

EXECUTIVE COMMITTEE

PRESIDENT

Karen L. Pallansch

Chief Executive Officer

Alexandria Renew Enterprises

Alexandria, VA

VICE PRESIDENT

Adel H. Hagekhalil

Assistant Director

Bureau of Sanitation

City of Los Angeles

Los Angeles, CA

TREASURER

Raymond J. Marshall

Executive Director

Narragansett Bay Commission

Providence, RI

SECRETARY

Cathy Gerali

District Manager

Metro Wastewater

Reclamation District

Denver, CO

PAST PRESIDENT

Julius Ciaccia, Jr.

Executive Director

Northeast Ohio Regional

Sewer District

Cleveland, OH

EXECUTIVE DIRECTOR

Ken Kirk

March 26, 2015

Leif Hockstad

U.S. Environmental Protection Agency

Climate Change Division, Office of Atmospheric Programs

Office of Air and Radiation

1200 Pennsylvania Ave, NW

Washington, DC 20460

Via Email: Hockstad.Leif@epa.gov

**Re: NACWA Comments on Wastewater Treatment Emissions Estimates in
EPA's Draft *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013***

Dear Mr. Hockstad:

The National Association of Clean Water Agencies (NACWA) appreciates this opportunity to comment on the U.S. Environmental Protection Agency's (EPA) draft *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013 (Inventory)*, and specifically Section 7.2, *Wastewater Treatment (IPCC Source Category 6B)*. NACWA represents the interests of nearly 300 publicly owned wastewater treatment agencies nationwide, serving the majority of the sewered population in the U.S. NACWA members are concerned that greenhouse gas (GHG) emissions from wastewater treatment facilities be characterized correctly in the *Inventory*, since the *Inventory* is a frequently-cited reference for GHG information.

The wastewater treatment category includes publicly owned treatment works (POTWs), septic systems, and industrial wastewater treatment systems. Although the emissions are much smaller in magnitude than for the highest ranked categories, the broadly-based wastewater category consistently ranks in the top ten emitters for nitrous oxide and methane emissions in the U.S. NACWA's review focused on emissions from POTWs, which are a fraction of the total wastewater treatment category emissions.

The emissions from POTWs in the 2013 *Inventory* are essentially the same as those in the 2012 *Inventory*. NACWA appreciates the clarifications that have been made over the past few years to clarify the emissions calculations and the factors that are used. NACWA's primary concern with the *Inventory* is the extensive use of potentially outdated data and extrapolated data in the emissions calculations. For

example, the 1992, 1996, 2000, and 2004 Clean Watershed Needs Surveys (CWNS) are used as the basis for the percent of wastewater flow to aerobic and anaerobic systems, the percent of utilities that do and do not employ primary treatment, and the wastewater flow to POTWs that have anaerobic digesters. EPA states that since the 2008 CWNS does not contain information that is detailed enough for use in the *Inventory*, information for the years 2004 through 2013 was forecast from the rest of the time series. The 2004 CWNS is likely outdated now, and forecasts made from it and the previous surveys may not accurately reflect recent trends and practices for wastewater utilities. A similar forecast was made for sludge generation and protein consumption.

NACWA's other concern with the *Inventory* calculations is the lack of specific emissions factors and calculation methods for the U.S. As NACWA has explained in comments on the *Inventory* in previous years, the Association believes that the nitrogen loading rates for N_2O_{EFFLUENT} are sourced incorrectly and that using information from the existing National Pollution Discharge Elimination System (NPDES) database will yield more accurate and justifiable loading rates. The NPDES permitting program represents long-term, nationwide facility performance that would allow emissions estimate projections over the time series represented in the *Inventory*. If EPA decides not to investigate its own databases, the average nitrogen loading rate of 15.1 g N/capita-day from Metcalf and Eddy (2003) represents the industry standard and is supported by a wealth of data widely confirmed in U.S. practice. This value represents all domestic sources of nitrogen, the use of other nitrogen-containing compounds, and both residential and commercial sources. EPA uses other values from Metcalf and Eddy (2003), such as the BOD_5 production rate and BOD_5 removed by primary treatment. Since this reference is valid for other factors, it should also be valid for the nitrogen loading rate.

NACWA agrees with EPA's planned improvements and encourages EPA to investigate additional data sources as soon as possible to ensure the accuracy of future *Inventories*.

Thank you for consideration of our comments on the draft *Inventory*. Please contact me at 202-533-1836 or cfinley@nacwa.org if you have any questions about NACWA's comments.

Sincerely,



Cynthia A. Finley, Ph.D.
Director, Regulatory Affairs