

# Testing the Boundaries of the Clean Water Act on the Virginia-Kentucky Border: The Coal Industry's Proposed Use Attainability Analysis for Straight Creek in Lee County, Virginia

by Mary V. Cromer

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In far Southwest Virginia along the Virginia-Kentucky border, the dramatic rise and fall of the Ridge and Valley Province abruptly gives way to the Appalachian Plateau. Instead of broad valleys, the land is characterized by narrow hollows cut as deep grooves in the plateau. For 6.6 miles, Straight Creek, a tributary to the North Fork of the Powell River, cuts through the plateau at the northern edge of Lee County, Virginia, forming one such hollow.<sup>1</sup> In the early twentieth century, coal was discovered in this part of Lee County, and coal companies began to develop the area along Straight Creek.

Development in this rugged, hard-to-access area was made possible by the Louisville & Nashville and Southern rail lines.<sup>2</sup> The physiography of the landscape determined the modes of development. In particular, Straight Creek's narrow flood plain provided the only flat land available for the rail lines, roads, and houses. Because of the need to ensure a stable foundation for these structures and the need to protect residents from floods, Straight Creek was dredged, moved, straightened, channelized, and generally shored up throughout the twentieth century.

Coal mining is the only significant industry for St. Charles and other communities along Straight Creek and its tributaries. Mining has had a significant impact on the water there. The watershed is still being affected by mining that occurred before the enactment of the Surface

Mining Control and Reclamation Act (SMCR Act) in 1977.<sup>3</sup> These impacts are referred to as abandoned mine land (AML) impacts.

Most AML impacts are chronic problems caused by runoff from abandoned surface mines and mine waste piles or seepage from abandoned deep mines. AML impacts can also be acute. In 1997, acidic water containing high levels of iron erupted from an underground abandoned mine and killed more than 3,000 fish in Straight Creek.<sup>4</sup> More recently, one of the largest pollution events in Virginia's history occurred in this watershed in August and October 1996. These spills occurred because of subsidence under Lone Mountain Processing Inc.'s slurry impoundment.<sup>5</sup> The first spill — on August 9, 1996 — released 2.6 million gallons of contaminated waste into Gin Creek, which flows into Straight Creek. The second spill — on October 24, 1996 — was more significant. That spill released three thousand gallons-per-minute of contaminated water into Gin Creek. The spill continued for nine days, killing more than 11,000 fish in Gin Creek, Straight Creek, and the North Fork of the Powell River.<sup>6</sup> A more recent pollution spill occurred in 2003, when a mining sediment pond, put in place to trap both wastewater and storm water from an active mine, was breached and flowed into Straight Creek, killing more than 2,400 fish.<sup>7</sup>

Given the many impacts to this watershed, it may not be surprising that Straight Creek currently fails to meet Virginia's water quality standards. In particular, it fails to support the designated use of providing for the "propagation and growth of a balanced indigenous population of aquatic life."<sup>8</sup> This determination was made because Straight Creek lacks pollution-sensitive indicator species like mayflies, stoneflies, and caddisflies that are common in Appalachian streams.<sup>9</sup> This designated aquatic life use, which applies to all waters of the commonwealth, is the cornerstone of Virginia's water quality standards<sup>10</sup> and is set to ensure that all of Virginia's waters meet the

goals of the Clean Water Act. Without a special dispensation, the Clean Water Act requires that this designated aquatic life use be met and maintained to ensure, at a minimum, “water quality that provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation.”<sup>11</sup>

Such a special dispensation can only be granted based on a use attainability analysis (UAA). A UAA is a structured scientific and technical analysis of the highest feasibly attainable use of a particular water body.<sup>12</sup> Despite being created by regulation twenty-five years ago, UAAs are a developing area of law under the Clean Water Act. Environmental Protection Agency (EPA) regulations and considerations of UAAs in other states provide substantial guidance as to what types of analyses are required to support a downgrading of use. As a threshold matter, under no circumstance can a use be removed or lowered if it has been attained at any point since November 28, 1975, or if it can be attained through the imposition of technology-based effluent limits for point sources and best management practices for nonpoint source pollution.<sup>13</sup>

If the water has not been in compliance at any point since November 28, 1975, the regulations provide an exclusive list of six water-quality stressors that can justify the downgrading or removal of a designated use. These six include “human caused conditions or sources of pollution [that] prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct them than to leave in place” and situations in which “controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.”<sup>14</sup> The latter refers to situations in which stricter controls are needed from permitted sources of pollution than are required under the EPA’s technology-based effluent limits that apply to all industrial and construction sources of pollution. Since the Clean Water Act presumes that all waters are capable of meeting and sustaining the act’s water quality goals, the EPA requires rigorous proof before allowing the downgrading or removal of any designated use.<sup>15</sup>

