January 3, 2002

VIA FACSIMILE AND REGULAR MAIL

Ms. Shirley J. Conard
Arizona Department of Environmental Quality
3033 N. Central Ave.
MO401A-422
Phoenix, Arizona 85012-2809

Re: ***Arizona Mining Association's Response to U.S. EPA Region 9's October 5, 2001 Comments on the Proposed Impaired Water Identification Rule (7 A.A.R. 3648, August 24, 2001)***

Dear Ms. Conard,

The Arizona Mining Association ("AMA") has reviewed the October 5, 2001 comments by U.S. Environmental Protection Agency Region 9 ("EPA Region 9") concerning the Arizona Department of Environmental Quality ("ADEQ") proposed rule for identification of impaired waters as required by Section 303(d) of the Clean Water Act and A.R.S. § 49-232 ("proposed rule"). Although we have certain outstanding concerns about the proposed rule, which were raised in our comments, the AMA generally believes that ADEQ has developed a listing methodology and process that will lead to scientifically defensible listing decisions the public can readily understand. Therefore, the AMA has serious concerns with EPA Region 9's comments, which criticize most of the key aspects of the proposed rule. We want to share these concerns with ADEQ at this time, before the agency takes any action in response to the EPA Region 9 comments.

The AMA's member companies are ASARCO Incorporated (a wholly owned subsidiary of Grupo Mexico S.A. de C.V.), BHP Copper Inc., and Phelps Dodge Corporation. Many facilities owned by AMA member companies are located on or near surface waters in Arizona and in many instances operate pursuant to individual and/or general NPDES permits for discharges to such waters. Some of these waters have been identified as impaired on past Section 303(d) lists, or as not attaining standards on past 305(b) lists. Consequently, the AMA has a strong interest in, and actively participated in development of, the proposed rule.

EPA Region 9 states in its letter that its comments are intended to point out aspects of the proposed rule that appear to be inconsistent with federal statutory or regulatory requirements and could lead to decisions by ADEQ concerning the status of a waterbody that EPA Region 9 would

disapprove. However, in many of these instances as discussed below, EPA Region 9's rationale is not supported by the Clean Water Act or its implementing regulations, nor is it consistent with national federal guidance or other decisions by EPA Headquarters (or other EPA Regions) about State methodologies for making decisions about waterbodies. Therefore, ADEQ should not make changes to the proposed rule to reflect EPA Region 9's comments. The following comments explain our concerns with EPA Region 9's comment letter on the proposed rule.

I. Excluding Data and Information That Does Not Meet Minimum Requirements for Data Quality and Representativeness

In several areas of its comment letter, EPA Region 9 states its concern that the proposed rule is inconsistent with federal requirements because by establishing minimum requirements for data quality and representativeness, it excludes data and information from consideration in making determinations about impairment. EPA Region 9 points to 40 CFR 130.7(b)(5) as support for its comment that ADEQ must consider all data and information, and thus cannot establish data quality and quantity requirements. EPA Region 9 has misinterpreted 40 CFR 130.7(b)(5), which provides:

> Each State shall *assemble and evaluate* all existing and readily available water quality-related data and information to develop the list required by §§ 130.7(b)(1) and 130.7(b)(2). ....

(emphasis added). The regulation does not require States to *apply* all data and information, regardless of quality or representativeness, when making impairment decisions; it simply provides that States must assemble and evaluate all data and information. In addition, the language addressing the assembly and evaluation of data in 40 CFR 130.7(b)(5) would be meaningless if States were not able to reject data after evaluation. As explained in the preamble to the proposed rule, ADEQ begins the listing process by "seeking all existing and readily available surface water quality data and information collected from sources, including federal and state agencies (including EPA's STORET database), other programs within the Department, tribes, local governments, watershed councils, private and public organizations, volunteer monitoring groups, and private individuals." 7 A.A.R. 3654. The proposed rule then sets forth the methodology ADEQ will use to *evaluate* whether the data and information it has collected are credible and relevant to accurately indicate the attainment/impairment status of waterbodies. *See* 7 A.A.R. 3655.

