POLLUTION CONTROL HEARINGS BOARD

STATE OF WASHINGTON

NISQUALLY DELTA ASSOCIATION, a non-profit organization, and ED KENNEY, Appellants, v. STATE OF WASHINGTON DEPARTMENT OF ECOLOGY, Appellee.	NOTICE OF APPEAL

Appellant Nisqually Delta Association ("NDA"), a non-profit organization composed of local citizens dedicated to the preservation and enhancement of the Nisqually Delta and the surrounding community, and Ed Kenney, (collectively "Appellant"), hereby provides notice of appeal of the Washington Department of Ecology's ("Ecology") approval and issuance of the Statewide General Permit for Biosolids Management ("Permit") and its associated SEPA determination of non-significance, according to the direction set forth in WAC 371-08-340.

A main concern of Appellant is that the General Permit fails to address the certain environmental and human health impacts of PFAS, PBDEs, and microplastics associated with land application of biosolids. These contaminants of emerging concern are well-documented in

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biosolids and impose severe, long-lasting harms which the General Permit fails to monitor, regulate, or mitigate. Likewise, the determination of non-significance does not consider the environmental impacts of contaminants of emerging concern, and clearly errs in its conclusion that the land application of over 1,000,000,000 pounds of biosolids laden with such contaminants lacks a probable significant environmental effect.

1. Appellants and Representatives of Appellants:

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Mr. Kenney submitted comment letters with studies appended on Ecology's decision to issue a General Permit, and on the general permit. Mr. Kenney is an appellant both as an individual and as President of the Nisqually Delta Association. His comments on the General Permit are appended to this appeal and incorporated by reference herein.

Members of NDA and Mr. Kenney are adversely affected by Ecology's issuance of the General Permit and the associated procedural and substantive violations of law. They live and recreate in areas near land application of biosolids and suffer aesthetic, recreational, and likely health impacts. They also seek greater disclosure of the environmental impacts associated with the General Permit, as required by the State Environmental Policy Act. An order from the Pollution Control Hearings Board invalidating the General Permit and requiring full disclosure of environmental impacts would remedy the harms imposed on members of NDA and Mr. Kenney.

2. Appellee:

State of Washington Department of Ecology

3. Applicant:

The challenged decision is the issuance of a Statewide General Permit for Biosolids Management, Ecology Publication No. 21-07-006, and the associated State Environmental Policy Act checklist and determination of non-significance.

The lead official at the Department of Ecology who signed the permit approval and determination of non-significance is:

Laurie Davies
Program Manager
Solid Waste Management Program
Washington State Department of Ecology

Kyle Dorsey prepared the SEPA checklist, but has since retired from the Department of Ecology. Emily Kijowski appears to have taken over his role.

4. Appealed Decision:

Appellants are appealing from the attached decision, issued June 15, 2022, which is approval and issuance of the "Statewide General Permit for Biosolids Management"

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("Permit"), as well as the associated SEPA determination of non-significance, dated May 5, 2021.

5. Legal Grounds for the Appeal:

The appeal concerns a five-year general permit that authorizes various aspects of biosolids treatment, transportation, and land application. According to Ecology regulations, "[s]ewage sludge is the solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Biosolids are produced by treating sewage sludge to meet certain quality standards that allow it to be applied to the land for beneficial use. Septage is a class of biosolids that comes from septic tanks and similar systems receiving domestic wastes." WAC 173-308-005. Ecology, and this Notice of Appeal, uses "biosolids" to refer to biosolids and septage collectively unless separately identified.

The Washington State Legislature authorized Ecology to implement a state biosolids management program, Chapter 70A.225 RCW. Ecology's overarching directive is that the biosolids program "shall, to the maximum extent possible, ensure that municipal sewage sludge is reused as a beneficial commodity and is managed in a manner that minimizes risk to public health and the environment." RCW 70A.226.005(2).

The state biosolids program is based on rules adopted by the Department of Ecology, Chapter 173-308 WAC. The regulations set pollutant limits, WAC 173-308-160, but those limits are focused on restriction of nine identified heavy metals, pathogen reduction, WAC 173-308-170, and vector attraction reduction, WAC 173-308-180. While the biosolids regulations focus on specific pollutants, this does not mean that those are the only pollutants that are subject to regulation or that may cause contamination. WAC 173-380-030 confirms that "[b]iosolids facilities and sites where biosolids are applied to the land must comply with the requirements of

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chapter 90.48 RCW and chapters 173-200 and 173-201A WAC," which are the Water Pollution Control statutes and regulations protecting groundwater and surface water. The regulations contain anti-degradation provisions which prohibit contamination of waters of the State. WAC 173-200-030; WAC 173-201A-300. WAC 173-201A-240 prohibits introduction of toxic substances to surface waters beyond background levels. In addition to the specific biosolids rules and State law, Ecology is subject to otherwise applicable provisions of the Federal Clean Water Act, 33 U.S.C. § 1251, *et seq*.

The United States Environmental Protection Agency (EPA) has a responsibility for implementing a national biosolids management program and establishes requirements and management practices for the use and disposal of biosolids in 40 CFR Part 503. EPA and Ecology work cooperatively on program implementation. EPA provides periodic technical assistance to the state. In return, the state provides information on request to EPA regarding biosolids management in Washington. *See* RCW 70A.226.007.

Approval and issuance of the Permit violates the Federal Clean Water Act, the Washington State Water Pollution Control Act, and applicable federal and state regulations. Specific violations include, but are not limited to, the following:

- The Permit fails to manage biosolids "in a manner that minimizes risk to public health and the environment." RCW 70A.226.005(2).
- The Permit authorizes activities that will allow toxic substances to enter waters of the State, violate water quality standards, and violate anti-degradation requirements imposed by State and Federal law.

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- The surface and groundwater protection buffers and mechanisms in the Permit fail to account for contaminants of emerging concern and fail to account for bioaccumulation of contaminants.
- The Permit fails to adequately address the prevalence of microplastics in biosolids, in violation of WAC 173-308-205.
- By ignoring contaminants with serious environmental and human health effects, the Permit fails to meet Ecology's affirmative obligation to protect waters of the State. *See* RCW 90.48.010.
- The General Permit authorizes discharges likely to adversely affect a threatened or endangered species or its critical habitat, in violation of WAC 173-308-191.
- The General Permit does not meet the requirements of 40 CFR Part 503.

The State Environmental Policy Act (SEPA) requires that Ecology prepare an environmental impact statement (EIS) for major actions having a probable significant, adverse environmental impact. RCW 43.21C.031. In order to determine whether an EIS is required, Ecology must prepare a threshold determination based on a rigorous review of direct, indirect, and cumulative effects of the proposal. WAC 197-11-330. Impacts likely to be significant include impacts "to environmentally sensitive or special areas such as loss or destruction of historic, scientific, and cultural resources, parks, prime farmlands, wetlands, wild and scenic rivers, or wilderness," impacts that "[a]dversely affect endangered or threatened species or their habitat," actions that "[c]onflict with local, state, or federal laws or requirements for the protection of the environment" and those impacts that "involve unique and unknown risks to the environment, or may affect public health or safety." WAC 197-11-330(3)(e).

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Ecology must make the threshold determination "based upon information reasonably sufficient to evaluate the environmental impact of a proposal," and may require the applicant to submit more information or conduct independent further analysis if such reasonably sufficient information is not provided by the project proponent. WAC 197-11-335. The reasonably sufficient information requirement is ongoing. The lead agency "shall withdraw" the determination of nonsignificance if "[t]here is significant new information indicating, or on, a proposal's probable significant adverse environmental impacts" or "[t]he DNS was procured by misrepresentation or lack of material disclosure." WAC 197-11-340(3).

While SEPA review may reference thresholds and requirements set forth in other statutes and regulations, SEPA compliance is an independent legal duty, and SEPA supplements existing authority. *Polygon Corp. v. Seattle*, 90 Wash. 2d 59, 65, 578 P.2d 1309, 1313 (1978); *Columbia Riverkeeper v. Port of Vancouver USA*, 188 Wash. 2d 80, 95, 392 P.3d 1025, 1032 (2017).

For the General Permit, Ecology prepared an extremely limited environmental analysis, first published on May 5, 2021, and never updated. The SEPA checklist is deficient and the determination of non-significance is clearly erroneous. Ecology's DNS and checklist violate the SEPA statute and regulations, including but not limited to the following:

- Ecology failed to make a determination of significance and prepare an environmental impact statement evaluating impacts and alternatives.
- Ecology failed to adequately disclose and evaluate impacts of contaminants of emerging concern, including PFAS, PBDEs, phthalates, other chemicals, and microplastics, and the associated risks to the environment and public safety.
- Ecology failed to consider cumulative effects of biosolids application to soils, waters, ecosystems, and human health, across space and time.

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- Ecology improperly assumed that limited buffers and groundwater protections will protect waters of the State, human health, and aquatic species.
- Ecology failed to adequately consider and mitigate environmental justice impacts, and imposes disproportionate impacts on vulnerable communities.

6. Pertinent Facts:

The Permit covers wastewater treatment plants that produce or treat biosolids, and also authorizes land application of biosolids for a 5-year period. Ecology's fact sheet states that "[i]n 2019, about 109,000 dry tons of biosolids were available for beneficial use or disposal in Washington. Generators beneficially used more than 80% of biosolids. Less than 20% were incinerated or disposed of in municipal solid waste landfills. Treatment plants and septage management facilities received, treated, or applied approximately 165,000,000 gallons (14,000 dry tons) of septage."[1]

Washington's population, and associated waste, are increasing over time. Ecology did not disclose the amount of biosolids to be applied during the 5-year general permit term. Assuming that the 2019 volumes cited by Ecology remain static, the Permit authorizes 101,200 dry tons of biosolids and septage application per year (80% of 109,000 tons of biosolids plus 14,000 tons of septage). In total, the Permit authorizes at least 501,000 tons (over 1,000,000,000 pounds) of biosolid application over its five-year term. The true total is likely far greater given population growth in Washington since 2019, and that the permit term covers years 2022-2027.

The one billion pounds of biosolids applied under the permit contain far more than processed human waste. Biosolids are the concentrated leftover of everything consumed and

[1] https://apps.ecology.wa.gov/publications/documents/2107005.pdf

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used in businesses and residences in Washington that is not eliminated by wastewater treatment. Contributors to municipal wastewater and biosolids include residents and a wide variety of businesses, including manufacturers and light industrial facilities. Thus, the extensive chemicals and contaminants consumed in modern life are concentrated in biosolids.

Biosolids are well-documented to contain a huge range of contaminants, including pharmaceuticals and a variety of chemicals. Three major classes of contaminants present in biosolids that cause severe harms to water, soils, wildlife, and human health are PFAS/PFOS, PBDEs, and microplastics.

PFAS refers to a large group of perfluoroalkyl and polyfluoroalkyl substances. Recently, the United States Environmental Protection Agency and the Department of Ecology have begun to recognize the evolving understanding of the widespread, severe impacts of PFAS. According to Ecology's website, "these manufactured chemicals never disappear from the environment, which is why they're called 'forever chemicals.'" Ecology further reports that "PFAS are water soluble and highly mobile. They can easily contaminate groundwater and can be hard to filter out. Since these substances don't break down naturally, our exposure to PFAS could continue for hundreds or thousands of years." With respect to human health, Ecology states that "[e]xperts investigating the effects on people have found probable links to immune system toxicity, high cholesterol, reproductive and developmental issues, endocrine system disruption, ulcerative colitis, thyroid issues, certain cancers, and pregnancy-induced hypertension."[2]

Also according to Ecology, "[s]ampling has also detected PFAS in Washington's surface waters, groundwater, wastewater treatment plant effluent, compost, freshwater and marine

[2] https://ecology.wa.gov/Waste-Toxics/Reducing-toxic-chemicals/Addressing-priority-toxic-chemicals/PFAS

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sediments, freshwater fish tissue, osprey eggs, and human breast milk. The scientific community considers certain PFAS to be persistent, bioaccumulative and toxic (PBT). PBTs are some of the 'worst of the worst' chemicals because they can build-up in organisms and move up the food chain, and their toxicity persists in the environment indefinitely. Researchers often refer to PFAS as 'forever chemicals' because of this persistence."[3]

In November 2021, Ecology released a "chemical action plan" for PFAS.[4] Key recommendations included: establish properly-funded and technically-supported water mitigation systems to ensure safe drinking water; manage environmental PFAS contamination through the establishment of PFAS cleanup levels and partnerships with community organizations; reduce PFAS in products, including those regularly found in home furnishing materials; and evaluate PFAS in wastewater treatment, landfill emissions, and biosolids.

Ecology's specific recommendations for biosolid management included:

- Establish biosolids and soil sample collection and handling methods for PFAS analysis;
- Accredit Washington labs for EPA-validated analysis method(s);
- Use EPA-validated analysis methods for biosolids and soils;
- Conduct credentialed third-party review of raw mass spectrometer PFAS data;
- Investigate land application sites where procedures mimic rates and practices under current state rule (Chapter 173-308159 WAC);
- Evaluate realistic exposure pathways;

[3] https://ecology.wa.gov/Blog/Posts/October-2021/PFAS-forever-chemicals%E2%80%9D-now-regulated-under-state

[4] https://apps.ecology.wa.gov/publications/documents/2104048.pdf

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- Evaluate risk modeling with use of realistic input values;
- Collaborate with stakeholders to get accurate and precise biosolids data; and
- Compile analysis data with statistical review.[5]

Ecology has also recognized PFAS as a "hazardous substance" under the Model Toxics Control Act, and set associated cleanup levels for drinking water.[6]

The EPA observes that PFAS are present in biosolids, listing a pathway for human exposure as: "Biosolids – for example fertilizer from wastewater treatment plants that is used on agricultural lands can affect ground and surface water and animals that graze on the land."[7] EPA has also set an aggressive roadmap for attempting to regulate PFAS, including recognition that PFAS are hazardous substances under the federal cleanup laws, the Comprehensive Environmental Response, Compensation, and Liability Act, and the Resource Conservation and Recovery Act. On June 21, 2022, EPA issued a health advisory recognizing that even very low concentrations of PFAS in drinking water are dangerous, and that "[h]uman studies have found associations between PFOA and/ or PFOS exposure and effects on the immune system, the cardiovascular system, development (e.g., decreased birth weight), and cancer." *See* 87 Fed. Reg. 36848 (June 21, 2022).

Despite EPA's and Ecology's clear recognition of the risks imposed by PFAS, and detailed comments submitted by Mr. Kenney and others with practical suggestions for how to mitigate associated risks, the General Permit does not incorporate any monitoring, testing, or regulation of PFAS.

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[5] *Id*.

[6] https://ecology.wa.gov/Waste-Toxics/Reducing-toxic-chemicals/Addressing-priority-toxic-chemicals/PFAS/Cleanup-sites

[7] https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas

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PBDEs present risks to the environment and human health, with concerns focusing on potential endocrine disrupting action and potential developmental neurotoxicity. PBDEs have been consistently detected in sewage sludge and treated biosolids in data gathered from other sites.

Similarly, microplastics have also been detected in biosolids, and serve as magnets that capture and concentrate other contaminants. Microplastics are plastic items with a longest dimension smaller than 5 millimeters. Microplastics gather in biosolids and may be retained by the soil upon which the affected biosolids are applied. Biosolids generally contain large volumes of small plastics, referred to as microplastics and nanoplastics. A recent synthesis of literature focused on microplastics in biosolids, titled "An overview of microplastic and nanoplastic pollution in agroecosystems" (Ng et al. 2018), states that "polyethylene, plastic fibres, and polystyrene foam occupied up to 5% w/w in compost from mixed municipal solid waste for all size fractions between 420 mm and 25 mm; with around 0.5 to 0.6% having sizes b2 mm." Soil ecosystems, particularly agricultural land, have been recognized as having high concentrations of microplastics. The most recent studies of microplastics suggest that they are highly mobile in water. Crossman et al. (2020) measured microplastics biosolids at various application sites, found high levels of contamination, and determined that 99 percent of the microplastics appeared to be transported by water over time. Human exposure to microplastics is a major health concern, with studies indicating that exposure causes disruption to reproductive systems, damages cell growth, and causes various types of tissue inflammation.

Despite clear and convincing evidence of severe contamination and risk imposed by contaminants of emerging concern in biosolids, Ecology has determined that it will only regulate a limited class of metals. The Permit does not require monitoring, testing, or limits on PFAS,

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PBDEs, microplastics, or other contaminants of emerging concern. The associated SEPA checklist and Determination of Non-Significance does not evaluate the impacts of authorizing application of PFAS, PBDEs, microplastics, or other contaminants of emerging concern. Other states, including Michigan and Maine, have recognized the risks of PFAS in biosolids and imposed stringent controls that reflect the severe environmental and human health impacts. In contrast, Ecology has decided to simply ignore the problem.

7. Relief Sought:

Appellant respectfully requests that the Board invalidate the General Permit and associated SEPA determination of non-significance and remand to Ecology with direction to resolve the identified deficiencies. In the alternative, Appellant requests that the Board revise the Permit to comply with applicable law.

8. Service

The undersigned attorney, Wyatt Golding, certifies that notice is timely filed via email with the Pollution Control Hearings Board, and served on the Appellee Department of Ecology by U.S. Certified Mail and email and the Washington Attorney General's Office by email only on July 15, 2022.

Dated this 15th day of July, 2022.

