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Chapter 20

Use of Conductivity to Define Compliance with State Narrative Water Quality Standards

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Synopsis

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§ 20.01. Introduction.

Over the past year, the Environmental Protection Agency (EPA) developed an aquatic life benchmark for conductivity meant to protect 95 percent of native aquatic insect genera living in Appalachian streams in ecoregions 69 and 70 from extirpation. EPA also promulgated guidance insisting that this benchmark be considered by state environmental agencies when issuing effluent discharge permits and Clean Water Act § 404 fill permits for surface coal mines. In fact, EPA used the benchmark as grounds for blocking draft National Pollutant Discharge Elimination System (NPDES) water discharge permits prepared by states in Central Appalachia and as a basis for objecting to "fill" permits prepared by the United States Army Corps of Engineers under § 404 of the Clean Water Act. EPA's efforts are being attacked in on-going litigation, and EPA has taken steps to "finalize"

its guidance in a way that withstands challenge. Those efforts and challenges to them continue to evolve.

This chapter is intended to trace the historical development of narrative water quality standards, describe the formation of EPA's conductivity benchmark and accompanying guidance, and explain how confusion over the techniques for measuring compliance with narrative water quality standards through numeric data has left state environmental agencies susceptible to attack from environmental groups who claim the agencies are failing to protect narrative water quality standards by issuing effluent permits without limits on conductivity, total dissolved solids, and sulfate.

§ 20.02. Water Quality Standards.

[1] — Historical Development of Narrative Water Quality Standards.

[a] — Pre Clean Water Act (1948-1972).

The legislative roots of what has since grown into the Federal Water Pollution Control Act, better known as the Clean Water Act (CWA), extend back in time over 60 years to 1948. When Congress passed the Federal Water Pollution Control Act of 1948,[2] it was the first time in modern history[3] that the federal government assumed a role in regulating the water quality issues of states.[4]

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2 Federal Water Pollution Control Act of 1948, Pub. L. No. 80-845, 62 Stat. 1155.

3 This is not to neglect the important role played by the Refuse Act of 1899, which, as part of the Rivers and Harbors Appropriation Act of 1899, outlawed the discharge of refuse into navigable waters or their tributaries, violations of which were punishable by up to 30 days in jail and fines from $500-2,500 (half of which would be given to the tipster who first reported the violation). Rivers and Harbors Appropriation Act of 1899 (Refuse Act of 1899), 100 Stat. 4082, Pub. L. NO 99-662, 30 Stat. 1152, Sec. 13 (codified as amended at 33 U.S.C. § 407). *See generally* William L. Andreen, "The Evolution of Water Pollution Control in the United States-State, Local and Federal Efforts, 1789-1972: Part II," 22 *Stan. Envtl. L.J.* 215, 220-22 (2003) [hereinafter *Andreen*].

4 Kenneth M. Murchison, "Learning From More Than Five-And-A-Half Decades of Federal Water Pollution Control Legislation: Twenty Lessons For the Future," 32 *B.C. Envtl. Aff. L. Rev.* 527, 529-30 (2005) [hereinafter *Murchison*].