A Virginia coal industry group, Virginia Mining Issues Group (VMIG), argues that human-caused conditions are so severe that Straight Creek cannot meet its aquatic life use standard and therefore this standard should be removed or lowered.<sup>16</sup> On March 9, 2007, the Virginia State Water Control Board approved VMIG’s request to perform a UAA for Straight Creek.<sup>17</sup> The approval of both Virginia and the EPA will be required before Straight Creek’s designated use can be lowered. Before being granted permission to proceed with a UAA, the industry submitted a “Reasonable Grounds Determination” to justify its proposal.<sup>18</sup> The reasonable grounds document posits that the modifications of Straight Creek that have destroyed aquatic habitat, the proximity of current residences to the creek, and extensive mining in the watershed before the SMCR Act likely prevent the attainment of the designated aquatic life use in Straight Creek. Regarding the regulatory requirement that no use can be removed if it has been attained since November 28, 1975, the industry group states “due to SMCR Act-related

improvements in mining in the watershed, the water quality is no worse than 1975.”<sup>19</sup>

The industry’s UAA will need to support all of these suppositions in order to justify downgrading Straight Creek’s designated use. The analysis of Straight Creek’s water quality problems will need to be both spatial and temporal. The UAA will need to assess differences in the water quality in different portions of the watershed. If compliance has been achieved since 1975 or if attainment is achievable in some segments and not others, those segments cannot be downgraded. The temporal analysis will require an assessment first of whether compliance has been achieved since November 28, 1975. If the UAA determines that it has been achieved, the process must stop there, because a downgrading of use cannot be supported, and the state must take steps, including more stringent regulation of mining in the watershed, to assure that the designated use is once again attained.

If the UAA finds that some segments of Straight Creek have not met the designated aquatic life use since November 28, 1975, the analysis must determine what is preventing attainment and whether attainment in the future is feasible. To determine the causes of nonattainment, the UAA must assess whether all point sources in the watershed<sup>20</sup> are in compliance with their current effluent limits and whether reasonable and cost-effective best management practices are being implemented for all pollution sources. If the assessment determines that any of these currently available controls are lacking, they must be remedied.

If the UAA determines that, even with proper enforcement of current permitting limits and the establishment and maintenance of best practices, Straight Creek could not meet Virginia’s water quality standards, the UAA must assess to what extent human-caused conditions that cannot be easily remedied are to blame and whether more stringent water quality based permit limits would bring the watershed into compliance. The UAA must assess whether it is possible to remedy those human-caused conditions or whether remediation would do more harm than good, and it must assess the economic and social impact of imposing more stringent water-quality-based effluent limits on the mining industry. Only if remediation of those human-caused impacts is infeasible and only if the social and economic cost of more stringent permitting is too great can those impacts justify a lowering of the designated uses. In all cases, all other impacts must be remediated.

The record of significant pollution problems caused by active mining in this watershed since the SMCR Act will be a significant hindrance to any proposal to downgrade Straight Creek’s designated use. In particular, because of the impacts of the pollution spills in the 1990s and the lack of base-line data on water quality throughout Straight Creek back to 1975, it will be difficult for the industry’s study to overcome the presumption that Straight Creek’s designated aquatic life use has been met since November 28, 1975. Even if that presumption is rebutted, the study will have to then separate the impacts from human alteration of the water and building near the stream

bank that cannot feasibly be remediated from those caused by active mining within the watershed.<sup>21</sup> For impacts caused by active mining in the watershed, the UAA will be required to determine how to reduce such impacts and the cost of doing so. Since active mining has caused several severe pollution spills in the recent past, a thorough analysis of how the current permitting regime failed to prevent these spills will be required. In addition, the UAA must perform a cost-benefit analysis of more stringent water-quality-based permitting that would reduce pollution from active mining.

It will likely be some time before the industry’s study is complete. After completion the industry likely will submit its request that the aquatic life use standard be lowered for Straight Creek with its UAA as support. The Virginia Department of Environmental Quality will review the study to determine if it complies with state and federal regulations and if the requested downgrade is supported. If the department finds that the study adequately supports the requested downgrade, the agency will present the UAA to the State Water Control Board. If the board approves the study, Virginia may begin the process of changing the designated use standard for Straight Creek through formal rulemaking. This rule change will require notice and the opportunity for a public hearing under the Virginia Administrative Process Act, *Va. Code Ann.* § 2.2-4007.01. Any change in the standard that is approved through formal rule making in Virginia must be approved by the EPA. The EPA will evaluate the UAA and the state’s rule change to determine whether the study conducted is sufficient to rebut the Clean Water Act’s presumption that the minimum designated aquatic life use is attainable. Only if the EPA finds that the presumption has been rebutted will it approve any proposed lowering of the aquatic life standard for Straight Creek. ■

