



Oregon

Kate Brown, Governor

Department of Environmental Quality

Western Region Eugene Office

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Date

Gary Walls, Lead Operator
City of Depoe Bay
PO Box 8
Depoe Bay OR 97431

Re: Biosolids Site Authorization to Land Apply Biosolids: WR2018-01-BS
National Pollutant Discharge Elimination System permit number 101383
File number 24095
Site: Mann Ranch
2875 Moonshine Park Rd. Logsden OR 97357
Site location: Twp. 9 S, R. 10W. Sec. 19
Lincoln County
Parcels about 120 acres

Dear Gary Walls:

The Department is reauthorizing the Mann Ranch sites under as part of your updated Biosolids Management Plan. This letter is DEQ's approval of your request to land apply anaerobic Class B biosolids on the above referenced site. This Class B biosolids authorization is valid until one of the following occurs:

1. Site ownership changes.
2. The current site owner withdraws permission to apply biosolids.
3. Pursuant to OAR 340-045-0060, DEQ revokes the authorization for non-compliance, submittal of false information, violation of any applicable law, or a serious danger to public health, safety or the environment.

Please be aware that in accordance with OAR 340-050-0030(3), this site authorization letter is part of your biosolids management plan and requirements of this authorization are considered enforceable conditions under your National Pollutant Discharge Elimination System permit #101383.

This authorization to apply anaerobic Class B biosolids on the above referenced site is subject to criteria detailed in the OAR 340-050, NPDES permit #101383 and the following conditions.

Responsibilities

Depoe Bay must ensure the following:

1. All Class B biosolids are analyzed as required by the permit and meet all permit requirements prior to land application.
2. Proper handling and application of all biosolids at this location.
3. Class B biosolids are transported to the application site in such a manner as to prevent leaking or spilling the Class B biosolids onto the highways, streets, roads, waterways or other land surfaces not approved for biosolids application.
4. A copy of this site authorization letter and a signed Class B biosolids pathogen and vector attraction reduction certification statement must be in the possession of the person applying biosolids or in the application truck. Any person who applies biosolids must review this site authorization letter prior to applying biosolids.

Site Description

This site is currently in pasture grass and is comprised of Knappa silty loam 2% to 7% slope, Nehalem silt loam 0% to 3% slope, Quillamook silty loam 0% to 3% slope and Siletz silt loam 0% to 3% and Wolfer silt loam 0% to 3% slope soils. All these soils are well drained.

Approved Fields

DEQ approves Class B biosolids application on the portions of these sites that are outlined in colored hatching on the attached site approval maps and as referenced in the table below.

Table 1. Depoe Bay Mann sites.

Site number*	Township Range Section Tax Lot	Approx. Acres	Crop Type
Mann 1	Twp. 9S, R. 10W. Sec. 19 WM.,	8	pasture grass
Mann 2	Twp. 9S, R. 10W. Sec. 19 WM.,	25	pasture grass
Mann 3	Twp. 9S, R. 10W. Sec. 19 WM.,	10	pasture grass
Mann 4	Twp. 9S, R. 10W. Sec. 19 WM.,	12	pasture grass
Mann 5	Twp. 9S, R. 10W. Sec. 19 WM.,	35	pasture grass
Mann 6	Twp. 9S, R. 10W. Sec. 19 WM.,	30	pasture grass
Total acreage		120	

* see attachment 1. Site approval map.

Site Use Limitations and Requirements

Depoe Bay must ensure the following conditions are met:

1. DEQ approves these sites for summer Class B biosolids application from May 1 through October 31 during daylight hours (see Attachment 1 Approval Map). DEQ may approve earlier application upon request if:

- a. There has been no rain in the 2 days prior to the requested date;
 - b. Soils are not wet (see condition #3, p. 3); and
 - c. There is 48" of separation from the ground surface to the permanent water table (see #11, p. 4).
2. Depoe Bay must notify DEQ 48 hours prior to the first application of the season to allow DEQ the opportunity to inspect the site. DEQ may inspect the site before, during and/or after the application.
 3. Class B biosolids application during wet soil conditions must be avoided, especially in low and concave areas. If rainfall exceeds $\frac{1}{4}$ inch in an hour or $\frac{1}{2}$ inch in a day, Class B biosolids application must stop until there are 24 continuous hours with no rain.
 4. Application must not cause soil compaction or compression and/or increase the potential for surface runoff. Application must occur by pressure tank spray with spreader bar or splash plate. Application must be with standard agricultural equipment designed for land application of liquids with low compaction tires.
 5. Application of Class B biosolids is not allowed on ground where the slope exceeds 30%. Liquid Class B biosolids application is not allowed on bare soils where the ground slope exceeds 12%.
 6. For ground slopes from 12% to 30%, liquid Class B biosolids may be applied only if the following conditions are met:
 - a. Depoe Bay must notify DEQ 48 hours prior to such application to allow DEQ the opportunity to inspect the site before, during and/or after the application.
 - b. Application must only occur when there has been no rainfall for 3 days before application and no forecast for rain for 3 days after application. Use the National Weather Service forecast.
 - c. The daily application rate must not exceed the dry soil infiltration rate. The rate is exceeded if ponding or runoff occurs.
 - d. All land application must be on the contour. No land application is allowed up and down the slope.
 - e. Depoe Bay must visually inspect the application area after every truck load applied to ensure that no ponding and/or runoff occurs. Results of this inspection must be included in the daily log.
 - f. DEQ may require additional land application management practices in writing if ponding and/or runoff occur.

