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**HOUSE JOINT RESOLUTION NO. 506**  
**AMENDMENT IN THE NATURE OF A SUBSTITUTE**  
(Proposed by the House Committee on Rules  
on February 6, 2015)

(Patron Prior to Substitute—Delegate Ware)

*Requesting the Virginia Institute of Marine Science and the Department of Mines, Minerals, and Energy's Division of Geology and Mineral Resources' Virginia geological survey, in consultation with the United States Geological Survey's Toxic Hydrology Regional Contamination Investigation Program, to study the short- and long-term effects of the storage and land application of industrial wastes and sewage sludge on public health, residential wells, and surface and ground water. Report.*

WHEREAS, prior to 1994, the Department of Environmental Quality (DEQ) regulated all land application of treated sewage sludge, commonly known as biosolids, when biosolids were applied to agricultural lands; and

WHEREAS, in 1994, the General Assembly directed the Virginia Department of Health (VDH) to adopt regulations to ensure that (i) sewage sludge permitted for land application, marketing, or distribution is properly treated or stabilized; (ii) land application, marketing, and distribution of sewage sludge is performed in a manner that will protect public health and the environment; and (iii) the escape, flow, or discharge of sewage sludge into state waters in a manner that would cause pollution of state waters, as those terms are defined in § 62.1-44.3 of the Code of Virginia, will be prevented; and

WHEREAS, in 2007, the General Assembly authorized the transfer of all regulatory oversight of treated sewage sludge, commonly known as biosolids, from VDH to DEQ; and

WHEREAS, since 2008, biosolids have been land applied in at least 68 localities in the Commonwealth, with at least 54 of those localities receiving biosolids annually; and

WHEREAS, between 2008 and 2013, an average of 221,000 dry tons of biosolids have been spread over an average of 63,000 acres annually; and

WHEREAS, in accordance with House Joint Resolution No. 694 (2007), the Secretary of Natural Resources and Secretary of Health and Human Resources convened a panel of experts in 2007 to study the impact of land application of biosolids on human health and the environment; and

WHEREAS, the General Assembly posed specific questions to the panel and requested that it consider the typical contaminant concentrations and application rates of biosolids in its study; and

WHEREAS, the panel included stakeholders from a broad range of disciplines, including medicine, higher education, forestry, agronomy, environmental science, ecology, veterinary medicine, and law; and

WHEREAS, the Secretary of Health and Human Resources and the Secretary of Natural Resources published the final report of the panel in 2008; and

WHEREAS, the panel uncovered no evidence or literature verifying a causal link between biosolids and illness but recognized gaps in the science and knowledge surrounding this issue; and

WHEREAS, the panel stated these gaps could be reduced through highly controlled epidemiological studies relating to health effects of land-applied biosolids and additional efforts to reduce the limitations in quantifying all the chemical and biological constituents in biosolids; and

WHEREAS, the panel stated that there are gaps in the research to characterize the composition, fate, and effects of pharmaceutical and personal care products and other persistent organic compounds in biosolids, as well as in other products, materials, and the environment; and

WHEREAS, House Joint Resolution No. 694 also directed the panel to perform a detailed analysis of the chemical and biological composition of biosolids; and

WHEREAS, detailed analysis of the vast number of constituents of biosolids, combined with the specialized analytical methodologies employed to detect and quantify these constituents, involves significant cost; and

WHEREAS, because no funding was available to conduct new analyses, the panel was limited in performing a detailed analysis of the chemical and biological constituents of biosolids; and

WHEREAS, § 62.1-44.3 of the Code of Virginia defines industrial wastes as "liquid or other wastes resulting from any process of industry, manufacture, trade, or business or from the development of any natural resources"; and

WHEREAS, the land application of industrial wastes in Virginia is regulated by the Virginia Department of Agriculture and Consumer Services (VDACS) and DEQ; and

WHEREAS, the Virginia Department of Agriculture and Consumer Services regulates certain industrial wastes as "industrial co-products" in accordance with the Virginia Fertilizer Law (§ 3.2-3600 et seq.) and Virginia Agricultural Liming Materials Law (§ 3.2-3700 et seq.), which provide for the marketing and distribution of industrial wastes; and

