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VIA EMAIL

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PUBLIC COMMENTS ON THE DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR NURSERY PRODUCTS HAWES COMPOSTING FACILITY

Pursuant to the County of San Bernardino’s (“County”) Notice of Availability for the Draft Supplemental Environmental Impact Report for Nursery Products Hawes Composting Facility, the Center for Food Safety (“CFS”) submits the following comments. CFS is a nonprofit membership organization that works to protect human health and the environment by curbing the proliferation of harmful food production technologies and by promoting organic and other forms of sustainable agriculture. CFS represents members in California and throughout the country that are opposed to the use of sewage sludge¹ in compost for agriculture.

I. THE COUNTY’S ISSUANCE OF THE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT IS IMPROPER.

The California Environmental Quality Act (“CEQA”) is a procedural statute mandated for “projects,” which are “[activities] directly undertaken by any public agency” that “may cause either a direct physical change in the environment, or a reasonably

¹ Also known as and used interchangeably in this document as “Biosolids.”

foreseeable indirect physical change in the environment.”² A project is either “undertaken by a public agency, undertaken by a person with assistance from a public agency,” or an “activity that involves the issuance of a lease, permit, etc., for use by one or more public agencies.”³

CEQA is implemented through initial studies, negative declarations and EIR's. CEQA requires a governmental agency to prepare an EIR whenever it considers approval of a proposed project that may have a significant effect on the environment. . . [T]he Supreme Court has recognized that CEQA requires the preparation of an EIR whenever it can be fairly argued on the basis of substantial evidence that the project may have significant environmental impact.⁴

“A significant effect on the environment is defined as a substantial, or potentially substantial, adverse change in the environment.”⁵ CEQA defines “environment” as the “physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance.”⁶ An Environmental Impact Report (EIR) “provide[s] public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project.”⁷

Here, the project is the proposed Nursery Products Hawes Facility, which will compost sewage sludge and green material on 80 acres of a 160 acre parcel located within an unincorporated area in the County of San Bernardino.⁸ The project proposes to combine this sludge and green waste to create Class A compost.⁹ In December, 2005, Nursery Products, LLC (“Nursery Products”) submitted an application with the County seeking approval of the Hawes sludge composting facility. Pursuant to CEQA, the final EIR was issued in November, 2006 and certified by the planning commission in early 2007.

The Center for Biological Diversity and HelpHinkley.org jointly filed a lawsuit in Superior Court outlining the inadequacies of this EIR and asking the court to invalidate the EIR.¹⁰ In *Center for Biological Diversity v. County of San Bernardino*, Judge Feer ruled that the initial EIR was flawed, vacated all permits given in association with the

² CAL PUB. RES. CODE § 21065; *Sherwin Williams, Co. v. South Coast Air Quality Management Dist.*, 86 Cal.App.4th 1258 (Cal.App. 2d Dist., 2001).

³ CAL PUB. RES. CODE § 21065.

⁴ *California Sportfishing Protection Alliance v. State Water Resources Control Board*, 160 Cal.App.4th 1625 1642 (CalApp. 1 Dist 2008) (internal citations omitted).

⁵ *Id.*

⁶ CAL PUB. RES. CODE § 21060.5.

⁷ *Id.* at § 21061.

⁸ Draft Supplemental Impact Report Nursery Products LLC Hawes Composting Facility, State Clearinghouse No. 2006051021, at ES-1 (July 2009).

⁹ Draft Supplemental Impact Report Nursery Products LLC Hawes Composting Facility, State Clearinghouse No. 2006051021, at ES-1 (July 2009).

¹⁰ *Center for Biological Diversity v. County of San Bernardino*, Case No. BCV 09950 (Super. Ct. 2008).

document, and held that “[n]o part of the project is severable.”¹¹ CFS firmly believes that the issuance of this Supplemental Environmental Impact Report (“SEIR”) directly contradicts the Judge’s Order. An SEIR is appropriate only for the following reasons: where there have been substantial changes to the project that require major revisions of the EIR; there are substantial new circumstances surrounding the project; or new information of substantial importance became available.¹² However, the decision clearly requires the County to vacate the previous EIR, therefore issuing the SEIR violates the decision of the court.

This decision was stayed when the county appealed. However, only two possible outcomes can result from the appeal: the county loses and must prepare an entirely new EIR, or the county prevails, and the original EIR is reinstated. Under either scenario, the SEIR is unnecessary. CFS believes that the SEIR will ultimately be vacated by the District Court if the County proceeds with its appeal. In the event that this is not the case, CFS comments on the inadequacies of the SEIR.

