Antimicrobial Pesticide Registration for the Removal of Bacteria from Stormwater Runoff

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Abstract. Essential features of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) are explored for the implementation of antimicrobial pesticides to control pathogenic bacteria in stormwater runoff. FIFRA defines a pesticide in terms of the inherent intent of a substance, not its characteristics. Stormwater quality programs, including Coastal Zone Management Plans, have largely focused on monitoring and meeting TMDLs or advisory limits with little regard to effective and sustainable antibacterial BMPs. The stormwater community has experienced a recent proliferation of antimicrobial BMPs carrying implied or explicit public health claims targeting pathogens such as fecal coliform, *E. coli* and *enterococci*. FIFRA requires that antimicrobial pesticides first be registered with the U.S. EPA and subsequently in states and any U.S. lands where they are to be sold. Only registered pesticidal products can carry public health claims and certain terms are cited which are considered by EPA as making such claims. Critical registration distinctions between chemical based pesticide product and mechanical based pesticide device are explained. Registration rules differ for these two types of antimicrobial mechanisms. Current approaches to antimicrobial BMPs are cited, some of which may not comply with FIFRA. A registration approach is proposed for pesticide products and devices. A "gray area" for public domain, land based stormwater BMPS is identified where their widespread implementation could be interpreted to conflict with FIFRA. The Georgia Beach Water Monitoring Program is cited as an example of bacteria monitoring.