committee information through postings on Facebook and Twitter.

Committee discussions

Beyond the recommendations described under the Statement of Fiscal and Economic Impact section above, the committee appreciated DEQ's explanation for the reasons for the rulemaking and reviewed the proposed rule language. The committee did not have additional comments for DEQ.

Public Engagement

Public notice

DEQ provided notice of the proposed rulemaking and rulemaking hearing on April 15, 2019, by:

- Filing notice with the Oregon Secretary of State for publication in the May 2019 Oregon Bulletin;
- Posting the Notice of Rulemaking on the web page for this rulemaking, located at: [Composting rulemaking](#)
- Emailing 11,438 interested parties on the following DEQ lists through GovDelivery:
 - Rulemaking
 - Composting
- Emailing the following key legislators required under ORS 183.335:
 - Senator Michael Dembrow, Chair, Senate Committee on Environment and Natural Resources
 - Senator Alan Olsen, Vice-chair, Senate Committee on Environment and Natural Resources
 - Representative Ken Helm, Chair, House Committee on Energy and Environment
 - Representative E. Werner Reschke, Vice-chair, House Committee on Energy and Environment
 - Representative Sheri Schouten, Vice-chair, House Committee on Energy and Environment
- Emailing advisory committee members
- Postings on Twitter and Facebook

- Posting on the DEQ event calendar: [DEQ Calendar](#)

Public Hearing

DEQ held one public hearing and did not receive any comments at the hearing. Later sections of this document include a summary of the eight comments received during the open public comment period, DEQ’s responses and a list of the commenters. Original comments are on file with DEQ.

Presiding Officer’s Record

| | |
|-------------------|---|
| Date | May 15, 2019 |
| Place | 700 NE Multnomah Street, Conference Room, Third Floor, Portland, Oregon |
| Start Time | 6 p.m. |
| End Time | 6:26 p.m. |
| Presiding Officer | Audrey O’Brien |

The presiding officer convened the hearing and explained that the hearing was for the compost permanent rulemaking. Signs were posted stating that DEQ was recording the hearing. One person attended the hearing in person. No one presented any oral testimony or written comments.

Summary of Public Comments and DEQ Responses

Public comment period

DEQ accepted public comment on the proposed rulemaking from April 15, 2019, until 4 p.m. on May 17, 2019. DEQ did not change the proposed rules in response to comments.

Comments received by close of public comment period

DEQ received written comments from one individual during the public comment period. The table below lists the persons who submitted public comments about the proposed rules by the deadline. Original comments are on file with DEQ. DEQ received comments not related to the permanent rulemaking but responded only to comments related to the proposed permanent rulemaking.

| List of Commenters | | | |
|---------------------------|-------------|--------------------------|-----------------------|
| # | Name | Organization | Comment Number |
| 1 | Kevin Maas | Farm Power Northwest LLC | 1, 2, 3, 4, 5, 6, 7 |

Comment 1

Most anaerobic digesters in the state are actually sewage sludge digesters at municipal wastewater treatment plants that must follow the full range of regulations in 40 C.F.R. §503 or its equivalent elsewhere in OAR 340. DEQ is asking to create a new class of digesters that is not on a farm, not required to process any manure, and allowed to accept unlimited amounts of municipal organic waste, but required to follow only a single fragment of biosolids regulations—§503.32(b)(5)—while being exempted from the rest.

DEQ Response

The proposed rule change does not alter the treatment of biosolids. Biosolids will continue to be regulated by applicable federal and state regulations, such as 40 C.F.R Part 503 and OAR chapter 340, division 50. The proposed rule change would change the application of pathogen limits to digestate, depending on the digestate’s use. However, the change gives DEQ the authority to reinstate pathogen limits for all digestate if such compliance is necessary to protect human health or the environment. Digestate must still be tested for pathogens. Composting facilities subject to OAR 340-096-0140 must still document and implement a pathogen reduction plan that addresses the requirements of 40 C.F.R. Part 503. They must also still receive DEQ’s written approval for any use of liquid digestate, other than discharge to an approved wastewater treatment system or discharge under a water quality permit issued under ORS 468B.050. DEQ also has authority under OAR 340-096-0080 and OAR 340-096-0090 to review and approve the types and volumes of feedstocks a composting facility may receive.

