

Memorandum of Law

RE: Reclassification of the Lower Androscoggin River to Class B
From: Rachel Doughty, Greenfire Law, PC
Date: March 31, 2020

The lower Androscoggin must be designated Class B because of its demonstrated achievement of the minimum standards for that classification. Maine has for many years resisted upgrading the water quality classification of the Lower Androscoggin from Class C to Class B by eliding the non-discretionary state and federal anti-degradation policy with the use attainability analysis, which can only be used to remove legally-designated uses.

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Analysis

Maine Department of Environmental Protection (DEP) is presently preparing recommendations to the legislature as part of the State's triennial mandatory review of water quality standards.¹ Under the federal and Maine anti-degradation laws, DEP must recommend a change in use classification for the lower Androscoggin from Class C to Class B because that is the standard of water quality it is actually achieving the overwhelming majority of the time. Maine may not avoid reclassification of the lower reach based on hypothetical, once-in-a-decade modeled events. Nor may the lower Androscoggin be kept in Class C to permit the greatest flexibility to accommodate industrial waste assimilation as a priority.

I. Maine DEP has a nondiscretionary duty to recommend the lower Androscoggin for reclassification because it attains the Class B standard.

Under federal and Maine law, a water quality standard is composed of narrative or quantitative criteria, designated uses, and an anti-degradation policy. The Clean Water Act (CWA) and Maine's anti-degradation policy require that "[w]hen the actual quality of any classified water exceeds the minimum standards of the next highest classification, that higher water quality must be maintained and protected. The board shall recommend to the Legislature that that water be reclassified in the next higher classification."² Simply put, if actual data show that the lower Androscoggin in fact meets the standard for a Class B water, then the Maine Board of Environmental Protection has a non-discretionary duty to recommend to the legislature that it be so classified.

A. Field data demonstrates the lower Androscoggin meets Class B water quality criteria.

Actual field data shows the lower Androscoggin achieves Class B water quality criterion for dissolved oxygen (DO). Maine's dissolved oxygen criterion for Class B is:

The dissolved oxygen content of Class B waters may not be less than 7 parts per million or 75% of saturation, whichever is higher, except that for the period from October 1st to May 14th, in order to ensure spawning and egg incubation of indigenous fish species, the 7-day mean dissolved oxygen concentration may not be less than 9.5 parts per million and the 1-day minimum dissolved oxygen concentration may not be less than 8.0 parts per million in identified fish spawning areas.³

FOMB has monitored the River since 1999 following EPA and or DEP protocols.⁴ Using these DEP-approved protocols FOMB collected data spanning the years 1999 to present--731 individual DO

¹ 33 U.S.C.S. § 1313(c)(1).

² 38 M.R.S. § 464.4.F.4 (emphasis added); see also 40 C.F.R. § 131.20(i) ("Where existing water quality standards specify designated uses less than those which are presently being attained, the State shall revise its standards to reflect the uses actually being attained.").

³ 38 M.R.S. § 465.3.B.

⁴ Exhibit 29, *Friends of Casco Bay EPA Quality Assurance Plan* under which FOMB operated until 2018, Exhibit 34, *MDEP VRMP Sampling Protocols* also used since 2009, Exhibit 28 FOMB, *Volunteer River Monitoring Program 2009-2018* (including DO and *E. coli* data) See also Exhibits 30 (Auburn Boat Launch DO data 2010-

samples--on the lower Androscoggin.⁵ Of these samples, only 16--two percent--fell below the Class B 7mg/L criterion for DO, mostly within the acceptable range of calibration error of 0.6 mg/L.⁶ Thus, actual sampling of the lower Androscoggin demonstrates attainment with the DO criterion for Class B 98% of the time.⁷

Likewise, field data shows the lower Androscoggin achieves Class B water quality criterion for *E. coli*. Maine's *E. coli* criterion for Class B is:

Between May 15th and September 30th, the number of *Escherichia coli* bacteria of human and domestic animal origin in these waters may not exceed a geometric mean of 64 per 100 milliliters or an instantaneous level of 236 per 100 milliliters. In determining human and domestic animal origin, the department shall assess licensed and unlicensed sources using available diagnostic procedures.⁸

E. coli sampling has been done since 2006. Again, the results were overwhelmingly above the Class B criterion.⁹

DEP, in its 2018 Proposed Reclassifications seemed to imply that if a scenario can be imagined and modeled demonstrating a once in ten year failure to meet a criterion of a water quality standard for a particular class, then the reach cannot be reclassified to the standard it meets the overwhelming majority of the time.¹⁰ The law is not that inflexible—certainly not in the direction implied.

First, there is no requirement to show even that the *actual* Class B water quality numeric standards need be attained one hundred percent of the time in every section of the reach being reviewed, much less that some remote, modeled scenario should dictate the classification of the reach. For example, some of the more stringent chemical criteria are stated as averages, meaning that measurements above and below that

2011), 35, 36, 37 (Applied Biomonitoring-FOMB Reports covering DO and *E. coli* for years 2009-2012) and 38 (Complete FOMB raw data.1999-2019).

⁵ See Exhibit 38 (FOMB Complete WQ Data Files and Exhibits).

⁶ See Exhibit 27, Peter Milholland, *Quality Assurance Project Plan for Friends of Casco Bay Citizen Stewards Water Quality Monitoring Program* (Sept. 15, 2006) p. 52 (describing calibration protocol) and Table 2. Under the federal EPA Quality Assurance Plan governing DO sampling for Friends of Merymeeting Bay and Friend of Casco Bay, during annual refreshers there was an allowance of 0.6 mg/L leeway between test reading and calibrated sample. In other words, a DO test result of as low as 6.4 would be within acceptable parameters for attainment of 7mg/L, the Class B standard. The occasional low DO reading over the years has generally been on the order of 6.8 or 6.9 well within the allowed margin of error.

⁷ Calculated from Exhibit 38 (FOMB Complete WQ Data Files and Exhibits).

⁸ 38 M.R.S. § 465.3.B.

⁹ See attached, Exhibit 26: *Geometric means chart for 2006-2019*; See also, Exhibit 38: FOMB Complete WQ Data Files and Exhibits 35, 36, 37: Applied Biomonitoring Reports 2010, 2011, 2013

¹⁰ In a October 25, 2019, letter to Senators Libby and Claxton (Exhibit 30), the DEP stated at page 3 that it considered the anti-degradation mandate “in the full context of the water quality laws including the sections of law that establish the conditions under which a discharge may be licensed.” So, citing findings made when determining the waste assimilative capacity of the water, the DEP concluded that a water cannot be recommended for a more protected classification if it cannot meet that standard in a modeled “7-day low flow that can be expected to occur with a frequency of once in 10 years.”

number are to be expected.¹¹ Additionally, instances of non-attainment are anticipated as a designated use is maintained by law, “whether or not that use is being attained.”¹² Finally, the EPA explicitly directs that “States are encouraged to designate uses that the State believes can be attained in the future.”¹³

Second, flexibility is allowed in assessing the proper classification based upon the unique natural features of the water at issue. For example, some natural conditions, such as the incoming tides from Merrymeeting Bay and Sediment Oxygen Demand may cause the lower Androscoggin to fail to achieve a water quality criterion from time to time. But these natural conditions expressly may not be used to determine non-attainment of a use.¹⁴

DEP’s interpretation would moor a reach to its lowest possibly quality days rather than pulling it towards its best uses attained since the Clean Water Act was adopted—and that is the exact opposite of what the law requires. After all, the purpose of the Clean Water Act is to eliminate water pollution, not to accommodate it by preventing progress towards more protective standards because of exceptionally rare hypothetical events.¹⁵

B. The actual uses of the lower Androscoggin are consistent with Class B designation.

Currently, the lower Androscoggin “[f]rom its confluence with the Ellis River to a line formed by the extension of the Bath-Brunswick boundary across Merrymeeting Bay in a northwesterly direction” is designated Class C.¹⁶ The designated uses of Class B and Class C are substantially the same, differing only in whether the habitat supported by the reach is characterized as unimpaired:

Class B: waters must be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under

¹¹ See, e.g., 38 M.R.S. § 465.3.B (describing even the most stringent criterion for Class B dissolved oxygen as a 7-day *mean*).