II. THE SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FAILED TO ASSESS THE ENVIRONMENTAL IMPACTS OF SEWAGE SLUDGE COMPOST.

The County failed to assess the environmental impacts of composing sewage sludge. Sewage sludge contains a number of contaminants not addressed by the governing federal regulatory scheme. These contaminants can and will be released into the environment. Therefore, the County must assess the effects.

A. Federal Sewage Sludge Regulations are Inadequate to Address the Overwhelming Number of Contaminants in Sewage Sludge and Sludge Compost.

Sewage sludge is a combination of industrial waste and household sewage, both of which are routed for treatment through municipal sewage treatment plants.¹³ This sewage “contains not only human fecal wastes from homes and businesses but also products and contaminants from homes, industries, businesses, stormwater, and landfill leachate (in some locals) and contaminants leached from pipes.”¹⁴ At treatment plants, wastewater is treated to remove chemicals, pathogens, and toxic metals from the effluent and these materials are concentrated in the byproduct, sewage sludge.¹⁵ The resulting sewage sludge is replete with toxic chemicals. For example, it has been estimated that 90% of the dioxins in the incoming water routed through the treatment plant will end up in sewage sludge.¹⁶

¹¹ *Id.* at 4.

¹² California Environmental Quality Act, CAL PUB. RES. CODE § 21166 (2009).

¹³ *R.A. McElmurray v. U.S. Dep’t Agric.*, 535 F.Supp.2d 1318, 1321 (S.D.Ga. 2008).

¹⁴ Ellen Z. Harrison et al., *Land Application of Sewage Sludges: An Appraisal of the US Regulations*, 11 INT’L. J. ENV. & POLLUTION 1, 2 (1999).

¹⁵ *McElmurray*, 535 F.Supp.2d at 1321.

¹⁶ Harrison et al., *supra*, n.14.

Sewage sludge contains a variety of organic wastewater contaminants (“OWCs”), which are compounds produced to offer improvements in industrial, medical and household products and applications.¹⁷ “Compounds that can be classified as OWCs include pharmaceuticals, hormones, detergent metabolites, fragrances, plasticizers, and pesticides.”¹⁸ Sewage sludge can also contain a variety of other contaminants, such as flame retardants and metals. In a recent EPA survey of sewage sludge, samples from across the US found that sewage sludge can contain heavy metals, pathogens, steroids, hormones, flame retardants, pharmaceuticals and endocrine disruptors.¹⁹ Particularly alarming is that almost all the samples contained 27 metals, 10 different flame retardants, 12 pharmaceuticals, and high levels of known endocrine disruptors.²⁰ There are as many as 100,000 chemicals used in American industry, with about a thousand new chemical compounds put to commercial use each year.²¹ Any of these can enter the wastewater stream and if they do, they will ultimately be found in sludge.

Sewage sludge is regulated by the Environmental Protection Agency (“EPA”) by what is commonly known as the “Part 503 Rule.”²² Part 503 requires the treatment of sewage sludge so that it can be land applied and used in agriculture. The rule includes concentration limits for nine metals and pathogens, as well as for vector attraction and reduction.²³ Sewage sludge can be Class A, in which pathogens are essentially eliminated, or Class B, in which pathogens have been reduced but not eliminated.²⁴ However, sewage sludge contains a diverse collection of wastewater contaminants of emerging and known toxicological concern not addressed whatsoever by the Part 503 Rule.²⁵ Despite EPA’s own study indicating high levels of a variety of toxins other than the nine metals and pathogens that sewage sludge is treated for, no additional federal requirements exist to eliminate these toxins.

A recent federal court decision indicates not only that EPA’s regulations are inadequate, but that EPA actively hidden and subverted critical information concerning the dangers of sewage sludge. In *McElmurray v. US*, a Georgia judge stated that EPA’s sludge program has ignored scientific dissent indicating that sewage sludge is harmful to humans and the environment. In this case, a Georgia dairy farmer entered into an agreement with the City of Augusta in 1979 to allow the city to apply local sewage sludge.²⁶ Over the next

¹⁷ Chad A. Kinney et al., *Survey of Organic Wastewater Contaminants in Biosolids Destined for Land Application*, 40 ENVTL SCI. TECH. 7202, 7207 (2006).

