Association of
Metropolitan
Sewerage Agencies

October 1, 2001

W-01-08 Comment Clerk
Water Docket, MC 4101
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: *Announcement of Public Comment Period for Draft National Beach Guidance and Performance Criteria for Recreation Waters, 66 Fed. Reg. 39,510 (July 31, 2001)*

Dear Sir/Madam:

The Association of Metropolitan Sewerage Agencies (AMSA) is pleased to provide comments on the U.S. Environmental Protection Agency's (EPA) draft *National Beach Guidance and Performance Criteria for Recreation Waters (2001 draft Beach Guidance)*. Founded in 1970, AMSA represents the interests of over 260 of the nation's publicly owned wastewater utilities (POTWs). AMSA members serve the majority of the sewered population in the United States and collectively treat and reclaim over 18 billion gallons of wastewater every day. For decades now, AMSA members have worked to ensure their discharges are protective of both human health and the environment. As many of our members discharge to the coastal waters of the U.S., we must ensure that efforts such as the *2001 draft Beach Guidance* are based on sound science and will serve to further improve water quality.

AMSA commends EPA's efforts to protect recreational water users through improved water quality programs, scientific advances, and risk communication. AMSA also appreciates EPA's commitments under the *Beaches Environmental Assessment and Coastal Health Act (BEACH Act) of 2000* to establish performance criteria for beach monitoring and notification programs and to outline the eligibility requirements for program implementation grants. AMSA agrees that robust beach monitoring programs are essential to reducing the risk of disease to users of recreation waters and we urge EPA to build upon the vast expertise some states have acquired in implementing beach monitoring programs when finalizing the guidance.

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These comments, however, outline for EPA several concerns with the technical content and the clarity of the *2001 draft Beach Guidance.* Although some of our comments encompass issues beyond the scope of the draft guidance, they are nevertheless relevant to the overall success of beach monitoring programs. We hope EPA considers our comments as it proceeds to finalize the document.

I. AMSA Recommends Additional Study of the Bacteria Criteria and Indicator Organisms

The *BEACH Act of 2000* requires states to develop water quality standards based on EPA's water quality criteria for bacteria by April 2004. EPA's current *Ambient Water Quality Criteria for Bacteria* were developed in 1986, over 15 years ago. Unfortunately, the studies cited by EPA in support of the 1986 criteria were based only on a very limited set of U.S. coastal sites. In addition, there were no true control sites in these studies. Control sites – beaches in areas with no known or suspected point sources of human fecal contamination such as stormwater outfalls – are necessary to ensure the results of swimmer surveys accurately characterize impacts.

In the *2001 draft Beach Guidance*, the Agency has only presented a handful of studies of U.S. beaches conducted since 1986 that support the criteria and only one of the studies considers enterococci (Haile et al., 1999). In that single study, Haile focused on storm drain runoff and found "no clear dose-response pattern across increasing levels of bacteriological exposures." Haile also made no judgement or distinction about the superiority of enterococci or E. coli as indicators. AMSA is concerned with the scientific foundation of the criteria and the exclusive reliance on indicators that have not been sufficiently proven and may not be reliable for all coastal environments. It also appears that in the *draft Beach Guidance*, EPA has cited epidemiological studies only to the extent that they support the Agency's recommended standards and criteria. An epidemiology study conducted for the Santa Monica Bay, cited in Chapter 1 of the guidance (Haile et al., 1996), found a significant association between symptoms and the ratio of total to fecal coliform bacteria. However, this fact is not referenced in the *draft Beach Guidance*. AMSA recommends that the final Beach Guidance discuss the disadvantages of relying solely on enterococci and E. coli as indicators for a monitoring program.