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Statewide General Permit for Biosolids Management

Issued: June 15, 2022

Effective: July 15, 2022

Expires: July 14, 2027

Laurie G. Davies

Laurie G. Davies, Program Manager June 15, 2022

Solid Waste Management Program

Washington State Department of Ecology

June 2022

Publication 21-07-006

Publication and Contact Information

This document is available on the Department of Ecology's website at:
https://fortress.wa.gov/ecy/publications/summarypages/2107006.html

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Statewide General Permit for Biosolids Management

Solid Waste Management Program

Washington State Department of Ecology

Olympia, Washington

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1. Overview and Changes

1.1. Introduction

The Washington State Legislature authorized Ecology to implement a state biosolids management program (Chapter 70A.225 RCW - *Municipal Sewage Sludge-Biosolids*[1]). The state biosolids program is based on rules adopted by the Department of Ecology (Chapter 173-308 WAC - *Biosolids Management*[2]). Ecology issues this general permit to implement the rules, including additional or more stringent requirements that may be necessary to ensure proper management of biosolids in specific circumstances.

Ecology uses accepted best management practices from state and federal guidelines and other authoritative sources to determine permit conditions, and to establish additional or more stringent requirements for individual sites and facilities. Input from the public may also inform the agency and lead to additional or more stringent requirements for a specific facility or land application site. Examples of commonly used state guidance include Ecology's *Biosolids Management Guidelines* - WDOE 93-80[3], and *Managing Nitrogen from Biosolids* – WDOE 99-508[4]. The U.S. Environmental Protection Agency's (EPA) *Control of Pathogens and Vector Attraction Reduction in Sewage Sludge*[5] is an important federal guidance document. Other authoritative sources include, but are not limited, to University Cooperative Extension publications on crop nutrient needs and soil sampling.

Unless modified by this permit or an approval of coverage under this permit, the rules in Chapter 173-308 WAC are applicable. The state biosolids program, including this General Permit for Biosolids Management, intends to comply with all applicable federal rules adopted pursuant to the federal Clean Water Act, as it existed on February 4, 1987.

The state biosolids program:

- Regulates facilities that produce, treat or land apply sewage sludge or biosolids.
- Regulates beneficial uses of biosolids including application to agricultural lands, forestlands, disturbed lands, lawns and home gardens and other sites where the public might have close contact.
- Does not regulate landfill or incineration *units* where biosolids are disposed.

All facilities that qualify as a *Treatment Works Treating Domestic Sewage* (TWTDS) are subject to the applicable requirements of this permit. Existing facilities that do not have active biosolids programs are automatically covered under this permit on its effective date. Facilities with active

[1] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.226&full=true
[2] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308&full=true
[3] https://apps.ecology.wa.gov/publications/SummaryPages/9380.html
[4] https://apps.ecology.wa.gov/publications/SummaryPages/99508.html
[5] https://www.epa.gov/biosolids/control-pathogens-and-vector-attraction-sewage-sludge

septage or active biosolids management programs must apply for coverage under the general permit, or an individual permit if approved to do so by Ecology.

1.1.1. Explanation of the Terms "Sewage Sludge", "Biosolids", and "Septage"

Sewage sludge is the solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a treatment works. *Biosolids* are produced by treating sewage sludge to meet standards that allow them to be beneficially used for their nutrient and soil conditioning value.

Septage is a type of biosolids that comes from septic tanks and similar systems. **In this permit, when we use the term *septage*, we mean *only* septage.**

When a facility mixes septage, sewage sludge or biosolids together in any combination, the mixture must be treated to the same standards for biosolids produced from the treatment of sewage in a wastewater treatment plant.

1.1.2. Jurisdiction

This permit applies to facilities located on, and biosolids management activities that occur on, lands under the jurisdiction of the State of Washington.

Treatment works subject to the state permit program must have consent from Ecology and the receiving jurisdiction, *prior* to exporting biosolids to an out of state jurisdiction.

Treatment works located outside the jurisdiction of the state that export sewage sludge or biosolids into state jurisdiction, must do so in accordance with WAC 173-308-130[6], and *may* be required to obtain coverage under this permit and/or pay a fee.

1.1.3. Persons Required to Apply for Coverage under this Permit

Unless you are obtaining an individual permit in accordance with WAC 173-308-310[7], you must apply for coverage under this permit if you own or operate a treatment works treating domestic sewage, including but not limited to:

- Publicly owned treatment works.
- Privately owned treatment works that treat *only* domestic sewage, or treat domestic sewage *separately* from industrial wastewater.
- Septage management facilities (SMF).
- Beneficial use facilities (BUF).
- Facilities that compost biosolids, unless exempt under WAC 173-308-310(1)(a)[7].
- Facilities designated by Ecology as a treatment works treating domestic sewage in accordance with WAC 173-308-310(1)(b)[7]

[6] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-130
[7] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-310

- Facilities that mix non-exceptional quality biosolids with other material, including other biosolids.
- Facilities that combine septage with biosolids for treatment, prior to beneficial use.

1.1.4. Activities Regulated Under this Permit

All TWTDS are subject to coverage under this permit. This permit establishes standards and requirements for the following:

- Treatment of sewage sludge or biosolids prior to beneficial use, disposal in a landfill, or incineration.
- Application of non-exceptional quality biosolids to the land, including agricultural lands, forestlands, land reclamation sites, and public contact sites.
- Application of septage to the land.
- Disposal of sewage sludge in municipal solid waste landfills or incinerators.
- Selling or giving away biosolids in bags or other containers with a capacity of one metric ton (1.1 U.S. tons), or less.
- Storing sewage sludge or biosolids.
- Transferring sewage sludge or non-exceptional quality biosolids from one facility to another, including for incineration or disposal in a landfill.
- Composting non-exceptional quality biosolids.
- Producing and selling or giving away exceptional quality biosolids derived from non-exceptional quality biosolids.

1.1.5. Local Health Jurisdiction Involvement

Ecology may authorize a local jurisdictional health authority to assist in implementation and administration of permits. When applying for coverage under this permit, contact Ecology to find out the status of delegation agreements in the areas where you treat, store, transfer, or apply biosolids to the land. Regardless of delegation, you should always be responsive to the inquiries of a local jurisdictional health authority.

1.1.6. Role of EPA

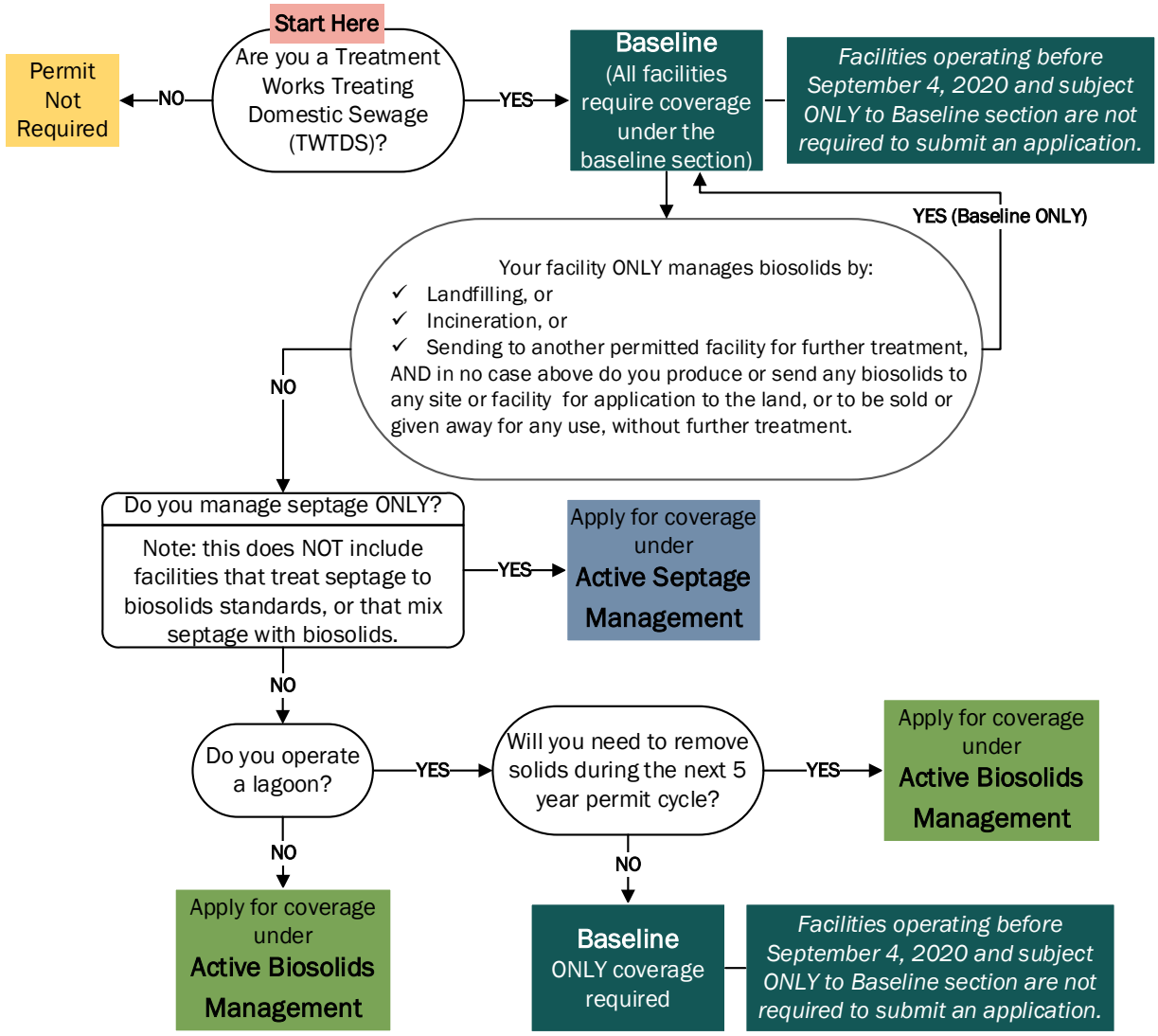
The United States Environmental Protection Agency (EPA) has a responsibility for implementing a national biosolids management program and establishes requirements and management practices for the use and disposal of biosolids in 40 CFR Part 503[8]. EPA and Ecology work cooperatively on program implementation. EPA provides periodic technical assistance to the state. In return, the state provides information on request to EPA regarding biosolids management in Washington.

[8] eCFR :: 40 CFR Part 503 -- Standards for the Use or Disposal of Sewage Sludge

1.2. Structure of this General Permit

The flowchart below provided by Ecology can be used to identify what sections of the permit your facility is subject to. Facilities should consult their regional biosolids coordinators with any questions.

Figure 1 – Permit Sections Flow Chart



1.2.1. Baseline Section

The Baseline section (2) establishes general requirements that are applicable to all facilities. It also establishes specific requirements for some facilities so that they are not required to submit a permit application.

Sections (3) and (4) cover active septage management facilities and active biosolids management facilities, respectively. Facilities without active management programs do not require coverage under section (3) or (4).

The active biosolids management and active septage management portions of this permit are not applicable if:

- You *only* send biosolids to another facility for further treatment before final use or disposal.
- You *only* dispose of the biosolids you produce in a landfill or incinerator (you may be required to develop and implement a beneficial use program).
- You operate a surface impoundment and do not expect to remove solids during the five-year term of this permit. *Note: If you operate a wastewater treatment facility with a surface impoundment and believe you will need to remove solids during the five-year term of the permit, you are also subject to section (4) for active biosolids management programs. Please contact your regional biosolids coordinator for guidance.*
- **AND** in *no* case above do you produce or send any biosolids to any site or facility for application to the land, or to be sold or given away for any use, without further treatment.

1.2.2. Active Septage Management Section

Section (3) of this permit applies to facilities that treat and/or land apply *only* septage.

Pumpers and others who *only* service onsite wastewater treatment systems and/or portable toilets and similar systems, and do *not* treat or land apply septage, are not subject to this permit.

If you receive only septage and treat it to standards for biosolids derived from sewage sludge, you are subject to section (4) for facilities with active biosolids management programs.

You are subject to the active septage management section (3) of this permit if:

- You treat *only* septage (not a mixture of septage and biosolids). Facilities that mix septage and biosolids fall under section (4) of this permit for facilities with active biosolids management programs.
- You land apply *only* septage. This does not include facilities that treat septage to biosolids standards for pathogen reduction, vector attraction reduction, and pollutants. Those facilities fall under section (4) of the permit, for facilities with active biosolids management programs.

1.2.3. Active Biosolids Management Section

Section (4) of this permit applies to facilities with active biosolids management programs, but not those that manage only septage (1.2.2 above).

You are subject to the active biosolids management section (4) of this permit if:

- You apply biosolids (or septage treated to standards for biosolids generated at a wastewater treatment plant) to sites approved *specifically for you.*
- You sell or give away biosolids you treat to *exceptional quality* standards.
- You treat and send biosolids to another facility for land application.

- You treat septage to meet Class A or B pathogen reduction.
- You treat septage, sewage sludge, or biosolids together in any combination to meet Class A or B pathogen reduction.
- You are a *beneficial use facility* (BUF) as defined in WAC 173-308-080[9].
- You receive non-exceptional quality biosolids for further treatment, except for compost facilities operating only under a local solid waste permit in accordance with WAC 173-308-310(1)(a)[7]
- You operate a surface impoundment and expect to remove solids during the five-year term of the permit. Consult your regional biosolids coordinator for guidance.

[9] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-080

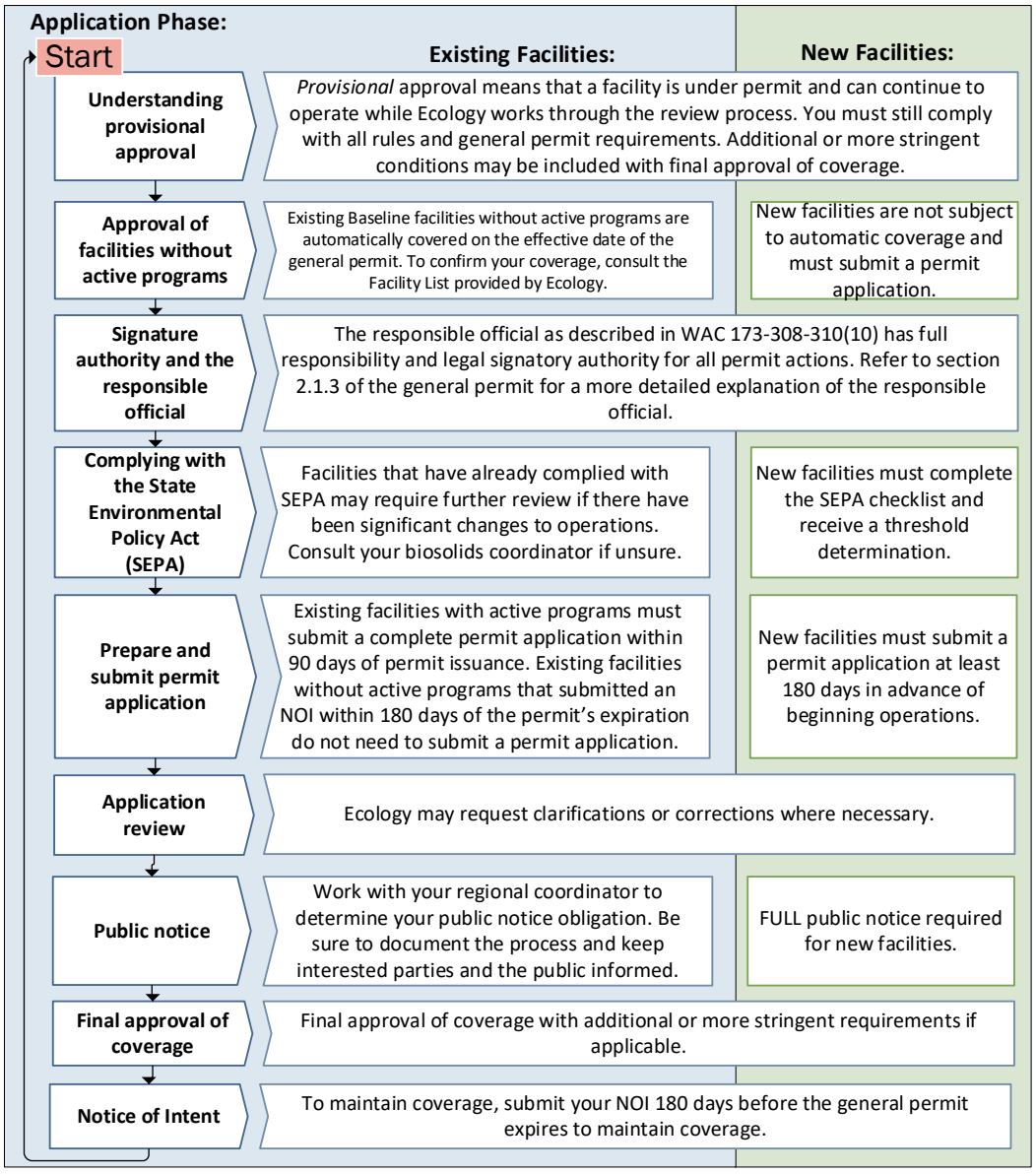
2. Baseline Requirements Applicable to All Facilities

The requirements of this section apply to all persons and facilities required to obtain permit coverage under this permit.

2.1. Understanding and Complying with the Permit System

The flow chart below provided by Ecology provides an overview of the permit application process for new and existing facilities.

Figure 2 – Permit Application Process Flow Chart.



2.1.1. Provisional Approval

***Key Concept**: A facility obtains provisional approval to operate, by submitting at the appropriate times, a permit application, or a Notice of Intent to continue coverage under a forthcoming permit. Provisionally approved facilities are under permit, but subject to additional or more stringent requirements prior to receiving final approval of coverage.*

Provisional approval means that a facility demonstrates recognition of its obligation to apply for coverage under a renewing general permit, and to comply with all applicable requirements of state biosolids rules and this permit. Provisional means that Ecology can add additional or more stringent conditions with final approval of coverage. In the meantime, a facility with provisional approval is under permit and can continue to operate.