Rather than recognizing ADEQ's effort to develop a methodology that will result in scientifically-supported listing decisions that can be readily understood by the public, EPA Region 9 appears to be taking the position that ADEQ must use all data and information, and states it would only support not using data "only in individual cases where metadata show a high likelihood that the data or information is unreliable." Once again, EPA Region 9 has misapplied federal regulations. 40 CFR 130.7(b)(6) requires States to provide documentation to support decisions to list or not list waterbodies. This documentation must include:

(i) A description of the methodology used to develop the list; and
(ii) A description of the data and information used to identify waters, including a description of the data and information used by the State as required by § 130.7(b)(5); and
(iii) A rationale for any decision to not use any existing and readily available data and information for *any one of the categories of waters as described in § 130.7(b)(5)*; and
(iv) Any other *reasonable* information requested by the Regional Administrator. *Upon request* by the Regional Administrator, each State must demonstrate good cause for not including a water or waters on the list. Good cause includes, but is not limited to, more recent or accurate data; more sophisticated water quality modeling; flaws in the original analysis that lead to the water being listed in the categories in § 130.7(b)(5); or changes in conditions, e.g., new control equipment, or elimination of discharges.

(emphasis added). The regulation only requires States to provide a rationale for a decision not to use data and information. The requirements of the regulation contrast sharply with EPA Region 9's statement that ADEQ must use data and information unless it makes a case-specific determination that a certain piece of data or information is unreliable. Further, the rationale required by 40 CFR 130.7(b)(6)(iii) concerns decisions to exclude an entire category of data and information listed in 40 CFR 130.7(b)(5)[1]. It does not require a case-by-case justification for why individual data points or pieces of information were not used. 40 CFR 130.7(b)(6)(iv) does allow EPA to make requests concerning a State's decision about individual waterbodies, but such requests must be made at the time EPA is reviewing a State's list, and must be reasonable. Thus, EPA Region 9's demand that ADEQ use all data and information absent a specific finding of unreliability is simply unsupported by federal regulations.

EPA Region 9's position also is inconsistent with federal guidance on listing decisions. In the "Guidance for 1994 Section 303(d) Lists[2]," EPA provided:

> States should use the *best available* information in making section 303(d) listing determinations.

(emphasis added). The "2002 Integrated Water Quality Monitoring and Assessment Report Guidance[3]" also recognizes that States should evaluate data quality and quantity when making assessment and listing decisions. It recommends that States develop a five-part list concerning water quality. Part 3 of the list is meant for waters for which States have insufficient or no data

[1] These categories include: waters identified as "partially meeting, "not meeting," or "threatened" on the 305(b) report; waters for which dilution calculations or predictive models indicate standards nonattainment; waters for which organizations or individuals have reported quality problems; and waters identified as impaired or threatened by nonpoint sources in 319 reports.
[2] November 26, 1993.
[3] November 19, 2001.

and information to make attainment decisions. The guidance states that waters should be placed in this category if data or information are not available to determine attainment or impairment, "consistent with the requirements of the state's or territory's assessment and listing methodology." Thus, EPA has clearly recognized that States should develop and use methodologies to determine whether existing data and information support impairment decisions.

Another source of information is the draft "Consolidated Assessment and Listing Methodology" ("CALM guidance") [4], which EPA anticipates issuing in final form shortly to support States' efforts to develop 2002 water quality reports and lists of impaired waters. In the CALM guidance, EPA is quite clear about the need to evaluate data:

> [N]ot all data are of equal value for assessing water quality standards attainment/impairment. Results or chemical data, or any other type of data, analysis are of limited value unless they are accompanied by documentation about sample collection, analytical methods and quality control protocols. Poorly documented monitoring results may provide an indication of potential problems, corroborate other data and information, or trigger additional monitoring, but they are unlikely to support an attainment or impairment decision if they fail to meet accepted data quality objectives. ....
>
> Documenting data quality requirements and data evaluation procedures is a critical element that states must address.

Section 3.2, p. 3-8. To define data quality, the draft guidance goes on to provide:

> EPA encourages states, territories, interstate commissions, and authorized tribes to use the data quality objectives process to define minimum quality data requirements. This includes information on appropriate sample size and monitoring design, sample collection and handling protocols, analytical methods and detection limits, quality control procedures, and data management.

Section 3.2.1, p. 3-9. EPA's guidance not only allows, but encourages, States to develop methodologies establishing minimum requirements concerning data quality and quantity.

Florida recently adopted a rule that established an assessment and listing methodology similar to the proposed rule. Like ADEQ's rule, the Florida rule is based on a State statute. Also, like ADEQ's rule, the Florida rule sets clear ground rules for data quality and representativeness and appropriate statistical analysis procedures. The Florida Department of Environmental Protection worked very closely with EPA Headquarters and Region 4 during the development of its rule, and after resolving certain issues, EPA has accepted the Florida rule as an appropriate methodology on which to base listing decisions. Thus, it is clear that EPA does not and should not object to State listing methodologies that evaluate data and information based on quality and representativeness as recommended and encouraged in EPA guidance.

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[4] April 20, 2001.

