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VIA CERTIFIED MAIL

November 21, 2011

Dick Pederson, Director
Oregon Department of Environmental Quality
811 SW 6th Avenue
Portland, OR 97204-1390

Paul Kennedy, Natural Resource Specialist 3
Oregon Department of Environmental Quality
165 East 7th Avenue, Suite 100
Eugene, OR 97401

Re: Petition for reconsideration of October 10, 2011, site authorization letter issued to the Roseburg Urban Sanitary Authority.

Dear Messrs. Pederson and Kennedy:

On October 10, 2011, the Oregon Department of Environmental Quality ("DEQ") authorized the Roseburg Urban Sanitary Authority ("RUSA") to dispose of sewage sludge on a property known as Hayden Ranch. *See* Attachment A. By this letter, Northwest Environmental Advocates ("NWEA") hereby petitions DEQ to reconsider that authorization letter pursuant to the Oregon Administrative Procedure Act, ORS Chapter 183, and OAR 137-004-0080. In doing so, NWEA requests DEQ to rescind its authorization letter and provide a public comment period before deciding whether to authorize use of the Hayden Ranch for sludge disposal. NWEA also requests DEQ to address several issues pertaining to buffer areas, loading rates, potential flooding, and groundwater contamination.

NWEA is an Oregon nonprofit environmental organization established in 1969 and incorporated in 1981 whose mission is to work through advocacy and education to protect and restore water quality, wetlands, and wildlife habitat in the Pacific Northwest. NWEA regularly works with state and federal agencies and comments on pending government decisions affecting natural resource use in the Pacific Northwest, and has litigated numerous claims pursuant to the federal Clean Water Act to preserve and improve water quality in the region. Thus, NWEA has a strong interest in ensuring that any sludge disposal at the Hayden Ranch does not harm the environment. Sewage sludge contains toxic pollutants including arsenic, lead, and zinc; micro-organisms such as fecal coliform, salmonella, and other disease pathogens; as well as

unpredictable and hazardous materials including pharmaceutical, flame retardant, and heavy-duty detergent residues.^{1/} These pollutants may harm both humans and aquatic life. Moreover, nitrogen and phosphorus contained in sewage sludge may runoff into surface waters, affecting fisheries, recreation, and drinking water supply, as well as impact local wells through groundwater contamination.^{2/}

The Hayden Ranch lies adjacent to the Umpqua River north of Roseburg, Oregon. The property is low-lying, flat, and is composed of pasture soils typical of flood plains in the Roseburg area. As discussed below, temporary groundwater in these soils may be as shallow as six to eighteen inches below the surface during the winter. The Hayden property also straddles a creek that discharges to the Umpqua River in an area designated as spawning habitat for salmon and steelhead under the Clean Water Act (“CWA”), 33 U.S.C. § 1251 et seq. *See* OAR 340-041-0320, Fig. 320B. This stretch of the Umpqua River is also designated critical habitat for the Oregon Coast Coho Salmon, a species listed as threatened under the ESA. *See* 73 Fed. Reg. 7816, 7870 (Feb. 11, 2008). NWEA members^{3/} have informed DEQ that they have witnessed sludge being sprayed into this creek, which threatens downstream aquatic life.

In addition, the Hayden Ranch is located near several residences, domestic wells, and a public road used by NWEA members to exercise and to gain access to a community-park area bordering the northern portion of Hayden Ranch. The park is used throughout the year for fishing, swimming, and general recreation, and the park surrounds the outlet of the creek described above. On April 18th, 2011, NWEA members also informed DEQ that they may need to move an existing diversion for domestic water to a point immediately downstream from the creek’s entrance to the Umpqua River. Thus, NWEA is concerned that any sludge or sludge-pollutants making their way into the creek or otherwise entering the Umpqua River may present a potential human health hazard in addition to harming sensitive aquatic life.^{4/}

¹ *See* Robert C. Hale and Mark J. LaGuardia, *Have Risks Associated with the Presence of Synthetic Organic Contaminants in Land-Applied Sewage Sludge Been Adequately Addressed?*, 12 *New Solutions: J. Env. & Occupational Health Policy* 371 (2002) (detailing a variety of harmful synthetic pollutants found in treated sewage sludge).

² *See* United States Environmental Protection Agency, Office of Inspector General, STATUS REPORT ON LAND APPLICATION OF BIOSOLIDS (March 28, 2002).

