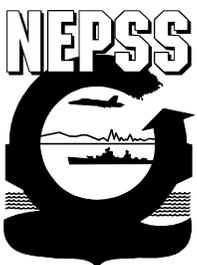




Marine Environmental Update



EPA Releases Watershed-Based NPDES Permitting Policy Statement

On January 7, 2003, G. Tracy Mehan, III, Environmental Protection Agency Assistant Administrator for Water, issued a policy statement outlining the EPA's position on developing and issuing National Pollutant Discharge Elimination System (NPDES) permits on a watershed basis. For this policy, watershed-based permitting is defined as an approach that produces NPDES permits that are issued to point sources on a geographic or watershed basis to meet watershed goals. A watershed-based approach to point source permitting under the NPDES program may serve as one innovative tool for achieving new efficiencies and environmental results. According to the policy document, the EPA believes that watershed-based permitting can:

- Lead to more environmentally effective results;
- Emphasize measuring the effectiveness of targeted actions on improvements in water quality;
- Provide greater opportunities for trading and other market based approaches;
- Reduce the cost of improving the quality of the nation's waters;
- Foster more effective implementation of watershed plans, including total maximum daily loads (TMDLs); and
- Realize other ancillary benefits beyond those that have been achieved under the Clean Water Act (e.g., facilitate program integration including integration of Clean Water Act and Safe Drinking Water Act programs).

In establishing point source controls in a watershed-based permit, the permitting authority may focus on watershed goals, and consider multiple pollutant sources and stressors, including the level of nonpoint source control that is practicable. In general, there are numerous permitting mechanisms that may be used to develop and issue

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permits within a watershed approach. The most common approach currently used in many states is to re-issue NPDES permits according to a five-year rotating basin schedule. Each source receives an individual permit and the permits are issued based on basin or watershed management areas. This process allows permittees to compare their permits with other dischargers in the same area and facilitates sharing data to arrive at the most appropriate limits. Some other permit approaches currently available include:

- **Watershed-based General Permit - Common Sources.** An NPDES permitting authority would develop and issue this type of general permit to a category of point sources within a watershed, such as all publicly-owned treatment works (POTWs) or all confined animal feeding operations (CAFOs) or all storm water discharges from municipal separate storm sewer systems. This is similar to current general permits, except that the geographic area covered by the permit would correspond to the watershed boundary. The most significant difference between a traditional general permit and the watershed-based general permit for common sources would be permit requirements that reflect watershed-specific water quality standards.
- **Watershed-based General Permit - Collective Sources.** Unlike the watershed-based general permit described above, this type of permit would address all point sources within the watershed or alternatively, several subcategories of point sources within the watershed. This type of permit would be similar to the multi-sector general permit for storm water discharges associated with industrial activity with requirements being tied to categories and subcategories of discharges. Again, the distinguishing feature of this type of permit would be geographic coverage based on the watershed-boundaries and the permit requirements reflecting watershed-specific water quality standards.
- **Watershed-based Individual Permit - Multiple Permittees.** Similar to the approach used for Phase I municipal separate storm sewer systems (MS4s) with multiple permittees, this type of permit would allow several point sources within a watershed to apply for and obtain permit coverage under an individual permit.
- **Integrated Municipal NPDES Permit.** This type of permit would bundle all NPDES permit requirements for a municipality (*e.g.*, storm water, combined sewer overflows, biosolids, pretreatment, *etc.*) into a single municipal permit. While this type of permit would focus on municipal boundaries rather than watershed boundaries, the analysis in developing permit requirements would reflect watershed-specific water quality standards.

The EPA is developing a framework for watershed-based NPDES permitting. It will be supported by a targeted communications approach focused on informing key stakeholders about the variety of tools developed by the EPA to implement a watershed-based permitting approach. Over the next 12 months, the EPA anticipates developing and issuing guidance addressing different aspects of the watershed-based permitting approach, including general implementation issues, technical tools and approaches, and procedural considerations.