¹² 38 M.R.S. § 464.2-A.F.

¹³ Section 2.4

¹⁴

Where natural conditions, including, but not limited to, marshes, bogs and abnormal concentrations of wildlife cause the dissolved oxygen or other water quality criteria to fall below the minimum standards specified in section 465, 465-A and 465-B, those waters shall not be considered to be failing to attain their classification because of those natural conditions.

38 M.R.S. § 464.4.C.

¹⁵ See 33 U.S.C. § 1251(a) (“The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this Act—(1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985.”)

¹⁶ 38 M.R.S. § 467.1.A(2).

Title 12, section 403; navigation; and as habitat for fish and other aquatic life. The habitat must be characterized as unimpaired.¹⁷

“‘Unimpaired’ means without a diminished capacity to support aquatic life.” 38 M.R.S. § 466.11. The lower Androscoggin has and does support unimpaired aquatic life, and is not listed as impaired on this section for any relevant parameter.¹⁸ Biological monitoring of the freeflowing sections of the Lower Androscoggin demonstrates attainment of Class B aquatic life standards.¹⁹

In determining what uses must be protected and maintained, the DEP may consider the actually designated uses contained in the Class B and C standards, as well as:

- (a) Aquatic, estuarine and marine life present in the water body;
- (b) Wildlife that utilize the water body;
- (c) Habitat, including significant wetlands, within a water body supporting existing populations of wildlife or aquatic, estuarine or marine life, or plant life that is maintained by the water body;
- (d) The use of the water body for recreation in or on the water, fishing, water supply, or commercial activity that depends directly on the preservation of an existing level of water quality; [. . .] and
- (e) Any other evidence that, for divisions (a), (b) and (c), demonstrates their ecological significance because of their role or importance in the functioning of the ecosystem or their rarity and, for division (d), demonstrates its historical or social significance.²⁰

The lower Androscoggin provides exceptional and unique habitat. It feeds tidal wetlands that have been recognized by the U.S. Fish and Wildlife Service “highest value habitat,” including for multiple rare intertidal plants and endangered, threatened and species of special concern (e.g., creeper, tidewater mucket, yellow lamp mussels, dry land sedge, etc.). It sustains, silver maple floodplain and birch-oak rocky communities. It is a spawning and nursery area for endangered short nose sturgeon, and Atlantic salmon

¹⁷ 38 M.R.S. § 465.3.A (emphasis added)Compare:

Class C: Class C waters must be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as a habitat for fish and other aquatic life.

38 M.R.S. § 465.4.A.

¹⁸ It is listed as impaired for PCBs, but so are other reaches that are designated Class B.

¹⁹ See Exhibit 31, Maine Department of Environmental Protection, *Lower Androscoggin River Basin Water Quality Study Modeling Report* (March 2011), Appendix D (Station 954 (below Pejepsot Dam, free-flowing) attained Class B aquatic life standard.) Other stations were taken from impoundments and impoundments attained Class C aquatic life criteria, which by law must be treated as attaining A or B criteria in these locations. 38 M.R.S. § 464. 10.A(1). See also Exhibit 32 (FOMB annotations to Exhibit 31, *Appendix D* (Aquatic Life)).