³ NWEA’s membership includes several residents living near or immediately adjacent to Hayden Ranch. These members are reasonably concerned that sludge disposal at that location may cause sickness, may contaminate groundwater or domestic water supply, and may otherwise harm the environment and interfere with the use and enjoyment of their homes.

⁴ *See* EPA, A GUIDE TO THE BIOSOLIDS RISK ASSESSMENTS FOR THE EPA PART 503 RULE at 27 (Sept. 1995) (Exposure pathways include migration of sewage sludge pollutants through the soil and into surface waters, groundwater, and fish used for human consumption). Exposure pathways also include the inhalation of sludge aerosols and dust. *Id.*

Should DEQ not take action within 60 days of receiving this petition, DEQ's site authorization letter will be ripe for judicial review under the Oregon Administrative Procedure Act. ORS 183.484(2).

I. Overview of the Law

The federal Clean Water Act ("CWA") is the primary source of federal law governing the disposal of sewage sludge. That law flatly prohibits the discharge of sludge to a water of the United States except when permitted by a National Pollutant Discharge Elimination System ("NPDES") permit. *See* 33 U.S.C. §§ 1311(a), 1345(a), 1362(6). Any unpermitted discharge may lead to the imposition of up to \$37,500 in civil penalties per day for each violation. 33 U.S.C. §§ 1365(a)(1), 1319(d); 40 C.F.R. § 19.4 (Table 1).

The CWA also authorizes the United States Environmental Protection Agency ("EPA") to issue regulations governing the disposal of sewage sludge on land, *see* 33 U.S.C. § 1345(d)(1), (4), and these regulations may be found at 40 C.F.R. Parts 501, 503, and 122. Under these EPA regulations, sludge may not be applied to the land above the agronomic loading rate for nitrogen—i.e. the rate necessary for healthy plant growth—so as to prevent the contamination of groundwater. 40 C.F.R. § 503.14(d). Sludge may not be applied within ten meters of a water of the United States. *Id.* at § 503.14(c). And sludge may not be applied if it is "likely to adversely affect" a species listed under the federal Endangered Species Act ("ESA"), 16 U.S.C. § 1531 et seq. 40 C.F.R. § 503.14(a).⁵ As above, disposal of sewage sludge in violation of these rules may lead to the imposition of civil penalties under the CWA. *See* 33 U.S.C. § 1365(a)(1), (f)(7).⁶

The CWA requires these and other restrictions on sludge disposal to be incorporated into

⁵ Under this standard, disposal practices are "likely to adversely affect" a listed species if "any adverse effect to a listed species *may* occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial." *Endangered Species Consultation Handbook*, March 1998, at p. xv (interpreting identical language in the ESA) (emphasis added). NWEA notes that in addition to this prohibition under the CWA, any harm to listed species due to sludge disposal at Hayden Ranch may violate the prohibition on "take" contained in Section 9 of the ESA. *See* 16 U.S.C. § 1538(1)(B). Moreover, any agency issuing a permit that allows such take may be held vicariously liable. *See Strahan v. Cox*, 127 F.3d 155, 163 (1st Cir. 1997), *cert. den.* 535 U.S. 830 (1998) (Massachusetts officials liable under ESA for licensing commercial fisherman who used methods that harmed listed whales).

⁶ In addition to violating the CWA, application of sludge in violation of 40 C.F.R. Part 503 by, for example, applying sludge in excess of agronomic rates, may violate the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6901 et seq. In particular, RCRA's prohibition on open dumping (42 U.S.C. § 6945) and EPA's regulations at 40 C.F.R. Part 257 "appl[y] if sewage sludge is applied to the land and if the sewage sludge is not used or disposed of in accordance with [40 C.F.R.] part 503." 58 Fed. Reg. 9248, 9381 (Feb. 19, 1983).

the NPDES permits of publicly-owned treatment works (“POTWs”) such as RUSA. 33 U.S.C. § 1345(d)(4), (f)(1). This means that POTWs may generally dispose of sludge only on sites identified during the NPDES permitting process, and POTWs may make use of new sites not identified during that process only pursuant to a valid and approved land application plan. 40 C.F.R. § 122.21(q)(9)(v). This plan must provide for advance public notice and an opportunity to object before sludge is disposed of on new sites. *Id.*⁷ Without first notifying the public, new sites may only be added by formally modifying the NPDES permit itself. *See* 64 Fed. Reg. 42432, 42454 (Aug. 4, 1999) (“The land application plan serves as the vehicle to allow [Treatment Works Treating Domestic Sewage] to add sites during the life of the permit without requiring a major permit modification.”).