Reliable indicators of risk are likely to vary significantly from beach to beach. In fact, the most effective indicator may be as simple as the beach's distance from a storm drain, as was demonstrated by Haile in 1999. The final Beach Guidance should require states seeking grants to conduct comprehensive studies of their recreational beaches to establish a current temporal and spatial picture with regard to a suite of potential bacterial indicators and physical factors, including rainfall, proximity to storm drains, and swimmer density. AMSA recommends that the final Beach Guidance require states to examine the unique characteristics of their coastal waters and select the most reliable indicator for beach monitoring purposes.

Currently, most of the wastewater industry operates under permits with effluent limits for fecal coliform bacteria. Knowledge regarding the effectiveness of current disinfection practices on indicators such as enterococci or E. coli is limited at best. In the *draft Beach Guidance*, EPA instructs states to supplement their basic sampling for these indicators by encouraging point sources (including POTWs) to test their discharges. However, there are currently no approved methods for assessing compliance with the enterococci/E. coli criteria. EPA proposed methods for evaluating these indicators in ambient water in August 2001 (66 Fed. Reg. 45,811), but these methods specifically exclude POTW effluent as an approved sample matrix. Therefore, there remains no proposed or approved method for measuring these indicators in effluent for monitoring or compliance determinations with new limits that may be imposed on POTWs. AMSA recommends that EPA approve methods for testing E. coli and enterococci in effluent matrices before relying on these indicators for beach monitoring programs.

II. AMSA Recommends Additional Clarification and Explanation of Key Issues

AMSA recommends that the final Beach Guidance include discussion of the issues involved with using single sample standards versus the use of a 30-day geometric mean standard. The *draft Beach Guidance* relies heavily on the use of single sample standards of the indicator organisms for taking regulatory actions and instituting public notification measures. Bacteriological monitoring data collected in California indicates that ocean water quality exhibits significant temporal variability, especially when monitoring is conducted in close proximity to dry weather urban runoff discharges, making reliance on single samples problematic.

We also recommend that beach monitoring programs acknowledge sources of bacterial contamination other than anthropogenic sources. Natural sources of fecal organisms can be, and often are, significant. Recent attempts to develop total maximum daily loads for fecal coliform in relatively small watersheds have shown that natural sources (wildlife, migratory birds, wetlands, and domestic animals) often are highly significant contributors and in some cases the major causes for exceeding established bacterial standards. It remains to be seen if similar sources in urban areas (such as pet waste, shore bird waste, and other urban wildlife) are significant contributors to fecal contamination in urban runoff.

III. Conclusion

AMSA recognizes the importance of comprehensive beach monitoring and notification programs, but questions the reliance on indicators of contamination that may not be reliable for all coastal environments. The final Beach Guidance should require states seeking grants to carefully examine the unique characteristics of their coastal recreation waters. EPA should provide states with the flexibility to develop standards and monitoring programs that take into account these nuances. AMSA also encourages the Agency to take advantage of the expertise some states have acquired through implementation of beach monitoring and notification programs. There is a wealth of beach water quality expertise and a significant body of completed scientific studies in California that the Agency should look to when

finalizing the guidance.

Again, we appreciate the opportunity to comment on the development of this guidance and welcome the development of more comprehensive, scientifically-based beach monitoring programs. Please do not hesitate to contact me if you have any questions regarding our comments at 202/833-9106 or via email at *chornback@amsa-cleanwater.org*.

Sincerely,

Christopher Hornback
Manager, Government Affairs

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Literature Cited

Haile, R.W. 1996. A Health Effects Study of Swimmers in Santa Monica Bay. Santa Monica Bay Restoration Project, Monterey Park, CA.

Haile, R.W., Witte, J.S., Gold, M., Cressey, R., MeGee, C., Millikan, R.C., Glasser, A., Harawa, N., Ervin, C., Harmon, P., Harper, J., Dermand, J., Alamillo, J., Barrett, K., Nides, N. and Wang, G., 1999. The Health Effects of Swimming in Ocean Water Contaminated by Storm Drain Runoff, Epidemiology, 10:355-363.