Environmental Protection Agency, [Watershed-Based NPDES Permitting Policy Statement](#), January 7, 2003 (26.3 KB Adobe™ Acrobat™ file).





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EPA Issues Final Water Quality Trading Policy

On January 13, 2002, the Environmental Protection Agency issued its final Water Trading Policy. The final policy describes ways that water quality trading programs may be aligned with the Clean Water Act and implementing regulations, and describes elements of environmentally-sound trading programs. Water quality trading is a voluntary, incentive-based approach that can offer greater efficiency in restoring or protecting water bodies. Trading allows a source to meet its regulatory obligations by using pollutant reductions created by another party with lower pollution control costs. The EPA's final Water Quality Trading Policy offers guidance to states and tribes on developing and implementing water quality trading programs. The EPA supports implementation of water quality trading by states, interstate agencies and tribes where it:

- Achieves early reductions and progress towards water quality standards pending development of TMDLs for impaired waters.
- Reduces the cost of implementing TMDLs through greater efficiency and flexible approaches.
- Establishes economic incentives for voluntary pollutant reductions from point and nonpoint sources within a watershed.
- Reduces the cost of compliance with water quality-based requirements.
- Offsets new or increased discharges resulting from growth in order to maintain levels of water quality that support all designated uses.
- Achieves greater environmental benefits than those under existing regulatory programs. EPA supports the creation of water quality trading credits in ways that achieve ancillary environmental benefits beyond the required reductions in specific pollutant loads, such as the creation and restoration of wetlands, floodplains and wildlife and/or waterfowl habitat.
- Secures long-term improvements in water quality through the purchase and retirement of credits by any entity.
- Combines ecological services to achieve multiple environmental and economic benefits, such as wetland restoration or the implementation of management practices that improve water quality and habitat.

The EPA's policy supports trading of nutrients (*e.g.*, total phosphorus, total nitrogen) and sediment load reductions. The policy recognizes the potential for environmental benefits from trading of pollutants other than nutrients and sediments but believes that these trades may warrant more scrutiny. The policy does not support any trading activity that would cause a toxic effect, exceed a human health criterion or cause an impairment of water quality. The EPA does not support trading of persistent bioaccumulative toxic pollutants at this time.

The policy supports trading to improve or preserve water quality in a variety of circumstances. For example: in unimpaired waters, trading may be used to preserve good water quality by offsetting new or increased discharges of pollutants; in waters impaired by pollutants, trading may be used to achieve earlier pollutant reductions and progress towards water quality standards pending the development of a





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TMDL; and trading may be used to reduce the cost of achieving reductions established by a TMDL. The EPA policy does not support trading that delays implementation of an approved TMDL.

Further information may be found at: <http://www.epa.gov/owow/watershed/trading/tradingpolicy.html>.

Federal Register, Volume 68, Number 8, Monday, January 13, 2003, pp. 1608-1613 (36.2 KB [text file](#) or 60.3 KB [Adobe™ Acrobat™ file](#)).



EPA Finalizes Nutrient Criteria Technical Guidance Manuals

On January 6, 2003, the Environmental Protection Agency announced the availability of a final nutrient criteria technical guidance manual for estuaries and coastal marine waters. This document gives State and Tribal water quality managers and others guidance on how to develop numeric nutrient criteria for estuaries and coastal marine waters. The document does not contain site-specific numeric nutrient criteria for any estuary or coastal marine water; rather the guidance was developed to help States and Tribes establish nutrient criteria. States and Tribes are in the best position to consider site-specific conditions in developing nutrient criteria. While the guidance contains the EPA's scientific recommendations regarding defensible approaches for developing regional nutrient criteria, the guidance is not regulation. Thus it does not impose legally binding requirements on the EPA, States, Territories, Tribes, or the public. States, Territories, and authorized Tribes retain the discretion to adopt, where appropriate, other scientifically defensible approaches to developing regional or local nutrient criteria that differ from these recommendations.