In addition to its general concerns about consideration of useful data and information, EPA Region 9 commented on specific provisions in the proposed rule concerning data quality and representativeness. The AMA has the following concerns as to those specific comments:

A. Data Quality Documentation Requirements

EPA Region 9 commented that it believes the elements required by ADEQ to be contained in a quality assurance plan ("QAP") are too restrictive. In particular, the comments question why entities must provide information concerning health and safety plans and waste disposal methods. EPA Region 9 also stated that it does not believe there is a reason to require entities to maintain monitoring records for the duration of a listing based on the monitoring data. These comments seem to be focused on whether the proposed rule places too great a burden on entities such that they will be discouraged from collecting and reporting water quality data and information. However, the specific requirements noted by EPA Region 9 do not pose any true hardship on monitoring entities. Furthermore, the requirements address reasonable concerns within the purview of ADEQ. ADEQ is simply trying to ensure appropriate health and safety objectives are met and waste is properly disposed, and to ensure that records concerning data and information are kept for future reference. Such objectives are entirely reasonable, and EPA Region 9 has absolutely no legal basis to object to these provisions in the proposed rule.

B. Weighing of Data Based on Quality

EPA Region 9 recommends that rather than establishing data quality and representativeness requirements, ADEQ instead simply place a greater reliance on the higher quality data. However, the specific procedures specified in a State's methodology concerning evaluation of data and information are clearly within the State's authority to determine. EPA Region 9 has no basis to dictate how ADEQ evaluates data and information, and is simply trying to unduly influence a state process without justification. Moreover, ADEQ's proposed rule does establish several specific procedures for weighing the relative worth of data. First, proposed R18-11-603(3) provides several considerations for resolving conflicts between data and information, including the reliability of the sampling and analysis procedures, the age of the data and the representativeness of the data. Second, proposed R18-11-604(B)(1) establishes a weight-of-evidence approach for evaluating different types of data to make impairment decisions. Although EPA Region 9 has criticized this approach in other portions of its comments, the approach is well-reasoned and scientifically justified, as discussed further below.

C. Rationale for Assessment Methods

In a few areas of its comments, EPA Region 9 states that ADEQ must provide a technical, scientific, legal or analytical rationale to justify its assessment methods. However, in the preamble to the proposed rule, ADEQ provided two sound rationales for its credible data requirements. First, the methods are meant to ensure that listing decisions are based on sufficient data:

> Listing decisions not supported by credible data are potentially flawed. An incorrect finding that a segment is not impaired allows a potential human health threat or environmental degradation to go unrecognized. Incorrectly placing a segment on the 303(d) List results in the unnecessary expenditure of public resources.

7 A.A.R. 3655. Secondly, ADEQ states that the requirements "level the playing field" between all entities that collect water quality data and information. Because all entities will be required to meet the same standards for collecting and analyzing data, second-guessing of data results will be substantially minimized.

D. Statistical Analysis Procedures: Method Detection Limits, Statistical Outliers, and Specifications for Field Sample Measurements

EPA Region 9 raised several concerns about the statistical analysis procedures in the proposed rule. Concerning standards that are lower than the method detection limit ("MDL"), EPA Region 9 believes it is invalid to assume a value that is less than the MDL meets the standard. This concern is unjustified for several reasons. First, the proposed rule does not specify that values below any MDL shall be treated as meeting the standards. Proposed R18-11-603(1)(b) states that if an entity does not use an analytical method with the lowest MDL, ADEQ will assume that result is equal to the MDL when making assessment decisions. If an entity does use an analytic method with the lowest MDL, but it is still greater than the applicable standard, ADEQ shall either consider that result to be equal to the MDL or assume the standard is met for results below the MDL and apply appropriate statistical analysis to the entire data set. Thus, it cannot be said that the proposed rule specifies that values below any MDL will be treated as meeting standards. Furthermore, Florida's assessment and listing rule makes similar provisions concerning data results below the MDL, and EPA expressed no concerns with this approach. *See* F.A.C. 62-303.320(9).

Federal regulations also allow States to establish compliance requirements at detection levels when effluent limitations or criteria are below detection levels. The "Technical Support Document for Water Quality-based Toxics Control" ("TSD")[5] sets forth technical guidance for assessing and regulating discharges of toxic pollutants. The TSD provides that when limits are below the applicable analytical detection level, the permit should specify that compliance is achieved if samples are below the specified detection level. EPA also recommends that the compliance level be defined as the minimum level ("ML"), which is greater than the MDL. TSD, p. 111. EPA carried this recommendation forward when promulgating the water quality standards and implementation procedures for the Great Lakes System. In "Questions and Answers on the Great Lakes Water Quality Guidance Set 2," ("GLI Q&A") [6] EPA provided the following answer in response to a request that it clarify the compliance status of a discharger when the discharge is detected below the level of quantification ("LOQ") (which is equal to the ML):

[5] EPA/505/2-90-001, March 1991.
[6] March 20, 1996.

