

Additional and More Stringent Requirements

Fire Mountain Farms (FMF) must comply with the following requirements upon approval of agreed order:

General Conditions

1. **Storage:** The SEPA checklist submitted by FMF in July of 2020 did not include sufficient information to evaluate long-term storage of biosolids at any of the units. Therefore, long-term storage of biosolids is not approved for any units under this order. The temporary staging of biosolids is allowed and shall be limited to six (6) weeks while being limited to those areas described and noted in the SSLAP and site maps respectively. Unless approved by Ecology, all temporarily staged biosolids must be land applied by October 1st of each year.
2. **Late Season Application:** For land application between October 1st and 31st, land application may occur with approval from Ecology based on evaluation of the run-off risk listed in the [Manure Spreading Advisory](#)¹ (MSA), upcoming weather data, and additional supporting documentation if requested by Ecology.
3. **Odors:** Ecology will investigate all complaints regarding odor, believed to have originated from a biosolids application unit. Upon investigation, one or more of the following conditions may be required to mitigate offsite odors:
 - a) No action is required; temporary staging and land application may continue.
 - b) The current temporary staging location may be required to be physically covered or moved to a different location.
 - c) Land application may be terminated or a modification to application practices may be required (e.g. injection of liquid biosolids or incorporation of biosolids within 6-hours of application).
 - d) An odor management plan may be required to continue, with either or both, temporary staging and land application of biosolids.
4. **Western Washington Biosolids Management Matrix:** Biosolids application activities conducted in western Washington must be conducted in compliance with the attached Western Washington Biosolids Management Matrix. Timbered portions of sites are exempted from this requirement, but must be addressed separately as required by Table 1 below. This requirement is to ensure compliance with WAC 173-308-190. It is further based on Ecology's determination that, at the western Washington sites covered by this agreed order, the potential for groundwater contamination due to biosolids application exists, and is therefore appropriate to include to ensure compliance with the provisions of WAC 173-200 (Water Quality Standards for Groundwaters for the State of Washington).

¹ <https://www.wadairyplan.org/MSA>

5. **Timber Production:** Prior to conducting application of biosolids to timber land, FMF must update its Site Specific Land Application Plans (SSLAPs) to include and explanation of the timber crop's agronomic need in relation to the timber's life cycle and it's intended end use (consistent with the final use that might be reflected in a Forest Management Plan under RCW 83.34). The updated SSLAPs must be approved by Ecology prior to conducting application of biosolids to timbered portions of a unit. This is to ensure that SSLAPs for sites that include timber meet the requirements for WAC 173-308-90003(2) and (3) to ensure compliance with WAC 173-308-190.
6. **Soil Sampling:** FMF shall conduct compliance soil sampling and analysis per the Soil Sampling and Analysis plan dated June 22, 2017. Sampling shall occur annually before October 1st of each year.
7. **Spill Prevention and Response Plan:**
 - a) A Spill Prevention and Response Plan must be approved by Ecology prior to transporting biosolids per WAC 173-308-100(2).
 - b) Biosolids should not be tracked offsite (from truck wheels) onto public roadways.
8. **Holiday Restrictions:** Biosolids land application is prohibited on the following federal holidays: Memorial Day (observed), the Fourth of July, and Labor Day. This prohibition shall also include the three days leading up to a federal holiday for a total of four consecutive days.
9. **Buffers:** Property boundaries, surface waters and well setbacks need to be flagged to show setback/buffer unless otherwise approved by Ecology. All buffers shall be increased to 50 feet per guidance from the Biosolids Management Guidelines of Washington State Publication #93-80 revised July 2000.
10. **Annual Report Additions:** FMF must submit to Ecology the following documents with their Annual Report:
 - a) An up-to-date list of their Interested Parties List (IPL),
 - b) A report summarizing the previous year's soil results and any long term trends,
 - c) Records demonstrating that FMF received proper notice and necessary information from each generator prior to land application (per WAC 173-308-120(2), (3)).

The reason for providing an IPL is so Ecology will be able to provide notice to all persons who might have standing to appeal any appealable decision pertaining to this facility. The report summarizing soil results is required to enable Ecology to evaluate FMF's compliance with the agronomic rate requirement of WAC 173-308-190(1) and the above requirement to follow the Western Washington Biosolids Application Management Matrix. The requirement to provide records from each generator is to ensure compliance with the cited rule provision and the requirements of the 2015 General Permit for Biosolids Application.