Since extensive degradation of estuaries systems has been reported, the guidance manual describes four options for establishing reference conditions in estuaries (one option is presented for coastal waters). The manual also places greater emphasis on historical information because the reference condition of estuaries may be degraded, and estuaries, in particular, can seldom be classified by using a frequency distribution. States have used response variables such as dissolved oxygen, pH, and turbidity to reveal nutrient problems in their waters, but the root cause of eutrophication, as demonstrated by excess primary productivity, is typically nitrogen and phosphorus. For more effective prevention, it is important to measure the level and extent of the causal agents. The criteria are based directly on these primary causal elements of total nitrogen and phosphorus plus two early response variables. These are algal biomass (*e.g.*, chlorophyll-a for microalgae, dry mass for macroalgae) and water clarity, which most often indicate the early vegetative response to nutrient enrichment. Because many estuaries experience or may experience hypoxia, dissolved oxygen was added as an additional response variable.

Also on January 6, 2003, the EPA announced the finalization of nine Section 304(a) ecoregional nutrient criteria documents for lakes and reservoirs, and rivers and streams within specific geographic regions (ecoregions) of the United States. These documents serve as recommendations for States, Territories and authorized Tribes to use as they develop nutrient criteria to protect designated uses and adopt these criteria into water quality standards. The nine documents finalized represent nutrient criteria





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recommendations for lakes and reservoirs in ecoregions 3, 4, 5, and 14 and nutrient criteria recommendations for rivers and streams in ecoregions 1, 4, 5, 8, and 10.

The documents are available at: <http://www.epa.gov/waterscience/standards/nutrient.html>. For further information contact: Robert Cantilli, U.S. EPA, Health and Ecological Criteria Division (4304), Office of Science and Technology, Ariel Rios Building, 1200 Pennsylvania Ave., NW., Washington DC 2046.

Federal Register, Volume 68, Number 3, Monday, January 6, 2003, pp. 557-560 (24.7 KB [text file](#) or 47.6 KB [Adobe™ Acrobat™ file](#)).

Federal Register, Volume 68, Number 3, Monday, January 6, 2003, pp. 560-561 (10.8 KB [text file](#) or 36.8 KB [Adobe™ Acrobat™ file](#)).

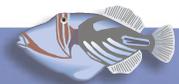


EPA Issues Proposed Rule On Procedures For Detection And Quantitation

On March 12, 2003, the Environmental Protection Agency proposed revisions to the procedures for determining the sensitivity of analytical (test) methods under the Clean Water Act (CWA). The EPA's method detection limit (MDL) and minimum level of quantitation (ML) are used to define test sensitivity under the CWA [40 CFR 136.2 Appendix B]. The MDL is used to determine the lowest concentration at which a substance is detected or is "present" in a sample. The ML appears in many EPA methods and has been used to describe the lowest concentration of a substance that gives a recognizable signal, or as a quantitation limit. The proposed revisions include clarifications and improvements that are based on a recent EPA assessment of the MDL and the ML and of alternative approaches for defining test sensitivity, peer review of the EPA's assessment, and earlier stakeholder comments on the existing MDL procedure. The proposed rule also revises the definition of the MDL to reflect the proposed revisions to the procedure.

Definition of the Detection Limit:

Section 136.2(f) currently defines the term "detection limit" to mean "the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure set forth at appendix B of this part." The EPA is proposing to revise Section 136.2(f) to explicitly equate the term "detection limit" with the "method detection limit" and to reflect the proposed revisions to the MDL procedure at Appendix B as follows: "Detection limit means the method detection limit (MDL), as determined by the procedure set forth at Appendix B of this part. The MDL is an estimate of the measured concentration at which there is 99% confidence that a given analyte is present in a given sample matrix." The EPA also is proposing to revise the definition of the Method Detection Limit included in Appendix B as follows: "The MDL is an estimate of the measured concentration at which there is 99% confidence that a given analyte is present in a given sample matrix." The MDL is the concentration at which a decision is made regarding whether an analyte is detected by a given analytical method. The EPA also is requesting comment on an





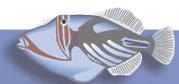
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alternative approach in which the term limit of detection would be defined at Section 136.2 as “the critical value, which is the concentration at which there is 99% confidence that a given analyte is present in a given sample matrix,” and the method detection limit would be defined as “the procedure set forth in Appendix B of this part, which can be used to estimate the limit of detection (*i.e.*, critical value).”