¹⁸ *Id.*

¹⁹ EPA, Targeted National Sewage Sludge Survey, EPA-822-R-08-014, 7 (January 2009) available at <http://www.epa.gov/waterscience/biosolids/tncss-overview.pdf>.

²⁰ *Id.*; Josh Harkinson, *Sludge Happens*, MOTHER JONES, April 21, 2009, at 1, available at <http://www.motherjones.com/environment/2009/05/sludge-happens>.

²¹ Robert C. Hale and Mark J. Laguardia, *Have Risks Associated with the Presence of Synthetic Organic Contaminants in Land-Applied Sewage Sludges Been Adequately Addressed?*, 12 NEW SOLUTIONS J. ENV. & OCCUPATIONAL HEALTH POLICY 371, 372 (2002).

²² 40 C.F.R. § 503.

²³ Harrison et al., *supra*, n.14 at 3.

²⁴ *Id.*

²⁵ Mark J. La Guardia et al., *Organic Contaminants of Emerging Concern in Land-Applied Sewage Sludge (Biosolids)*, 1 J. OF RESIDUALS SCI. & TECH. 111, 119 (2004).

²⁶ *McElmurray*, 535 F.Supp.2d at 1321.

decade, McElmurray began having trouble with his crops and about half of his 700 cows died from severe diarrhea.²⁷ McElmurray hired an expert to test his soil, who opined that McElmurray's fields were contaminated by heavy metals, and that there was a correlation between the cattle eating silage produced from the field and the cattle mortality.²⁸ McElmurray submitted an application to the USDA for disaster relief, and when denied, sued in federal court.²⁹ The district court found the USDA's denial to be arbitrary and capricious and ruled in favor of McElmurray.³⁰ Additionally, the court indicated that "[o]ther evidence of record calls into question the fairness and objectivity of the EPA's opinions with respect to the sludge land application program. The administrative record contains evidence that senior EPA officials took extraordinary steps to quash scientific dissent, and any questioning of the EPA's biosolids program."³¹

Thus, sewage sludge contains many harmful chemicals, which are inadequately regulated. EPA's Part 503 Rule is an inadequate tool for protecting the public from the various harmful toxins in sewage sludge.

B. Composting Sewage Sludge Does Not Effectively Eliminate Toxins and Poses Direct Harm to the Public.

Sewage sludge poses severe threats to human health, and while composting sludge may eliminate pathogens, it wholly fails to eliminate toxic chemicals. "Treated" sewage sludge, renamed "biosolids" by the EPA, finds its way into agriculture, either by direct land application, as an ingredient in industrial and processed fertilizer, or as "compost." According to the EPA, composting is one of several methods for treating sewage sludge to "create a marketable end product that is easy to handle, store and use."³² The end product is considered "Class A" compost that can be and is applied as "a soil conditioner and fertilizer to gardens, crops and rangelands."³³ This "compost" is often given away to area residents, community gardeners, even schools for application on school gardens.³⁴ EPA claims that Class A sludge compost is without a detectible level of pathogens. While composting may reduce pathogens, it does not reduce or eliminate the variety of other toxins commonly found in sewage sludge.

Kinney et al. studied the effects of adding plant material (green material) to sewage sludge as proposed at the Nursery Products facility. The results indicated that composting does not reduce OWC concentrations.

²⁷ *Id.*; Josh Harkinson, *Sludge Happens*, MOTHER JONES, April 21, 2009, at 1, available at <http://www.motherjones.com/environment/2009/05/sludge-happens>.

²⁸ *McElmurray* at 1327.

²⁹ *Id.* at 1322-24.

³⁰ *Id.* at 1321.

³¹ *Id.* at 1333.

³² EPA, Biosolids Technology Fact Sheet: Use of Composting for Biosolids Management, available at <http://www.epa.gov/owm/mtb/combioman.pdf>.

³³ *Id.*

³⁴ See SFPUC's Big Blue Bucket Eco Fair, available at <http://sfpuccbigbluebucket.eventbrite.com/>.