Ecology may prohibit a new facility from operating under provisional approval if the agency has not received a complete and correct application, or if the facility has not complied with requirements of the State Environmental Policy Act or this permit as required.

Facilities with provisional approval must operate in compliance with the requirements of federal and state rules, the applicable requirements of the general permit, and in accordance with their application and associated plans. ***Operators are responsible to know and comply with state and federal program requirements***. A facility cannot justify noncompliance by proposing in a plan or other document in a manner contrary to requirements of the rules or general permit. ***Operators must be sure their biosolids coordinator is aware of any changes to operations, including any planned changes from the previous permit***.

Provisional approval carries existing *approved* BUFs from one permit to the next. *New* BUFs cannot receive or apply biosolids to the land under provisional approval. To operate, a new BUF must have final approval of coverage with an approved general land application plan, or at least one approved site specific land application plan.

2.1.2. Automatic Coverage for Some Facilities.

***Key concept**: Approval of coverage is final on the effective date of this permit for facilities that do not have an active biosolids or septage management program, if they have previously complied with application and notice of intent requirements, and have no significant changes to biosolids management practices.*

Facilities that do not have active management programs will be automatically covered on the effective date of this permit if they have undergone environmental review and have no significant changes in biosolids management practices from the previous permit cycle. A permit application is not required from these facilities if they submitted a Notice of Intent to continue coverage, prior to expiration of the previous general permit.

Facilities that propose significant changes in biosolids management from the previous permit cycle, are not eligible for automatic coverage, must submit a permit application, and are subject to further permit review, evaluation under SEPA, and public notice prior to approval.

2.1.3. Responsible Official and Signature Authority

***Key concept**: The person responsible for signing permit-related documents is usually not the operator. The responsible official cannot delegate authority to sign an application, submit a notice of intent, or request a modification of permit coverage (including a new land application site). The responsible official may delegate authority to submit reports and other required documentation. Delegation must be in writing and on file with Ecology.*

The signature of the responsible official is required:

- For a permit application
- For any request to modify the terms of permit coverage, including the addition of a new land application site
- For a notice of intent to continue coverage under a forthcoming permit
- In response to an enforcement action or other legal proceeding

Table A1: Identifying the Responsible Official

Facility Type	Who is the Responsible Official?
Major or Class 1 POTW	An executive or manager with *overall authority* for operation of the treatment works, such as the plant superintendent or director of public works.
Minor POTW	Mayor, county executive, or in the case of a county or special purpose district with multiple minor POTWs, an executive or official with overall responsibility for operation of all facilities.
Special Purpose Districts	The executive director or manager of the district.
Federal	Either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal agency includes either of the following: (A) The chief executive officer of the agency. (B) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
Sole Proprietorships, Registered Partnerships, and Limited Liability Companies.	The proprietor or a partner with legal authority to make decisions on behalf of the company.
Private Corporations	A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation.

2.1.3.2. Delegation of Signature Authority

Table A2: When Signature Delegation can be Authorized

Responsible Official Signature Required	Can signature authority be delegated?
Permit application	No
Permit modification, including new land application site	No
Notice of Intent to apply for coverage	No
Annual report	Yes. Upload signature delegation letter at the end of the online report.
Interim reports, data, minor changes and clarifications	Yes. Upload signature delegation letter, at the end of the annual report process, or send to office where report is due.

An example signature Delegation Authority Letter can be found on Ecology's webpages.

2.1.4. Complying with the State Environmental Policy Act (SEPA)

***Key concept**: SEPA is a process that often runs parallel with, but is separate from the permit application process. Identify the SEPA Lead Agency and SEPA Responsible Official before you begin preparing your application. There is an opportunity to coordinate public notice requirements. Do not proceed with, or encourage a local agency to proceed with SEPA public notice until you have verified timing with Ecology. Make an informed decision. Use Ecology's SEPA resources online[10].*

If further SEPA review is required for your proposal, it is to your advantage to open that line of communication early in project planning. Begin by verifying the SEPA Lead Agency and the SEPA staff with whom you will work. If a local government entity such as a publicly owned treatment works is making a proposal, the SEPA Lead Agency is generally a local government body. For privately owned facilities, the SEPA Lead Agency will be either a local government body or Ecology.

The application package and SEPA Checklist work hand-in-hand. If another agency is the SEPA Lead Agency, Ecology will expect the application packet to include the SEPA Threshold Determination, associated SEPA Checklist, and if required, proof of public notice often referred to as an Affidavit of Publication." Ecology cannot accept a verbal assurance about the determination of the SEPA Responsible Official. If Ecology is the SEPA Lead Agency, we will expect a complete application package, including a SEPA checklist, prior to making our threshold determination.

If SEPA and biosolids permit processes are running in parallel, it is possible to issue a combined public notice. The combined public notice includes opportunity for public review and comment on both the SEPA threshold determination and the biosolids permit. That will extend the SEPA review period from fourteen days, to the minimum required for the biosolids general permit, of thirty days. If you post a combined public notice, you must include contact information for the

[10] https://ecology.wa.gov/regulations-permits/SEPA-environmental-review

SEPA Lead Agency as well as Ecology. Alternatively, you may complete the public review process for SEPA process before proceeding with public notice on your permit application.

2.1.5. Preparing a Permit Application

***Key Concept**: Review application requirements before you begin. Ecology will work with applicants, but may reject applications that are substantially incomplete or incorrect. A poor application will delay final approval, may reflect unfavorably on your operations in the view of the public, and your activities may be restricted.*

You can obtain the current version of the Application for Coverage form, from Ecology's biosolids webpages[11].

Identify the Ecology regional biosolids coordinator for your proposal. You can find contact information on the application form or online[12]. Identify your facility's responsible official – the person with authority to sign your application (see 2.1.3), and identify the SEPA Lead Agency and SEPA Responsible Official or SEPA staff you will work with (see 2.1.4).

Ecology will not approve public notice until your application is complete, correct, and prepared in a manner that a reasonably knowledgeable person can understand.

2.1.6. Submitting a Permit Application

***Key concept**: Reduce delays in processing by submitting a complete and correct permit application. Follow instructions provided within the application, and supplemental direction from your regional biosolids coordinator.*

When an application is required, you must submit a complete and correct application, including all associated plans and other documentation. You can find instructions on how to submit an application and required contents in the application form and online[11].

The application process for new facilities (not individual land application sites) is the same as for existing facilities, with the following exceptions and points of emphasis:

- New facilities must apply at least 180 days in advance of beginning operations. You may not submit an application for coverage with the assumption that you can immediately begin work.
- New facilities always require a completed SEPA checklist and threshold determination.
- New facilities require full public notice, including notice of your permit application and SEPA threshold decision, and notice of a public hearing if applicable.

[11] https://ecology.wa.gov/Biosolids-fees-forms-annual-reports
[12] https://ecology.wa.gov/Biosolids

2.1.7. Ecology Review of Applications and Other Documents

***Key Concept**: Your application and all related documentation and correspondence are a matter of public record. The review process ensures that your application is ready for public review. Ecology will not approve public notice if your application is inadequate.*

Ecology will review all documentation submitted as part of the permit application process. We may ask you to clarify or correct your application, or to submit additional information. Ecology may determine that changes and/or supplemental information are necessary to support your proposal. Ecology may add additional or more stringent requirements as a condition of final approval of coverage.

2.1.8. Public Notice Requirements

***Key Concept**: Determine your public notice obligations (including SEPA). Be sure to document all steps you take to inform the public and specific interested parties. Pay special attention to anyone you identify as, or who has notified you asking to be identified as, an "interested party." You are responsible for notice. Ecology can coordinate and assist you.*

All facilities applying for permit coverage for the first time, or proposing a permit modification, must meet the public notice requirements of WAC 173-308-310(13)[7]. There are different reasons and standards for public notice under this permit, including:

- Initial / new facility application.
- Renewing facility coverage and applying non-exceptional quality biosolids or septage to the land.
- Modification of existing coverage, including the addition of a general land application plan or a new land application site.
- Compliance with requirements of the State Environmental Policy Act.
- In response to an enforcement action or administrative order.
- When otherwise required by Ecology.

Do not undertake public notice until you have consulted with your regional biosolids coordinator. Work with both your regional biosolids coordinator and SEPA Responsible Official to determine notice requirements and timing. Applicants are responsible for the cost of publication of notice (in newspapers and other places) associated with obtaining coverage under this permit, and any modifications. This includes the cost of printing and posting signs when required.

2.1.8.1. Interested Parties

You must ensure notification of permit actions, including modifications, to ***all*** interested parties. Someone is an interested party if:

- They have informed you in writing.
- They have commented on your permit application or other public process, and provided their contact information.
- They have attended a public event for your permit, and provided contact information (whether or not they have commented).

Important: Be sure to notify your regional biosolids coordinator if anyone asks you to include them on your interested parties list. Failure to notify interested parties can jeopardize your permit status.

2.1.9. Public Hearings

Key Concept*: Not all applications or proposals require a public hearing. If you think a hearing may be required, discuss that with your regional coordinator early in your application process.*

A permit application or proposal does not require a public hearing *unless* Ecology stipulates. Ecology may require a public hearing if the agency believes there is a significant public interest in your application or proposal. We may make that determination independently, or based on comments we receive during the public notice period. Applicants are responsible for costs of a public hearing.

If you believe Ecology will likely require a public hearing for your project, you can save time and reduce costs by foregoing the initial notice and request for comments (where people might request a hearing), and going directly to notification for the public hearing. If you think this would help with your permit process, discuss how to proceed with your regional biosolids coordinator.

2.1.10. Final Approval of Coverage

Key concept*: A final approval of coverage (including approval of permit modifications) may contain additional or more stringent requirements specifically for your facility. Be sure to review and understand them, in addition to the other requirements of the general permit.*

After the comment period closes, Ecology will evaluate all comments received. Once we complete our review, we will issue a final determination in writing. An approval of coverage may or may not contain additional or more stringent requirements.

Ecology will notify interested parties regarding final approvals, but you must ensure notification to anyone who has advised you that they are an interested party. See 2.1.8 and 2.1.8.1.

2.1.11. Permit modifications.

Significant changes in biosolids management practices, including but not limited to the addition of new land application sites, are permit modifications. Ecology will approve permit modifications per the process in 2.1.3 – 2.1.10 above.

2.1.12. Notice of Intent

***Key Concept**: Submit your notice of intent promptly if you want to preserve coverage into the new permit, and avoid significant additional processes and fees. Be sure you update your contact information, and that the responsible official (see 2.1.3) signs the notice of intent.*

Before this permit expires, Ecology will notify facilities to submit a Notice of Intent to continue coverage. A completed and properly signed Notice of Intent is due to Ecology no later than 180 days before this permit expires. The Notice of Intent represents a facility's commitment to continue coverage under the next general permit. The Notice of Intent preserves coverage under an expired permit until the expired permit is formally canceled or a replacement has been issued. *Failure to submit a Notice of Intent may result in loss of coverage, the need to reapply as a new facility and revisit public notice, and significant additional fees*. You must submit your Notice of Intent on a form and in a manner specified by Ecology. New approvals (e.g. new facilities) and modifications of existing approved coverage (e.g. a new land application site for an existing facility) cannot be granted under the authority of an expired permit.

2.2. Obtaining and Maintaining Coverage

All facilities subject to coverage under the current general permit, except existing Baseline only facilities, must submit a complete permit application within 90 days of issuance of a new or replacement general permit.

Ecology may grant a request for an extension of up to 90 additional days for the submittal of a permit application, after approval of written justification from the facility responsible official. Facilities wishing to request an extension should work through their regional biosolids coordinator.

New facilities must submit a complete permit application 180 days in advance of beginning operations.

2.3. Maintaining Contact Information

All facilities must notify regional coordinators of any changes to contact information. This includes providing *and* updating as necessary the name, title, physical address, mailing address, and a valid, *actively monitored* email address for the following contacts.

- *Responsible Official*: The person who has full responsibility and legal signatory authority for all permit actions. Refer to 2.1.3 of this permit for an explanation of the Responsible Official.
- *Primary Contact*: The person who will normally serve as the first line of communication for routine permit and operational inquiries.
- *Billing Contact*: The person who will receive all invoices and assure timely payment of fees.

2.3.1. Identifying the Responsible Official

All permittees must identify a responsible official. *The responsible official may serve as the primary contact and/or billing contact*. The responsible official is typically not the operator (see 2.1.3). All facilities must notify Ecology within 30 days of any change in information for the contacts above.

2.3.2. Email List Membership Required

All facilities must provide and maintain at least one point of contact on the Ecology-Biosolids email list maintained by Ecology. This email list is the mechanism of general communication on technical and permit related issues. Permittees must monitor email list communications and respond if required. You can subscribe or manage your subscription here[13].

2.4. Requirements for Transporting Sewage Sludge or Biosolids

Transportation of biosolids must be consistent with an Ecology-approved spill response plan.

All generators are responsible for ensuring the safe and properly documented transportation of biosolids they generate, from the time of generation through the time of final use or disposal. This does not apply to septic pumping trucks that are not required to obtain coverage under this permit, including those that deliver septage to septage management facilities, because they are not identified as generators.

Any facility subject to this permit is responsible for the performance of any contractor or subcontractor they retain for the transportation of biosolids. Transporters must comply with Title 81 RCW and rules adopted thereunder, as applicable.

[13] https://public.govdelivery.com/accounts/WAECY/subscriber/new?topic_id=WAECY_47

Non-exceptional quality biosolids may be transported only to another facility for further treatment, an approved land application site, an approved storage site, or an approved disposal facility.

2.4.1. Transporting non-exceptional quality biosolids out of the jurisdiction of the State of Washington

Generators must have approval from Ecology and the receiving regulatory authority before transporting non-exceptional quality biosolids out of the jurisdiction of the State of Washington

2.4.2. Accepting Biosolids from Federal, Tribal, or Out of State Facilities

Treatment works must have written approval from Ecology before accepting biosolids from a federal, tribal, or out of state facility.

This provision is not meant to impact pumping trucks servicing onsite wastewater systems, and delivering septage to facilities within state jurisdiction. This provision is meant to identify out of jurisdiction facilities that participate in the state program and ensure that they are treated the same as those within state jurisdiction.

Treatment works subject to this permit, may not accept biosolids for further treatment or disposal unless the generating treatment works complies with the following requirements.

Generating facilities must:

- Comply with the requirements of WAC 173-308-130[3] and WAC 173-308-320[14].
- Have and comply with an Ecology approved spill response plan.
- Ensure that a copy of the spill response plan is available to drivers, and in the event of a spill, ensure that drivers understand what to do.
- Ensure that an accurate record of all loads is kept and available for inspection, including the source of biosolids, the destination of biosolids, the amount transported, how that was determined (scale ticket, calculation based on solids content), and the date of transportation and delivery.
- Ensure that the generating and receiving facilities receive a copy of the record of biosolids transported.

2.5. Surface Impoundments and Tanks Used for Storage and Treatment

All facilities must store and treat biosolids consistent with approved plans, and in a manner that is not likely to result in harm to human health or the environment. Facilities storing biosolids for more than two years must have a documented commitment to beneficial use on file with Ecology.

[14] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308&full=true#173-308-320

2.5.1. Surface Impoundments Used for Storage or Treatment

Surface impoundments must be designed and operated in accordance with the standards of Chapter 173-350 WAC – *Solid Waste Handling Standards*[15], unless they are operating in compliance with a current state, or federal water pollution control permit, or another environmental permit.

The following requirements do not apply to surface impoundments at septage management facilities and facilities that mix primarily septage with smaller amounts of biosolids (mixing facilities) unless specified as an additional or more stringent requirement as part of the permit approval process.

Facilities that operate surface impoundments must annually report:

- The estimated remaining capacity for biosolids accumulation to the nearest half foot.
  - Capacity must not include any portion of freeboard required to preserve the structural integrity of the surface impoundment or to prevent it from overtopping.
- The estimated year when solids removal will be required to stay within capacity or prevent violations of discharge limits
- Begin planning and notify Ecology at least one year in advance of solids removal. *Ecology encourages a planning horizon of two years to ensure availability of alternatives and reduce project costs.*
- Analyze for the pollutants in WAC 173-308-160 Table 1[16], within 24 months of the date this permit is issued, unless biosolids were analyzed on or after September 1, 2019.
  - Notify the regional biosolids coordinator if the concentration of any pollutant is above 90% of the value in WAC 173-308-160 Table 3 or the Table 1 value for Molybdenum.

2.5.2. Tanks Used for Storage or Treatment

This section does not apply to wastewater treatment plants operating under an NPDES or State Waste Discharge Permit.

Facilities storing biosolids in tanks must:

- Do so in a manner that would not be likely to result in the contamination of groundwater, surface water, air, or land under current conditions or in the case of fire or flood.
- Protect tanks from damage by placement of bollards or other devices.
- Maintain tanks to avoid leakage and catastrophic failure.
- Submit and follow an inspection and maintenance schedule consistent with requirements for the type of tank in service.

[15] https://apps.leg.wa.gov/wac/default.aspx?cite=173-350-330
[16] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-160

2.6. Requirements for Disposal in a Municipal Solid Waste Landfill or Incinerator

Disposal includes landfill disposal and incineration. Per statute, the State of Washington recognizes biosolids as a valuable and beneficial commodity. Ecology will not approve permit applications for disposal or incineration of biosolids except as described in this section.

Any treatment works transferring biosolids to another facility for the purpose of disposal must have written approval from Ecology, and meet the criteria for disposal on an *emergency*, *temporary* or *long-term* basis as specified in 2.6.3 below.

