



NATIONAL COUNCIL FOR AIR AND STREAM IMPROVEMENT, INC.

Mailing Address: PO Box 340317, Clemson, SC 29634-0317

Physical Address: Room 261 Lehotsky Hall, Clemson, SC 29634

Phone (864) 656-0840 Fax (864) 656-3304

T. Bently Wigley, Ph.D.
Vice President - Forestry Programs
(864) 656-0840
bwigley@ncasi.org

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TO: Science Advisory Board Advisory Panel on EPA's Report on the Environment 2014

Dear Panel Members,

On April 28, 2014, the National Council for Air and Stream Improvement, Inc. (NCASI) submitted technical comments on the Environmental Protection Agency's Draft Revised Report on the Environment 2014 (Docket ID No. EPA-HQ-ORD-2014-0231). NCASI is a non-profit organization that serves the forest products industry as a center of excellence for providing technical information and scientific research needed to achieve the industry's environmental goals and principles. NCASI (<http://www.ncasi.org>) has a long history of supporting research to help its member companies better manage forest and manufacturing operations in order to meet environmental objectives.

NCASI found the EPA Draft Revised Report on the Environment (ROE) to be a well-organized, user-friendly collection of graphics that provides much useful information about many aspects of the nation's environment. However, NCASI technical comments, which are attached, noted two aspects of the report that we suggested EPA address. First, we suggested that EPA consider opportunities to enhance comparability of graphics that present similar data. Second, we encouraged EPA to more thoroughly explain limitations of the graph depicting sources of wetland gain and loss (Exhibit 4, Wetlands indicator) which indicates that silviculture resulted in the loss of approximately 307,340 acres between 2004 and 2009. We are now supplementing our comments on the wetlands indicator to assist your review.

The wetlands indicator was developed by EPA using data from the most-recent U.S. Fish and Wildlife Service's (USFWS) Wetlands Status and Trends survey (Dahl 2011), which is conducted periodically by the Service's National Wetlands Inventory and measures the areal extent of wetlands. The attached NCASI comments note several concerns about the methodology used by the NWI to determine wetland losses (Dahl and Bergeson 2009), and whether these losses are attributable to forestry or silvicultural operations. NCASI and others (e.g., the Southern Group of State Foresters) have communicated these concerns directly to the U.S. Fish & Wildlife Service upon the release of NWI status and trends reports.

One concern is that the methods used by the USFWS in the NWI program do not rely on the U.S. Army Corps of Engineer wetland delineation manual to determine areas that are wetlands. As a result, there is no direct correlation between wetlands protected under the Clean Water Act if they also meet the jurisdictional definition of “waters of the United States” and “wetlands” classified by the U.S. Fish and Wildlife Service NWI program, particularly with respect to forested wetlands. For example, the Clean Water Act has specific provisions that apply if forest management changes the status of a jurisdictional forested wetland to an upland. These provisions are rarely invoked because the Corps and EPA recognize that these lands retain wetland characteristics throughout the forest management process. Thus, NWI reports are not an appropriate source of information for EPA to use in reporting on the status and trends of wetlands.

Another concern is that the NWI program assumes that forest wetland loss occurs when a planted forest is found via remote sensing techniques to occur on a site previously identified by the NWI program as a forest “wetland” site. Clearly, silvicultural operations in forest wetlands can alter the species composition and structure of dominant overstory vegetation. However, harvesting a forest and regenerating it naturally or via planting does not result in wetland “loss” from the perspective of the Clean Water Act and decades of research indicates that wetland forests can be managed sustainably while maintaining their wetland functions (e.g., Aust et al. 1990, Aust and Lea 1991, Aust et al. 1991, Aust et al. 1997, Crownover et al. 1995, Lockaby et al. 1997a, Lockaby et al. 1997b, Lockaby et al. 1997c, Kellison and Young 1997, Messina et al. 1997, Perison et al. 1997, Xu et al. 1999, Rapp et al. 2001, Sun et al. 2001, Bliss and Comerford 2002, Sun et al. 2002, Miwa et al. 2004, Aust et al. 2006, Aust et al. 2012, McKee et al. 2012, Sain et al. 2012, McKee et al. 2013). A more detailed discussion of this concern is provided in the attached comments.

Thank you for the opportunity to submit a statement on EPA’s Report on the Environment 2014. We would welcome the opportunity to discuss any of these comments in further detail and to collaborate with EPA on improvements to graphs related to the relationship between silviculture and the status and trends of wetlands.

Sincerely,
T. Bently Wigley

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ATTACHMENT

NCASI Technical Comments on Draft Revised EPA's Report on the Environment 2014

Docket ID No. EPA-HQ-ORD-2014-0231

April 28, 2014



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Phone (864) 656-0840 Fax (864) 656-3304

T. Bently Wigley, Ph.D.
Acting Vice President, Forestry
(864) 656-0840
bwigley@ncasi.org

**Technical Comments on
Draft Revised EPA's Report on the Environment 2014
Docket ID No. EPA-HQ-ORD-2014-0231
April 28, 2014**

Dear Sir or Madam,

On March 27, 2014, the Environmental Protection Agency (EPA) announced in the Federal Register (Vol. 79, No. 59, Pages 17145-17146) a 30-day public comment period for a draft revised web-based "EPA's Report on the Environment 2014," hereafter referred to as the "ROE" or the "report." The report is available at www.epa.gov/draftroe. EPA describes the ROE as a "comprehensive source of scientific indicators that describe the trends in the nation's environmental and human health condition." The EPA suggests that the indicators were selected to help answer important questions about the current status and historical trends in U.S. air, water, land, human health, ecological systems, and aspects of sustainability at the national and regional levels. The ROE does not address relationships between trends in stressors and environmental and health outcomes. EPA plans to use the indicators within the context of a sustainability framework to help the agency understand trends in factors that influence three interrelated and interacting systems: economy, society, and environment.