> The Guidance provides flexibility for the permitting authority to evaluate compliance with [Water Quality Based Effluent Limits ("WQBELs")] below the minimum quantification level and EPA will defer to State or Tribal procedures in this regard. This procedure should be specified in the permit. For example, if the NPDES permit indicates that, for purposes of compliance with a specified WQBEL, the discharger shall use a particular analytical method with an associated LOQ, and the permitting authority specifies that analytical results below the LOQ shall be deemed to be below the WQBEL, any analytical results based on that method below the LOQ would be deemed to be in compliance with the permit requirements where compliance is being assessed based on a single sample. ....
>
> In the case of determining compliance with average limitations, permitting authorities shall use applicable State and Tribal procedures to average and account for monitoring data. ....

GLI Q&A, p. 28. It is clear that EPA meant for States to determine the most appropriate method to account for analytical results below levels that can be accurately quantified. Moreover, ADEQ has set forth a procedure that is more protective than EPA guidance, because the proposed rule established the MDL, and not the ML, as the applicable level. Therefore, EPA Region 9 is simply not justified in objecting to the proposed rule.

EPA Region 9 is also concerned that the provision in the proposed rule concerning consideration of statistical outliers is scientifically unsupported and inconsistent with standard statistical analysis practices. EPA Region 9 seems to have misinterpreted the proposed rule. The provision in proposed R18-11-603(4)(c) does not state that all statistical outliers are invalid, but simply that statistical outliers shall be evaluated to determine whether they do not represent valid measures of water quality, and only then, will they be excluded from consideration. Florida's assessment and listing rule contains a similar provision, which was found to be acceptable by EPA. *See* F.A.C. 62-303.320(6).

Finally, EPA Region 9 is concerned with the proposed rule's provision that when a result shows an exceedance that is within the manufacturer's specifications for accuracy, the result is assumed to meet the applicable standard. In this case, EPA Region 9 appears to be misinterpreting the proposed rule to provide an unjustified assumption. In the preamble to the proposed rule, ADEQ explains that this assumption is limited to certain conventional parameters, including only pH, dissolved oxygen, turbidity and temperature, and that over short periods of time, aquatic organisms can generally tolerate or adapt to small fluctuations with the accuracy range of the field test methods.

II. <u>Assessment of Data to Determine Exceedances of Numeric Criteria</u>

EPA Region 9 has raised several concerns regarding the proposed rule's methodology for assessing data to determine whether numeric criteria exceedances indicate waterbody

impairments. The general theme of EPA Region 9's comments is the concern that the proposed rule is unreasonably stringent because the requirements for data quality and representativeness might result in a waterbody not being listed as impaired. It is not realistic to expect that any assessment and listing methodology will accurately identify all impaired waters. However, the proposed rule lays out a process that should lead to reasoned decision-making, ensuring that the list of impaired waters is largely accurate and doesn't require development of TMDLs when they are not warranted. The AMA's specific concerns with EPA Region 9's comments follow.

A. Data Representativeness

We are very concerned with EPA Region 9's statement that it "cannot support eliminating data and information sources from consideration in the assessment process simply because they are not demonstrated to be 'representative.'" This comment does not comport with basic principles of sound science. We find it difficult to believe that EPA Region 9 is really suggesting that States should use data that are not representative, and are further troubled that EPA Region 9 seems to be interfering with a decision that should be left entirely to ADEQ. It also conflicts with the previously cited EPA guidance concerning development of methodologies that appropriately consider data quality and representativeness. In the draft CALM guidance, EPA expressly provides that States should evaluate data in the first instance to determine if appropriate procedures were used and quality assurance/quality control measures were in place, and if samples were collected under appropriate conditions in comparison to applicable water quality standards. It then goes on to recommend more detailed evaluation procedures. p. 3-10. Thus, it simply cannot be the case that ADEQ is prohibited from establishing a process to determine the representativeness of data and information.

B. Temporal and Spatial Independence

The proposed rule provides that samples will be considered temporally independent if sampling events are separated by at least seven days, and spatially independent if sampling locations are at least 200 meters apart. EPA Region 9 has expressed concern that the independence requirements are overly stringent. This position is inconsistent with previous EPA decisions concerning State listing methodologies. EPA accepted Florida's determinations concerning independence, which are identical to the proposed rule. *See* F.A.C. 62-303.320(4). EPA Region 9 has provided no technical basis for its rejection of these determinations.