2.6.1. Incineration

This permit authorizes the wastewater treatment plants with existing incinerators listed below, to continue incinerating sewage sludge (in keeping with the definitions in Chapter 173-308[2], descriptions in 40 CFR Part 503[8], and 40 CFR Part 62, Subpart LLL[17]) or biosolids they generate, and to accept sewage sludge or biosolids for incineration from other facilities when they meet applicable requirements of 2.6.3:

- Anacortes WWTP
- Bellingham Post Point WWTP
- Edmonds WWTP
- Lynnwood WWTP
- Vancouver Westside WWTF

2.6.2. Landfill Disposal

Facilities disposing in a landfill must meet the applicable requirements in 2.6.3 below, comply with the landfill disposal requirements in WAC 173-308-300[18], and provide Ecology with written approval from the local health jurisdiction where the biosolids will be disposed.

2.6.3. Terms of Disposal

2.6.3.1. Justification for Disposal on an Emergency Basis

This permit approves the disposal of biosolids for all facilities for up to one year when disposal meets the definition of *disposal on an emergency basis* in WAC 173-308-080[9].

Any facility undertaking emergency disposal must notify Ecology in writing, including a summary of the conditions warranting disposal.

[17] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-62/subpart-LLL?toc=1
[18] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-300

2.6.3.2. Justification for Disposal on a Temporary Basis

Ecology may approve disposal for up to five years when a facility meets the conditions for *disposal on a temporary basis* in WAC 173-308-080[9].

2.6.3.3. Justification for Disposal on a Long-term Basis

Ecology may approve disposal as a preferred method of management for five years or longer when a facility meets the conditions for *disposal on a long-term basis* in WAC 173-308-080[9].

2.7. Requirements for Transferring Biosolids to Another Person or Facility

Transferring means changing the possession of biosolids. Biosolids may be transferred from one facility to another, including to an individual person, only as follows:

2.7.1. Transfer of Exceptional Quality Biosolids for Unrestricted Use

When biosolids are transferred to another person for unrestricted use:

- The biosolids must meet criteria to be classified as exceptional quality.
- The requirements in WAC 173-308-260[19], including providing a label or information sheet must be met.

2.7.2. Transfer of Non-Exceptional Quality Biosolids:

Non-exceptional quality biosolids may be transferred only to a properly permitted facility provided that:

- There are no specific conditions of coverage for either the sending or receiving facility prohibiting the transfer of biosolids.
- Both the sending and receiving facility exchange information needed to comply with this permit and Chapter 173-308-WAC[2]. This includes, but is not limited to, information on biosolids quality and the permit status of each facility.

[19] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-260

2.9. Duty to Comply

You must comply with all conditions of this permit, all applicable requirements of Chapter 173-308 WAC[2], and all applicable requirements of other laws and rules for which the Department of Ecology has responsibility, including but not limited to:

- Title 90 RCW[20] – Water Rights – Environment
- Title 70A RCW[1] – Environmental Health and Safety
- Chapter 43.21C RCW[23] – State Environmental Policy and the State Environmental Policy Act (SEPA) rules adopted under chapter 197-11 WAC or applicable local ordinances.

You must abide by all commitments in your permit application, including those in any plans and other operating documents unless modified through the permit review and final approval of coverage process.

You may not use any provision of your application or any associated plans or other documents to justify noncompliance with any provisions of Chapter 173-308 WAC[2] or the conditions of this general permit.

You must comply with any additional or more stringent requirements developed as a condition of final coverage under this permit.

2.10. Permit Modification, Revocation and Reissuance, and Termination

Ecology may modify, revoke and reissue, or terminate coverage under this permit for cause. Permit conditions remain in effect until Ecology acts, even if you file a request to modify, revoke and reissue, or terminate coverage under this permit, or notify Ecology of planned changes or anticipated noncompliance.

Ecology may modify or revoke and reissue your coverage under this permit in accordance with WAC 173-308-310(23)[7]. Ecology may terminate your coverage under this permit in accordance with WAC 173-308-310(24)[7].

2.11. Continuing Coverage and Duty to Reapply

If you wish to continue an activity regulated by this permit after its expiration date, you must submit a Notice of Intent at least 180 days in advance of its expiration date and subsequently apply for coverage under a new permit in accordance with WAC 173-308-310. Failure to comply with these requirements can result in loss of permit coverage.

[20] https://apps.leg.wa.gov/rcw/default.aspx?Cite=90

2.12. Need to Halt or Reduce Activity Not a Defense

It is not a defense for a permit holder in an enforcement action to argue that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2.13. Duty to Mitigate

You must take all reasonable steps to minimize or prevent biosolids use or disposal that may adversely affect human health or the environment. This includes, but is not limited to, the proper operation and maintenance of equipment, adequate laboratory controls, and appropriate quality assurance procedures.

2.14. Duty to Provide Information to Ecology

You must furnish to Ecology on request, any records required by Chapter 173-308 WAC[2], or as a condition of approval under this permit.

You must furnish any information requested by Ecology to determine compliance with this permit, or to determine whether cause exists for modifying, revoking and reissuing, or terminating coverage.

2.15. Inspection and Entry

Upon presentation of credentials and other documents as may be required by law, you must allow Ecology or an authorized representative of Ecology, to:

- Enter the premises where a regulated facility or activity is located or conducted, or where related records are kept.
- Have access to and copy, during reasonable times, any records required under this permit.
- Inspect during reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
- Sample or monitor during reasonable times, to assure permit compliance or as otherwise authorized by state law, Chapter 70A.226 RCW[1], and the Clean Water Act, any substances, parameters, or practices at any location.

2.16. Monitoring and Records

You must monitor and report monitoring results annually as required in 2.17 of this permit, and in accordance with your NPDES permit or State Waste Discharge Permit, if applicable.

You must retain all records and data used to complete your application for coverage under this permit:

- For a period of at least 5 years from the date of the application, and
- Until a new application has been submitted and permit coverage is approved, or
- Longer if required by other applicable laws or regulations.

You must retain all records related to annual report submittals for five years after the due date of the respective annual report.

2.17. Signatory Requirements

The responsible official must sign the application for coverage, and all subsequent proposals to modify coverage. See 2.1.3.

2.18. Reporting and Notification

Some facilities have a separate obligation to report to U.S. EPA in accordance with 40 CFR part 503[8]. This permit does not address federal reporting requirements.

You must report to or notify Ecology as follows.

2.18.1. Annual Reports

You must submit an annual report for the previous calendar year, in the format and using the means specified by Ecology by March 1, of each year.

2.18.2. Planned Changes

You must notify your regional biosolids coordinator and any applicable delegated local health jurisdiction, in advance of significant changes in your biosolids management practices, including planned physical alterations or additions to your facility. Significant changes are permit modifications and require agency approval.

2.18.3. Requirement to Self-Report Noncompliance

You must report any noncompliance to Ecology within 24 hours of becoming aware. Unless waived in writing by Ecology, you must submit a written explanation of the noncompliance within 5 days. Each written explanation must include:

- A description of the noncompliance.
- The cause of the noncompliance.
- The period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue.
- Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

2.18.4. Reporting in Event of a Spill

You must report any spill to the Ecology regional office immediately, to the regional biosolids coordinator within 24 hours, and as otherwise specified in your approved spill prevention and response plan.

2.18.5. Other Information

If you become aware that you failed to submit any relevant facts, or you submitted incorrect information in a permit application or a report, you must immediately notify your regional biosolids coordinator, and follow with a written explanation.

2.18.6. Transferring Permit Coverage

Coverage under this permit is transferable only as provided in WAC 173-308-310(22)[7].

Any facility wishing to transfer permit coverage must file a complete notice of transfer with Ecology, no later than thirty days before the proposed date of transfer.

The new permit holder is responsible for any unpaid fees or penalties, on the date of the transfer.

2.19. Penalties

If you willfully violate any provisions of this permit or any provisions of chapter 70A.226 RCW[1] or any order issued pursuant to chapter 70A.226 RCW, without sufficient cause, you are guilty of a gross misdemeanor. Willful violation of this chapter, or a permit or order issued pursuant to this chapter is punishable by a fine of up to ten thousand dollars and costs of prosecution, or by imprisonment for up to three hundred sixty-four days, or by both. Each day of violation may be deemed a separate violation.

In addition to any other penalty provided by law, if you violate any provisions of Chapter 70A.226 RCW or rules or orders adopted or issued pursuant to it, you are subject to a penalty of

up to five thousand dollars a day for each violation. Each violation is a separate violation. In the case of a continuing violation, each day of violation is a separate violation. An act of commission or omission that procures, aids, or abets in the violation is also considered a violation under this section.

2.20. Obtaining and Providing Information

Whenever you transfer biosolids to another person or facility, you must provide notice and necessary information for the receiving person or facility to comply with the requirements of this permit and Chapter 173-308 WAC[2].

2.21. Final Coverage: Additional or More Stringent Requirements

On a case-by-case basis, Ecology may impose requirements that are in addition to or more stringent than the requirements in this permit.

All additional or more stringent requirements become a part of the permit and are fully enforceable. You may appeal any additional or more stringent requirements only as described in 2.24 of this permit.

2.22. Compliance Schedules

A schedule with tasks and milestones leading to compliance with the requirements of this permit and Chapter 173-308 WAC[2] may be established by mutual agreement. A compliance schedule may not extend deadlines established under the Clean Water Act or Chapter 70A.226 RCW[1]. Compliance schedules must be established in accordance with the requirements of WAC-173-308-310(16)[7].

2.23. Permit Fees and Penalties Due

You must pay permit fees annually, within forty-five days of receiving the invoice. Fees are determined and issued in accordance with WAC 173-308-320[21]. Failure to pay permit fees can result in revocation of your permit.

You must pay penalties as specified in an accompanying administrative order or other legal documents.

When coverage under this permit is transferred, the new permit holder is responsible for any unpaid fees or penalties, on the date of the transfer.

[21] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-320

2.24. Recordkeeping Requirements

You must keep records and certification statements in accordance with 2.15 of this permit and WAC 173-308-290[22].

2.25. Appeals

Any aggrieved person may appeal this permit as provided by applicable law including, but not limited to, Chapter 43.21B RCW[23] and Chapter 34.05 RCW[24]. You must file your appeal within 30 days of the issuance date listed on the cover page.

[22] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-290
[23] https://app.leg.wa.gov/rcw/default.aspx?cite=43.21B
[24] https://app.leg.wa.gov/rcw/default.aspx?cite=34.05

3. Active Septage Management

This section applies to all Active Septage Management Facilities, in addition to the Baseline section.

This section does not apply to:

- Facilities that treat and manage septage as *biosolids originating from sewage sludge* (i.e. to meet pollutant limits, Class A or B pathogen reduction, and vector attraction reduction), including but not limited to POTWs and compost facilities that accept septage for treatment (applicable under section (4)).
- Facilities that mix septage with biosolids derived from sewage sludge (see section (4)) including compost facilities that accept both.

If you apply both septage and biosolids from wastewater treatment plants to the land, but manage them separately, you are subject to the requirements of this section and section (4).

3.1. Obtaining and Maintaining Coverage

You must apply for coverage, obtain coverage, and maintain coverage under this permit. Refer to Section (2) for details on the permit process.

3.2. Public Notice Required

Facilities must obtain approval from Ecology before issuing public notice of permit actions.

Notices required to be published or posted under this permit must meet Ecology standards as to content, overall dimension, font size, and placement.

3.2.1. Who Must Provide Public Notice

You must comply with public notice requirements in WAC 173-308-310(13)[7] if you have an active septage management program *or* you propose or are required to modify the terms of your coverage under this permit, and when otherwise required by Ecology. Modifications include but are not limited to the addition of new land application plans and significant changes to existing management practices. You do not have to conduct public notice if:

- You only rely on a BUF for land application of septage, or you only transfer non-exceptional quality biosolids to another facility for further treatment.

3.2.2. State Environmental Policy Act

You must comply with applicable SEPA requirements. Applicants may combine the public notice required under SEPA with notice required for the biosolids program in WAC 173-308-310[7], with the approval of the SEPA Responsible Official. See 2.14 and 2.18.

When conducting separate notice under the State Environmental Policy Act, approval for compliance with SEPA rests with the SEPA Lead Agency.

3.2.3. Identification and Notice to Interested Parties

All facilities must maintain a list of interested parties during the life of the permit and must maintain a record of attempts to notify each interested party on the list, whenever public notification is required, including when notification is undeliverable to the interested party. If notice is returned as undeliverable, and all methods to reach the interested party are exhausted, they may be removed from the facility's interested party list. The facility must provide documentation of the notice attempts and failed delivery(s) to Ecology prior to removing the individual from the interested parties list. Ecology may assist with interested party notification, but it is the permit holder's responsibility to ensure notification to interested parties.

All facilities must provide their interested parties list to Ecology on request.

A person is an interested party, if:

- They request a facility to place them on their interested parties list.
- They attend a public meeting or hearing offered by Ecology's state biosolids program and provide an email or physical mailing address. *Persons do not have to comment or testify during a meeting or hearing in order to be interested parties. Persons who attend without signing in, or who do not provide contact information, do not qualify as interested parties.*
- They notify Ecology of their interest in a specific facility. Ecology will share this information with the facility.

If an interested party provides both an email and physical mailing address, the facility must notify using both addresses, or confirm receipt of notification by one.

For the purposes of notifying organizations that may be interested, notification to the president (or other officers if specified by the organization) constitutes notice to all members of the organization, *except* where members have made individual requests for separate notification.

3.3. Removing Manufactured Inerts

Prior to land application, septage must meet the requirements for removal of manufactured inerts in WAC 173-308-205[25].

Materials removed by screening are solid waste and materials must be contained on site in a manner that does not present a threat to human health or the environment, consistent with

[25] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-205

the requirements of WAC 173-350-040 [26], until lawfully disposed of in the municipal solid waste handling system.

3.4. Requirements for Sampling, Analysis, and Process Monitoring

This section contains the *minimum* requirements for sampling and analysis of septage and soils when you prepare septage for beneficial use.

3.4.1. Representative Sampling

You must collect samples that are representative of the septage or soils you are characterizing. Samples must represent the quality of septage at the time it is transferred, used, or disposed.

You must collect samples at times and locations that will capture septage representative of the stage of treatment.

You must collect a sufficient number of samples to meet requirements for characterization of pathogen reduction, vector attraction reduction, nitrogen, and any other required macro or micronutrients.

3.4.2. Sampling and Analysis Plans

You must submit a sampling and analysis plan for all septage and soil sampling activities.

Soil sampling and analysis plans must conform to cooperative extension guidelines or generally accepted guidance, or be prepared by a soil scientist, agronomist, crop adviser, or other certified or licensed professional. A list of approved analysis methods is maintained on Ecology's webpage. Making it available outside the permit document allows for more efficient maintenance, as analytical methods change, or are updated from time to time.

[26] https://apps.leg.wa.gov/wac/default.aspx?cite=173-350-040

At a minimum, plans must address:

- When you will collect samples, including calendar timing and with respect to treatment processes as appropriate.
- Where you will collect samples (i.e. the physical point in the process, or location).
- The number of samples you will collect for each analyte, and how you will determine the location for sample collection.
- How you will collect samples including a description of the supplies and equipment needed, and onsite manipulation such as compositing or subsampling.
- How you will handle and care for samples from the time of collection to the time of analysis or delivery to an accredited laboratory for analysis, including sample preservation, chain of custody, and compliance with holding time requirements.

Except for onsite sampling of pH adjustment, all samples, including soil samples and surface or groundwater samples, must be analyzed by a lab properly accredited in the appropriate matrix, if accreditation is available

You may identify a lab appropriate for your needs by searching Ecology's web[27].

3.4.3. Frequency of Process Monitoring

You must monitor pH adjustment as applicable in 3.6.7

3.4.4. Frequency of Septage Analysis

You must monitor pH adjustment as applicable in 3.6.7

3.4.5. Point of Compliance

The point of compliance for a sample is the date on which the sample is taken, not the date on which results are subsequently reported. It is a violation of this permit to use or distribute biosolids that fail to meet applicable standards.

3.4.6. Analytical Methods and Holding Times

You must use approved analytical methods, and conform to sample preservation and holding time requirements for each analyte in accordance with the specifications of the analytical method used.

The appropriate methods specified in 40 CFR 503.8, 40 CFR 136, and WAC 173-308 are approved unless otherwise specified in an Ecology final sampling and analysis plan or final approval of coverage.

[27] https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Laboratory-Accreditation/How-to-choose-an-analytical-laboratory

3.5. Sites Where Septage Cannot be Applied

Application of septage to *public contact sites*, lawns, and home gardens is prohibited.

3.6. Requirements When Septage is Applied to the Land

This section contains the requirements for the land application of septage. It does not apply to *septage managed as biosolids originating from sewage sludge*.

3.6.1. Site Specific Land Application Plans

You must submit a site specific land application plan (SSLAP) meeting the content requirements in Appendix B, for every site where septage will be applied to the land. You are **not** required to submit a SSLAP for septage sent to a BUF, if the conditions in WAC 173-308-310(8)(g)[7] have been met.

3.6.2. General Land Application Plans

Submit a General Land Application Plan (GLAP) meeting the content requirements of Appendix A if you intend to develop other land application sites during the life of your permit coverage.

3.6.3. Soil Testing Required

You must test all new land application sites for the pollutants in Table 1 of WAC 173-308-160[16], including nitrate and other nutrients if specified.

Testing of soils for pollutants and nutrients must be consistent with an approved sampling and analysis plan.

3.6.4. Application Rates

You must apply septage to the land at a rate not exceeding the rate determined by equation 1.