Oregon also regulates the disposal of sewage sludge at OAR chapter 340, division 50. These regulations contain criteria for selecting new disposal sites, including criteria for avoiding flood plains, residential areas, surface waters, and groundwater contamination. *See generally* OAR 340-050-0070. For example, if a new site lies in a flood plain, the sludge should be incorporated into the soil instead of sprayed or spread onto the soil surface. *Id.* at 0070(2)(a). New disposal sites should be “carefully evaluated” to ensure that sludge is not applied during times of the year when temporary groundwater is less than twelve inches from the surface. *Id.* at 0070(2)(b). And Oregon law recommends setbacks of up to 500 feet from residential areas to prevent wind drift and nuisance conditions. *Id.* at 0070(3)(a).

Oregon law also requires every POTW to submit a biosolids management plan (“BMP”) and land application plan during the NPDES permitting process. *See* OAR 340-050-0031(1), (7), -0015(8). The purpose of this plan is to identify, *inter alia*, every site that will be used for sludge disposal during the life of the NPDES permit. *See* OAR 340-050-0031(7). Pursuant to 40 C.F.R. § 122.21(q)(9)(v)(E), failure to list a disposal site or otherwise identify a site during the permitting process means that the site may not be used without advance public notice. And Oregon law requires DEQ to provide a public comment period and opportunity to request a public hearing before authorizing any new disposal site that “may be sensitive with respect to residential housing, runoff potential or threat to groundwater.” OAR 340-050-0030(2)(a).

Prior to disposing of sewage sludge at a new site, a POTW must also obtain a site authorization letter from DEQ. OAR 340-050-0030(1). The purpose of this document is to “establish[] minimum site management conditions for applying biosolids to a specific land application site.” OAR 340-050-0010(20).

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⁷ *See* 54 Fed. Reg. 18716, 18738 (May 2, 1989) (application plan must “provide for advance notice of new land application sites and a reasonable opportunity to object to the permitting authority.”) (emphasis added).

II. Factual Background

DEQ first authorized use of the Hayden Ranch for sludge disposal in 1990 when that property was owned by a Mr. Charles Collins. *See* Attachment B. This authorization predated RUSA's adoption of a BMP and before the federal regulations currently governing sludge disposal were adopted. Among other things, the first site authorization letter included an agronomic loading rate of 150 lbs of nitrogen per acre, per year, or approximately 18,415 gallons of sludge per acre/year. That letter also excluded portions of Hayden Ranch from use during the winter.

In 2004, Mr. Collins sold the property to a Mr. Simonis, who thereafter declined to allow RUSA to use his property for sludge disposal. *See* Attachment C. RUSA did not notify DEQ of this change in ownership despite the fact that DEQ previously notified RUSA that "[i]f a site authorization were lost due to a new owner not wanting biosolids land applied on their property, then any future biosolid application on this property would require a *new* site authorization." *See* Attachment D at 1 (emphasis added).

On October 6, 2005, DEQ renewed RUSA's NPDES permit number 100981. DEQ also approved RUSA's current BMP. That BMP did not list the Hayden property as a site RUSA planned to use during the life of the NPDES permit or, to NWEA's knowledge, otherwise notify DEQ that RUSA intended to use that property for sludge disposal. Contrary to the terms in the first site authorization letter for Hayden Ranch, RUSA's new BMP also provided that "[t]he agronomic biosolid land application rate for pasture is 100 lb [nitrogen/acre/year]." *See* BMP at 16.^{8/}

In 2008, Mr. Simonis sold the property to its current owner, Mr. Michael Hayden, who in September of 2008 signed an agreement allowing RUSA to use the property for sludge disposal. *See* Attachment E. Again, RUSA did not notify DEQ of this change in ownership. Nor did RUSA update its BMP to list the property, in violation of OAR 340-050-0031(7)(a). RUSA did not notify the public of its renewed use of the Hayden property as required by 40 C.F.R. § 122.21(q)(9)(v)(E). And RUSA did not seek DEQ approval before disposing of sludge at the Hayden Ranch.