Endnotes:

1 Virginia’s 2006 303(d) impairment listing for this area includes not just Straight Creek, but several of its main tributaries. Virginia Department of Environmental Quality, *Final 2006 305(b)/303(d) Water Quality Assessment Integrated Report*, at 3.3a-75, available at [http://www.deq.virginia.gov/export/sites/default/wqa/pdf/2006ir/2006irdoc/ir06\\_Pt3\\_Ch3.3a\\_Category\\_5\\_List.pdf](http://www.deq.virginia.gov/export/sites/default/wqa/pdf/2006ir/2006irdoc/ir06_Pt3_Ch3.3a_Category_5_List.pdf) (approved Oct. 16, 2006). This article focuses only on the mainstem of Straight Creek.

2 Lee County Historical and Genealogical Society Inc., *BICENTENNIAL HISTORY OF LEE COUNTY, 1792-1992*, 1992, at 42.

3 30 U.S.C. § 1201, et seq.

4 Virginia Department of Environmental Quality, *Fecal Bacteria and General Standard Total Maximum Daily Load Development for Straight Creek*, at 6-24, available at <http://www.deq.virginia.gov/tmdl/apptmdls/tenbigvr/straight.pdf> [hereinafter Straight Creek TMDL].

5 Coal slurry is the waste water left after coal processing. The water is impounded to allow coal fines and other particles to settle out. Clean water is removed from the top of the impoundment and reused in the coal processing. EPA Press Release, *Mining Company Admits to Criminal Negligence: Special Restitution Project Will Help Improve the Water Quality to St. Charles, Va.*, available at

<http://yosemite.epa.gov/r3/press.nsf/0/16b03f3109769fa785256a07006b7363?OpenDocument> (Nov. 1, 1999).

6 *Id.* On November 1, 1999, Lone Mountain Processing Inc. pled guilty to criminal negligence with regard to the spills and agreed to pay \$1.6 million in criminal fines and restitution. *Id.*

7 Straight Creek TMDL at 6-25.

8 9 VAC 25-260-10.

9 Straight Creek TMDL at 6-2.

10 Water quality criteria for particular pollutants or a general narrative water quality criteria, like Virginia’s “free from” standard, are then required for each water depending on its designated use. See 9 VAC 25-260-20 (“State waters . . . shall be free from substances . . . in concentrations, amounts, or combinations which contravene established standards or interfere directly or indirectly with designated uses of such water or which are inimical or harmful to human, animal, plant, or aquatic life.”). The designated aquatic life use standard is the least protective designated use and is intended to ensure what is minimally necessary to meet the goals of the Clean Water Act.

11 33 U.S.C. §1251(a)(2).

12 UAAs were created by EPA regulation on November 8, 1983. 48 Fed. Reg. 51,400 (Nov. 8, 1983). The UAA regulations are found at 40 C.F.R. §131.10(g).

13 40 C.F.R. §131.10(d), (h)(1); 40 C.F.R. §131.3; see also 9 VAC 25-260-10.D, 10.I.1.

14 40 C.F.R. §131.10(g)(3), (g)(6).

15 See, 68 Fed. Reg. 40,428, 40,430 (Jul. 7, 2003) (“EPA regulations effectively establish a rebuttable presumption that CWA §101(a) goal uses are attainable and therefore should apply to a water body unless it is affirmatively demonstrated that such uses are not attainable.”); *Idaho Mining Ass’n v. Browner*, 90 F. Supp. 2d 1078 (D. Id. 2000) (upholding EPA’s “rebuttable presumption” interpretation).

16 Virginia Coalfields TMDL Group, *Reasonable Grounds Documentation to Conduct an Aquatic Life Use Attainability Analysis for Straight Creek, Lee County, Virginia Under VAC 62.1-44.19:7*, submitted to Virginia State Water Control Board on Oct. 2, 2006 [hereinafter Reasonable Grounds Documentation].

17 The industry group is being permitted to conduct the UAA pursuant to Virginia Code §62.1-44.19:7.E. That subsection, added March 23, 2006, allows an “aggrieved party” to conduct a UAA with permission of the SWCB. The VMIG group’s proposal is the first UAA to be undertaken under Virginia Code §62.1-44.19:7.E.

18 Reasonable Grounds Documentation.

19 VA Mining Issues Group, *Study Plan: Straight Creek Use Attainability Analysis*, submitted to DEQ on Oct. 22, 2007, *Attachment III: Response to Comments*, at 2.

20 Forty-nine of the fifty permitted point sources of pollution in this watershed are from active mines. Straight Creek TMDL at xxvi.

21 Permitted mining comprises 1,310 acres of the 17,670-acre watershed, while residential land use comprises only 145 acres. Straight Creek TMDL at 3-2.