Comment 2

DEQ ignores that such on-farm digesters have always been required to operate primarily on manure (no less than 85%) and operate within other agricultural CAFO permitting, location and operation restrictions. There is no similar requirement to actually process manure at any percentage. The proposed rule simply allows this new digester category the benefit of agricultural exemptions without any attendant requirements. The proposed permanent rule even allows disposal of effluent under a “nutrient management plan”—not on a permitted dairy farm and not covered by any land application or discharge permit at all.

DEQ Response

The proposed permanent rule does not change regulations regarding which digesters must apply for a DEQ solid waste permit or the exemptions from the need for a DEQ solid waste permit. The proposed permanent rule allows digestate, when land-applied under

specific conditions, to be exempt from pathogen limits in OAR 340-096-0140(2), unless DEQ determines that the digestate must meet the limit to protect human health or the environment. Manure that has not been digested contains a very high fecal coliform count (in the 10s to 100s of millions). In contrast, common Type 3 feedstocks, such as food waste, generally have a significantly lower fecal coliform count (hundreds to low thousands).

Effluent is defined as liquid wastewater discharged into surface waters. Effluent discharges are regulated through water quality permits and regulations. The proposed permanent rule change does not change how effluent is regulated.

Comment 3

Under 40 C.F.R. 503, the EPA requires testing and annual land loading limits for persistent pollutants including arsenic, lead and mercury. However, the proposed rule ignores non-pathogen pollutants in Type 3 feedstocks, as well as the risk of physical contaminants. Under the proposed rule change, DEQ can require land-applied digestate to meet the pathogen testing limits of OAR 340-096-0140(2) if the agency determines compliance is necessary to protect human health or the environment. All composting facilities must also continue to comply with performance standards set forth in OAR 340-096-0070.

DEQ Response

This rulemaking focuses on pathogen limits for digestate and does not change any other applicable requirements.

Comment 4

DEQ includes in its “Documents relied on for rulemaking” an EPA publication titled *Control of Pathogens and Vector Attraction in Sewage Sludge*. This document says little about pathogen reduction after soil application, but what it does say is not encouraging: Table 2-4 shows that both bacteria and viruses survive longer in soil than the 30-day restriction on harvest, grazing and access. There is no evidence that DEQ considered or analyzed any common manure-application procedures, such as applying digestate to bare soil before planting corn, which could affect the reduction in pathogens they hope for after eliminating testing requirements required by OAR.

DEQ Response

The proposed rule change would exempt digestate that is land applied at agronomic rates and consistent with site restrictions in 40 C.F.R. §503.32(b)(5) from meeting the fecal coliform limit of 1,000 Most Probable Number per gram of total solids. However the change does not eliminate the requirement to perform pathogen testing. Digesters subject to OAR 340-096-0140 must continue to test digestate for pathogen reduction and document and implement a pathogen reduction plan under sections 3, 4, and 5 of OAR 340-096-0140.

In the EPA publication that the commenter cited, Table 2-3 of *Control of Pathogens and Vector Attraction in Sewage Sludge* shows that anaerobic digestion is a treatment that

significantly reduces the number of pathogens that would otherwise exist in sewage sludge. The EPA guidance states, “Studies of anaerobic or aerobic digestion of sludges have shown that the corresponding reduction in the pathogen population will be significant and sufficient so that environmental attenuation can reduce pathogen levels to below detection limit within the time period of site restrictions [...].” A discussion of how the site restrictions in 40 C.F.R. §503.32(b)(5) allow time for further reduction in the pathogen population of class B biosolids is in section 5.5 of the guidance. See [Control of Pathogens and Vector Attraction in Sewage Sludge](#) (pages 11, 15, and 38).

Biosolids, such as digested sewage sludges, typically contain a high count of fecal coliforms. These are enteric bacteria that can be used as indicators of the likelihood of the presence of bacterial pathogens. Manure before digestion also contains a very high fecal coliform count that digestion significantly reduces and which is then further reduced through the land application process allowed by the proposed regulations within the time frame required before growing crops. Common Type 3 feedstocks, such as food waste, fish processing waste and fats, oils and grease, generally contain a much lower fecal coliform count.