The National Council for Air and Stream Improvement, Inc. (NCASI) is a non-profit organization that serves the forest products industry as a center of excellence for providing technical information and scientific research needed to achieve the industry's environmental goals and principles. NCASI (<http://www.ncasi.org>) has a long history of supporting research to help its member companies better manage forest and manufacturing operations in order to meet environmental objectives. On behalf of NCASI, I am pleased to offer three comments regarding the ROE.

First, we found the report to be a well-organized, user-friendly collection of graphics that provides much useful information about many aspects of the nation's environment. The ROE organizes the indicators using six themes: Air, Water, Land, Human Exposure and Health, Ecological Condition, and Sustainability. Data related to the indicators are presented in graphs which can be accessed through a series of drop-down menus associated with each of the six themes. Each graph is accompanied by brief explanatory text and one or more citation describing the source of the data. Users also may access more detailed information about the

indicator that is organized in 4 sections titled, Introduction, What the Data Show, Limitations, and Data Sources. Hyperlinks to References and Technical Documentation open new windows in which the report describes questions that the indicator will be used to answer, methods for data collection, quality control / quality assurance, sources of uncertainty and variability, comparability over time and space, and other aspects of the indicator.

Second, we encourage EPA to consider opportunities to enhance comparability of graphics that present similar data. For example, the ROE presents graphs describing nitrogen and phosphorous in agricultural streams, large rivers, and wadeable streams. The graphs for agricultural streams describe nitrogen and phosphorous concentrations (i.e., mg/L), the graphs for large rivers present nitrogen and phosphorous loading, and the graphs for wadeable streams characterize nutrient concentrations as “low,” “medium,” or “high.” Thus, users cannot compare nutrient levels between stream types. The use of loadings for large rivers also complicates comparison among this category of rivers because the Mississippi River load dominates the chart. The chart would be more informative if these data were normalized to flow (i.e., concentration units) or to watershed area.

Third, we encourage EPA to more thoroughly explain limitations of the graph depicting sources of wetland gain and loss (Exhibit 4, Wetlands indicator) which indicates that silviculture resulted in the loss of approximately 307,340 acres between 2004 and 2009. This indicator was developed using data from the U.S. Fish and Wildlife Service’s Wetlands Status and Trends survey, which is conducted periodically by the Service’s National Wetlands Inventory and measures the areal extent of wetlands. Unfortunately, the methodology used by NWI to determine wetland losses, and whether these losses are attributable to forestry or silvicultural operations, limits the utility of these data for EPA’s purposes.

According to the Clean Water Act, a wetland loss occurs when a wetland is converted to an upland or other non-wetland type. Silvicultural operations that modify wetland hydrology to the extent that the wetland is converted to a non-wetland may be in violation of Clean Water Act regulations and are uncommon. However, there is no direct correlation between “jurisdictional wetlands” protected under the Clean Water Act and “wetlands” classified by the U.S. Fish and Wildlife Service NWI program, particularly with respect to forested wetlands. Rather, the NWI program assumes that forest wetland loss occurs when a planted forest is found via remote sensing techniques to occur on a site previously identified as a forest “wetland” site. The NWI considers planted forests to be “upland plantation forests.” Remote sensing indicators used by the NWI to identify an “upland plantation forest” include trees planted in rows or blocks, forested blocks growing with uniform crown heights, and logging activity and use patterns including access roads or trails, and loading and skidding pads (Dahl and Bergeson 2009). The NWI also appears to consider sites where the overstory has been removed and the area is temporarily “bare” to be “transitional lands,” which are defined as “lands which are changing from one land use to another” (Dahl and Bergeson 2009). Thus, there is a possibility that recently harvested forests and young forests could be classified as “transitional lands” even though they remain in forest cover and remain a wetland. Because of these issues, the trends in gain or loss of wetlands due to silviculture as reported in the Exhibit 4 of the Wetlands Indicator appear to be largely due to the methods and definitions used by the NWI program and do not reflect trends in area of actual wetlands.

Clearly, silvicultural operations in forest wetlands can alter the species composition and structure of dominant overstory vegetation. However, harvesting a forest and regenerating it naturally or via planting does not usually result in wetland "loss" from the perspective of the Clean Water Act." Rather, a significant body of research confirms that, in general, wetlands can be managed for timber production while maintaining the ecological functions of wetlands (Tatum et al. 2006 and references therein).

We also suggest that EPA provide measures of error associated with estimates of wetland loss and gain due to various causes [Wetland Indicator, Exhibit 4]. The Technical Documentation section for this indicator acknowledges that "the primary source of uncertainty for this indicator is sampling error," and that measurement error is another source of uncertainty. However, error estimates are not provided on the graph even though the ROE indicates that percent coefficients of variation are provided in reports by the NWI program. This is particularly important because the estimates of wetland gain and loss described in the ROE are small relative to the total area of wetlands in the U.S., and the small net loss reported for the most recent period is likely not different statistically from zero.

Thank you for the opportunity to comment on EPA's Report on the Environment 2014. We would welcome the opportunity to discuss any of these comments in further detail and to collaborate with EPA on improvements to graphs related to the relationship between silviculture and the status and trends of wetlands.

Sincerely,
T. Bently Wigley

References

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