Equation 1 – Annual Application Rate for Septage

AAR = N ÷ 0.0026

AAR = maximum annual application rate in gallons per acre per 365-day period

N = amount of nitrogen in pounds per acre per 365-day period needed by the crop or vegetation grown on the land (subtract any nitrogen supplied by other sources—for example, commercial fertilizers or manures)

Equation 2 – Calculating Drive Length of Spreader per Load

Drive length (in feet) = gallons in spreader / spread width (in feet) x 43,560 / AAR *or*

Drive length (in feet) = gallons in spreader/ (AAR / 43,560) / spread width

AAR = annual application rate in gallons per acre per 365-day period determined by Equation 1

3.6.5. Pollutants

EPA developed the application rate formula in Equation 1 with consideration of acceptable pollutant loading. Testing for pollutants in WAC 173-308-160 is not required for septage applied to land unless it is managed as biosolids originating from a treatment works (refer to Section 4).

3.6.6. Pathogen and Vector Attraction Reduction

The requirements for pathogen and vector attraction reduction for septage are based on the percent by volume of septage from households, and whether or not septage will be injected or tilled into the soil. You must keep records for each load or batch of septage you apply to the land. You must be able to show compliance with 3.6.7 and 3.6.7.1 below.

3.6.7. Septage must be treated or applied to the land as follows:

Except as allowed in 3.6.7.1:

- You must raise the pH of the septage by the addition of alkali, to at least 12 for a minimum of thirty minutes.
- You must conduct at least two pH tests for each load of septage applied to the land.

  The first test must occur *after* the addition of lime or alkali, and show that a pH of at least 12 has been attained.

  The second test must occur at least 30 minutes after the first test to show that a pH of at least 12 has been retained.

  If the pH is less than 12 when the second test is conducted, the process must be restarted.

- Sampling must be representative of the septage that is applied to the land.
- You must keep records of each sampling event including the date, time, and result for each sample.

3.6.7.2. Alternative to pH adjustment for septage 75% or more by volume from household septic tanks

When a load or batch of septage is 75% or more by volume from household septic tanks, as an alternative to pH adjustment, you may:

- Inject the septage below the surface of the land so that no significant amount of the septage is on the surface within 1 hour after injection, or
- Incorporate the septage into the soil within 6 hours after application.

3.7. Landowner Consent

You must obtain written consent of all landowners prior to applying non-exceptional quality biosolids to the land for the first time on any parcel. The landowner must consent to allow access for Ecology inspections, and agree to comply with requirements for site management and access in Chapter 173-308 WAC[2].

3.8. Site Management and Public Access Restrictions

The site management and public access restrictions in this subsection apply when septage is applied to the land.

3.8.1. Crop Harvest Waiting Periods

The time between the last application of septage and crop harvesting must adhere to the waiting periods in Table S1.

Table S1: Crop Harvesting Restrictions for Septage

Crop Type	Examples	Does the harvested part of plant contact septage?	Length of time the septage remains on soil surface prior to incorporation in the soil	Waiting period until harvest is allowed
Above ground food crops	Cherries, wheat	No	Not applicable	30 days
Above ground food crops	Lettuce, cucumbers, strawberries	Yes	Not applicable	14 months
Root food crops	Onions, potatoes	Yes	≥4 months	20 months
Root food crops	Onions, potatoes	Yes	<4 months	38 months
Feed crops	Rangeland, pasture, hay, feed corn.	Not applicable	Not applicable	30 days
Fiber crops	Trees, cotton	Not applicable	Not applicable	30 days

3.8.2. Public Access Restrictions

Public access must be restricted following the application of septage. You must post and maintain signs limiting access to the site during the time when site access is restricted, in accordance with the requirements in Table S2.

Table S2: Site Posting Requirements for Septage Application Sites

Where	Notice Content	How Long
All significant points of access to the site. Every ½ mile (805 meters) around the perimeter of the site.	The name and address or phone number of the generator and, if different, the person who applies. The names, addresses, and phone numbers of the regulatory and permitting authorities. The material that is being applied. Notice that access is restricted and, if desired, the date after which access is no longer restricted. If applicable, a notice on limitations regarding the harvesting of edible plants from the site.	Sites with a high potential for public exposure: 1 year Sites with a low potential for public exposure" 30 days

3.8.3. Buffers

You must meet the additional site management restrictions in Table S3 below when septage is applied to the land. For information on interpreting buffers, please refer to Ecology's Biosolids Management Guidelines, WDOE 93-80[41].

Table S3: Additional Site Management Restrictions for Septage

Feature	Restriction
Surface waters	No application within 100 feet (30.5 meters)*
Wells	No application within 100 feet (30.5 meters)*
Wetlands	No application allowed*
Public contact sites, lawns, or gardens	No application allowed
Flooded, frozen, or snow-covered sites	No application allowed

*** Unless otherwise approved by Ecology**

4. Permit Section: Active Biosolids Management

Facilities covered in this section have active biosolids management programs. You have an active biosolids management program, if you are:

- Treating sewage sludge and/or septage to produce biosolids.
- Treating sewage sludge and/or septage to produce biosolids, and directly applying biosolids to the land, or have a legal arrangement to have your biosolids applied to the land where you remain directly responsible for all compliance aspects.
- Sending your biosolids to a BUF that applies them to the land under a separate permit (this does not relieve you of responsibility for proper management of your biosolids).
- Applying biosolids to the land as a permitted BUF.
- Producing exceptional quality biosolids to sell or give away. This includes wastewater treatment plants, composters, and other treatment facilities.

If you also apply septage to the land, you are subject to the requirements in section (3) of this permit.

If you only transfer your biosolids to another facility for further treatment, or you operate a surface impoundment and do not plan to remove solids during the life of this permit, you are subject *only* to section (2) of this permit.

4.1. Obtaining and Maintaining Coverage

You must apply for coverage, obtain coverage, and maintain coverage under this permit. Refer to section (2) for details on the permit process.

4.2. Public Notice Required

Facilities must obtain approval from Ecology prior to issuing public notice of permit actions.

Notices required to be published or posted under this permit, must meet Ecology standards as to content, overall dimension, font size, and placement.

4.2.1. Who Must Provide Public Notice

You must conduct public notice according to WAC 173-308-310(13)[77] if you have an active biosolids management program and you land apply non-exceptional quality biosolids, or you propose or are required to modify the terms of your coverage under this permit, or you are a new facility beginning operations, and when otherwise required by Ecology. Modifications include but are not limited to the addition of new land application plans and significant changes to existing management practices. You do not have to conduct public notice if:

- You have been permitted to produce exceptional quality biosolids unless you rely on your own land application site for biosolids that do not meet exceptional quality standards.
- You rely on a BUF for land application of non-exceptional quality biosolids you produce, or you transfer non-exceptional quality biosolids to another facility for further treatment.

Please note this list does not excuse new active biosolids management facilities from conducting initial public notice to gain coverage under the general permit.

4.2.2. State Environmental Policy Act

You must comply with applicable SEPA requirements. Applicants may combine the public notice required under SEPA with notice required for the biosolids program in WAC 173-308-310[7], with the approval of the SEPA Responsible Official. See 2.14 and 2.18.

When conducting separate notice under the State Environmental Policy Act, approval for the purpose of compliance with SEPA rests with SEPA Lead Agency.

4.2.3. Identification and Notice to Interested Parties

All facilities must maintain a list of interested parties during the life of the permit, and must maintain a record of attempts to notify each interested party on the list, whenever public notification is required, including when notification is undeliverable to the interested party. Should notice return to the facility as undeliverable via mail, email, or some other means, and all methods to reach the interested party are exhausted, the facility must document the attempts and the interested party in question may be removed from the facility's interested party list. Ecology may assist with interested party notification, but it is the permit holder's responsibility to ensure notification to interested parties.

All facilities must provide their interested parties list to Ecology on request.

A person is an interested party, if:

- They request a facility to place them on their interested parties list.
- They attend a public meeting or hearing offered by Ecology's state biosolids program and provide an email or physical mailing address. *Persons do not have to comment or testify during a meeting or hearing in order to be interested parties. Persons who attend without signing in, or who do not provide contact information, do not qualify as interested parties.*
- They notify Ecology of their interest in a specific facility. Ecology will share this information with the facility.

If an interested party provides both an email and physical mailing address, the facility must notify using both addresses, or confirm receipt of notification by one.

For the purposes of notifying organizations that may be interested, notification to the president (or other officer if specified by the organization) constitutes notice to all members of the organization, *except* where members have made individual requests for separate notification.

4.3. Removing Manufactured Inerts

Prior to land application, biosolids must meet the requirements for removal of manufactured inerts in WAC 173-308-205[28].

Materials removed by screening are solid waste and must be contained on site in a manner that does not present a threat to human health or the environment, consistent with the requirements of WAC 173-350-040[29] until lawfully disposed of in the municipal solid waste handling system.

4.4. Requirements for Sampling, Analysis, and Process Monitoring

This section contains the *minimum* requirements for sampling and analysis of biosolids and soils, and process monitoring that are applicable when you prepare biosolids for beneficial use.

4.4.1. Representative Sampling

You must collect samples that are representative of the biosolids or soils you are characterizing. Samples must represent the quality of biosolids at the time they are transferred, used, disposed, sold, or given away.

You must collect samples at times and locations that will capture biosolids representative of the stage of treatment.

You must collect a sufficient number of samples to meet requirements for characterization of pathogen reduction, vector attraction reduction, pollutant limits, nitrogen, and any other required macro or micronutrients.

4.4.2. Sampling and Analysis Plans

You must submit a sampling and analysis plan for all biosolids and soil sampling activities.

Soil sampling and analysis plans must conform to cooperative extension guidelines or generally accepted guidance, or be prepared by a soil scientist, agronomist, crop adviser, or other certified or licensed professional. A list of approved analysis methods is maintained on

[28] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-205
[29] https://apps.leg.wa.gov/wac/default.aspx?cite=173-350-040

Ecology's webpage. Making it available outside the permit document allows for more efficient maintenance, as analytical methods change, or are updated from time to time.

At a minimum, plans must address:

- When you will collect samples, including calendar timing and with respect to treatment processes as appropriate.
- Where you will collect samples (i.e. the physical point in the process, or location).
- The number of samples you will collect for each analyte, and how you will determine the location for sample collection.
- How you will collect samples including a description of the supplies and equipment needed, and onsite manipulation such as compositing or subsampling.
- How you will handle and care for samples from the time of collection to the time of analysis or delivery to an accredited laboratory for analysis, including sample preservation, chain of custody, and compliance with holding time requirements.

All samples, including soil samples and surface or groundwater samples, must be analyzed by a lab properly accredited by Ecology if accreditation is available. Note that accreditation must be specified for the appropriate matrix – solid and chemical materials for biosolids, drinking water for drinking water, and nonpotable water for influent or effluent.

You may identify a lab appropriate for your needs by searching Ecology's web[30].

4.4.3. Frequency of Process Monitoring

You must monitor the pathogen reduction processes (WAC 173-308-170[31]) and vector attraction reduction processes (WAC 173-308-180[32]), at a frequency and duration that will ensure the process and biosolids meet applicable requirements.

4.4.4. Frequency of Biosolids Analysis

At a minimum, you must analyze your biosolids at the frequency listed in Table B1 below.

The dry weight tonnage of biosolids applied to the land or prepared for sale/give away per 365-day period determines the minimum frequency of biosolids analysis (Table B1 below).

For facilities that compost or mix Class B quality biosolids with other materials, the frequency of analysis is based on the dry weight tonnage of the total amount of material, not just the biosolids.

[30] https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Laboratory-Accreditation/How-to-choose-an-analytical-laboratory
[31] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-170
[32] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-180

For facilities with surface impoundments preparing to remove solids, frequency of sampling is converted to a number of samples based on the amount of solids that will be removed.

For facilities with surface impoundments characterizing biosolids under section 2.5.1, the number of samples is determined based on the estimated quantity of solids in the impoundment at the time of sampling, or as otherwise approved by Ecology.

Table B1 applies to the pollutants in WAC 173-308-160[33], the pathogen density requirements in WAC 173-308-170[34], the vector attraction reduction standards in WAC 173-308-180[35], and the nitrogen concentrations and percent solids data needed to support agronomic rate determinations. It does not apply to process monitoring

Table B1: Minimum Frequency of Biosolids Analysis (adapted from WAC 173-308-150[36])

Dry Metric tons per Year	Frequency*
>0 <290 (>0 <320 U.S. tons)	once per year (1X per year)
290 - 1,500 (320 - 1,653 U.S. tons)	once per quarter (4X per year)
1,500 - 15,000 (1,653 - 16,535 U.S. tons)	once per 60 days (6X per year)
>15,000 (>16,535 U.S. tons)	once per month (12X per year)

*** after 2 years of analyzing at this frequency, analysis for the pollutant concentrations may be reduced with approval of Ecology, but it must not be less than once per year. The frequency of sampling for compliance with pathogen and vector attraction reduction cannot be reduced.**

4.4.5.Point of Compliance

The point of compliance for a sample is the date on which the sample is taken, not the date on which results are subsequently reported. It is a violation of this permit to use or distribute biosolids that fail to meet applicable standards.

4.4.6.Analytical Methods and Holding Times

You must use approved analytical methods, and conform to sample preservation and holding time requirements for each analyte in accordance with the specifications of the analytical method used.

The appropriate methods specified in 40 CFR 503.8[8], 40 CFR 136[37], and WAC 173-308[2] are approved unless otherwise specified in an Ecology final sampling and analysis plan or final approval of coverage.

[33] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-160
[34] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-170
[35] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-180
[36] http://app.leg.wa.gov/WAC/default.aspx?cite=173-308-150
[37] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-136?toc=1

4.5. Requirements for Non-Exceptional Quality Biosolids to the Applied the Land

These requirements apply to non-exceptional quality biosolids that are applied to:

- Agricultural Land,
- Forest Land,
- Public Contact Sites, or
- Land Reclamation Sites

Non-exceptional quality biosolids are not commercial fertilizers unless properly registered. Generators cannot make, nor can users rely on, any guarantee of nutrient value.

4.5.1. Site Specific Land Application Plans

You must submit a site specific land application plan (SSLAP) meeting the content requirements in Appendix B, for every site where non-exceptional quality biosolids will be applied to the land. You are not required to submit a SSLAP for biosolids sent to a BUF, if the conditions in WAC 173-308-310(8)(g)[7] have been met.

You are not required to submit a SSLAP for the management of exceptional quality biosolids unless Ecology requires a plan in accordance with WAC 173-308-310(8)(a)(ii) or (iii).[7]

A generator is not required to submit a SSLAP if they send non-exceptional quality biosolids to a BUF, and the conditions in WAC 173-308-310(8)(g)[7] have been met.

4.5.2. General Land Application Plans

Submit a General Land Application Plan (GLAP) meeting the content requirements of Appendix A if you intend to develop other land application sites during the life of your permit coverage.

4.5.3. Soil Testing Required

You must test all new land application sites for the pollutants in Table 1 of WAC 173-308-160[33], including nitrate and other nutrients if specified.

Testing of soils for pollutants and nutrients must be consistent with an approved sampling and analysis plan.

4.5.4. Agronomic Rate

Biosolids must be applied at an agronomic rate in accordance with WAC 173-308-190[38], except as allowed for certain land reclamation sites or research projects approved in accordance with WAC 173-308-190(1) - (3)[38] and WAC 173-308-192[39], respectively.

The person who prepares the biosolids is responsible for providing information necessary to determine an agronomic rate to the person who receives the biosolids.

4.5.5. Pollutants

When beneficially used, concentrations of pollutants in biosolids must not exceed the ceiling concentration limits in WAC 173-308-160[33] Table 1. If biosolids exceed the pollutant concentration limits in WAC 173-308-160[33] Table 3, they must be applied at a rate that will not exceed the cumulative pollutant loading rates in WAC 173-308-160[33] Table 2, over the lifetime of the site.

If the biosolids are subject to the cumulative pollutant loading rates in WAC 173-308-160[30] Table 2, the person who proposes to apply the biosolids must obtain approval from Ecology in accordance with the process prescribed in WAC 173-308-160(2)[33] prior to application.

Table B2 below provides a summary of WAC 173-308-160 Tables 1, 2, and 3.

Table B2: Allowable Biosolids Pollutants and Loading Rates

Pollutant	WAC 173-308-160 Table 1 (173-308-160) Ceiling Concentration Limits	WAC 173-308-160 Table 2 (173-308-160) Cumulative Loading Rates	WAC 173-308-160 Table 3 (173-308-160) Pollutant Concentration Limits
Arsenic	75 mg/kg	41 kg/ha	41 mg/kg
Cadmium	85 mg/kg	39 kg/ha	39 mg/kg
Copper	4300 mg/kg	1500 kg/ha	1500 mg/kg
Lead	840 mg/kg	300 kg/ha	300 mg/kg
Mercury	57 mg/kg	17 kg/ha	17 mg/kg
Molybdenum	75 mg/kg	Not applicable	Not applicable
Nickel	420 mg/kg	420 kg/ha	420 mg/kg
Selenium	100 mg/kg	100 kg/ha	100 mg/kg
Zinc	7500 mg/kg	2800 kg/ha	2800 mg/kg

4.5.6. Pathogen Reduction

Biosolids must meet one of the Class A processes in WAC 173-308-170(1)-(4)[34] or one of the Class B processes in WAC 173-308-170(5)-(7)[34].

[38] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-190
[39] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-192

4.5.7. Vector Attraction Reduction

Biosolids must meet one of the vector attraction reduction processes in WAC 173-308-180[35], or be managed to reduce vector attraction in the field as described in WAC 173-308-210(4)(a) and (b)[40].

4.5.8. Landowner Consent

You must obtain written consent of all landowners prior to applying non-exceptional quality biosolids to the land for the first time on any parcel. The landowner must consent to allow access for Ecology inspections, and agree to comply with requirements for site management and access in Chapter 173-308 WAC[2].

