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LETTERS

Phosphorus in runoff

Dear Sir: The editorial "Runoff poses next big control challenge" in the September 1972 issue correctly points out that more attention should be placed on the role of diffuse nutrient sources as a factor in the eutrophication of natural waters. At the University of Wisconsin Water Chemistry Program, the fertilization of lakes by diffuse nutrient sources has been under investigation for several years. Recently, it has been estimated that about 50% of the total phosphorus annually entering Lake Mendota is derived from rural runoff.

However, preliminary results of studies currently conducted at this laboratory indicated that a significant portion of the total phosphorus in runoff may not be biologically available. The fraction of organic and particulate phosphorus that becomes available in natural waters is extremely important in designing meaningful eutrophication control programs for diffuse sources of nutrients. There would be little point in attempting to control a source of phosphorus if it is known that most of the phosphorus does not become available for biological growth under conditions existing in receiving waters.

As the emphasis in eutrophication control shifts to diffuse sources of nutrients, a much better understanding of the aqueous environmental chemistry of particulate, inorganic, and organic forms of phosphorus and other nutrients must be achieved in order to ascertain the real significance of nutrients derived from diffuse sources in rural and urban areas in stimulating the growth of aquatic plants.

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Sonzogni, W., and Lee, G. F., "Phosphorus in Runoff," Letter to the Editor, *Environmental Science & Technology* 7(3):181 (1973).
www.gfredlee.com/Nutrients/Sonzogni_Lee_Runoff.pdf