Site Specific Conditions

11. Big Hanaford Unit

- a) Land application of biosolids cannot begin at this unit until all delisted Emerald Kalama Chemical (EKC) waste has been removed from this location.
- b) The application window of this unit is restricted to April 1st – October 31st, assuming appropriate weather conditions. According to the Natural Resources Conservation Service (NRCS) Soil Survey the dominant soil type of fields is Reed Silty Loam which is noted to have 'Frequent Flooding' during the month of March.
- c) The following field is not approved for land application of biosolids because insufficient information was provided in the Site Specific Land Application Plan (SSLAP) to confirm that contamination of onsite pond will be prevented:
 - BH-10.
- d) The following fields are not approved for land application of biosolids because they do not have an applicable crop for biosolids application:
 - BH-11 and BH-20 CREP.
- e) The following field is not approved for land application for biosolids because the risk of public contact is deemed too high:
 - Homesite.

12. Burnt Ridge Unit

- a) Fire Mountain Farms shall be in compliance with Dam Safety permits for impoundments on Burnt Ridge Unit before land application of biosolids can occur.
- b) Land application of biosolids cannot begin at this unit until all delisted EKC waste has been removed from this location.
- c) The buffer along the southern property line of fields BR-13 and BR-14 shall be increased to 50 feet from the property line or 200 feet from the neighboring dwelling, whichever is farthest.
- d) Fields with slopes greater than 15% are required to have reduced application rates to prevent surface water contamination.
- e) An approved Spill Prevention and Response Plan must be followed when transporting biosolids from the Burnt Ridge to Homestead Unit.
- f) The following field is not approved for land application of biosolids because the slope is too steep to prevent contamination of water source in ravine:
 - BRT-5
- g) The following field is not approved for land application of biosolids because insufficient information was provided in SSLAP for Ecology to determine that surface water contamination would be prevented:
 - BR-6

13. Lincoln Creek Unit

- a) The application window of this unit is restricted to April 1st – October 31st, assuming appropriate weather conditions. According to the Natural Resources Conservation Service (NRCS) Soil Survey one of the dominant soil type of fields is Reed Silty Loam which is noted to have 'Frequent Flooding' during the month of March.
- b) Fields with slopes greater than 15% are required to have reduced application rates to prevent surface water contamination.

- c) The following fields are not approved for land application of biosolids because they do not have an applicable crop for biosolids application:
- LC1-CREP-1 and LC1-CREP-2.

15. Newaukum Prairie Unit

- a) Land application of biosolids cannot begin at this unit until all delisted EKC waste has been removed from this location.
- b) The following fields are not approved for land application of biosolids because they do not have an applicable crop for biosolids application:
- NP-13 and NP-14.

16. Homestead Unit

- a) An approved Spill Prevention and Response Plan must be followed when transporting biosolids from the Burnt Ridge to Homestead Unit.
- b) Fields with slopes greater than 15% are required to have reduced application rates to prevent surface water contamination.

Table 1 Western Washington Biosolids Application Management Matrix

<p>Fall Soil Test¹</p> <ul style="list-style-type: none"> • Measure Nitrate-N in 0-12”² • Ecology may also require 12-24” based on trends for fall soil test results 	<ul style="list-style-type: none"> • Max Application Window: <ul style="list-style-type: none"> • Big Hanaford: April 1 – October 15 • Newaukum Prairie: March 1 – October 15 • No application until Manure Spreading Advisory (MSA) = Low Risk³ • Agronomic rate approach to determine application rates • Proposed application rate and supporting documentation must be submitted to Ecology at least 14 days in advance of anticipated application dates⁴ • Submit with each Annual Report: summary of application activities per field
<p>Fall Soil Nitrate Concentration</p>	<p>Required Actions</p>
<p>Target (≥15 ppm)</p>	<ul style="list-style-type: none"> • No increase in application rate or decrease in nutrient removal without Ecology consultation
<p>Above Target (>15 ppm - 30 ppm)</p>	<ul style="list-style-type: none"> • Report proposed actions to reduce residual nitrates • Ecology may require a reduced application rate up to 25%
<p>Excessively Above Target (>30 ppm)</p>	<ul style="list-style-type: none"> • Explanatory report shall be submitted by professional consultant which includes recommended changes to application and farming practices • Ecology may require a reduced application rate up to an additional 25%. • After three consecutive years in this bracket, stop application until fall soil nitrate returns to Target range.

1 Must occur per Oregon State University publication EM8832 Post-Harvest Soil Nitrate Testing for Manured Cropping Systems West of the Cascades.

2 Greater depth may be required if sampling is not conducted per EM8832 or there is a concern about nitrate leaching.

3 Or provide equivalent documentation of surface water runoff risk evaluation made prior to land application. The MSA can be found at <https://www.wadairyplan.org/MSA>.

4 Supporting documentation includes: location, proposed application rate including mineralization and ammonia retention, application history, crop, yield, soil and biosolids nutrient information, and other operational considerations.