In April of 2011, NWEA members notified DEQ that they had witnessed RUSA employees disposing of sludge at the Hayden Ranch in ways that violated state and federal law, including spraying sludge over the creek described above. As a result, DEQ began investigating RUSA's use of Hayden Ranch and discovered that since 2008 RUSA repeatedly disposed of sludge during the winter in areas where disposal is allowed only during the summer. *See*

⁸ RUSA's 2005 BMP is available at <http://www.deq.state.or.us/wqpr/417_200912090000_8CS01.PDF>. Despite that RUSA's new BMP allowed only for 100 lbs of nitrogen to be applied per acre/year, RUSA exceeded this figure in 2009, applying 113 lbs of nitrogen per acre. *See* RUSA 2009 annual biosolid report. RUSA prepared this report pursuant to OAR 340-050-0035(6) and this report is on file with DEQ, RUSA, and NWEA.

Attachment F at 2. DEQ also discovered that RUSA did not list the Hayden Ranch in its BMP during the 2005 permitting process. Consistent with the federal and state authorities discussed above, DEQ informed RUSA that because the Hayden Ranch was not listed in the BMP, that property “*was not part of*” RUSA’s 2005 NPDES permit. *Id.* at 1 (emphasis added).

On October 10, 2011, DEQ then issued the site authorization letter at issue here without first notifying the public or nearby landowners, and without providing the public an opportunity to comment or to request a hearing pursuant to 40 C.F.R. § 122.21(q)(9)(v)(E) or OAR 340-050-0030(2).

III. Grounds for Reconsideration

A. DEQ may not authorize use of Hayden Ranch without providing advance public notice and an opportunity to comment.

As discussed above, federal law requires POTWs to identify all sites intended for sludge disposal during the NPDES permitting process. *See* 40 C.F.R. § 122.21(q)(9)(v). New sites may not be used to dispose of sewage sludge unless the public is first notified and given an opportunity to object. *Id.* at § 122.21(q)(9)(v)(E); *see also* 54 Fed. Reg. at 18738. Moreover, Oregon law expressly requires POTWs to list in their land application plans all sites intended for sludge disposal. OAR 340-050-0031(7)(a). And DEQ must provide advance public notice and an opportunity to comment and request a hearing prior to approving any site that “may” be sensitive with respect to residential areas, potential runoff, or groundwater contamination. OAR 340-050-0070(2)(a).

Here, RUSA failed to list the Hayden property in its 2005 BMP and, to NWEA’s knowledge, RUSA did not otherwise identify the Hayden property during its 2005 NPDES permit renewal process. Therefore, as DEQ has succinctly stated, the Hayden property “*was not part of*” RUSA’s 2005 NPDES permit. Attachment F at 1 (emphasis added). RUSA was therefore required to provide advance public notice before disposing of any sludge at Hayden Ranch and has been operating in violation of federal and state law since 2008.

Moreover, DEQ’s decision to authorize RUSA to use Hayden Ranch fits every condition under Oregon law for requiring an opportunity for public comment. The property is located immediately adjacent to homes, domestic wells, a public road frequented by nearby residents, and a community park-area used throughout the year. As discussed below, the site is composed of soils known to have a very shallow water table from November through May—i.e. six to eighteen inches—and these are the primary periods of the year that RUSA uses the Hayden property for sludge disposal. The property appears to be located within a flood plain. And the sludge or sludge pollutants on the property may enter the creek, discharge into the Umpqua, and thereafter enter domestic water supply.

In all, NWEA and its members have been deprived of their right to object in advance to RUSA’s use of Hayden Ranch for sludge disposal pursuant to 40 C.F.R. § 122.21(q)(9)(v)(E), as well as their right to comment on RUSA’s use of that property and to request a public hearing pursuant to OAR 340-050-0030(2)(a). NWEA therefore requests that DEQ rescind its October

10, 2011 site authorization letter until such time as DEQ provides advance public notice and an opportunity to comment. NWEA also requests DEQ to stay its authorization pending the completion of that process. Given the potentially serious issues involved, NWEA believes that a stay and opportunity for public comment will be time well spent.

If DEQ does not rescind its authorization in accordance with state and federal law, and allow NWEA and its members to comment on RUSA's proposed use of Hayden Ranch, then DEQ should at least reconsider the provisions of the site authorization letter discussed below.

