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**HOUSE JOINT RESOLUTION NO. 506**  
**AMENDMENT IN THE NATURE OF A SUBSTITUTE**

(Proposed by the Senate Committee on Rules  
on February 20, 2015)

(Patron Prior to Substitute—Delegate Ware)

*Requesting the Virginia Institute of Marine Science, the Department of Mines, Minerals and Energy's Division of Geology and Mineral Resources, and the Virginia Tech Department of Crop and Environmental Sciences, in consultation with the U.S. Geological Survey's Toxic Substances Hydrology Program, to study the short-term 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 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 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 the Virginia Department of Health to the Department of Environmental Quality; 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 and the Department of Environmental Quality; 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 Agriculture Liming Materials Law (§ 3.2-3700 et seq.), which provide for the

SENATE SUBSTITUTE

HJ506S1

60 marketing and distribution of industrial wastes; and

61 WHEREAS, the land application of industrial wastes that are not regulated by the Virginia  
62 Department of Agriculture and Consumer Services is regulated by the State Water Control Board and  
63 the Department of Environmental Quality; and

64 WHEREAS, industrial wastes from over 35 facilities are land applied in Virginia pursuant to the  
65 terms of a Virginia Pollution Abatement or Virginia Pollutant Discharge Elimination System Permit  
66 issued by the Department of Environmental Quality; and

67 WHEREAS, since taking over the regulatory program from the Virginia Department of Health, the  
68 Department of Environmental Quality has conducted over 10,000 inspections of biosolids and industrial  
69 wastes land application sites; and

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

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

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

80 WHEREAS, the Department of Environmental Quality permit application requires the permit  
81 applicant to submit details regarding the design of the industrial wastes treatment works, including the  
82 storage facility and land area determination, as well as characterization of the industrial wastes that  
83 includes analyses of heavy metals and other constituents; and

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

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

91 RESOLVED by the House of Delegates, the Senate concurring, That the Virginia Institute of Marine  
92 Science, the Department of Mines, Minerals and Energy's Division of Geology and Mineral Resources,  
93 and the Virginia Tech Department of Crop and Environmental Sciences, in consultation with the U.S.  
94 Geological Survey's Toxic Substances Hydrology Program, be requested to study the short-term and  
95 long-term effects of the storage and land application of industrial wastes and sewage sludge on public  
96 health, residential wells, and surface and ground water.

97 In conducting its study, the Virginia Institute of Marine Science, the Division of Geology and  
98 Mineral Resources, and the Virginia Tech Department of Crop and Environmental Sciences shall (i)  
99 compile a comprehensive list of the contaminants and other constituents contained in biosolids and  
100 industrial wastes without the restrictions of current regulatory omissions; (ii) determine how  
101 contaminants and constituents applied to land affect surface, ground, and well water; and (iii) determine  
102 whether current testing and monitoring regulations and setback requirements are adequate to protect  
103 human health and the environment.

104 Staffing for this study shall be provided by the Virginia Tech Department of Crop and Environmental  
105 Sciences. Technical assistance shall be provided to the agencies by the Virginia Department of Health.  
106 All agencies of the Commonwealth shall provide assistance to the agencies for this study, upon request.

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