Comment 5

The proposed rule adds only one brief fragment of 40 C.F.R. §503.32 with the proposed rule, but chose not to add any regulations from earlier sections related to land application (§503.10 through §503.18). These regulations apply to all the other anaerobic digesters in Oregon which can land apply digestate from substantially unlimited amounts of non-manure feedstocks. It appears that DEQ has selected a tiny portion of 40 C.F.R. §503 to provide regulatory cover for its blanket exemption of a new class of anaerobic digester.

DEQ Response

Anaerobic digesters in Oregon must continue complying with all federal and state biosolids requirements. The proposed rule change does not alter the need to comply with federal and state regulations of biosolids, such as those in 40 C.F.R 503 and OAR chapter 340, division 50. The proposed rule change also would not alter OAR 340-096-0140(3), which requires regulated compost facilities to document and implement a pathogen reduction plan that addresses requirements of 40 CFR Part 503. DEQ is changing only the pathogen limit requirements for digestate. The pathogen testing limits of OAR 340-096-0140(2) replicate the analytical standards for Class A biosolids in 40 C.F.R. §503.32(a). The proposed rule language changes the applicability of pathogen limits on digestate to more closely track the differing federal treatment of pathogen requirements for Class A and Class B biosolids. The proposed rule does not change requirements for biosolids to meet all applicable federal and state regulations for sewage sludge.

Comment 6

DEQ’s inconsistency between the positions and justifications offered at each stage of rulemaking is highlighted by the permit it re-issued for the Port of Tillamook Bay digester. While the emergency rulemaking was built around the needs of the Port of Tillamook Bay digester, the Port of Tillamook Bay’s solid waste permit now has an approved Digestate

Management Plan that does not mention site restrictions consistent with 40 C.F.R. §503.32(b)(5); indeed, the permit itself does not require them.

DEQ Response

Permitted solid waste facilities are required to comply with all applicable federal, state and local laws or regulations regardless of whether such laws and regulations are listed in the permit. This comment is specific to the POTB digester's solid waste permit and not to this rulemaking. DEQ accepted public comment and responded to public comments received on the DEQ modification to the solid waste permit through a separate public notice process. For this current rulemaking, DEQ is providing responses only to comments related to the proposed permanent rule.

Comment 7

DEQ's own water quality website claims milk cows are not allowed to graze on land receiving digestate for 90 days after application (<https://www.oregon.gov/deq/wq/programs/Pages/Biosolids.aspx#bioother>), but the proposed rule allows grazing after 30 days and allows any conceivable spreading that can be covered by a nutrient management plan.

DEQ Response

The comment cites a webpage that relates to biosolids, not digestate. The proposed rule change does not alter the treatment of biosolids.

Implementation

Notification

If approved, the proposed rules would become effective upon filing with the Secretary of State on approximately July 19, 2019. DEQ will then notify affected parties by:

- Emailing through the GovDelivery email list;
- Directly contacting known affected facilities; and
- Posting an announcement on the DEQ website.

Compliance and enforcement

Affected parties

DEQ anticipates that two facilities will be subject to the proposed rule: Shell New Energies and the anaerobic digester of the Port of Tillamook Bay. Both currently have DEQ solid waste permits. Should either facility request a change in their operations plan to accept new feedstock, DEQ will review the operations plan and require any revisions, as needed, or approve the plan. DEQ already conducts inspections as part of these facilities' permits. Inspections may identify violations of the proposed rule.

DEQ staff

The permit writing team and enforcement staff will work together to develop training materials for permit writers and inspectors to implement the proposed rules.

Measuring, sampling, monitoring and reporting

Affected parties

DEQ will incorporate testing and monitoring requirements into the affected parties' permits.

DEQ staff

DEQ staff will process and review compliance reports affected parties submit to determine compliance with the applicable requirements. DEQ staff will also consult with the Oregon Department of Agriculture on agronomic rates and Nutrient Management Plans.

Systems

Website

Upon rule adoption, DEQ will update the Composting webpages on its website.

Database

DEQ will update applicable databases as needed to track compliance with the amended applicable requirements.

Invoicing

DEQ will use the existing SWIMS database for invoicing.

Training

Affected parties

If the proposed rules are approved by EQC, permit writers will provide technical assistance to affected parties.