4.5.9. Site Management and Public Access Restrictions for Class B Biosolids

Whenever Class B biosolids are applied to the land, the site management and public access restrictions in this subsection apply.

4.5.9.1. Crop Harvest Waiting Periods

The time between the last application of Class B biosolids and crop harvesting must adhere to the waiting periods in Table B3.

[40] https://app.leg.wa.gov/WAC/default.aspx?cite=173-308-210

Table B3: Crop Harvesting Restrictions for Class B Biosolids

Crop Type	Examples	Does the harvested part of plant contact biosolids?	Length of time the biosolids remain on soil surface	Waiting period until harvest is allowed
Above ground food crops where the edible portion does not contact the biosolids/soil mixture	Cherries, wheat	No	Not applicable	30 days
Above ground food crops where the edible portion may contact the biosolids/soil mixture	Lettuce, cucumbers, strawberries	Yes	Not applicable	14 months
Root food crops	Onions, potatoes	Yes	≥4 months	20 months
Root food crops	Onions, potatoes	Yes	<4 months	38 months
Feed crops	Range land, pasture	Not applicable	Not applicable	30 days
Fiber crops	Trees, cotton	Not applicable	Not applicable	30 days
Turf	Lawn grass	Not applicable	Not applicable	1 year*

**** Unless a different waiting period is approved by Ecology***

4.5.9.2. Public Access Restrictions

Public access must be restricted following the application of Class B biosolids. Minimally, you must maintain posted informational signs during the time site access is restricted, in accordance with the requirements in Table B4. Exceptions to these requirements must be approved in writing by Ecology.

Table B4: Site Posting Requirements for Class B Biosolids

Where	Notice Content*	How Long
All significant points of access to the site. Every ½ mile (805 meters) around the perimeter of the site.	The name and address or phone number of the generator and, if different, the person who applies the biosolids. The names, addresses, and phone numbers of the regulatory and permitting authorities. The material that is being applied Notice that access is restricted and, if desired, the date after which access is no longer restricted. If applicable, a notice on limitations regarding the harvesting of edible plants from the site.	Sites with a "high" potential for public exposure: 1 year Sites with a "low" potential for public exposure: 30 days

4.5.9.3. Buffers

The additional restrictions in Table B5 are in effect for sites where Class B biosolids are applied. For information on interpreting buffers, please refer to Ecology's Biosolids Management Guidelines, WDOE 93-80[41].

Table B5: Additional Site Management Restrictions for Class B Biosolids

Feature	Restriction
Surface waters	No application within 33 feet*
Wells	No application within 100 feet *
Wetlands	No application allowed*
Waters of the state	No application allowed*
Flooded, frozen, or snow-covered sites	No application allowed*
Adjacent Properties	As specified by Ecology

*** Unless otherwise approved by Ecology**

4.6. Exceptional Quality Biosolids

Exceptional quality (EQ) biosolids have been treated to the highest regulatory standards. Examples of EQ biosolids processes include thermal drying, lime pasteurization, temperature-phased (including thermophilic) anaerobic digestion, and auto-thermal aerobic digestion. Process controls and biosolids quality must be documented.

All first-generation exceptional quality biosolids products must comply with the labeling and information sheet requirements of 4.6.2. If you guarantee a nutrient content, or represent your product as a commercial fertilizer, in addition to the requirements of this permit you are subject to regulations implemented by the Washington State Department of Agriculture under chapter 15.54 RCW**Error! Bookmark not defined.** and chapter 16-200 WAC**Error! Bookmark not defined.**.

Biosolids generated from EQ treatment processes may in some cases be made into second-generation products such as manufactured soil and compost. The state biosolids program does not regulate second-generation products, but we do require specific documentation for generators of them, see 4-6.1 – Plan Required.

4.6.1. Plan Required for Second-Generation Products

Publicly-owned or private facilities that manufacture second-generation exceptional quality biosolids products must ensure separation of those products from first-generation exceptional quality biosolids. The separation between first and second-generation EQ biosolids products must be physically distinct, and ensure no possibility of mingling. Operators must be able to identify each product at all times.

[41] https://apps.ecology.wa.gov/publications/SummaryPages/9380.html

All generators of EQ products that manufacture second-generation EQ products must submit a basic operational plan describing the products they manufacture, and how those products are managed on site to ensure compliance with the requirements of this subsection. Generators producing second-generation products must submit a plan with their permit application. Other generators of EQ products must submit a plan prior to manufacturing second-generation products. Facilities must notify their regional biosolids coordinator prior to making any changes to this plan.

4.6.2. Labeling Requirements for Exceptional Quality Biosolids

Whenever first-generation exceptional quality biosolids products are sold or given away, you must label the container or provide an information sheet with the following information:

- The name, address, and phone number of the person who prepared the biosolids.
- A statement or information indicating that the product complies with applicable regulations for biosolids, or that the product has been prepared to meet standards that make it safe for its intended use when used in accordance with the directions provided by the manufacturer.
- A statement or information that encourages proper use of the product and protection of public health and the environment. This may include information on product storage, hygiene, and protection of surface or ground water resources.
- Agronomic rates for typical applications or guidance on how to determine the agronomic rate of application.
- A statement or information indicating that the product contains or is derived from biosolids.
- Unless registered as a fertilizer by the Washington State Department of Agriculture, a disclaimer stating that the product is not a commercial fertilizer and that all nutrient claims are estimates or averages and not guaranteed.

Appendices

Appendix A - Minimum content for a General Land Application Plan (GLAP)

(1) Describes the geographical area covered by the plan, including the names of all counties and water resource inventory areas where biosolids may be applied.

(2) Identifies site selection criteria.

(3) Describes how sites will be managed.

(4) Provides for not less than thirty days advance notice to the department of new or expanded land application sites, including those subject to provisional approval under WAC **173-308-310**(18)[7], to allow time for the department to object prior to the biosolids application.

(5) Provides for advance public notice as required in WAC **173-308-310**(13)[7], and that is reasonably calculated to reach potentially interested adjacent and abutting property owners.

Appendix B - Minimum Content for a Site Specific Land Application Plan

(1) Whether or not it is known or can be determined that biosolids containing pollutants in excess of the values WAC 173-308-160[16] Table 3 have ever been applied to the site, and if so:

(a) The date(s) when the biosolids were applied (if known).

(b) The amount of biosolids applied (if known).

(c) The concentrations of the pollutants in the biosolids (if known).

(d) The area(s) of the site to which the biosolids were applied (if known).

(2) A discussion of the types of crops grown or expected to be grown, their intended end use (e.g., pasture grass for a feed crop, corn as a food crop), and the current distribution of crops on the site.

(3) An explanation of how agronomic rates will be determined during the life of the site, along with any currently available calculations. Whenever agronomic rates or the method used to determine agronomic rates change, an update of the agronomic rate calculations must be filed with the department.

(4) Method(s) of application.

(5) Seasonal and daily timing of biosolids applications.

(6) Provisions for conducting any sampling of soils, surface waters, or groundwater and any available data collected from the site within the last two years.

(7) The name of the county and water resource inventory area where biosolids will be applied.

(8) A description of how biosolids will be staged or stored at the site that also addresses related offsite storage.

(9) Maps. The purpose of a site map is to provide a clear understanding of the features that both encourage *and* limit or condition the appropriate beneficial use of biosolids. *Several maps are typically required for each site*.

Maps must be submitted at minimum scales as follows:

Maps of individual land application sites must be at a minimum scale of 1:7920 (8 inches per mile). Larger scales (i.e. showing less area and providing more detail) are acceptable, but all maps must fit on a standard 8-1/2 x 11-inch page when printed at scale unless a different size is approved in advance by Ecology. Facilities should reach out to their biosolids coordinator for prior approval.

Maps intended to show the general area around a facility or a group of specific land application sites must be presented at a minimum scale of 1:24,000 (also known as the 7.5 minute scale ~ 2.6 inches per mile). Larger scales are acceptable, but all maps must fit on a standard 8-1/2 x 11-inch page when printed at scale unless a different size is approved in advance by Ecology. Facilities should reach out to their biosolids coordinator for prior approval.

Legends and all other notations must be rendered in a location and size, and be of such contrast as to easily distinguish them from the base map and other information on the map.

Graphically rendered notations are preferred. Handwritten notations are acceptable *only* if they are neat, legible, and meet the criteria above.

Minimally, maps must provide the following information

(a) A legend.

(b) The location and means of access.

(c) Specific areas of the site where biosolids may be applied. If there is more than one site or more than one application unit within a site, delineate the specific area and include a site or unit ID number.

(d) The number of acres in the site or in any distinct application unit within a site.

(e) Location and extent of any wetlands on the site.

(f) A topographic relief of the application site and surrounding area.

(g) Adjacent properties and uses and their zoning classification.

(h) Any seasonal surface water bodies located on the site.

(i) Any perennial surface water bodies located on or within one-quarter mile (402 meters) of the site.

(j) The location of any wells located on or within one-quarter mile (402 meters) of the site that are listed in public records or otherwise known to the applicant, whether for domestic, irrigation, or other purposes.

(k) Buffer zones to features such as surface waters, wells, property boundaries, and roadways and the width of the buffer zones.

(l) The presence and extent of any threatened or endangered species or related critical habitat.

(m) The location of any critical areas on site, as required to be identified under chapter 36.70Ab RCW in the county's growth management plan.

(n) The location and size of any areas that will be used to store biosolids.

(10) If the seasonal groundwater is three feet (0.91 meters) or less below the surface, a management plan describing how you will protect groundwater. For example, you may propose to limit applications to the time of year when groundwater has receded to more than three feet (0.91 meters) below the surface.

(11) A description of how access to the site will be restricted (e.g., signs posted around the site or other approved method of access restriction).

(12) A copy of the landowner agreement required under WAC 173-308-120(6)[42].

(13) Any additional information requested by the department that is needed to evaluate the appropriateness of the site for biosolids application.

[42] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-120

Appendix C - Glossary of Terms

See also the definitions in WAC 173-308_080[9].

Active biosolids management facility: Facilities that sell, give away or apply biosolids to the land. Facilities that only store or treat biosolids in surface impoundments, only send biosolids to another facility for further treatment, or that only dispose of biosolids, do not have active management programs.

Active septage management facility: Facilities that treat and/or apply ONLY septage to the land. Businesses that only deliver septage to an active septage management facility, and that only service onsite wastewater systems and similar devices, do not have active programs.

Beneficial use facility: A receiving-only facility consisting of a site or sites where biosolids from other treatment works treating domestic sewage are applied to the land for beneficial use, which has been permitted as a treatment works treating domestic sewage in accordance with the provisions of WAC 173-308-310[7], and that has been designated as a beneficial use facility through the permitting process.

First-generation exceptional quality biosolids: Exceptional quality biosolids produced from the treatment of non-exceptional quality biosolids, and meeting all standards for Class A pathogen reduction, vector attraction reduction, and pollutant concentration. Standards must be met at the time EQ biosolids are distributed or made into a second-generation product.

Public contact site: Land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

Second-generation exceptional quality biosolids products: Products that blend first-generation EQ biosolids with other materials to make products like manufactured soil or compost. Further monitoring and testing of second-generation products against biosolids standards is not required. **Septage or domestic septage:** Liquid or solid material removed from septic tanks, cess pools, portable toilets, type III marine sanitation devices, vault toilets, pit toilets, RV holding tanks, or similar systems that receive only domestic sewage. Septage may also include commercial or industrial septage mixed with domestic septage if approved in accordance with the provisions in WAC 173-308-020(3)(g)[43].

Septage managed as biosolids originating from sewage sludge: Septage treated and managed as biosolids originating from a wastewater treatment plant.

Septage management facility: A facility that treats and/or applies septage to the land.

Sewage Sludge: Solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage;

[43] https://apps.leg.wa.gov/wac/default.aspx?cite=173-308-020

scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

Staging: Short-term storage of biosolids at a land application site, in preparation for land application.

Storage: Placing biosolids or sewage sludge on land or in surface impoundments or other containment devices in which the biosolids or sewage sludge remain for two years or less, except where a greater time period has been approved by the department. This does not include the placing of biosolids or sewage sludge on land or in surface impoundments or other containment devices for treatment or disposal.

Temporary, small-scale storage: The storage of biosolids or sewage sludge for no more than thirty days in a tank holding no more than 10,000 gallons with a total on-site maximum volume of no more than 20,000 gallons.

Treatment Works Treating Domestic Sewage: A publicly owned treatment works or any other sewage sludge or wastewater treatment devices or systems, regardless of ownership, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage or sewage sludge, including land dedicated for the disposal of sewage sludge. Treatment works treating domestic sewage also includes beneficial use facilities and septage management facilities as defined in this section, and a person, site, or facility designated as a treatment works treating domestic sewage in accordance with WAC 173-308-310(1)(b)[7]. This definition does not include septic tanks or similar devices or temporary, small-scale storage as defined in this section.

Washington State
Department of Ecology

By: Laurie Y. Davies 6/15/22

Laurie Davies
Solid Waste Management
Program Manager

Date

(Use Agency Letterhead)

STATE ENVIRONMENTAL POLICY ACT

Determination of NonSignificance

May 4, 2021

Lead agency: Washington State Department of Ecology

Agency Contact: Kyle Dorsey, kyle.dorsey@ecy.wa.gov, 360-407-6559

Agency File Number: NA

Description of proposal: – Issue a new statewide general permit for biosolids management with a term of 5 years. If issued, Ecology will use the general permit and Chapter 173-308 of the Washington Administrative Code (WAC) to regulate all forms of biosolids produced, treated, stored, transferred from one facility to another, sold or given away, applied to the land for beneficial use, and disposed through incineration or landfilling within the jurisdiction of the State of Washington.

Location of proposal –The permit is applicable statewide in all areas subject to the jurisdiction of the State of Washington

Applicant/proponent: Washington State Department of Ecology, Solid Waste Management Program, PO Box 7600, Olympia, WA 98504-7600. Program reception phone: 360-407-6900

The Washington State Department of Ecology has determined that this proposal will not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). We have reviewed the attached Environmental Checklist with consideration of the proposed general permit and biosolids permit program implemented under Chapter 173-308 of the Washington Administrative Code. This information is available at: https://ecology.wa.gov/Biosolids-permit-actions

This determination is based on the following findings and conclusions:

> The state biosolids program is based on, and meets or exceeds the requirements of the federal biosolids management program implemented by U.S. EPA under 40 CFR Part 503. Beneficial use is the primary means of management in Washington, and nationwide. Biosolids that meet appropriate standards for beneficial use do not pose a significant risk to human health or the environment when used in accordance with applicable rules, guidelines and permit requirements. The permit authorizes landfilling and incineration when biosolids do not meet applicable standards. The permit program implemented by Ecology allows the agency to impose additional or more stringent requirements for individual facilities and sites, as required, following review of a permit application, additional environmental review, and public hearings if required.

This DNS is issued under WAC 197-11-340(2) and the comment period will end on July 1, 2021.

Responsible Official:

Laurie G. Davies, Manager
Washington State Department of Ecology Solid Waste Program
PO Box 47600, Olympia, WA 98504-7600
Laurie.davies@ecy.wa.gov or 360-407-6103:

Signature Laurie G. Davies Date May 5, 2021

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July 12, 2021

Submitted via the Online Public Comment Form

Washington State Department of Ecology
Solid Waste Program
P.O. Box 47600
Olympia, WA 98504-7600

Re: Comments on the New Draft Statewide General Permit for Biosolids Management and Associated SEPA Checklist

Ms. Kijowski,

Thank you for accepting and reviewing comments on the draft general permit for biosolids and septage application. These comments and materials are submitted on behalf of Ed Kenney, a Washington resident with deep concern for water quality, human health, and fisheries in the State.

Please consider these comments to apply both to the draft permit and the associated State Environmental Policy Act (SEPA) checklist and proposed determination of non-significance (DNS). In general, the proposed permit and DNS are inadequate in that they focus solely on regulated metals, nitrogen, and bacteria, without accounting for modern pollutants with significant human health risks: microplastics, PBDEs, PFAS, pharmaceuticals, and other contaminants of emerging concern. This deficiency means that Ecology cannot meaningfully assess environmental impacts of issuance of the general permit for application of biosolids, and that the protections for surface waters and groundwater are insufficiently protective.[1]

In a June 24, 2021 public meeting, Ecology stated that 86,000 tons of biosolids were land applied in Washington in 2019. Even under a conservative and unrealistic assumption that the use of biosolids will remain unchanged, that amounts to a total of 430,000 tons (860 million pounds) over the five-year life of the general permit. This staggering quantity mandates caution in regulating biosolids.

At the same meeting, Ecology asserted that it lacks means to regulate pollutants other than the nine metals identified by the United States Environmental Protection Agency (EPA) in 40 CFR § 503.13, and nitrogen. As explained herein, this position is both inaccurate and fails to meet Ecology's statutory duties to protect waters of the State. Given inadequate information and

[1] The term "biosolids" in this letter refers to both biosolids and septage unless specified. *See* RCW 70A.226.010(1).

reasonable risk of harm to the environment and human health, Ecology must take a precautionary approach, make a determination of significance, and prepare an environmental significance. While Mr. Kenney acknowledges that Ecology faces legislative direction to make beneficial use of biosolids in a manner that minimizes risk to public health and the environment, preparation of an environmental impact statement will allow the agency the time and information needed to balance these dual mandates. Careful consideration of alternatives is essential before approving such an extensive, impactful, and risky program.