WHEREAS, the land application of industrial wastes that are not regulated by VDACS is regulated

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60 by the State Water Control Board and DEQ; and

61 WHEREAS, industrial wastes from over 35 facilities are land applied in Virginia pursuant to the  
62 terms of a Virginia Pollution Abatement or Virginia Pollutant Discharge Elimination System Permit  
63 issued by DEQ; and

64 WHEREAS, since taking over the regulatory program from VDH, DEQ has conducted over 10,000  
65 inspections of biosolids and industrial wastes land application sites; and

66 WHEREAS, biosolids and industrial wastes are land applied on less than one percent of the cropland,  
67 pastureland, and woodland on Virginia farms; and

68 WHEREAS, on average, less than 10,000 dry tons of industrial wastes are land applied annually in  
69 Virginia, which is less than five percent of the annual amounts of biosolids land applied in Virginia; and

70 WHEREAS, the Department of Environmental Quality permits include authorization for land  
71 application of industrial wastes from a variety of facilities, including chicken and pork processing and  
72 packaging, apple processing, breweries, concentrated and dried soup stocks manufacturing, confectionary  
73 manufacturing, beverage manufacturing, snack cake manufacturing, fish processing, poultry hatching,  
74 meat processing, tomato processing, wood processing, rendering, farmers' markets, and municipal potable  
75 water treatment plants; and

76 WHEREAS, the DEQ permit application requires the permit applicant to submit details regarding the  
77 design of the industrial wastes treatment works, including the storage facility and land area  
78 determination, as well as characterization of the industrial wastes that includes analyses of heavy metals  
79 and other constituents; and

80 WHEREAS, the Department of Environmental Quality examines the specific processes used at the  
81 facility generating the industrial wastes to determine whether constituents may represent a threat to  
82 human health and the environment; and

83 WHEREAS, the Department of Environmental Quality requires the permit applicant to provide  
84 analyses to determine the capacity of the land application site to assimilate nutrients, metals, and any  
85 other pollutants of concern, in order to demonstrate that the activity may be performed safely and  
86 protect the environment; now, therefore, be it

87 RESOLVED by the House of Delegates, the Senate concurring, That the Virginia Institute of Marine  
88 Science and the Department of Mines, Minerals, and Energy's Division of Geology and Mineral  
89 Resources' Virginia geological survey, in consultation with the United States Geological Survey's Toxic  
90 Hydrology Regional Contamination Investigation Program, be requested to study the short- and  
91 long-term effects of the storage and land application of industrial wastes and sewage sludge on public  
92 health, residential wells, and surface and ground water.

93 In conducting its study, the Virginia Institute of Marine Science and the Division of Geology and  
94 Mineral Resources shall determine (i) a comprehensive list of the contaminants and other constituents  
95 contained in biosolids and industrial wastes without the restrictions of current regulatory omissions; (ii)  
96 how contaminants and constituents applied to land impact surface, ground, and well water; and (iii)  
97 whether current testing and monitoring regulations and setback requirements are adequate to protect  
98 human health and the environment.

99 Technical assistance shall be provided to the Virginia Institute of Marine Science and the Division of  
100 Geology and Mineral Resources by the Virginia Department of Health and the Virginia Polytechnic and  
101 State University's Department of Crop and Soil Environmental Sciences. All agencies of the  
102 Commonwealth shall provide assistance to the Virginia Institute of Marine Science and the Division of  
103 Geology and Mineral Resources for this study, upon request.

104 The Virginia Institute of Marine Science and the Division of Geology and Mineral Resources shall  
105 complete their joint meetings by November 30, 2015, and the Directors shall submit jointly to the  
106 Division of Legislative Automated Systems an executive summary of their findings and  
107 recommendations no later than the first day of the 2016 Regular Session of the General Assembly. The  
108 executive summary shall state whether the Virginia Institute of Marine Science and the Division of  
109 Geology and Mineral Resources intend to submit to the General Assembly and the Governor a report of  
110 their findings and recommendations for publication as a House or Senate document. The executive  
111 summary and report shall be submitted as provided in the procedures of the Division of Legislative  
112 Automated Systems for the processing of legislative documents and reports and shall be posted on the  
113 General Assembly's website.