B. DEQ should ensure that sludge does not contaminate temporary groundwater and should determine the potential for flooding and runoff from adjacent lands.

Oregon law provides a series of standards that new sites must meet to be considered for sludge disposal. These standards include specific protections for groundwater.

At the time when liquid biosolids or domestic septage are applied, the minimum depth to permanent groundwater should be four feet and the minimum depth to temporary groundwater should be one foot. Sites approved for year-round application should be evaluated carefully to ensure that groundwater separation distances conform with these requirements.

OAR 340-050-0070(2)(b). In addition, “[s]ites should be on a stable geologic formation not subject to flooding or excessive runoff from adjacent land. . . . [and i]f periodic flooding cannot be avoided, the period of application should be restricted and soil incorporation is recommended.” *Id.* at 0070(2)(a).

Here, the U.S. Department of Agriculture has determined that the soil type found throughout most of the Hayden Ranch property, Sibold fine sandy loam, has a temporary water table of only six to eighteen inches below the surface from November through May. *See* Attachment G at 1; *see also* Attachment A at 4 (map of soil types at the Hayden property). Thus, it is likely that use of the Hayden property during these months does not comply with OAR 340-050-0070(2)(b). Yet, as discussed below, RUSA uses the Hayden Ranch extensively during these months.

DEQ should reconsider its site authorization letter and evaluate the potential effects on this temporary water table. For example, NWEA is aware that DEQ visited the Hayden property on May 5, 2011. NWEA is not, however, aware of any site visits or testing during any other month. As such, DEQ should require groundwater testing during other key periods of the year before it authorizes the Hayden Ranch for sludge disposal. *See* OAR 340-050-0070(2)(b) (Sites should be “carefully evaluated” to ensure that adequate groundwater separation distances exist prior to approval). Should DEQ ultimately approve the site, DEQ should include permit conditions prohibiting disposal when the temporary water table rises closer than twelve inches from the surface.⁹ DEQ should also verify that RUSA is able to accurately determine the depth

⁹ The new site authorization letter provides that “[a]t the time of land application there
(Continued . . .)

to temporary groundwater prior to each application of sludge.^{10/}

Moreover, Sibold fine sandy loam is characteristic of flood plains in the Roseburg area and the U.S. Department of Agriculture has designated “Hazard of flooding” to be a major management limitation for this type of soil. *See* Attachment G at 2. As such, it is likely that this area is subject to at least “periodic flooding” or runoff from adjacent lands within the meaning of OAR 340-050-0070(2)(a). And DEQ should reconsider its site authorization letter and investigate whether the site is suitable for sludge disposal. DEQ should also consider requiring RUSA to incorporate its sludge into the soil to decrease runoff potential and the likelihood of harm to nearby waterbodies.^{11/}

C. DEQ should require buffers sufficient to prevent wind drift, nuisance conditions, and violations of state and federal law.

RUSA’s new site authorization letter provides that “[b]iosolids must not be applied closer than 50 feet to any public property or road way, any drainage ditch, channel, pond, or waterway, or within 200 feet of a domestic water source or well.” Attachment A at 5. DEQ should reconsider this provision and require buffer widths sufficient to ensure compliance with Oregon law and the CWA.

First, this provision appears to be based on OAR 340-050-0070(3)(c), which provides that “[n]o bulk Class B biosolids or domestic septage should be *spread* at the site closer than 50 feet to any ditch, channel, pond, or waterway, or within 200 feet of a domestic water source or well.” (emphasis added). However, while RUSA has stated that it will *spread* sewage sludge on the land when weather permits, e.g. by driving a truck onto the fields and dumping sludge directly on the ground, RUSA uses an irrigation gun during the winter to *spray* sewage sludge through the air.^{12/} And when this latter method is used, Oregon law recommends much greater

must be a 48’’ separation between the ground surface and the soil water table.” Attachment A at 5. This rule appears to be based on DEQ’s regulations regarding permanent groundwater. DEQ should clarify that the prohibition applies to temporary groundwater as well.

¹⁰ The new site authorization letter indicates that two piezometers are used at the Hayden property to determine depth to groundwater. *See* Attachment A at 4. DEQ should ensure that the number, placement, and type of monitoring devices reflect best practices for measuring temporary groundwater. For example, it appears from RUSA’s biosolids load sheets that the piezometers at the Hayden property are at least 48 inches deep. DEQ should determine whether shallower piezometers or monitoring wells are needed under current protocols. *See e.g.* Wetlands Regulatory Assistance Program, Installing Monitoring Wells/Piezometers in Wetlands (July 2000), *available at* <<http://el.erd.c.usace.army.mil/elpubs/pdf/tnwrap00-2.pdf>>.