A. Biosolids Statutory and Regulatory Criteria

The Department of Ecology is affirmatively responsible for ensuring that permitted activities, including land application of biosolids, protects waters of the State. RCW 90.48.010 states in part that:

> It is declared to be the public policy of the state of Washington to maintain the highest possible standards to insure the purity of all waters of the state consistent with public health and public enjoyment thereof, the propagation and protection of wild life, birds, game, fish and other aquatic life, and the industrial development of the state, and to that end require the use of all known available and reasonable methods by industries and others to prevent and control the pollution of the waters of the state of Washington. Consistent with this policy, the state of Washington will exercise its powers, as fully and as effectively as possible, to retain and secure high quality for all waters of the state.

As part of effectuating that policy, RCW 90.48.080 mandates that:

> It shall be unlawful for any person to throw, drain, run, or otherwise discharge into any of the waters of this state, or to cause, permit or suffer to be thrown, run, drained, allowed to seep or otherwise discharged into such waters any organic or inorganic matter that shall cause or tend to cause pollution of such waters according to the determination of the department, as provided for in this chapter.

This provision is broad in scope, covering any mechanism by which "any organic or inorganic matter" pollutes groundwater or surface waters. These broad provisions are reinforced by the State Environmental Policy Act, RCW 43.21C.020, which recognizes that "each person has a fundamental and inalienable right to a healthful environment," and commands that it is the "continuing responsibility of the state of Washington and all agencies of the state to use all practicable means" to protect a safe, healthful, and productive environment. SEPA further requires that "[t]he policies, regulations, and laws of the state of Washington shall be interpreted and administered in accordance with the policies set forth" in SEPA. RCW 43.21C.030.

With respect to biosolids specifically, RCW 70A.226.005(2) states:

> The legislature declares that a program shall be established to manage municipal sewage sludge and that the program shall, to the maximum extent possible, ensure

> that municipal sewage sludge is reused as a beneficial commodity and is managed in a manner that minimizes risk to public health and the environment.

This provision presents dual mandates that apply "to the maximum extent possible." While biosolids must be reused, Ecology may only authorize such reuse in a manner that minimizes environmental and health risk. If Ecology cannot ensure that environmental and health risks are minimized, the agency may not permit biosolids application.

Ecology implements RCW Chapter 70A.226 through the rules promulgated at WAC Chapter 173-308. The regulations detail testing requirements and concentration thresholds for certain pollutants, WAC 173-308-160, require pathogen and vector reduction, WAC 173-308-170 to -180, require screening of manufactured inerts, WAC 173-308-205, and set agronomic rate of application, WAC 173-308-190, among other requirements. Notably, WAC 173-308-190(6) provides that "[w]hen the potential for groundwater contamination due to biosolids application exists, the department may require groundwater monitoring or other conditions in accordance with the provisions of chapter 173-200 WAC. If it is determined that an enforcement criterion may be violated, an evaluation must be conducted to demonstrate compliance with the provisions of chapter 173-200 WAC." Finally, WAC 173-308-191 mandates that "[b]iosolids may not be applied to the land if they are likely to adversely affect a threatened or endangered species or its critical habitat."

While the biosolids regulations focus on specific pollutants, this does not mean that those are the only pollutants that are subject to regulation or that may cause contamination. WAC 173-380-030 confirms that "[b]iosolids facilities and sites where biosolids are applied to the land must comply with the requirements of chapter 90.48 RCW and chapters 173-200 and 173-201A WAC," which are the Water Pollution Control statute and regulations protecting groundwater and surface water. The regulations contain anti-degradation provisions which prohibiting contamination of waters of the State. WAC 173-200-030; WAC 173-201A-300. WAC 173-201A-240 prohibits introduction of toxic substances to surface waters beyond background levels.

The State law requirements are in addition to those imposed by the Federal Clean Water Act and implementing regulations. 40 CFR § 503.5 ("[n]othing in this part precludes a State or political subdivision thereof or interstate agency from imposing requirements for the use or disposal of sewage sludge more stringent than the requirements in this part or from imposing additional requirements for the use or disposal of sewage sludge."). Where there is land application within the confines of a wastewater treatment facility, a NPDES permit is required. 40 CFR § 122.26(b)(14)(ix).

B. SEPA Procedural Requirements

SEPA requires that Ecology prepare an environmental impact statement (EIS) for major actions having a probable significant, adverse environmental impact. RCW 43.21C.031. In order to determine whether an EIS is required, Ecology must prepare a threshold determination based on a rigorous review of direct, indirect, and cumulative effects of the proposal. WAC 197-11-330. Impacts likely to be significant include impacts "to environmentally sensitive or special areas,

such as loss or destruction of historic, scientific, and cultural resources, parks, prime farmlands, wetlands, wild and scenic rivers, or wilderness," impacts that "[a]dversely affect endangered or threatened species or their habitat," actions that "[c]onflict with local, state, or federal laws or requirements for the protection of the environment" and those impacts that "involve unique and unknown risks to the environment, or may affect public health or safety." WAC 197-11-330(3)(e).

Ecology must make the threshold determination "based upon information reasonably sufficient to evaluate the environmental impact of a proposal," and may require the applicant to submit more information or conduct independent further analysis if such reasonably sufficient information is not provided by the project proponent. WAC 197-11-335. The reasonably sufficient information requirement is ongoing. The lead agency "shall withdraw" the determination of nonsignificance if "[t]here is significant new information indicating, or on, a proposal's probable significant adverse environmental impacts" or "[t]he DNS was procured by misrepresentation or lack of material disclosure." WAC 197-11-340(3).

While SEPA review may reference thresholds and requirements set forth in other statutes and regulations, SEPA compliance is an independent legal duty, and SEPA supplements existing authority. *Polygon Corp. v. Seattle*, 90 Wash. 2d 59, 65, 578 P.2d 1309, 1313 (1978); *Columbia Riverkeeper v. Port of Vancouver USA*, 188 Wash. 2d 80, 95, 392 P.3d 1025, 1032 (2017).

C. The General Permit Fails to Protect Against Dangerous Chemicals

The fundamental failing of the general permit is that, even though Ecology knows and recognizes that biosolids contain dangerous contaminants of emerging concern and microplastics, Ecology requires no testing or control for these substances whatsoever. This is a very significant concern given the capacity of these substances to penetrate to groundwater and enter drinking water and surface waters. There is also concern that biosolids directly applied or in compost will expose farmworkers. Lack of adequate regulation of contaminants is a systemic concern which poses cumulative effects. The issues referenced in this letter should be dealt with at the programmatic general permit level and not deferred until site specific review.

Because the areas that produce the most biosolids tend to be the most populated and affluent urban areas in Washington, and the areas that receive biosolids tend to be less affluent, rural areas, the general permit raises serious environmental justice issues that Ecology has not evaluated.

1. Public health and environmental risk

The proposed general permit poses grave risk of contaminating both surface and groundwaters. Because biosolids derive from our collective waste stream, they contain concentrations of untreated chemicals from household and business use—everything we eat, drink, use for cleaning, and launder. This means that biosolids inherently contains myriad harmful substances, including: dozens of different chemicals derived from detergents, fragrances, and pharmaceuticals, that are collectively referred to as "contaminants of emerging concern,"

including PFAS;[2] polybrominated diphenyl ethers (PBDEs) and other dioxins;[3] phthalates; and biological contaminants such as norovirus and the novel coronavirus.[4] Many of these substances can cause significant short and long-term ecological and human health impacts at relatively low concentrations, raising significant public health and environmental risks.

Contaminants of emerging concern and dioxins found in biosolids evade treatment in municipal wastewater treatment plants. As such, they tend not to break down in soil, and can be transported by and to water. According to at least one peer-reviewed study of runoff following biosolids application, contaminants in biosolids are transported by runoff and can enter surface waters in dangerous concentrations.[5] Another peer-reviewed study states that "[r]ecent studies have demonstrated that the application of PFC contaminated biosolids can have important effects on local environments, ultimately leading to demonstrable human exposures," notes that "relatively high transport from soils to surface and well water is possible," and describes a case study in Alabama.[6]

Contamination would contribute to an already dangerous level of pollution in many areas. For example, the Nisqually River, Nisqually Reach, and McCallister Creek exceed water quality standards for fecal coliform, and water and sediments contain contaminants of emerging concern. According to a recent Seattle Times article summarizing an EPA study,

> The Nisqually estuary was more contaminated than expected with drugs, including cocaine, Cipro and Zantac. The source of the drugs there was unknown, the researchers reported. However, the Nisqually River, Nisqually Reach and McAllister Creek do not meet water-quality standards for fecal coliform. That makes leaking septic systems a possible source of the drugs.[7]

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[2] These chemicals include perfluorinated chemicals (PFOS, PFOA); polychlorinated alkanes (PCAs), polychlorinated naphthalenes (PCNs); organotins (OTs), polybrominated diphenyl ethers (PBDEs), triclosan (TCS), triclocarban (TCC); benzothiazoles; antibiotics and pharmaceuticals; synthetic musks; bisphenol A, quaternary ammonium compounds (QACs), steroids; phthalate acid esters (PAEs) and polydimethylsiloxanes (PDMSs). *See* Bradley O. Clarke, Stephen R. Smith, Review of 'emerging' organic contaminants in biosolids and assessment of international research priorities for the agricultural use of biosolids, Environment International, Volume 37, Issue 1, 2011, Pages 226-247, ISSN 0160-4120, https://doi.org/10.1016/j.envint.2010.06.004; *see also* Kinney et al., 2006, Survey of organic wastewater contaminants in biosolids destined for land application. Environmental Science and Technology, Vol. 40, No. 23, pp. 7207-7215.

[3] Kim et al., 2017, Review of contamination of sewage sludge and amended soils by polybrominated diphenyl ethers based on meta-analysis. Environmental Pollution, Vol. 220 Part B, pp. 763-765 (finding consistent presence of PBDEs in biosolids in varying concentrations across 288 samples).

[4] Viau et al., 2011, Toward a Consensus View on the Infectious Risks Associated with Land Application of Sewage Sludge. Environmental Science and Technology, Vol. 45, Issue 13, pp. 5459–5469.

[5] Yang et al., 2012, Steroid hormone runoff from agricultural test plots applied with municipal biosolids. Environmental Science and Technology, Vol. 46, No. 5, pp. 2746-2754, doi:10.1021/es203896t.

[6] Lindstrom AB, Strynar MJ, Delinsky AD, Nakayama SF, McMillan L, Libelo EL, Neill M, Thomas L. Application of WWTP biosolids and resulting perfluorinated compound contamination of surface and well water in Decatur, Alabama, USA. Environ Sci Technol. 2011 Oct 1;45(19):8015-21. doi: 10.1021/es1039425. Epub 2011 Apr 22. PMID: 21513287.

[7] Seattle Times, Drugs found in Puget Sound salmon from tainted wastewater (Feb. 23, 2016). Available at: https://www.seattletimes.com/seattle-news/environment/drugs-flooding-into-puget-sound-and-its-salmon/

If these chemicals are present in leaking septic effluent they are certainly also present in septage and biosolids. When present in water and sediments, the chemicals make their way into salmon and cause adverse health effects and death.[8]

Similarly, testing of sediment in outfall areas near the King County Elliott West CSO treatment plant has exceeded screening levels, including total PCBs, benzo(a)anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, benzyl butyl phthalate, bis(2-ethylhexyl) phthalate, chrysene, dibenzo(a,h)anthracene, fluroanthene, indeno(1,2,3-c,d)pyrene, and mercury.[9] Like leaking septic, overflow sewage likely presents many of the same threats as biosolids.

One contaminant of particular concern is PFAS. According to the Department of Health, Per- and polyfluoroalkyl substances (PFAS) are a family of chemicals used since the 1950s to manufacture stain-resistant, water-resistant, and non-stick products. PFAS are widely used as coatings in common consumer products such as food packaging, outdoor clothing, carpets, leather goods, ski and snowboard waxes, and more. Ecology has recognized the risks posed by these chemicals, and has prioritized regulating them through a chemical action plan (CAP).

Federal and State agencies increasingly recognize PFAS as widespread and a serious health risk. On February 22, 2021, the United Stated Environmental Protection Agency (EPA) made final determinations to regulate PFOS and PFOA in drinking water. On April 27, 2021, Administrator Regan called for the creation of a new "EPA Council on PFAS" that is charged with building on the agency's ongoing work to better understand and ultimately reduce the potential risks caused by these chemicals. EPA has recognized that PFAS pose serious health risks that can no longer simply be ignored.

Likewise, the State has acknowledged that PFAS are chemicals of serious public health concern that is likely present in biosolids and wastewater, highly mobile in water and soil, do not degrade, bioaccumulate in humans and other animals, and cause likely human health effects.

Ecology's website provides a fact sheet for PFAS, reading in part that:

> **PFAS have become a serious public health concern across our country and state. Over time, some PFAS released from manufacturing sites, landfills, firefighting foam, and other products seep into surface soils. From there, PFAS leaches into groundwater and can contaminate drinking water.** PFAS have also been found in rivers, lakes, fish, and wildlife.
> …
> PFAS do not break down easily and stay in the environment for a long time. As a result, PFAS are widely detected in air, soil, water, and food. Exposure can occur when someone uses certain products that contain PFAS, eats PFAS-contaminated food, or drinks PFAS-contaminated water. When ingested, some PFAS can build

[8] Seattle Times, Puget Sound salmon do drugs, which may hurt their survival (April 16, 2018). Available at: https://www.seattletimes.com/seattle-news/puget-sound-salmon-do-drugs-which-may-hurt-their-survival/
[9] Fact Sheet for NPDES Permit WA0029181 West Point Wastewater Treatment Plant (WWTP) and Combined Sewer Overflow (CSO) System December 19, 2014.

> up in the body and, over time, these PFAS may increase to a level where health effects could occur.
>
> Studies in animals show that exposure to some PFAS can affect liver function, reproductive hormones, development of offspring, and mortality.
>
> Although nearly all of us are exposed to PFAS, their toxicity in humans is not completely understood. Experts investigating the effects on people have found probable links to immune system toxicity, high cholesterol, reproductive and developmental issues, endocrine system disruption, ulcerative colitis, thyroid issues, certain cancers, and pregnancy-induced hypertension. [10]

Media accounts and increasing science support these conclusions.[11] The Ecology fact sheet for PFAS similarly acknowledges that Ecology is "concerned" because

> Certain PFAS are highly mobile in the environment, meaning they can contaminate groundwater. Some PFAS transform into highly persistent perfluorinated chemicals—no natural processes can break these substances down. Once in the environment, PFAS can contaminate water and bioaccumulate in wildlife. The drinking water supplies in several parts of Washington are contaminated with PFAS above Environmental Protection Agency's health advisory level. They are costly to filter out.

Accordingly, the draft chemical action plan recognizes biosolids as potential sources of PFAS contamination to waters of the State, and calls for Ecology to, *inter alia*, "[e]stablish biosolids and soil sample collection and handling methods for PFAS analysis," "[a]ccredit Washington labs for EPA-validated analysis methods," "[i]nvestigate land application sites where procedures mimic rates and practices under current state rule (Chapter 173-308 WAC15)," "[e]valuate realistic exposure pathways," and "[e]valuate risk modeling using realistic input values."

For wastewater, the draft CAP recommends that "Ecology should evaluate PFAS in WWTP influent and effluent to better understand PFAS discharges in Washington state," "Ecology should develop a study design to sample PFAS in three different types of plants," "Ecology should consider additional monitoring requirements for WWTP dischargers…Based on this evaluation Ecology should require possible PFAS monitoring for some or all domestic and industrial WWTPs."

According to the draft CAP, the Legislature provided Ecology "$235,000 to conduct a WWTP sampling study by June 30, 2021. This includes costs for sample analysis, which can range from $1,000 to $1,500 per sample as well as project staff salaries."

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[10] https://ecology.wa.gov/Waste-Toxics/Reducing-toxic-chemicals/Addressing-priority-toxic-chemicals/PFAS
[11] *See, e.g.*, https://www.nytimes.com/2020/09/23/parenting/pregnancy/pfas-toxins-chemicals.html?searchResultPosition=1 "These Everyday Toxins May Be Hurting Pregnant Women and Their Babies"

Despite a long record of Ecology recognizing the risks of PFAS, including those risks specific to wastewater treatment and biosolids land application, the draft general permit has no protections in place for PFAS which Ecology recognizes as a priority-toxic chemical. The same is true for pharmaceuticals and other contaminants of emerging concern. Lastly, pathogens deemed dead may actually be dormant. When applied to land in sewage wastes, dormant pathogens can regenerate when spread on the soil, especially wet soil.

There is also no meaningful discussion of contaminants beyond those specified in regulation in the draft general permit or associated documents, no disclosure of risk, and no indication that Ecology has seriously considered how to address PFAS, PBDE, and other contaminants.

2. *Proposed changes to the general permit and SEPA review*

Mr. Kenney acknowledges that Ecology has incomplete information and cannot fully know the contents of all biosolids. However, these challenges are not a valid reason to ignore the presence of harmful contaminants. Ecology has a duty to the public to protect waters of the State, and a duty under SEPA to obtain and consider all reasonable available information: "If information on significant adverse impacts essential to a reasoned choice among alternatives is not known, and the costs of obtaining it are not exorbitant, agencies shall obtain and include the information in their environmental documents." WAC 197-11-080(1).

Ecology's SEPA obligation requires the agency to consider environmental impacts of all contaminants likely present in biosolids, even if they are not specified under biosolids regulations. *Columbia Riverkeeper*, 188 Wash. 2d at 95.

Accordingly, Mr. Kenney requests that Ecology make the following changes to the general permit documentation and SEPA review to better protect the environment and public health:

- Coordinate internally with Ecology staff working on the PFAS CAP, and coordinate and consult with the Washington Department of Health, the Washington Department of Fish and Wildlife, and Washington tribal governments.