EPA Region 9 also stated that the averaging provisions in proposed R18-11-604(C)(1)(c) for samples that are not spatially or temporally independent appear to conflict with Arizona water quality standards. These provisions only apply to how ADEQ will consolidate dependent samples. They do not directly address attainment decisions, thus it is not necessary that they conform to the data considerations for Arizona water quality standards. Furthermore, the proposed rule, as well as the process of establishing numeric water quality criteria, are already quite conservative (*i.e.*, protective). Making dependent samples meet the requirements for interpretation of state standards would result in an overly conservative listing determination process.

C. Binomial Approach to Assessing Numeric Data

The proposed rule specifies that at least ten spatially independent samples are preferred to make a determination concerning impairment. Samples that meet this requirement are analyzed according to a binomial approach that accounts for the probability of errors. EPA Region 9's comments express several concerns with these provisions. Concerning the minimum sampling size recommendation of ten data points, EPA Region 9 states that ADEQ has not provided a "scientifically-based rationale for the suggested minimum number of samples and sampling events needed to carry out an assessment." This statement is contrary to EPA's draft CALM guidance, which provides:

> Sample size is an important element of data quality. In general, statistical tests have a high level confidence with 30 or more samples.

Section 3.2.1, p. 3-9.

EPA Region 9 also states that it is inappropriate for ADEQ to provide a binomial distribution that determines with a 90 percent confidence level that the actual frequency of a standard exceedance is at least 10 percent. EPA Region 9 has two concerns with this approach: it is biased toward minimizing findings that a waterbody is impaired when it isn't actually impaired, and it isn't consistent with EPA guidance concerning allowable rates of water quality standards exceedances. However, the same approach was specified in Florida's assessment and listing methodology rule (*see* F.A.C. 62-303.420(2)), and EPA expressly determined that a confidence level of 90 percent is scientifically-based and acceptable to EPA.[7] EPA Region 9 did note that ADEQ did not follow Florida's approach exactly, but the only issue raised concerned following a different approach for delisting waterbodies, which has nothing to do with the basic approach for listing waterbodies. Issues related to delisting are addressed below.

In our comments to ADEQ, the AMA stated that even the binomial approach set forth in the proposed rule may not go far enough to minimize the frequency of inaccurately determining that waters are impaired when they actually are not impaired (known as "Type 1 errors"). To account for statistical errors, we recommended that ADEQ increase the minimum number of samples required.

In its letter, EPA Region 9 did recognize that the proposed rule only establishes a preference for data sets of 10 or more samples. If there are fewer than 10 data points, an impairment decision can be made if three temporally independent samples exceed certain chronic criteria, more than one temporally independent sample exceeds an acute criterion in a three-year period, or more than one sample exceeds certain long-term average criteria. *See* proposed R18-11-604(C)(3)(b). This provision allows ADEQ to make impairment determinations based on less than 10 data points when it is clear that a waterbody exceeds standards. ADEQ made this exception to the binomial approach for smaller data sets because of the higher probability of

[7] "Resolution of Comments by the U.S. EPA on the Florida Draft Rule – Identification of Impaired Surface Waters (IWR 62-303), April 23, 2001.

errors in data sets of less than 10 points. However, EPA Region 9 is concerned that these same principles do not apply to data sets of 10 or more samples. It is within ADEQ's discretion in establishing assessment procedures to provide the exception for small data sets. Such an exception is not needed for larger data sets, and would negate the purpose of establishing the binomial approach. EPA Region 9 has no basis for second-guessing the State's technical rationale.

III. Assessment of Data to Determine Exceedances of Narrative Criteria

The proposed rule provides that in accordance with Arizona Revised Statutes ("A.R.S.") § 49-232(F), ADEQ must adopt an implementation procedure to specify an objective basis for determining violation of narrative standards before a waterbody may be listed based on an exceedance of a narrative criterion. EPA Region 9 is concerned that this provision conflicts with 40 CFR 130.7(b)(3), which provides that States must make assessments based on all applicable standards, including narrative criteria. This interpretation of federal regulation is inconsistent with EPA guidance. EPA's "Guidance: Use of Fish and Shellfish Advisories and Classifications in 303(d) and 305(b) Listing Decisions[8]," which addresses how States should interpret narrative human health criteria, provides:

> EPA recommends States, Territories, and authorized Tribes translate the applicable narrative criteria on a site-specific basis or adopt site specific numeric criteria ....

The draft CALM guidance makes a similar statement:

> EPA encourages states, territories and authorized tribes to use chemical data to interpret narrative criteria, however, these jurisdictions should develop implementation procedures that explain how different types of chemical data are used to make attainment/impairment decisions based on narrative criteria.