7. Class B biosolids must be applied evenly at approved agronomic rate and in a manner to prevent ponding or runoff.
8. The site setbacks and 12% slope break must be flagged prior to Class B biosolids application. Flags should be spaced every 300 feet if practicable.
9. Class B biosolids applications are not allowed within the following setbacks:

Table 2 Agricultural setbacks for Class B liquid and cake Class B biosolids.

Setback to:	Liquid	Cake
Neighboring house*	50 feet	50 feet
Neighbor's property line	50 feet or 200 feet if drinking well location is unknown	50 feet or 200 feet if drinking well location is unknown
Seasonal drainage ditch, channel, pond, waterway	50 feet	50 feet
Water wells, drinking water sources	200 feet	200 feet
County road, public access	50 feet	25 feet
Farmer's road, no public access	10 feet	10 feet

*Setback may increase if DEQ receives odor complaints.

10. Liquid Class B biosolids application is not allowed when there is a constant wind speed greater than 20 miles per hour. Depoe Bay may use a wind chart or website to estimate wind speed if a site measurement is not economically feasible. The following are acceptable examples of the Beaufort wind scale and potential websites:
 - a. Beaufort wind scale
http://www.weather.gov/media/iwx/webpages/skywarn/Beaufort_Wind_Chart.pdf or
<http://www.stormfax.com/beaufort.htm>
 - b. Accuweather <http://www.accuweather.com/en/us/roseburg-or/97470/weather-forecast/335275>
 - c. WindyTV <https://www.windy.com/43.217/-123.342?2017-06-11-09,42.759,-123.344,8,m:eRcacJA> (forecast in knots; 1 knot ~ 1.151 mph)
11. A minimum of 48" vertical separation must be maintained from the ground surface to the permanent water table. For sites requiring piezometer installation and use (see Table 1 and attachment 1 Approval Area Map), the water table depth must be measured daily and written record must be kept. The piezometer must meet the following requirements:
 - a. A 2" diameter PVC pipe at least 60" deep from the ground surface.
 - b. The pipe must have a cap and a visible flag showing the piezometer location.

- c. The pipe must have ¼" perforation spaced an inch apart on opposite sides of the pipe at the lower 2 foot section of the piezometer; this section must covered with a fine mesh screen (window screening will do).
 - d. Care must be taken not to smear the soil surface borehole as this can affect water readings. If smearing occurs, you must rough up the smooth borehole surface with a rake or similar tool.
12. The Class B biosolids application rate must not exceed the recommendations in the applicable Oregon State University fertilizer guides and must not exceed the following plant available nitrogen rates:

Table 3 Agricultural setbacks for Class B liquid and cake Class B biosolids.

Crop	Plant Available Nitrogen (PAN) lbs./acre/year
Pasture grass*	100 lbs./acre/year

*OSU fertilizerguide FG63 for Pastures Western Oregon (Jan. 2000).

13. Changes in the Class B biosolids characteristics or crops management may necessitate appropriate adjustments in the Class B biosolids application rate to maintain proper plant available nitrogen for desired crop growth.
14. If other sources of nitrogen are used, such as recycled water or commercial fertilizer, the Class B biosolids application rate must be reduced so the total nitrogen applied does not exceed the base agronomic loading rate specified in condition 8 above.
15. Public access to land with a high potential for public exposure must be restricted for one year after application of Class B biosolids.
- a. Signs must be posted at the start of the application and throughout the application season as follows: "No Trespassing – Class B Biosolids Land Application". Signs should be at least 8.5" x 11" in size and spaced a minimum of 500 feet apart. Signs may be removed 2 days after the last application of the season.
 - b. Controlled access (site must have a minimum three strand wire fence around perimeter) to the Class B biosolids site must be maintained for a period of 12 months following biosolids application.
16. Grazing of domestic animals is prohibited for 30 days following the last day of Class B biosolids application. Grazing of lactating animals (for example, dairy cattle) is prohibited for 90 days following the last day of Class B biosolids application.
17. Should nuisance issues such as malodors or flies become a problem, Class B biosolids application practices must be reviewed and immediate countermeasures taken, which may include plowing the solids into the soil within 6 hours of land application.