- Given the risk to groundwater and surface waters and limited testing conducted of biosolids available for a variety of contaminants, ban biosolids application on hydric soils and periodically inundated areas, impose greater buffers from surface waters, and require more distance to groundwater for all biosolids application.

- In the SEPA analysis, identify information gaps and obtain information to fill those gaps to the maximum extent feasible. To the extent information truly cannot be obtained, "indicate in the appropriate environmental documents its worst case analysis and the likelihood of occurrence." WAC 197-11-080(3)(b).

- Disclose and discuss the progress on the WWTP sampling study referenced in the draft PFAS CAP, including the methodology and any initial results.

- Identify and discuss all other States (such as Maine) that monitor, test, and/or regulate PBDEs or PFAS and other chemicals in biosolids. Explain the implications for this information on the Washington regulatory program.

- Prior to making a threshold determination, specifically identify a list of contaminants of priority concern (including PBDEs and PFAS) and: 1) assess their likely prevalence in biosolids, 2) assess their probable human health and environmental impacts given the scale of application in Washington, 3) test biosolids from various WWTPs, 3) test groundwater and runoff at application sites.

- Require as a condition of the general permit that WWTP operators test biosolids for PFAS and other contaminants of emerging concern and report to Ecology. Ecology indicates that these tests are available for $1,000-$1,500, which is a reasonable cost to impose on the regulated entity given the risk to public health. If entities profit from land application of biosolids, it is entirely appropriate and reasonable to pass through costs of testing to those companies to gather data. Requiring testing would provide Ecology with a broad data set to effectively regulate PFAS and other chemicals.

- Evaluate and disclose the extent to which biosolids application sites risk becoming contaminated over time in a manner that requires cleanup under State or Federal law (including the Model Toxics Cleanup Act, RCW 70A.305.010, *et. seq.*, and the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 *et. seq.*).

In public meetings and comments on prior applications, the public has rightfully raised concerns regarding lack of testing and monitoring for PBDEs, PFAS and other chemicals in biosolids. In general, Ecology has responded that it is not financially or technically feasible to test for PFAS because there is not a validated testing methodology, and that the more efficient method of regulating PFAS is "upstream" in consumer products.

As an initial matter, many chemicals, such as PBDEs, phthalates, illegal drugs, and pharmaceuticals, are readily tested. To fulfill its statutory mandates and duties to protect the public and environment, Ecology must sample biosolids for these contaminants. Furthermore, as noted, Ecology has received funding to complete testing for PFAS associated with wastewater. This testing effort should be incorporated into permit review. Ecology should also draw from ongoing testing and information gathering from drinking water regulation to inform environmental review of the biosolids program, in consultation with the Department of Health.[12]

Mr. Kenney notes that other states require that WWTPs use an isotope dilution method like Method 537.1, ASTMD7979-19M, or CWA Method 1600 for PFAS analysis of biosolids in the interim and until EPA completes its work. Such methods are reliable for biosolids because they use an isotope-dilution method to measure sample extraction recoveries and correct for matrix

[12] https://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/RegulationandCompliance/RuleMaking

suppression effects in the LCMSMS. Ecology should allow the use of these methods as do other states.

Mr. Kenney also notes that PFAS is a nationally recognized concern on and around lands used for training by the Department of Defense. In these locations, the DOD regularly tests water using EPA-approved methods for PFAS. For example, testing has been underway for PFAS on Whidbey Island associated with the Naval training area since 2016.[13] Water sampling at Joint Base Lewis McChord revealed elevated levels of PFAS in 2018, which required cessation of drinking water use to protect public safety.[14] As such it is entirely possible for Ecology to test groundwater and surface water associated with biosolids applications sites.

With respect to consumer product regulation, Mr. Kenney welcomes those efforts. However, even if implemented immediately the benefits would be limited and long-term, given the prevalence of PFAS in widespread consumer products and the global nature of commerce.

D. The General Permit Fails to Protect Against Microplastics

WAC 173-308-205(1) requires that "all biosolids…must be treated by a process such as physical screening or another method to significantly remove manufactured inerts prior to final disposition." Additionally, "biosolids (including septage) that are land applied…must contain less than one percent by volume recognizable manufactured inerts." WAC 173-308-205(4).

Biosolids generally contain large volumes of small plastics, referred to as microplastics and nanoplastics. A recent synthesis of literature focused on microplastics in biosolids, titled "An overview of microplastic and nanoplastic pollution in agroecosystems" (Ng et al. 2018),[15] states that "polyethylene, plastic fibres, and polystyrene foam occupied up to 5% w/w in compost from mixed municipal solid waste for all size fractions between 420 μm and 25 mm; with around 0.5 to 0.6% having sizes b2 mm." Prevailing agronomic rates in the United States suggest maximum potential rate of microplastic inputs from biosolid in the order of 0.5 to 3.2 t·ha−1·yr−1. This unit measurement equates to 0.2 to 1.3 metric tons per acre per year of plastics present in biosolids (one hectare equals 2.471 acres). Plastics are "manufactured inerts." Extensive study, widespread publicity dedicated to microplastic contamination in soils and waters, and the ability to eliminate microplastics if desired indicates that microplastics are "recognizable." WAC 173-308-205(4).

The general permit would authorize approximately 430,000 tons of biosolids land application over a five-year period. Even a conservative estimate under which microplastics compose 2.5% of those biosolids would mean that 10,7050 tons of microplastics will be land applied under the

[13] https://www.navfac.navy.mil/navfac_worldwide/pacific/fecs/northwest/about_us/northwest_documents/environmental-restoration/pfas-groundwater-and-drinking-water-investigation/nswi_pfas.html; see also https://www.navfac.navy.mil/niris/SOUTHWEST/FALLON_NAS/N60495_000011.PDF (Naval Air Station Fallon);
[14] https://home.army.mil/lewis-mcchord/application/files/2015/6106/2504/CCR_2018_Lewis_DIGI_FINAL.pdf
[15] Ng et al., 2018, An overview of microplastic and nanoplastic pollution in agroecosystems. Science of the Total Environment, Vol. 627, pp. 1377-88.

general permit. Plastics take hundreds of years to break down: "projections indicate that the lifetime of polyolefins on land is in the vicinity of hundreds of years."[16] This means that microplastics not dispersed into surface or groundwaters (with resulting harm to aquatic species), or ingested and adsorbed by grazing cattle, will bioaccumulate on site and quickly add up. The plastics are harmful in their own right, and also can transport and degrade into a variety of contaminants. The health effects of microplastics are believed to be detrimental but are still poorly understood. According to Ng et al.:

> Classical soil ecotoxicological approaches use isolated organisms and standard substrates, with measures taken for survival, growth, reproduction and avoidance behaviour over a period of days and weeks. Such approaches may not capture the full impact of chemical additives in plastics that act as endocrine disruptors in addition to those which bioaccumulate, where long-term exposure at low doses may alter cell functions or cause DNA damage. Such damage manifests later in life or across generations as the damage accumulates.[17]

The most recent studies of microplastics suggest that they are highly mobile in water. Crossman et al. (2020) measured microplastics biosolids at various application sites, found high levels of contamination, and determined that 99 percent of the microplastics appeared to be transported by water over time.[18]

In short, the proposed application would put cumulatively significant amounts of plastic onto application sites, that would likely enter surrounding waters and organisms and cause uncertain long-term impacts to the native ecosystem and human health.

Despite these risks, the general permit does not specify any means by which to comply with the requirement to remove manufactured inerts. As a result the general permit is deficient and must be conditioned to require rigorous screening for microplastics and nanoplastics.

Accordingly, Mr. Kenney requests that Ecology make the following changes to the general permit documentation and SEPA review to better protect the environment and public health:

- Identify and discuss all other jurisdictions that monitor, test, and/or regulate microplastics in biosolids. Explain the implications for this information on the Washington regulatory program.

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[16] Ng et al., 2018, An overview of microplastic and nanoplastic pollution in agroecosystems. Science of the Total Environment, Vol. 627, p. 1380.
[17] *Id.* at 1385.
[18] Crossman, Rachel R. Hurley, Martyn Futter, Luca Nizzetto,
Transfer and transport of microplastics from biosolids to agricultural soils and the wider environment,
Science of The Total Environment, Volume 724, 2020, 138334, ISSN 0048-9697,
https://doi.org/10.1016/j.scitotenv.2020.138334
(https://www.sciencedirect.com/science/article/pii/S0048969720318477)

- Identify mechanisms to remove microplastics from biosolids, and the viability of these methods.
- In the SEPA analysis, identify information gaps and obtain information to fill those gaps to the maximum extent feasible. To the extent information truly cannot be obtained, "indicate in the appropriate environmental documents its worst-case analysis and the likelihood of occurrence." WAC 197-11-080(3)(b).
- Require as a condition of the general permit that WWTP operators remove microplastics from biosolids in accordance with WAC 173-308-205.
- Ecology should test runoff and groundwater associated with select recent biosolids application sites after rain and report the results.

As with PFAS, PBDEs, and contaminants of emerging concern, Ecology cannot fulfill its public statutory obligations by simply ignoring microplastics. Mr. Kenney requests that Ecology take reasonable, affirmative steps to address this serious issue and comply with its statutory mandate to protect waters of the state.

E. The General Permit Fails to Protect Threatened and Endangered Species

Biosolids application is not allowed where the application is likely to adversely affect a threatened or endangered species or its critical habitat as listed under Title 232 WAC or section 4 of the Endangered Species Act. WAC 173-308-191. Notably, the regulation prohibits any likely harm to threatened or endangered species or their critical habitat and does not allow for *de minimus* exceptions or mitigation measures. This is a particularly significant issue for southern resident killer whales, which are top tier predators of salmon and marine life and thus bioaccumulate toxins.

Issuance of the general permit without protections for protected species would not only potentially violate State law, it would also likely violate the Federal Endangered Species Act (ESA). The ESA prohibits the "take" of species listed as threatened or endangered on the federal endangered species list. 16 U.S.C. § 1538(a)(1)(B). The ESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." *Id.* § 1532(19). By regulation, the National Marine Fisheries Service has defined "harm" to include "significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including, breeding, spawning, rearing, migrating, feeding or sheltering." 50 C.F.R. § 222.102; *Babbitt v. Sweet Home Chapter, Communities for Great Ore.*, 515 U.S. 687 (1995).

Under what is known as the "*Strahan* theory," a governmental entity may be liable under the ESA for authorizing harm carried out by private third parties. *See Strahan v. Coxe*, 127 F.3d 155, 158, 163 (1st Cir. 1997) (state agency caused takings of the endangered right whale because it "licensed commercial fishing operations to use gillnets and lobster pots in specifically the manner that is likely to result in violation of [the ESA]"), cert. denied, 1998 U.S. LEXIS 7103 (Nov. 2, 1998) (No. 97-1485); *Defenders of Wildlife v. Administrator, Envtl. Protection Agency*,

882 F.2d 1294, 1300-01 (8th Cir. 1989) (federal agency caused takes of the endangered black-footed ferret through its "decision to register pesticides" even though other persons actually distributed or used the pesticides); *Loggerhead Turtle v. Cty. Council of Volusia Cty.*, 148 F.3d 1231, 1251 (11th Cir. 1998) (finding plaintiffs had standing where they alleged harm from county's failure to regulate artificial beach lighting, which harmed turtles).

An agency may receive authorization from the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service to issue permits that cause harm to listed species, under ESA Section 10. *See* 16 U.S.C. § 1539(a)(2)(B). For example, Washington State Department of Natural Resources has an incidental take permit for authorization of forest practices that cause likely harm to listed species. Ecology lacks such authorization for the biosolids program.

The ESA authorizes citizen suits "to enjoin any person, including the United States and any other governmental instrumentality or agency (to the extent permitted by the eleventh amendment to the Constitution), who is alleged to be in violation of any provision" of the Act. 16 U.S.C. § 1540(g)(1)(A). Agency officials acting in their official capacity are not protected by the eleventh amendment, and so state agencies are functionally subject to suit. Such suits may result in injunctive relief, civil penalties, and an award of costs and attorneys' fees.

In order to fully protect listed species and protect the State from liability, Mr. Kenney suggests that Ecology consult with the National Marine Fisheries Service and U.S. Fish and Wildlife Service to determine whether an incidental take permit and associated habitat conservation plan is required.

F. SEPA Checklist Specific Comments

The SEPA Checklist and associated threshold determination must fully disclose sufficient information to determine whether a proposal has probable significant adverse environmental impacts. WAC 197-11-335. The determination includes consideration of cumulative effects, WAC 197-11-330(3)(c), and may not weigh purported benefits of the proposal against the adverse impacts, WAC 197-11-330(5). "Significant" means "a reasonable likelihood of more than a moderate adverse impact on environmental quality."

The general permit authorizes millions of pounds of land application of biosolids over a period of five years, which, as documented above, contain unknown amounts of dangerous chemicals and microplastics. While Mr. Kenney recognizes that there would be phased SEPA review for individual projects, in order to be meaningful SEPA review must be carried out "at the earliest possible time to ensure that planning and decisions reflect environmental values, to avoid delays later in the process, and to seek to resolve potential problems." WAC 197-11-055(1). Early review is particularly necessary here, where there are significant cumulative effects of biosolids application across the State, and the identified issues are common to all biosolids. PFAS, contaminants of emerging concern, and microplastics exist in all biosolids, and are not site-specific issues well suited for later phased review. The programmatic phase is also the only meaningful opportunity to conduct environmental review of Class A "exceptional quality" biosolids, application of which is not subject to later SEPA review.

The general permit clearly creates "a reasonable likelihood of more than a moderate adverse impact on environmental quality," and thus is significant and requires preparation of an environmental impact statement. Because application of biosolids can reasonably be anticipated to contaminate both groundwater and surface waters across the State with chemicals already recognized by Ecology to pose a serious threat to human health, the proposal presents cumulative effects to wildlife, "unique and unknown risks to the environment," and "may affect public health or safety." WAC 197-11-330(3).

Ecology mainly points to data gaps as the explanation for why it cannot regulate acknowledged risks. Under SEPA regulations, significance depends on context and intensity. "The context may vary with the physical setting. Intensity depends on the magnitude and duration of an impact." WAC 197-11-794. Here, PFAS are "forever chemicals," so the duration of the impact is perpetuity. Furthermore, "[t]he severity of an impact should be weighed along with the likelihood of its occurrence. An impact may be significant if its chance of occurrence is not great, but the resulting environmental impact would be severe if it occurred." The impacts of widespread biosolids application are undoubtedly severe, given the reasonable threat of harm to human health of PFAS, including, according to Ecology, "probable links to immune system toxicity, high cholesterol, reproductive and developmental issues, endocrine system disruption, ulcerative colitis, thyroid issues, certain cancers, and pregnancy-induced hypertension."

Preparation of a programmatic EIS is the statutorily mandated mechanism by which to address these data gaps and assess associated risks and impacts. Rather than forge ahead in the face of admitted incomplete information, Ecology must carefully assess the likelihood and severity of impacts, reasonable alternatives, and the mechanism to mitigate them.

In addition to the general request for a determination of significance and preparation of an EIS, Mr. Kenney raises the following specific concerns with the SEPA checklist:

- ¶ 1. The checklist improperly excludes consideration of population growth, when Washington is a quickly growing State. The checklist should consider more recent population trends, including during the COVID pandemic.

- ¶ 1. The description of pollutants should distinguish between pollutants that are regulated, and pollutants more broadly, as this section appears to use the terms interchangeably. The SEPA analysis must consider impacts of all pollutants reasonably likely to be contained in biosolids irrespective of their regulation. The general statement that "Generally, pollutants in biosolids occur in very low concentrations, below the level where an adverse effect is expected" is inadequate. This cursory analysis lumps all pollutants together and contains no useful information.

  As detailed above, high priority pollutants (including PBDEs and PFAS) should be identified, along with a discussion of their likely presence of the pollutants and risks to

the environment and human health. The one summary sentence dedicated to a serious and complex systemic issue is clearly inadequate.

- ¶ 1. The citation to WAC 173-308-90003 should acknowledge that this is the minimum content of a land application plan, but not necessarily sufficient to protect groundwater or adequate to fulfill Ecology's duties to protect groundwater.

- ¶1. The checklist states that "If the regulation of other pollutants becomes necessary during the course of the permit cycle, that is sufficient cause for Ecology to open the permit for modification." This statement lacks basis or thresholds, and is circular in that it states that if regulation is necessary then it is necessary. In order to be meaningful, mitigation must include specific triggers, criteria, and regulatory responses as part of a robust adaptive management system with public involvement.

- ¶ 2. The general statements regarding "decades of science" are inadequate. Citation must be provided. Emphasis should be placed on recent science, rather than decades-old science, given the concerns regarding PFAS, microplastics and other more recently understood issues.

- ¶ 2. The purported benefits of biosolids are immaterial to the threshold determination.

- ¶ 4. The statement that "Parks, wilderness areas, and wild and scenic rivers are likely too remote to be desirable for the land application of non-EQ biosolids" is inaccurate.

- ¶ 4. Application of biosolids to hydric soils raises high probability of groundwater contamination, which must be analyzed. As a mitigation measure, Mr. Kenney recommends barring biosolids applications from hydric soils and areas that are periodically inundated.

- ¶ 6. The analysis states that "[t]he permit itself will not increase demands on transportation or public services and utilities." This is the incorrect legal standard for SEPA review, which requires consideration of both direct and indirect effects. Ecology must consider the full impacts of biosolids application over time, including emissions and traffic associated with application.

Thank you for your consideration of these comments. Please contact me at wgolding@ziontzchestnut.com with any response to comments or follow up questions or concerns.

Sincerely,

ZIONTZ CHESTNUT

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