

November 8, 2013

Our File: 5210

Water Policy Branch
AESRD
7th Floor, Oxbridge Place
9820-106th Street
Edmonton, Alberta
T5K 2J6
Via Email: AENV-Web.SWQ@gov.ab.ca

To whom it may concern,

RE: Comment on Surface Water Quality Guidelines

The Environmental Law Centre (ELC) is an Edmonton-based charitable organization established in 1982 to provide Albertans with an objective source of information about environmental and natural resources law and policy. The ELC's vision is an Alberta where the environment is a priority, guiding society's choices. It is the ELC's mission to ensure that Alberta's laws, policies and legal processes sustain a healthy environment for future generations.

The ELC is pleased to provide recommendations regarding the *Draft Environmental Quality Guidelines for Alberta Surface Waters* (hereinafter *Surface Water Quality Guidelines*).¹ .

Nutrient guidelines

The *Surface Water Quality Guidelines* narrative statements around nutrient management (found in Table 1.5) require amendment to detail reference (or baseline) conditions and to outline a process to attain guideline amounts for differing water bodies. The process and guidelines should clearly identify where water quality impairment has occurred due to anthropogenic inputs of nutrients and this in turn should trigger a loading and management protocol.

The CCME *Phosphorus: Canadian Guidance Framework for the Management of Freshwater Systems* notes,²

Establishing the reference condition is the most important step in the framework because it determines the trigger range that is used for comparison. In some cases,

¹ Government of Alberta, (Edmonton: Government of Alberta, 2013), online: Alberta Environment and Sustainable Resource Development <<http://environment.gov.ab.ca/info/library/8926.pdf>>.

² Canadian Council of Ministers of the Environment, 2004, *Canadian Water Quality Guidelines for the Protection of Aquatic Life*, online: CCME <<http://ceqg-rcqe.ccme.ca/>>.

historical data may be available, but in most cases there will be a need to estimate reference (baseline) phosphorus concentrations. Several options are available for this, ranging from use of available historical data to derivation and application of predictive models to hindcast predevelopment phosphorus values (Environment Canada 2004).

The initial narrative statement for lakes in the *Draft Guidelines* poses a problem insofar as it may allow for deferral of action by way of claiming that existing conditions are natural with no assessment of baseline condition being conducted.

The major river narrative statement also lacks sufficient clarity to be useful in decision making processes. Maintaining nutrient levels “so as to prevent detrimental changes to algal and aquatic plant communities, aquatic biodiversity, oxygen levels, and recreational quality” will require a level of site specific information and assessment such that the capacity of decision makers will be significantly tested to ensure the statement is being upheld.³ Again, it appears probable that actions will be deferred due to the lack of information in the absence of an established numeric reference or baseline condition.

The ELC is of the view that numeric guidelines for many reaches of mainstem rivers could be established today and that further deferral will simply allow for further degradation of waterways.

Narrative statements have been used in the United States but they have also lead to litigation in the State of Florida, with the EPA acknowledging that such narrative statements often result in “a time-consuming, site-specific and resource-intensive implementation process” that is “insufficient to protect applicable designated uses”.⁴ This resulted in Florida creating numeric nutrient criteria for various water bodies (while maintaining the narrative statement for others).⁵

The ELC recommends amending the *Surface Water Quality Guidelines* to identify baseline conditions or reference conditions for various classes of water bodies and apply numeric standards for mainstem rivers.

Integration of Lowest effect level (LEL) standards

Sediment quality guidelines should be as fulsome as possible and appear to have gaps which should be addressed. Specifically, the absence of amounts for lowest effect levels (LEL) to

³ *Ibid.* at p.34.

⁴ United States Environmental Protection Agency, letter from Herschel T. Vinyard, dated June 28, 2013

http://water.epa.gov/scitech/swguidance/standards/upload/amended_determination.pdf

⁵ *Ibid.*



which interim guideline amounts could be compared is a gap that should be addressed. This is particularly the case for certain metals (such as Chromium, Copper and Nickel) where LEL levels are less than the interim quality guideline levels.⁶ The LEL values should be included as a reference standard.

Please do not hesitate to contact me in relation to any questions you may have regarding the ELC comments.

Yours truly,

Jason Unger
Staff Counsel
junger@elc.ab.ca

cc. Andy Ridge

⁶See Government of Ontario, *Guidelines for Identifying, Assessing and Managing Contaminated Sediments in Ontario: An integrated approach* (Queen's Printer of Ontario, 2008), online: Ontario Ministry of the Environment <http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@resources/documents/resource/std01_079844.pdf>.