²⁰ 38 M.R.S. § 465.4.F.

and threatened Atlantic sturgeon. Other significant diadromous fish including alewives, blueback herring, sea lamprey, American eel striped bass, rainbow smelt and American shad. The river provides sites for multiple bald eagle nests [13 to GIP], and several Peregrine falcon nests.²¹

The maintenance of a clean and lower Androscoggin is a critical economic resource to Maine as well.²² It is well loved for recreation-fishing, hiking and paddling.²³ As a result, there is overwhelming support for reclassifying the Lower Androscoggin to protect it as an economic and recreational asset.²⁴

And, even if water has degraded since the Clean Water Act was adopted, any “uses which have actually occurred on or after November 28, 1975, in or on a water body whether or not the uses are included in the standard for classification of the particular water body” must be protected in the absence of a use attainability analysis and a specific finding to eliminate a use.²⁵

The lower Androscoggin clearly meets the use, criteria, and anti-degradation components for Class B waters and DEP’s analysis should end here with a recommended change to that classification for the Board.

II. DEP has relied on inappropriate factors to recommend against reclassification in the past.

In previous years DEP staff recommended against reclassification of the Androscoggin to Class B for the following reasons, none of which is appropriate in the face of actual attainment of the Class B standard:

- a) Under modeled “critical” once-in-a-decade low flow, high temperature conditions, the lower Androscoggin might fail to meet Class B standard,
- b) Waste discharge permits might have to be altered and might not be allowed at all under Class B designation because of the requirement to consider modeled once-in-a-decade low flow, high temperature conditions,
- c) Impoundments create low dissolved oxygen concentrations, and
- d) Upstream pollution.

A. Pollution assimilation modeling cannot be used to overcome classification based on demonstration of uses actually being attained.

DEP’s recommendation against reclassification of the lower Androscoggin primarily was based on modeling. DEP determined that “the existing models provide sufficient information to support the Department’s previous assessment that there is no feasible approach to ensure attainment of Class B

²¹ See Exhibits 9 to 18

²² See Exhibits 8,15, 16, and 17.

²³ See *id.* and Exhibits 18-22 (describing protected lands and trails along the River).

²⁴ Exhibit 7 (compiled support letters); Exhibit 8 (Economic Benefit Articles), Exhibit 6 (Comprehensive Plan Excerpts).

²⁵ See 38 M.R.S. § 464.F.(1).

dissolved oxygen criteria in the lower Androscoggin River.”²⁶ But the models DEP relied upon are used to minimize risk of harm to aquatic resources when permitting a discharge, not to determine whether a use is present in a river stretch. As such, they are designed to be conservative in permitting harmful impact to waters—emphasize worst-case scenarios to build in a margin of safety to guard against degradation of the nations’ waters. The models are not intended to be used to thwart the purpose of the anti-degradation policy.

What DEP essentially did was perform a perfunctory Use Attainability Analysis to argue that the River should not be classified as the law would otherwise require.²⁷ But, a Use Attainability Analysis is appropriate in only two circumstances: when designating a use not included in the CWA and if removing a designated use.²⁸ DEP has been called upon to do neither of these things with regard to the lower Androscoggin, and the DEP may not use a use attainability analysis to avoid its *non-discretionary obligation* to recommend reclassification to a higher standard reflective of actual use and water quality.²⁹ Only *after* a use has been designated may the DEP perform a Use Attainability Analysis and consider the sort of things put before the Board here (e.g., economic effect on permits of reclassifying the River).³⁰

Essentially, there is *supposed to be* a rebuttable presumption that water quality standards consistent with actual water quality should stand.³¹ And, there is no ability to constrain a reach at a lower classification where the water is actually attaining the designated uses and standards of a more protective classification.³² Thus, there is not properly room for a Use Attainability Analysis here. Anti-degradation policy—the ratcheting always towards improved quality--ensures that water quality is continually improved over time and that improvements are maintained. Effectively, DEP’s attachment of proof of attainment under the most dire possible modeled scenario reverses the ratchet direction of the state and federal anti-degradation policy and statute.

²⁶ Oct. 25, 2019 Kavanaugh letter at pp. 7-8.

