

H. Ward Slacum, Jr.

From: Bruce Vogt - NOAA Federal <bruce.vogt@noaa.gov>
Sent: Wednesday, March 04, 2015 9:15 AM
To: DiPasquale, Nicholas; H. Ward Slacum, Jr.
Cc: Daniel Watson; Edward, James; luck@vims.edu; donnab@vims.edu; cbott@hrsd.com; rmcham@wm.edu; JOHN.MEISINGER@ars.usda.gov; eyagow@vt.edu; BGoldsborough@cbf.org; Donald Webster; Peyton.Robertson@noaa.gov; Batiuk, Rich; Power, Lucinda; kirk@vims.edu
Subject: Re: NEW RESEARCH on Nitrogen Removal via Oyster Aquaculture

Hi Dan,

Thanks for sending this along. As Nick mentioned there is significant interest in developing an expert panel for an oyster BMP. That effort is being coordinated by the Oyster Recovery Partnership. Ward Slacum cc'ed here is the lead. He can give you a more detail update on the status of this effort.

Bruce

On Wed, Mar 4, 2015 at 8:09 AM, DiPasquale, Nicholas <dipasquale.nicholas@epa.gov> wrote:

Thanks Dan. Please call me Nick. Although STAC issued a report on this topic based on the existing science, the Chesapeake Bay Program still intends to convene an expert panel to consider how oyster aquaculture as a BMP for nitrogen removal. By copy of this message, I would ask Bruce Vogt to update you on the status of convening that expert panel. I am also attaching a copy of the Management Board's response to the STAC report. Thank you for sharing information on the Rose paper.

Please let me know if you have any questions. Thanks, Nick

Nicholas A. DiPasquale, Director

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From: Daniel Watson [mailto:danwatson123@icloud.com]
Sent: Tuesday, March 03, 2015 6:16 PM
To: DiPasquale, Nicholas
Cc: Edward, James; luck@vims.edu; donnab@vims.edu; cbott@hrsd.com; rmcham@wm.edu; JOHN.MEISINGER@ars.usda.gov; eyagow@vt.edu; BGoldsborough@cbf.org; Donald Webster
Subject: NEW RESEARCH on Nitrogen Removal via Oyster Aquaculture

Dear Director DiPasquale:

The Bay Program's Scientific and Technical Advisory Committee completed a review report in September 2013 concerning potential use of shellfish as a method of nutrient reduction in Chesapeake Bay (STAC 13-005). The STAC concluded "The overriding finding by the panel is a *dearth of data* bearing directly on the issues under consideration" and "*Limited data* on the effects of oyster aquaculture on nutrient fluxes preclude the development of a full suite of BMPs at this time."

I want to call to your attention new research about to be published which appears right on point, and which seems to suggest that oyster aquaculture could be a very significant means of removing nitrogen from Chesapeake waters, and at modest cost, as a by-product of oyster harvesting. The paper is cited as Rose, J.M., et al. Comparative analysis of modeled nitrogen removal by shellfish farms. Mar. Pollut. Bull. (2014), <http://dx.doi.org/10.1016/j.marpolbul.2014.12.006>. As this research was completed subsequent to the STAC review, its data of course was not included in the STAC review.

The Rose paper concludes (quoting from the abstract) "... model outputs of nitrogen removal at the shellfish farm scale have been summarized here, from 14 locations in 9 countries across 4 continents. Modeled nitrogen removal ranged from 105 lbs/acre/year (12 g/m²/year) to 1356 lbs/acre/year (152 g/ m²/year). Mean nitrogen removal was **520 lbs/acre/year** (58 g/m² /year). These model results are site-specific in nature, but compare favorably to reported nitrogen removal effectiveness of agricultural best management practices and stormwater control measures." (A Potomac River site was included in the sample, with an indicated N removal of 507 lbs/acre/yr.)

We are in great need of new and effective BMPs, and so I strongly urge that you and others with the Bay Program take another look at this opportunity in light of the Rose research paper. Many direct and indirect benefits would flow from a much broader adoption of oyster aquaculture throughout the Chesapeake Bay.

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Some tables extracted from Rose paper:

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