¹¹ NWEA notes that DEQ could likely obtain information on the extent of flooding and runoff by allowing a public comment period.

¹² *See e.g.* RUSA 2010 annual biosolids report at p. 9 (“During wet weather conditions,

(Continued . . .)

setbacks to prevent wind drift and nuisance conditions. For example, OAR 340-050-0070(3)(a)(C) recommends setbacks of up to 500 feet from sensitive areas.^{13/} It is unclear why DEQ has imposed buffers not intended for the manner in which RUSA disposes of its sludge and DEQ should reconsider its choice of buffer widths.

Second, while the site authorization letter requires a 200-foot setback from “domestic water source[s],” the letter does not clarify whether the creek running through Hayden Ranch is or is not a domestic water source. As discussed above, that creek discharges into the Umpqua River just north of a future diversion point for domestic water. Pollutants entering that stream may ultimately infiltrate domestic water supply and DEQ should make clear that RUSA may not spread sludge within 200 feet or spray sludge within 500 feet of the creek.^{14/}

Third, the site authorization letter prohibits the application of sludge within 50 feet of a “pond” or “waterway,” but fails to mention wetlands. This is despite that federal law specifically forbids the application of sludge within ten meters of “waters of the United States”—i.e. waters triggering CWA jurisdiction. 40 C.F.R. § 503.14(c). And under EPA’s current guidance, “waters of the United States” may include wetlands adjacent to tributaries of traditionally navigable waters.^{15/} Thus, any wetlands adjacent to the creek described above, or adjacent to any other tributary on or near Hayden Ranch, may be “waters of the United States” and the application of sludge near such wetlands is strictly prohibited.

Last, it is likely that the buffers required under the site authorization letter will not prevent violations of the CWA. As discussed above, section 301 of the CWA prohibits the unpermitted discharge of any pollutant to a water of the United States. *See* 33 U.S.C. §1311(a). Under the CWA, a “discharge of a pollutant” includes “*any* addition of *any* pollutant to [waters of the United States] from *any point source*.” *Id.* at § 1362(12)(A) (emphasis added); *see also id.*

biosolids are pumped through an irrigation gun onto the field. . . . During the drier season, the truck drives on the field and spreads the biosolids directly out of the tank with the use of a splash plate.”).

¹³ *See also* DEQ’s Implementing Oregon’s Biosolids Program, Internal Management Directive at 22–23 (December 2005) (noting that “[b]uffer strips may need to be increased if a liquid product is being land applied by means of spray irrigation.”). RUSA itself appears to acknowledge that a buffer greater than 50 feet is needed when sludge is spray-applied. *See* RUSA 2010 Annual Biosolids Report at p. 9 (“A 50 foot minimum (*75 foot minimum if irrigation gun is used*) setback is maintained between biosolids application areas and all highways and public roadways, and property lines.”) (emphasis added). DEQ should not leave the determination of a sufficient buffer area to RUSA’s sole discretion.

¹⁴ DEQ should also consider requiring greater buffer widths around any drainage ditch or other features that may cause sludge pollutants to runoff or discharge into the creek.

¹⁵ *See* EPA, Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in Rapanos v. United States & Carabell v. United States at 7–8 (Dec. 2, 2008).