²⁷ To remove a designated use, DEP must make a number of findings demonstrating why that use is not attainable, hold a public hearing, and demonstrate that the conditions of 40 C.F.R. § 131.10(g) are met.²⁷

²⁸ 38 M.R.S. § 464.2-A.A; *see also* 40 C.F.R § 131.10(h).

“‘Use attainability analysis’ means a structured scientific assessment of the factors affecting the attainment of a designated use in a water body. The assessment may include consideration of physical, chemical, biological and economic factors.” 38 M.R.S. § 466.11-A.

²⁹ 38 M.R.S. § 464.4.F.4 (“When the actual quality of any classified water exceeds the minimum standards of the next highest classification, that higher water quality must be maintained and protected. The board shall recommend to the Legislature that that water be reclassified in the next higher classification.”) (emphasis added).

³⁰ *See above*, Section I, discussing what the Board can consider in making its classification recommendation.

³¹ *Idaho Mining Ass’n v. Browner*, 90 F. Supp. 2d 1078, 1097-98 (D. Idaho 2000).

³² *Kan. Nat. Res. Council, Inc. v. Whitman*, 255 F. Supp. 2d 1208, 1209 (D. Kan. 2003)

B. Use of the water body to receive waste water discharges is not a permissible consideration in establishing appropriate classification.

There are no other factors that should be considered in determining what class the lower Androscoggin is actually attaining. DEP expressly may not take into account industrial discharge capacity needs in determining uses.³³

DEP improperly invited consideration of the waste-assimilative capacity of the River as part of the reclassification review, stating that waste permitting limits “is an important requirement [to consider] when a reclassification is being evaluated. . . It is highly recommended that the Legislature fully understands any new licensing requirements that will be imposed on any discharge prior to a reclassification decision being made.”³⁴ In short, the DEP was directing the legislature to be careful not to eliminate the ability of the water legally to support the waste disposal needs of industry, which is not allowed.³⁵

C. Naturally occurring conditions cannot be used as evidence of non-attainment of water quality standards.

DEP’s analysis of dissolved oxygen deficiency relied on naturally occurring conditions. “Where natural conditions, including, but not limited to, marshes, bogs and abnormal concentrations of wildlife cause the dissolved oxygen or other water quality criteria to fall below the minimum standards specified in sections 465, 465-A and 465-B, those waters shall not be considered to be failing to attain their classification because of those natural conditions.”³⁶

D. Upstream conditions must be ameliorated rather than used as an excuse to avoid protecting downstream water quality.

DEP concluded that “river sampling showed a nutrient loading from sources upstream.”³⁷ The States designation of those upstream sources should not negatively impact downstream waters.³⁸ Further, “[n]o waste load allocation can be developed or NPDES permit issued that would result in standards being violated. With respect to antidegradation, that means existing uses must be protected, water quality may not be lowered in [Outstanding Natural Resource Waters], and in the case of waters whose quality exceeds that necessary for the section 101(a)(2) goals of the Act, an activity cannot result in a lowering of

³³ 38 M.R.S. § 465.4.F (d) (“Use of the water body to receive or transport waste water discharges is not considered an existing use for purposes of this antidegradation policy”); 40 C.F.R. § 131.10 (“In no case shall a State adopt waste transport or waste assimilation as a designated use for any waters of the United States.”)

³⁴ Exhibit 33, Oct. 25, 2019 letter at p. 5.

³⁵ See above, n. 33.

³⁶ 38 M.R.S. § 464.4.C.

³⁷ Oct. 25, 2019 letter at 7.

³⁸ 40 C.F.R. § 131.10(b).

water quality unless the applicable public participation, intergovernmental review, and baseline control requirements of the antidegradation policy have been met.”³⁹

III. Conclusion

In conclusion, the DEP should present to the Board of Environmental Protection and the legislature the factual basis for the lower Androscoggin’s attainment of Class B criterion and character and refrain from including within that recommendation any argument that might be construed as a Use Attainability Analysis.

³⁹ U.S. EPA, Clean Water Act Handbook, Chapter 4, p. 14.