Section 3.1.2, p. 3-8. The proposed rule simply implements EPA's recommendation; thus the basis for EPA Region 9's concern is unclear.

EPA Region 9 also is concerned that proposed R18-11-604(B)(2), which would require ADEQ to provide justification that numeric criteria are insufficient to protect a waterbody if it determines impairment based on a narrative criteria, provides a substantial barrier to interpreting narrative standards. However, the proposed rule does nothing more than require documentation to support a listing decision, as required by 40 CFR 130.7(b)(6). EPA Region 9's position on this issue seems inconsistent with other comments concerning ADEQ's justification to supporting its listing decisions.

Lastly, EPA Region 9 states that the proposed rule provides no information about how ADEQ will consider non-traditional data (sediment, animal tissue, physical and biological data)

[8] October 24, 2000.

and information (advisories, fish kills, taste and odor problems). This comment ignores the provisions in R18-11-604(B)(1)(c) and (d), which requires ADEQ to consider the role of soil, geology, hydrology, flow regime, biological communities, geomorphology, climate, natural processes, anthropogenic influences, and other available water quality or related information when making impairment determinations.

IV. Threatened Waters

EPA Region 9 has noted that the proposed rule does not make any provisions for listing waters that are currently meeting standards, but are not expected to meet standards, as required by 40 CFR 130.2(j) and 130.7(b)(1). EPA Region 9 cites to the "National Clarifying Guidance for 1998 State and Territory Section 303(d) Listing Decisions[9]," which provides that States should list waterbodies that are expected to exceed standards before the next deadline for submission of 303(d) lists. ADEQ developed the new rule when it appeared that EPA's 2000 rule revising the TMDL regulations would become effective. The 2000 revisions to the federal TMDL rule would have removed the requirement that States must list threatened waters. However, because that rule's effectiveness has been delayed and EPA is reconsidering its revisions, we recognize that the currently effective federal regulation requires ADEQ to list threatened waters.

We believe that the federal rule should be changed to eliminate the requirement to list threatened waters. This requirement is beyond EPA's authority under the Clean Water Act. Section 303(d)(1) of the Act requires States to "identify those waters . . . for which the [technology based] effluent limitations . . . *are not* stringent enough to implement any water quality standard applicable to such waters." (Emphasis added.) The use of the phrase "are not" indicates Congress' intent that EPA focus on waters that *are not* meeting standards. There is absolutely no indication that Congress intended for EPA to expand beyond that group of waters to target other waters that are now meeting standards. In fact, these waters are already addressed under another CWA program: antidegradation. That program is specifically intended to focus on waters that are currently meeting standards, with the goal of preventing or limiting further degradation. If that program is applied, "threatened" waters will not become impaired. Therefore, threatened waters are not appropriate for coverage under the TMDL program. Although, current EPA rules require their listing, ADEQ should reassess this issue when the reconsidered TMDL rules are issued by EPA. That is scheduled for spring 2003.

V. Weight-of-Evidence Approach

The proposed rule adopted a weight-of-evidence approach, in which multiple types of data are evaluated and balanced according to their relative worth in determining impairment. In its comments on the proposed rule's weight-of-evidence approach, EPA Region 9 states that "[w]ater quality standards must be applied independently for listing assessment purposes." EPA Region 9 provides no regulatory justification for this statement, and in fact, it is simply relying on an EPA policy of independent applicability that is not supported by regulation, and is contrary

[9] August 17, 1997.

to principles of sound science. By setting a process for how different types of data will be evaluated with each other, ADEQ is simply interpreting its water quality standards, which is uniquely within the State's judgment to determine. Thus, EPA Region 9 should not interfere with the weight-of-evidence provisions.

In contrast to the weight-of-evidence approach in the proposed rule, EPA's independent applicability policy treats each type of information independently when making impairment determinations. Under this policy, differences in assessment results should be resolved either by presuming impairment or modifying the applicable criteria. The AMA fundamentally disagrees with EPA's use of the independent applicability policy. Presuming impairment based on only one type of data does not allow for a careful evaluation of the reliability, amount, and quality of the different types of data. This is particularly troubling in situations where only a small amount of data is available. States must not make impairment findings based on only a small amount of one type of data. Also, an independent applicability approach does not consider the strength of the linkages of each of these types of data to the designated use that is being protected. Instead, we believe that States should adopt a weight-of-evidence approach, which would ensure that the best scientific analysis and the best available data is used to make impairment decisions as recommended in EPA guidance.[10]

