

PolicyPennings by Daryll E. Ray & Harwood D. Schaffer

Des Moines' water-quality suit is based on drainage-tile water not stormwater

In a case that could well end up in the US Supreme Court, the Des Moines (Iowa) Water Works (DMWW) filed a lawsuit against the Sac, Calhoun, and Buena Vista County Boards of Supervisors alleging their violation of the Clean Water Act (CWA). The complaint (<http://tinyurl.com/q8h3xsc>) was filed in the US District Court for the Northern District of Iowa, Western Division by the Des Moines (Iowa) on March 16, 2015 asserting that boards of supervisors acting as trustees of a number of drainage districts (referred to in the complaint as "Drainage Districts") allowed "the discharge of nitrate pollution into the Raccoon River and [failed] to obtain a National Pollution Discharge Elimination System ("NPDES") permit or other state permit in violation of the" CWA.

Under the CWA, those responsible for point source pollution (generally a pollutant coming out of a pipe and being discharged into a body of water) are required to obtain an NPDES which specifies the level of pollutant that can be discharged—in this case nitrates.

The DMWW is a municipal water utility that serves 500,000 people in the Des Moines area. Its concern about nitrates arises because under the Safe Drinking Water Act the minimum contaminant level for nitrates is 10mg/L and at times, its source water, the Raccoon River exceeds that level. Its complaint says, "Since the 1970s, the concentration of nitrate in the Raccoon River at Des Moines Water Works intake points has steadily increased.... From 1995 to 2014, nitrate concentrations in the Raccoon River at the Des Moines Water Works intake points exceeded the 10 mg/L standard for drinking water at least 1,636 days or 24% of the time. From 1995 to 2014, the nitrate removal facility has operated a total of 673 days."

In addition to problems faced by the utility, the DMWW, quoting from a National Oceanic and Atmospheric Administration document, says, "drainage of agricultural land by tile drains and other means contributes to the high nitrate concentration and flux in the Mississippi River. Tile drains short-circuit the flow of ground water by draining the top of the ground water system into tile lines and ditches and eventually to the Mississippi River. Tile drainage water can have very high nitrate concentrations."

The DMWW then referenced Schilling and Libra saying, "despite Iowa occupying less than 5 [percent] of the Mississippi River drainage basin, average annual export of nitrate from surface water in Iowa is estimated to range from approximately [225,000 to 245,000 US tons] or 25% of the nitrate that the Mississippi River delivers to the Gulf of Mexico" (see <http://tinyurl.com/p7srmmu>).

"To address [the problem of] nitrate pollution in Iowa," the DMWW argues that "agricultural drainage infrastructure and drainage districts can be, should be, and are required to be regulated as 'point sources' under the [CWA], Iowa Code...and state regulation" because the voluntary efforts of the Iowa Nutrient Reduction Strategy "is an inadequate response to a problem with a well-documented cause." The Strategy says, "sources not currently regulated as point sources create 92 [percent] of nitrate pollution entering Iowa's waterways. These sources include agricultural drainage, which is noted as a major contributor in the Strategy."

In its complaint, the DMWW then takes a closer look at the CWA and its definitions: "A 'point source' is generally defined to include 'any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, [or] channel ... from which pollutants are or may be discharged.' However, the term 'does not include agricultural stormwater discharges and return flows from irrigated agriculture.' 33 U.S.C. § 1362(14)."

The DMWW points out that "because stormwater flowing across a field or into a surface intake of a drainage district has little opportunity to dissolve nitrate produced by soil microorganisms or to interact with soil containing dissolved nitrate, only a very small concentration of nitrate can be found in agricultural stormwater runoff." Rather "the conveyance of nitrate is almost entirely by groundwater transport."

And "the primary purpose of the Drainage District infrastructure is to remove water from agricultural lands, including groundwater containing a high concentration of nitrate.... Subsurface tile and pipe and surface ditches and channels created and maintained by the Drainage Districts are connected to private subsurface tiles to convey groundwater within each of the Drainage Districts to streams and rivers, and ultimately to the Raccoon River."

So the DMWW contends that the nitrates that cause problems for the DMWW come not from exempted stormwater, but rather from groundwater, which is not exempted from regulation by the CWA. Thus DMWW argues that the Drainage Districts serving as collectors of this groundwater are required to obtain NPDES permits which will in turn require the Drainage Districts to work with landowners to reduce their discharge of nitrates below the 9.5 mg/L that is required of the 77 entities in the Raccoon River watershed that currently hold NPDES permits.

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If this argument holds up in court, it will have a significant impact not only on how farmers manage their groundwater, but also on the quality of water in the Mississippi River and the Gulf of Mexico.

In this column we summarized the DMWW complaint. In coming weeks we will summarize the early reaction to the suit and consider the broader issues raised by the complaint.

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