The addition of plant material effectively dilutes biosolids samples, while possibly increasing the organic matter content of the biosolid production. Composting has been recognized as an effective means to limit or eliminate some organic contaminants, but when the biosolids that are composted are compared to the unamended sludges and granulated biosolid products, the comparable concentrations observed in this study suggest that composting is relatively ineffective at reducing OWC concentrations.³⁵

Toxins found in sewage sludge can leach into the soil on site, or become food safety hazards when the compost is used on gardens, farms, or rangelands. For instance, EPA recognizes that 27 metals are present in almost all sludge samples taken for their most recent risk assessment.³⁶ “Toxic metals do not breakdown in the treatment process or in the environment. As a consequence they can build up in the soil upon repeated application.”³⁷ Since the US standards for metals in sewage sludge are among the most lenient in the world, and since the US only regulates 9 of the 27 metals found in sewage sludge, it is inevitable that metals will be released from sludge and expose humans to their harmful effects.

Plants fertilized with sludge or sludge compost often contain increased levels of metals. A 2007 study found that, for potatoes and peppers grown in soil spread with sewage sludge, the cadmium concentration was almost at the “Codex-established maximum limit”³⁸ and the lead concentration in potatoes exceeded the maximum level.³⁹ Further, research indicates that increased dissolved organic carbon (DOC) in sewage sludge decreases the adsorption of metals to soil surfaces through formation through formation of organometallic complexes, thereby increasing the bioavailability of metals to plants.⁴⁰ Adverse health effects from heavy metals have been recognized for a long time. For instance, arsenic is a well known toxin and carcinogen.⁴¹ Adults chronically exposed to lead can experience seizures, anorexia, abdominal disorders and personality changes.⁴² Children exposed to lead suffer a far worse fate, brain damage.⁴³ Mercury can also cause brain damage, even in adults.⁴⁴ Cadmium and lead are of the greatest concern, because plants actively take them up and introduce them into the human food chain.⁴⁵ Even though the health effects of these metals are well-known, the County failed to assess the

³⁵ Kinney et al., *supra*, n.17 at 7212.

³⁶ EPA, Sewage Sludge Survey, *supra*, n. 19.

³⁷ Hale and Laguardia, *supra*, n.21 at 373.

³⁸ George F. Antonious & John C. Snyder, *Accumulation of Heavy Metals in Plants and Potential Phytoremediation of Lead by Potato, Solanum tuberosum L.*, A 42 J. ENV'T'L. SCI & HEALTH 811, 814 (2007).

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ Heavy Metals in the Environment and Their Effects, July 21, 2009, <http://soil-environment.blogspot.com/2009/07/heavy-metals-and-their-health-effects.html>

⁴² The Hazards of Heavy Metals, <http://www.physics.ohio-state.edu/~wilkins/energy/Companion/E14.2.pdf.xpdf>.

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ Antonious and Snyder, *supra*, n.38 at 814.

impact of the release of heavy metals on the environment and potential exposure to the population.

Furthermore, there are a variety of other toxic agents found in sewage sludge with known and unknown consequences to human health and the environment. Poly-brominated diphenyl ethers (PBDEs), for example, are commonly found in sewage sludge and are recognized for their impact on human health and the environment.⁴⁶ They are chemically related to PCBs and PBBs and replaced them in chemical applications.⁴⁷ Chronic exposure to PBDEs or exposure during development can compromise the endocrine and nervous systems.⁴⁸ Numerous additional organic pollutants have been found to be present in US sludge, such as polycyclic aromatic hydrocarbons, PCBs, DDT degradation products, chlordanes, synthetic musk products, triclosan, and tributyltin.⁴⁹ The presence of these compounds at the Hawes Composting Facility site presents severe human health and environmental risks that must be addressed. Further, the use of sludge compost in local home gardening and in agriculture presents unstudied and unacceptable food safety risks.

The County did not assess the impacts of the release of the above toxins in the environment via the Hawes Composting facility. As a matter of public policy, the County's failure to analyze the human health and environmental risk associated with sewage sludge is inexcusable. As a matter of law, this failure violates the most basic requirements of CEQA to review the environmental impacts of this project.⁵⁰

III. CONCLUSION

The County's issuance of the SEIR was improper. Regardless, this document is inadequate because the County did not assess the environmental impacts of sewage sludge compost. Specifically, the SEIR did not take into account the release of heavy metals, OWCs and other contaminants on the environment. For the above reasons, the County must vacate the current SEIR and prepare an EIR that addresses these and other environmental impacts.

⁴⁶ See Hale and Laguardia, *supra*, n.21.

⁴⁷ *Id.* at 376.

⁴⁸ *Id.*

⁴⁹ *Id.* at 382.

⁵⁰ CAL PUB. RES. CODE § 21061.