VI. Delisting

Proposed R18-11-605 lists several situations in which a waterbody would be removed from the list of impaired waters, including development of an EPA-approved TMDL, more recent credible data collected under similar conditions as the original data that shows the waterbody is not impaired, an EPA-approved change in the applicable standard or designated use, a change in the interpretation of a narrative criteria, a proven deficiency in the analysis of the original data, or the impairment is caused by naturally-occurring conditions.[11] EPA Region 9 has stated its belief that these procedures for removing a waterbody from the list are substantially less stringent that the process for placing waterbodies on the list. It cites to the requirement in 40 CFR 130.7(d)(6)(iv) to show "good cause" to remove waters from the list, but provides no specific information to substantiate its concern that the proposed rule would not meet this requirement. In fact, however, the proposed rule meets all of the good cause factors in the federal regulation[12], and does not make it any easier for waters to be removed from the list. Rather, it makes the procedures for listing and delisting comparable, which is a key component of A.R.S. § 49-232. As stated in the preamble to the proposed rule, "[q]uality assurance

[10] "Guidance for 1994 Section 303(d) Lists," November 26, 1993.

[11] Although the provision concerning naturally occurring conditions is not one of the reasons for delisting expressly provided in federal regulation and guidance, ADEQ is justified in including it as a basis for delisting because the State's water quality standards (as approved by EPA Region 9) currently provide that high levels of pollutants caused by naturally occurring conditions are not considered standards violations and because of the statutory language in A.R.S. § 49-232.D.

[12] The factors include more recent or accurate data (see proposed R18-11-605(2)); more sophisticated water quality modeling (see proposed R18-11-605(5)); flaws in the original analysis (see proposed R18-11-605(5)); or changes in conditions (see proposed R18-11-605(1), (3), (4) and (6).

requirements must be met for all data used as a basis to support a listing, or to show cause why a surface water or segment should not be listed." 7 A.A.R. 3655.

EPA Region 9 primarily may be concerned that the proposed rule uses the statistical analysis procedure to list and delist a waterbodies. Florida establishes more stringent data requirements for delisting than listing, and EPA Region 9 appears to believe this approach is most appropriate. However, this preference is not mandated by federal law or guidance, and is simply not allowed by Arizona statute.

VII. Data and Information Exempted or Excluded from Listing Decisions

The proposed rule provides that when making assessment decisions, ADEQ shall not consider exceedances based on spills, upsets, bypasses or NPDES/AZPDES permit violations, or data collected within an approved mixing zone. *See* R18-11-604(A)(3) and (4). EPA Region 9 is concerned that these provisions allow ADEQ to ignore data, and that ADEQ is attempting to invoke the "offramp" provision in 40 CFR 130.7(b)(1) without providing sufficient documentation on a case-by-case basis. 40 CFR 130.7(b)(1) provides that waters only need to be listed if technology-based or more stringent effluent limitations or other pollution control requirements, such as best management practices, are not stringent enough to achieve the applicable water quality standards. EPA has interpreted this provision to require that States must show that discharge controls are required and enforceable, specific to the waterbody and pollutant of concern, in place or scheduled for implementation, and sufficient to achieve standards in the near future. The proposed rule makes these findings in advance for certain types of incidents that are clearly controlled through enforceable mechanisms. Furthermore, with the exception of mixing zone allowances, all of the incidents are not continuous in nature, and thus do not reflect ongoing water quality concerns. As to mixing zones, if they are approved in a permit, dischargers have been given approval to exceed standards within the approved zone. Therefore, mixing zones are irrelevant from an impairment standpoint.

VIII. Priority Ranking

EPA Region 9's comments state that the priority ranking provisions in the proposed rule are confusing and not mutually exclusive, and thus, it is difficult to determine from the rule how ADEQ will make individual ranking decisions. However, it is simply not within EPA Region 9's authority to second guess ADEQ's procedures for establishing a priority ranking system. Furthermore, it is not feasible to design a ranking system that explains exactly how priorities will always be assigned, because it would not allow the State to weigh each of the appropriate factors for each waterbody and pollutant to make a sound decision. Concerning EPA Region 9's suggestion that the proposed rule provide for consideration of the magnitude of exceedances, this consideration is already provided in A.R.S. § 49-233(C)(6), which is expressly incorporated by reference in the proposed rule.

The AMA agrees with EPA Region 9's statement that it may not be feasible for ADEQ to develop TMDLs for all waterbodies with high priorities within two years of the time they are

listed. However, the proposed rule provides that this schedule is a target, not an absolute deadline.

