

From: Ross Sutherland [<mailto:7846elbe@gmail.com>]
Sent: February-17-16 5:06 PM
To: Wayne Orr <worr@southfrontenac.net>
Subject: Addition to Council Correspondence

Hi Wayne, I would like to have the following article from the Buck Lake Association newsletter added to the agenda. I have cleared its distribution with the author. I will also be asking Council to support circulating this information to the lake Association list with a note that their members might find this information from Buck lake useful in helping their residents efforts to reduce carbon emissions and help protect the environment.

Update Notes on Outboard motor emissions

Some good things do come of modern progress and even from our government. As an update to part of the Lake Plan published a few years back, now it should be noted that in regards to outboard motors, modern two strokes of some manufacturers are not the polluters they were in the past. High pressure direct inject technologies used in the Envinrude line and some of the Tohatsu line meet even the most stringent of pollution regulations of the California air quality agency, CARB, (namely the 3 Star ultra low emissions rating). Four stoke engines have been, and continue to be, low emission engines.

The Canadian government passed legislation in 2011 to work in conjunction with the US EPA so that all motors imported or manufactured in Canada meet emission standards that are not unlike what we know of for our automobiles in Ontario - ie regulating the output of Nitrous Oxides, Carbon Monoxides and other emissions. The emissions regulations are evolving and are more stringent for subsequent production years, but the take away is that anyone who is considering the retirement of their "old smoker" can be confident that any outboard purchased in Canada since production year 2012 is the cleanest that is available. For engines under 15 hp it should be noted that the Lehr propane outboards are a very good option with low emissions and represent new forward enviro thinking, and of course there are electric options such as the Elco line of marine engines.

Also, the somewhat obvious should be mentioned, that less is better - the reguations are basically structured to control how much of these pollutants are released per kilowatt of power produced by the motor. Consequently the smaller the engine you can employ to enjoy your boating experience, the better, and as well, the less it is used. I suppose one could say that the more we paddle, row, sail or swim the better for the environment and probably us as well.

Current Canadian legislation governing marine engine emissions

<http://laws-lois.justice.gc.>

The specific NOx and CO emmission limits

<https://www.law.cornell.edu/cfr/text/40/1045.103>

USA EPA governing regulations for marine engines

<http://www.epa.gov/otaq/>

California Air Resource Board - CARB marine engine Star rating

(note that the direct inject manufacturers quoted in the three star category are not current representatives of manufacturers in actual production - it should be Envinrude, Tohatsu, and some Mercury)

<http://www.marineenginedigest.>

Dave Frid - Friends of the Lake

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