at § 1362(14) (defining “point source” to mean “any discernable, confined, and discrete conveyance.”). Relevant here, federal courts have recognized devices similar to RUSA’s spray gun to be point sources under the CWA. *See e.g. Concerned Area Residents for the Environment v. Southview Farm*, 34 F.3d 114, 118 (2d Cir. 1994) (irrigation system as point source). The Ninth Circuit has emphasized that point-source pollution is any pollution traceable to a single source. *See Trustees for Alaska v. EPA*, 749 F.2d 549, 558 (9th Cir. 1984); *see also United States v. Earth Sciences, Inc.*, 599 F.2d 368, 373 (10th Cir. 1979). And such pollution may be traceable to a single source even if natural forces are ultimately responsible for the discharge. *See e.g. Friends of Santa Fe County v. LAC Minerals, Inc.*, 892 F. Supp. 1333, 1337 (D.N.M. 1995) (discharge from waste pile resulting from exposure to air and water). Last, at least one court has expressly held that even the spraying of aerosols into the air may constitute the discharge of a pollutant if particles subsequently fall on a water of the United States. *See No Spray Coalition v. New York*, 2005 WL 1354041 at *4 (S.D.N.Y. June 8, 2005); *see also League of Wilderness Defenders v. Forsgren*, 309 F.3d 1181 (9th Cir. 2002) (aerial spraying of insecticides constituted the discharge of a pollutant); *Peconic Baykeeper, Inc. v. Suffolk County*, 600 F.3d 180 (2d Cir. 2010) (same). Thus, *any* pollutants deposited on the creek or the Umpqua River as a result of spraying sewage sludge, even if that addition results only from incidental over-spray or wind drift, may constitute the unpermitted discharge of a pollutant flatly prohibited under the CWA. DEQ should therefore reconsider its chosen buffer widths and include additional requirements to ensure that *no* sludge sprayed on the land will enter the creek or Umpqua River.

D. DEQ should either reduce the agronomic loading rate or should include additional provisions to prevent the contamination of groundwater.

RUSA’s new site authorization letter sets an agronomic loading rate for nitrogen of 100 pounds of nitrogen per acre/year. *See* Attachment A at 5. However, that letter also allows RUSA to dispose of up to 150 pounds of nitrogen per acre/year so long as RUSA monitors for carry-over nitrogen and subtracts that volume from the next year’s load. *Id.* at 5, 6. DEQ should reconsider both of these figures. In particular, while it appears that DEQ calculated these figures by consulting an Oregon State University Extension Service fertilizer guide (“OSU Guide”) for Western pasture grass, *see id.* at 5 (Table 1), it does not appear that DEQ considered relevant variables and guidance contained in that document.

First, the OSU Guide only recommends applying 150 pounds of nitrogen per acre/year under specified conditions. *See* Attachment H at 3. For example, while the OSU Guide recommends the application of between 100 and 120 pounds of nitrogen when that volume is split between fall and winter, the OSU Guide recommends additional nitrogen only during the spring and summer for “irrigated pastures” that are “[i]ntensively grazed.” *Id.* Here, RUSA does not appear to use the Hayden property during the summer or September, and only infrequently during May.¹⁶ Moreover, the site authorization letter contains no restrictions pertaining to the amount of irrigation or grazing that must accompany this increased nitrogen load. For these reasons, DEQ should reconsider allowing RUSA to apply 150 lbs of nitrogen *at all* unless DEQ

¹⁶ *See* RUSA annual biosolids reports for the years 2008 through 2010.

provides sufficient guidelines to ensure that nitrogen is applied only at appropriate times of the year, and only under those conditions specified in the OSU Guide.

Second, the OSU Guide recommends applying 100 pounds of nitrogen per acre/year only if that volume is spaced out over both fall and late winter. For example, the chart cited by DEQ calls specifically for 50 pounds of nitrogen during February and 50 pounds during September. Attachment H at 3, Fig. 2. Yet, under the new site authorization letter, RUSA may apply all 100 pounds for a given acre or field during a single month. Again, DEQ should require RUSA to apply nitrogen at rates and intervals sufficient to ensure that nitrogen will not leach into the groundwater or otherwise harm the environment. See OAR 340-050-0065(3) (“Biosolids and domestic septage shall be applied at *rates and methods* which prevent the occurrence of runoff, erosion, leaching, and nuisance conditions, or the likelihood of groundwater contamination.”) (emphasis added).^{17/} It should be made clear that RUSA may apply sewage sludge only in accordance with the application calendar contained within the OSU Guide.¹⁸

Last, the OSU Guide provides the following general directive:

N fertilization should be based on moisture and temperature, which control pasture growth. Time N applications to crop and forage production needs. *Avoid the following:*

- *N applications in November and December.* N applied to cold, wet soils in winter can be leached below the root zone before slow-growing plants can use the fertilizer.