Technical Revisions to the MDL Procedure:

The notice proposes several technical revisions to the MDL procedure at 40 CFR Part 136, Appendix B. The proposed rule would:

- Revise the definition of the MDL to replace the term “minimum concentration” with the term “estimate of the measured concentration” and replace the phrase “greater than zero” with the phrase “present in a given sample matrix.”
- Expand the Scope and Application discussion to recognize that there are a variety of purposes and analytical methods for which the MDL procedure may be employed.
- Revise three of the four considerations for estimating the detection limit (see Step 1 of the current MDL procedure and Section 4.3 of the proposed revisions), and suggest that the method-specified MDL can be used as the initial estimate when performing an MDL study to verify laboratory performance or to demonstrate that the MDL can be achieved in a specific matrix.
- Revise the specifications for establishing the test concentration range according to the intended application of the MDL as follows: (1) If verifying a published MDL, the test concentration should be no more than five times the published MDL; (2) if verifying an MDL to support a regulatory objective or the objective of a study or program, the test concentration should be no more than one third the compliance or target limit; (3) if determining an MDL for a new or revised method, the test concentration should be no more than five times the estimated detection limit; and (4) if performing an iteration, the test concentration should be no more than five times the MDL determined in the most recent iteration.
- Delete the calculation of a 95% confidence interval estimate for the MDL. The EPA has determined that these calculations are neither routinely performed by laboratories, nor are the results employed by regulatory agencies, including the EPA.
- Revise the discussion of the iterative procedure to require that the iterative procedure be used to verify the reasonableness of the MDL when developing an MDL for a new or revised method or when developing a matrix-specific MDL, but that it remain optional when determining an MDL to verify a method-, matrix-, program-, or study-specific MDL.
- Add a new section (Section 4.9) to the MDL procedure to address the treatment of suspected outliers.
- Delete the discussion of analysis and use of blanks included in Section 4(a) of the current procedure.
- Revise the optional pre-test described in Section 4(b) of the current procedure.





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Definition and Procedure for Determining the Minimum Level of Quantitation:

The proposal requests comment on whether to add the following definition of the ML to Appendix B of 40 CFR Part 136: “the lowest level at which the entire analytical system gives a recognizable signal and acceptable calibration point for the analyte, as determined by the procedure set forth at Appendix B of this part. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence.” In addition to the definition, the EPA requests comment on whether Appendix B should contain an explicit explanation of the calculation of the ML from an MDL value determined using the revised MDL procedure, including a table of multiplier values that may be used when the MDL value is calculated from other than seven replicate analyses. The EPA is also requesting comment on whether it should encourage or require that laboratories periodically demonstrate target analyte recovery at the ML by preparing and analyzing a reference matrix sample spiked at the ML using all sample handling and processing steps described in the method.

Acceptance of Test Methods Employing Alternative Detection and Quantitation Procedures:

The proposed rule would allow use of alternative detection and quantitation procedures to establish detection and quantitation limits in an analytical method, provided that the resulting detection and quantitation limits meet the sensitivity needs for the specific application. The EPA will consider test methods that include these procedures for use in CWA programs when such methods are available. If ASTM International is successful in developing single-laboratory adaptations of the Interlaboratory Detection Estimate (IDE) and Interlaboratory Quantitation Estimate (IQE) that may be used to verify the ability of a given laboratory to achieve the IDE and IQE, the EPA also may consider those single-laboratory approaches in evaluating both method and laboratory performance.