Spill Reporting and Cleanup Requirements

Depoe Bay must comply with the following:

1. Immediately clean up any spillage of Class B biosolids and notify the DEQ Eugene office at 541-687-7439 of any such occurrence. Outside of DEQ business hours or when spills reach or have the potential to reach waters of the state, notify the Oregon Emergency Response System (OERS) at 1-800- 452-0311.
2. Spillage that cannot be completely cleaned up must be covered with hydrated lime (calcium hydroxide) or lime (calcium oxide). A 50-lb. bag of lime must be available during transportation of Class B biosolids.
3. A copy of the current year’s Class B biosolids analysis must be carried in the land application truck with all Class B biosolids that are to be land applied.

Monitoring and Reporting Requirements

Depoe Bay must conduct the following monitoring and reporting:

4. Soil nutrients and carry over nitrogen sampling is required on all active Class B biosolids land application sites as specified in Table 3 below. DEQ may require more frequent soil sampling based on land application practices and approved agronomic loading for crops grown on the site.
5. Written daily land application records must be kept on a field grid map or other easily readable system. Depoe Bay is responsible for tracking the land application of Class B biosolids on daily basis (number gallons and the equivalent number of dry pounds nitrogen land applied per acre).
6. The results of the monitoring must be submitted to DEQ with the biosolids annual report by no later than February 19 of each year.

Table 4. Monitoring Requirements

Parameter	Frequency (Unless otherwise required by DEQ in writing)	Sample Type	Reporting Requirement (Unless otherwise required by DEQ in writing)
Distance from ground surface to groundwater (inches)	Before each application	Written record from piezometer	Keep log in application truck Submit copy of log to DEQ in annual report

Date

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Parameter	Frequency (Unless otherwise required by DEQ in writing)	Sample Type	Reporting Requirement (Unless otherwise required by DEQ in writing)
<ol style="list-style-type: none"> 1. Application date and time 2. Each application location on the site 3. Name of applicator 4. Quantity applied (gallons and dry lbs. total nitrogen based on most recent Class B biosolids analysis) 5. Visual observation for ponding and/or runoff after application 	For each application on a daily basis	Written record and written record of visual observation	<p>Keep log in application truck</p> <p>Submit copy of log to DEQ in annual report</p>
Total gallons applied on site	Monthly summary	Written report	Submit to DEQ in annual report

Date

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Parameter	Frequency (Unless otherwise required by DEQ in writing)	Sample Type	Reporting Requirement (Unless otherwise required by DEQ in writing)
Carryover nutrients in the 0" – 12" soil profile: 1. Ammonia (NH ₃ , mg/kg or mg/L) 2. Nitrate + Nitrite (NO ₃ +NO ₂ , mg/kg or mg/L) 3. Total Kjeldahl Nitrogen (TKN, mg/kg) 4. Phosphorus (mg/kg) 5. pH (S.U.) 6. Potassium (mg/kg)	Once year prior to biosolids application (Unless otherwise requested by DEQ)	Composite soil sample that is representative of the site. At a minimum, the sample must be composite of a minimum of 7 distinct locations for each soil type.	Submit to DEQ in annual report
Carryover nutrients in the 12" – 24" soil profile: 1. Ammonia (NH ₃ , mg/kg or mg/L) 2. Nitrate + Nitrite (NO ₃ +NO ₂ , mg/kg or mg/L) 3. Total Kjeldahl Nitrogen (TKN, mg/kg) 4. Phosphorus (mg/kg) 5. pH (S.U.) 6. Potassium (mg/kg)	Once prior to biosolids land application (Unless otherwise requested by DEQ)	Composite soil sample that is representative of the site. At a minimum, the sample must be composite of a minimum of 7 distinct locations for each soil type.	Submit to DEQ in annual report

Depoe Bay FN 24095
Mann Ranch Site Authorization
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If you have any questions regarding this authorization, please call me at 541-687-7439.

Sincerely,

Paul Kennedy, CPSS-REHS
Natural Resource Specialist 4

Attachment: OSU fertilizerguide FG63 Pastures Western Oregon
Mann site approval map.

ec: Pat Heins, Biosolids Program Coordinator, DEQ HQ (w/encl)

cc: File Copy (w/encl)

Amy Chapman REHS, Lincoln County Human Services Department, 36 SW Nye St.
Newport OR 97365

Mr. Mann, 2875 Moonshine Park Rd. Logsden OR 97357

Mann Ranch Logsden OR, Lincoln County Area, Oregon (OR638)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
33B	Knappa silt loam, 2 to 7 percent slopes	8.4	6.1%
40A	Nehalem silt loam, 0 to 3 percent slopes	2.3	1.7%
51A	Quillamook silt loam, 0 to 3 percent slopes	52.0	38.0%
54A	Siletz silt loam, 0 to 3 percent slopes	22.1	16.1%
65A	Wolfer silt loam, 0 to 3 percent slopes	52.2	38.1%
Totals for Area of Interest		136.9	100.0%



Attachment 1
Site Approval Map

Approval Map, approx. 130 acres, 3 to 12% slope.