¹⁷ For example, NWEA notes that additional timing restrictions may be especially important on land that is artificially drained, either by surface ditches or by tile lines, and DEQ should evaluate whether such restrictions are necessary in this case. See *Guide to Soil Suitability and Site Selection for Beneficial Use of Domestic Biosolids*, OSU Extension Service Manual 8 at 38 (Sept. 1995) (explaining that sludge disposal should be timed carefully to coincide with nutrient uptake, and may need to be limited to dry seasons, to avoid discharging pollutants through ditches or drain tiles), available at <<http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/23672/GUIDETOSOILSUITABILITY1995.pdf?sequence=1>>. It may also be necessary to require RUSA to monitor the quality of water being discharged from these drainage systems to ensure that harmful pollutants are not being released. See *Agricultural phosphorus management using the Oregon/Washington Phosphorus Indexes*, OSU Extension Service at 6, 13 (Dec. 2003) (noting that surface-applied biosolids have a “very high” P index and that such phosphorous may be transferred to tile lines via vole, worm, and root holes), available at <<http://extension.oregonstate.edu/catalog/pdf/em/em8848-e.pdf>>. To NWEA’s knowledge, RUSA has never tested the wastewater leaving the Hayden Ranch property to determine whether pollutants are being discharged through these drainage systems.

¹⁸ Alternatively, the OSU Guide provides that nitrogen timing may be calculated by adding up heat units, which DEQ may also consider including in the site authorization letter. See Attachment H at 3.

- *Late winter or early spring N application to saturated soils.* Soils that are too wet to drive on with a tractor may be too wet for plant growth. The plants may be yellow due to lack of oxygen from wet conditions and not lack of fertilizer. Wait for conditions conducive to plant growth before applying fertilizer.

Attachment H at 2 (first emphasis added, second and third emphases in original). Here, the OSU Guide specifically states that sludge should not be applied during November or December. Yet, DEQ's site authorization letter does not include this prohibition. And despite its shallow water table, location on a flood plain, and proximity to residential areas, domestic water sources, and sensitive waterbodies, the Hayden property appears to be used more than any other disposal site during these months. Nor does the site authorization letter instruct RUSA to avoid using the Hayden property when soils are too wet to drive on. Instead, the letter advises RUSA only to "take care" to avoid wet soil conditions "especially in low and concave areas." See Attachment A at 2-3. This "take care" provision reflects neither the OSU Guide nor the actual requirement imposed by Oregon law that sewage sludge "*shall be*" applied in a manner which will prevent leaching and groundwater contamination. OAR 340-050-0065(3) (emphasis added).

DEQ should reconsider its decision to allow use of the Hayden property during November and December. And if DEQ proposes to continue to allow disposal during those months, DEQ should explain its divergence from the OSU Guide in any order on reconsideration. Moreover, DEQ should revise the site authorization letter to either prohibit the application of sludge when the soil is too wet to drive on, or DEQ should provide some other enforceable permit condition ensuring that soils too wet to benefit from added nitrogen are not used for sludge disposal. For example, if there are low or concave areas on the property that need to be avoided, these areas should be mapped and clearly delineated within the site authorization letter.

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IV. Conclusion

For the reasons set out above, NWEA asks that DEQ rescind its October 10, 2011 site authorization letter and provide advance public notice and an opportunity to comment before DEQ authorizes use of the Hayden Ranch for the disposal of sewage sludge. If DEQ will not rescind its authorization, then NWEA asks that DEQ take the actions described above to ensure that RUSA's use of the Hayden Ranch will not result in harm to the environment or violations of state or federal law.

Sincerely,



Bryan Telegin
Of Attorneys for NWEA

Attachments:

- A: Site authorization letter dated October 10, 2011
- B: Site authorization letter dated January 24, 1990
- C: Memo from Paul Kennedy, DEQ, to Roseburg Urban Sanitary Authority Biosolid File, dated May 23, 2011
- D: Letter from Paul Kennedy, DEQ, to Steve Whitbeck, OMI, dated April 3, 2001
- E: Site Management Agreement between Roseburg Urban Sanitary Authority and Michael Hayden, dated September 2008
- F: Warning Letter with Opportunity to Correct, dated July 11, 2011
- G: Excerpts from U.S. Department of Agriculture, Soil Survey of Douglas County Area, Oregon, *available at*
<http://soildatamart.nrcs.usda.gov/Manuscripts/OR649/0/DouglasOR.pdf>
- H: OSU Fertilizer Guide for Pastures, Western Oregon and Western Washington

cc: Nina Bell, Executive Director, NWEA
Dan Mensher, Pacific Environmental Advocacy Center
River Bend West Water Association
Roseburg Urban Sanitary Authority