DEQ staff

DEQ permit writers have been involved developing the rule and will schedule internal trainings if needed.

Five-Year Review

Requirement

Oregon law requires DEQ to review new rules within five years after EQC adopts them with some exceptions. DEQ determined whether the rules described in this report are subject to the five-year review. DEQ based its analysis on the law in effect when EQC adopted these rules.

Five-year rule review required

DEQ must review newly adopted rules. In this rulemaking, this requirement applies to OAR 340-096-0140.

No later than five years after EQC adopts the proposed rule, DEQ will review the newly adopted rule to determine whether:

- The rule has had the intended effect
- The anticipated fiscal impact of the rule was underestimated or overestimated
- Subsequent changes in the law require that the rule be repealed or amended
- There is continued need for the rule.

DEQ will use “available information” to comply with the review requirement allowed under ORS 183.405 (2). DEQ will provide the five-year rule review report to the advisory committee to comply with ORS 183.405 (3).

Accessibility Information

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.

[NOTE: Summary of Changes: This rulemaking is replacing a temporary rule by amending the previous permanent rule. The rule adopts new language clarifying to which facilities certain pathogen reduction standards apply. New text is in blue and underlined.]

Division 96

SOLID WASTE: SPECIAL RULES FOR SELECTED SOLID WASTE DISPOSAL SITES

340-096-0140

Special Rules Pertaining to Composting: Pathogen Reduction

(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:

(a) For composted material produced from Type 1 or Type 3 feedstock, or a mix of Type 1 and 3 feedstocks, analysis must be performed for salmonella or fecal coliform and meet the following limits:

(A) Salmonella analysis must result in less than 3 Most Probable Number per 4 grams of total solids (dry weight).

(B) Fecal coliform analysis must result in less than 1,000 Most Probable Number per gram of total solids (dry weight).

(b) For composted material and digestate produced from Type 1 or Type 3 feedstock with less than 50% by volume of Type 2 feedstock, analysis must be performed for salmonella or fecal coliform and meet the following limits:

(A) Salmonella analysis must result in less than 3 Most Probable Number per 4 grams of total solids (dry weight).

(B) Fecal coliform analysis must result in less than 1,000 Most Probable Number per gram of total solids (dry weight).

(c) For composted material and digestate produced from feedstock containing more than 50% volume of Type 2 feedstock in the initial pile, analysis must be performed for fecal coliform and meet the following limits:

(A) Analysis must result in less than 1,000 Most Probable Number per gram of total solids (dry weight).

(3) Methods of Pathogen Reduction. All composting facilities subject to this rule must document and implement a pathogen reduction plan that addresses requirements of the Code of Federal Regulations, 40 CFR Part 503. The plan must include a Process to Further Reduce Pathogen (PFRP), under 40 CFR Part 503 Appendix B, item (B)(1), dated February 19, 1993, that must include one of the following elements:

(a) Using either the within-vessel aerobic composting method or the static aerated pile composting method, the temperature of the active composting pile must be maintained at 55 degrees Celsius or higher for three days;

(b) Using the windrow composting method, the temperature of the active composting pile must be maintained at 55 degrees Celsius or higher for 15 days or longer. During the period when the composting pile is maintained at 55 degrees Celsius or higher, there must be a minimum of five turnings of the windrow;

(c) Using anaerobic digestion, the following parameters must be met:

(A) All feedstocks are pasteurized at 70 degrees Celsius or higher for five minutes or longer prior to placement in the digester; or

(B) The digestion process (treatment phase) maintains an operating temperature of 53 degrees Celsius or higher for five hours or longer; or

(C) The digestion process (treatment phase) maintains an operating temperature of 35 degrees Celsius or higher for 10 days or longer; or

(D) The digestion process (treatment phase) maintains an operating or liquid digestate storage temperature above 6 degrees Celsius or higher for six months or longer; or

(d) An alternative method that permittee can demonstrate achieves an equivalent reduction of human pathogens.

(4) Testing compost and solid digestate for pathogen reduction. All composting facilities subject to this rule must test composted material and solid digestate, excluding composted material and digestate that is sent as feedstock to a composter with either a composting permit or registration, with the following frequency:

(a) If less than 2,500 tons of composted material from Type 1 and 2 feedstocks are produced per year, testing must be conducted once a year.