A.R.S. § 49-233(B) provides for all TMDLs in Arizona to be developed within 15 years of the time of listing. EPA Region 9 has stated that ADEQ must provide a rationale for taking longer than 8 to 13 years to develop TMDLs, as recommended by EPA in its August 8, 1997 "New Policies for Establishing and Implementing Total Maximum Daily Loads." However, the 8 to 13-year timeframe in that guidance is only a target. The 1997 guidance states that the schedule can be slightly longer depending on State-specific factors. The Arizona legislature has made a reasoned policy determination that it may take up to 15 years to develop all TMDLs. Arizona has an arid climate, and water quality issues are dominated by the ephemeral nature of most waterbodies and water rights concerns. These issues will be difficult to address, and thus a 15-year timeframe is justified. EPA Region 9 should not interfere with Arizona's schedule.

IX. Conclusion

Although we still have several concerns with certain provisions in the proposed rule, the AMA believes that it generally reflects a positive step toward setting sound procedures for data quality and representativeness and appropriate analytical evaluation methods. EPA Region 9's comments would eliminate many of these positive aspects of the proposed rule, and are not supported by federal regulation or guidance, nor are they technically justified. Therefore, we believe ADEQ should not make the changes to the proposed rule recommended by EPA Region 9's comments.

We hope these comments are helpful to ADEQ. If you have any questions on these comments, please call me at (602) 266-4416.

Sincerely,

Chuck Shipley
President

cc: Karen Smith, ADEQ
Linda Taunt, ADEQ
Alexis Strauss, Director, Water Division, EPA Region 9
Michael Haire, OWOW, EPA Headquarters

Jane Dee Hull
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

3033 North Central Avenue • Phoenix, Arizona 85012-2809
(602) 207-2300 • www.adeq.state.az.us

Jacqueline E. Schafer
Director

March 22, 2002

Ms. Alexis Strauss, Director
U.S. Environmental Protection Agency, Region IX
Water Division, WTR-1
75 Hawthorne Street
San Francisco, CA 94105-3901

Re: ADEQ requests an extension for submitting the 2002 Water Quality Assessment Report

Dear Ms. Strauss:

The Arizona Department of Environmental Quality (ADEQ) requests an extension until October 1, 2002, for submitting the 2002 Water Quality Assessment Report to fulfill requirements of Section 305(b) of the Clean Water Act. This extension is necessary because the State is still in the process of developing criteria for identifying impaired waters. State legislation passed in July, 2000 mandates that ADEQ promulgate this criteria in rule before a new impaired list can be developed and submitted to the EPA.

As you are aware, a draft impaired waters rule was presented for public review and comment in August 2001 following an eight month stakeholder effort. A draft assessment report was completed based on those draft rules. In late October, 2001, EPA released guidance on the development of a consolidated assessment and listing process. After reviewing EPA's guidance, ADEQ elected to withdraw the earlier rule package and incorporate key concepts from that guidance into a new rulemaking which was presented for public review and comment in February 2002. A second assessment has been drafted based on the revised rule and is being held in abeyance until the rule package is heard at the Governor's Regulatory Review Council meeting on June 8, 2002.

Once the impaired waters rule package is approved through the state rulemaking processes, ADEQ will begin the public review of the consolidated assessment and impaired waters list prior to submittal to EPA on or before October 1, 2002. My staff has been working closely with Region 9 staff in an effort to ensure that our consolidated assessment and the impaired waters list developed pursuant to our new rule, will satisfy the requirements under the Clean Water Act.

If you have any questions about the status of the process or the assessment, please contact Linda Taunt, Hydrologic Support and Assessment Section Manager, at 602 207-4416 or Diana Marsh, Water Quality Assessment Coordinator at 602 207-4545.

Sincerely,

Karen L. Smith, Director
Water Quality Division

cc: Linda Taunt, Manager, Hydrologic Support and Assessment Section, AEDQ
Diana Marsh, EPS, Watershed Management Unit, ADEQ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

April ~~10~~ 12, 2002

Karen Smith, Director
Arizona Department of Environmental Quality
Water Quality Division
3033 North Central Avenue
Phoenix, AZ 85012-2809

Dear Ms. Smith:

We have received your letter dated March 22, 2002 requesting an extension until October 1, 2002 for the submittal of the 2002 Water Quality Assessment Report to fulfill the requirements of Section 305(b) of the Clean Water Act. We understand your need for additional time to prepare the report and will allow the extension. The extension is consistent with the recent guidance (*2002 Integrated Water Quality Monitoring and Assessment Report Guidance*) issued on November 19, 2001 by memorandum signed by Robert Wayland, Director of the Office of Wetlands, Oceans and Watersheds. If you or your staff have any further questions about the assessment report requirements, please contact Janet Hashimoto at (415) 972-3452.

Sincerely yours,

Alexis Strauss
Director, Water Division

cc: Linda Taunt, Manager, Hydrologic Support and Assessment Section, ADEQ
Diana Marsh, EPS, Watershed Management Unit, ADEQ