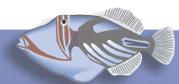
Comments must be postmarked, delivered by hand, or electronically mailed on or before July 10, 2003. For further information contact: William Telliard, Engineering and Analysis Division (4303T), Office of Science and Technology; Office of Water; U.S. Environmental Protection Agency; Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460; telephone (202) 566-1061; or e-mail at telliard.william@epa.gov. Copies of the proposed rule and related documents are available at: <http://www.epa.gov/edocket>.

Federal Register, Volume 68, Number 48, Wednesday, March 12, 2003, pp. 11770-11790 (153 KB [text file](#) or 135 KB [Adobe™ Acrobat™ file](#)).



EPA Withdraws 2000 TMDL Rule

On March 13, 2003, The Environmental Protection Agency withdrew a controversial rule that would have revised the EPA’s program for cleaning up impaired waters – the July 2000 final Total Maximum Daily Load (TMDL) rule. The 2000 rule was determined to be unworkable based on reasons described by more than 34,000 comments, and was challenged in court by some two dozen parties. The Congress





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stopped the rule's implementation, and the National Academy of Sciences' National Research Council found numerous drawbacks with the July 2000 rule. An overwhelming majority of comments (more than 90 percent) supported the EPA's proposed action to withdraw the July 2000 rule. These comments came from a broad cross-section of stakeholders, including agricultural and forestry groups, business and industry entities and trade associations, State agencies, professional associations, academic groups and private citizens.

[EPA Press Release, March 13, 2003.](#)

Federal Register, Volume 68, Number 53, Wednesday, March 19, 2003, pp. 13607-13614 (50.2 KB [text file](#) or 118 KB [Adobe™ Acrobat™ file](#)).



House Subcommittee Holds Hearing On DoD Environmental Legislative Proposals

On March 13, 2003, the Readiness Subcommittee of the House Armed Services Committee heard testimony on environmental legislative proposals from the Department of Defense, federal environmental agencies and other interested stakeholders to consider their views on environmental legislative proposals submitted by the Department of Defense last week. These proposals include amendments to the Endangered Species Act, the Marine Mammal Protection Act, the Clean Air Act, the Comprehensive Environmental Restoration, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA). The focus of the hearing was to examine whether proposals submitted to the subcommittee by the DoD are the appropriate and responsible solutions to what is considered to be a significant encroachment problem. The Department of Defense has taken the position that mandatory compliance with Federal environmental laws has an increasingly adverse impact on military readiness.

On April 19, 2002, the Department of Defense sent legislative language to Congress recommending clarifications to certain environmental statutes entitled "Readiness and Range Preservation" (see *Marine Environmental Update*, [Vol. FY02, No. 3](#), for information on testimony presented during the Readiness Subcommittee's 2002 hearing on the issues). The proposed clarifications were put together to help solve some of the training and testing issues the DoD deals with on its operational ranges. The provisions were narrowly focused on readiness activities – the training testing and operations related to combat. The provisions would not affect the wide range of DoD activities that do not relate to combat and the DoD's cleanup responsibilities would remain unchanged.

House Armed Services Committee, [Opening Statement by Chairman Hefley](#), Subcommittee on Military Readiness, March 13, 2003.

[Statement by the Honorable Raymond F. DuBois, Jr., Deputy Under Secretary of Defense for Installations and Environment, Department of Defense, before the House Armed Services Committee, Subcommittee on Military Readiness, U.S. House of Representatives, March 13, 2003.](#)





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[Statement by the Honorable Nelson Gibbs, Assistant Secretary of the Air Force for Installations, Environment & Logistics, Department of the Air Force, before the House Armed Services Committee, Subcommittee on Military Readiness, U.S. House of Representatives, March 13, 2003.](#)