(b) If more than 2,500 tons of composted material from Type 1 and 2 feedstock are produced per year, testing must be conducted every 5,000 tons of feedstock used or a maximum of once every three months.

(c) If less than 2,500 tons of composted material from Type 3 feedstocks are produced per year, testing must be conducted once every four months.

(d) If more than 2,500 tons of composted material from Type 3 are produced per year, testing must be conducted every 5,000 tons of feedstock used or monthly.

(5) Testing liquid digestate for pathogen reduction. The frequency with which liquid digestate must be tested for pathogen reduction depends on the average storage time for digestate following the treatment phase, where "average storage time" is defined as the total amount of liquid digestate withdrawn from storage over the course of a month, divided by the average quantity of liquid digestate being stored in that month. All anaerobic digestion facilities subject to this rule and proposing to use liquid digestate as a soil amendment, fertilizer or other productive use must test liquid digestate with the following frequency:

(a) If the average storage time for liquid digestate is less than one month, then testing must be conducted at least monthly.

(b) If the average storage time for liquid digestate is one month or greater, but less than six months, then testing must be conducted at least quarterly.

(c) If the average storage time for liquid digestate is six months or greater, then testing must be at least semi-annually.

(6) All composting facilities subject to this rule must receive written approval from the department regarding any use of liquid digestate other than:

(a) Discharge to an approved wastewater treatment system; or

(b) Discharge under a water quality permit issued under ORS 468B.050.

(7) Composted material and digestate from type X feedstock must be disposed in a landfill permitted to receive domestic solid waste, unless a facility receives written approval from the department for alternative use of the material.

Statutory/Other Authority: ORS 459.045, 459A.025 & 468.020

Statutes/Other Implemented: ORS 459.005, 459.015 & 459.205

History:

DEQ 10-2019, temporary amend filed 02/27/2019, effective 02/27/2019 through 08/24/2019

DEQ 9-2019, temporary amend filed 02/26/2019, effective 02/26/2019 through 08/24/2019

DEQ 8-2019, temporary amend filed 02/25/2019, effective 02/26/2019 through 08/24/2019

DEQ 7-2013, f. & cert. ef. 8-29-13

DEQ 6-2009, f. & cert. ef. 9-14-09

[NOTE: Summary of Changes: This rulemaking is replacing a temporary rule by amending the previous permanent rule. The rule adopts new language clarifying to which facilities certain pathogen reduction standards apply. New text is in blue and underlined.]

Division 96

SOLID WASTE: SPECIAL RULES FOR SELECTED SOLID WASTE DISPOSAL SITES

340-096-0140

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(b) For composted material and digestate produced from Type 1 or Type 3 feedstock with less than 50% by volume of Type 2 feedstock, analysis must be performed for salmonella or fecal coliform and meet the following limits:

(A) Salmonella analysis must result in less than 3 Most Probable Number per 4 grams of total solids (dry weight).

(B) Fecal coliform analysis must result in less than 1,000 Most Probable Number per gram of total solids (dry weight).

(c) For composted material and digestate produced from feedstock containing more than 50% volume of Type 2 feedstock in the initial pile, analysis must be performed for fecal coliform and meet the following limits:

(A) Analysis must result in less than 1,000 Most Probable Number per gram of total solids (dry weight).

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(b) If more than 2,500 tons of composted material from Type 1 and 2 feedstock are produced per year, testing must be conducted every 5,000 tons of feedstock used or a maximum of once every three months.

(c) If less than 2,500 tons of composted material from Type 3 feedstocks are produced per year, testing must be conducted once every four months.

(d) If more than 2,500 tons of composted material from Type 3 are produced per year, testing must be conducted every 5,000 tons of feedstock used or monthly.

(5) Testing liquid digestate for pathogen reduction. The frequency with which liquid digestate must be tested for pathogen reduction depends on the average storage time for digestate following the treatment phase, where "average storage time" is defined as the total amount of liquid digestate withdrawn from storage over the course of a month, divided by the average quantity of liquid digestate being stored in that month. All anaerobic digestion facilities subject to this rule and proposing to use liquid digestate as a soil amendment, fertilizer or other productive use must test liquid digestate with the following frequency:

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