[Statement by the Honorable Raymond J. Fatz, Deputy Assistant Secretary of the Army \(Environment, Safety and Occupational Health\), Department of the Army, before the House Armed Services Committee, Subcommittee on Military Readiness, U.S. House of Representatives, March 13, 2003.](#)

[Statement by the Honorable Wayne Army, Deputy Assistant Secretary of the Navy \(Installations and Facilities\), Department of the Navy, before the House Armed Services Committee, Subcommittee on Military Readiness, U.S. House of Representatives, March 13, 2003.](#)

[Statement of John Peter Suarez, Assistant Administrator, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, before the House Armed Services Committee, Subcommittee on Military Readiness, U.S. House of Representatives, March 13, 2003.](#)

[Statement of Julie MacDonald, Special Assistant to Assistant Administrator for Fish, Wildlife and Parks, U.S. Department of the Interior, before the House Armed Services Committee, Subcommittee on Military Readiness, U.S. House of Representatives, March 13, 2003.](#)

[Statement of William Hogarth, Assistant Administrator for Fisheries, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, before the House Armed Services Committee, Subcommittee on Military Readiness, U.S. House of Representatives, March 13, 2003.](#)



NMFS To Designate Southern Resident Stock Of Killer Whales As Depleted Under MMPA

On January 30, 2003, National Marine Fisheries Service (NMFS) proposed to designate the Southern Resident stock of killer whales as depleted under the Marine Mammal Protection Act (MMPA) after determining that the stock is below its Optimal Sustainable Population (see *Marine Environmental Update*, [Vol. FY01, No. 4](#)). The NMFS initiated consultation with the Marine Mammal Commission and has received initial support for the proposed action. For further information contact Mr. Garth Griffin, Northwest Regional Office, NMFS, Portland, OR; telephone (503) 231-2005, or Dr. Thomas Eagle, Office of Protected Resources, NMFS, Silver Spring, MD; telephone (301) 713-2322, ext. 105.

Federal Register, Volume 68, Number 20, Thursday, January 30, 2003, pp. 4747-4750 (20.4 KB [text file](#) or 36.8 KB [Adobe™ Acrobat™ file](#)).





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SERDP PRISM Field Effort Update

In the second week of a multi-agency field effort (see *Marine Environmental Update*, [Vol. FY03, No. 1](#)) sampling was carried out at two sites in Pearl Harbor. The Pathway Ranking for In-place Sediment Management (PRISM) study, is led by the Space & Naval Warfare Systems Center (SPAWAR) San Diego (SSC San Diego) and funded by the Strategic Environmental Research and Development Program (SERDP). It seeks to examine the transport of contaminants in near-shore marine sediments via multiple physical, chemical and biological pathways. The ultimate goal is to provide field insight on how contaminants behave in near-shore sediments, and how they can be cost-effectively but protectively managed. In this week of the field effort, two Benthic Flux Sampling Devices were deployed to provide direct quantification of diffusive fluxes of contaminants from the sediments. New seepage meter technology (UltraSeep) that was jointly developed by SSC San Diego and Cornell University was used to evaluate advective fluxes of contaminants. Sediment traps were deployed at all stations to evaluate sedimentation rates and the influx of contaminants with settling particles. Time-lapse sediment profile imaging was conducted to evaluate bioturbation activity over a 24-hour period. In addition, current meters were deployed to begin a one-month evaluation of water velocities that will be used to estimate erosive potential of the sediments. Ultimately, these individual studies will be integrated so that these disparate processes can be evaluated in common terms in support of sediment management.



The *Marine Environmental Update* is produced quarterly as an information service by the Marine Environmental Support Office (MESO) to inform the Navy environmental community about issues that may influence how the Navy conducts its operations. The contents of this document are the responsibility of the Marine Environmental Support Office and do not represent the views of the United States Navy. References to brand names and trademarks in this document are for information purposes only and do not constitute an endorsement by the United States Navy. All trademarks are the property of their respective holders. Approved for public release; distribution is unlimited.

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