BEFORE THE
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL QUALITY COUNCIL
STATE OF WYOMING

IN THE MATTER OF CHAPTER 1,	)
QUALITY STANDARDS FOR	)
WYOMING SURFACE WATERS,	)
WATER QUALITY RULES AND	)
REGULATIONS	)

STATEMENT OF PRINCIPAL REASONS

Background

The Department of Environmental Quality (DEQ), Water Quality Division, pursuant to the authority vested in it by the Act, Wyoming Statutes 35-11-101 to 1507 et seq., proposed to the Council to amend and revise Chapter 1 of the Wyoming Water Quality Rules and Regulations. Chapter 1 contains the quality standards for surface waters in the state including water classifications and designation of protected uses.

The department began a comprehensive revision *(Triennial Review)* of the Chapter 1, Surface Water Quality Standards in March, 1998. This process has involved an initial outreach and scoping effort, numerous statewide public meetings, and the publication of five draft iterations. This rule making is a comprehensive revision of the current rules and all aspects of the surface water standards have been considered. Substantial modifications have been made to the surface water classifications and to the numeric and narrative criteria and the associated appendices, along with revisions to many of the definitions of terms used in the chapter. This rule also implements Enrolled Act # 47, which was passed by the legislature in 1999 and created a new subsection, 35-11-302(b) in the Environmental Quality Act. Four new sections have also been incorporated into the rule. These are numbered Section 32 through Section 35 and address the following issues:

Section 32: Biological Criteria
Section 33: Reclassifications and Site Specific Criteria
Section 34: Use Attainability Analysis
Section 35: Credible Data Requirements

In addition to the revised rules, four implementation policies have also been developed. These policies provide needed detail on the procedures that will be used to implement the "Antidegradation" rule *(Section 8)*; "Mixing Zones" *(Section 9)*; "Turbidity" *(Section 23)*; and "Reclassifications" and "Use Attainability Analysis" *(Sections 33 and 34)*. These policies are not in themselves "regulations," but are referenced in the associated sections of the Chapter 1 rules and are necessary to obtain EPA approval of the revised standards for federal Clean Water Act purposes. Adoption of these policies is not part of this rule making, and they are referenced here, as in the rule, for informational purposes. Upon adoption of the final rule, these policies will be adopted as water management plans by the Water and Waste Advisory Board.

Purpose and Intent of this Proposed Revision

Section 303(c) of the Federal Clean Water Act provides states, tribes and territories with the primary authority and responsibility to establish water quality standards for Waters of the United States within their respective jurisdictions. The Clean Water Act also requires states to review their water quality standards at least once every three years and to make revisions where appropriate. This three-year revision cycle is commonly referred to as the "triennial review."

Chapter 1 of the Wyoming Water Quality Rules and Regulations contains the state surface water quality standards. Though limited revisions of the rules were adopted in October, 1998 and March, 2000 to address localized issues, a comprehensive review of the water classifications and criteria was last accomplished in November, 1990. These revised rules, once adopted, not only will become state requirements but will be submitted to the United States Environmental Protection Agency (EPA), Region VIII for approval under the Federal Clean Water Act as the applicable federal requirements in the State of Wyoming.

In this rule making, the Department of Environmental Quality proposes to update the Wyoming surface water quality standards to meet the most current national recommendations. The proposed revisions are intended to protect and maintain the designated uses of waters of the state and to achieve the goals of the federal Clean Water Act. These goals will be accomplished by designating protected uses on all waters, setting appropriate water quality criteria for all pollutants according to the use designations, and by establishing and implementing an antidegradation policy for the maintenance of existing water quality on waters whose background quality is better than the numeric criteria.

These rules are also intended to implement various provisions of the Wyoming Environmental Quality Act (WS 35-11-101 through 35-11-1507 et. seq.) including 1999 amendments addressing the level of data necessary to make various water quality program decisions.

Specifically, these rules are being revised to:

1. Meet the triennial review requirements of the federal Clean Water Act;

2. Provide an improved procedure for the classification of surface waters and the designation of protected uses;

3. Update and revise the numeric and narrative criteria for all pollutants and water body conditions to meet the current national recommendations;

4. Address federal regulations requiring the implementation of an antidegradation policy;

5. Implement the applicable provisions of the Wyoming Environmental Quality Act; and

6. Maintain Wyoming's primacy for delegated programs of the federal Clean Water Act.

Compliance with Federal Regulations *(WS 16-3-103(a)(i)(F)*

These rule revisions are proposed to comply with the federal regulations regarding the adoption of state water quality standards, specifically those contained in 40 CFR Part 131, which require the designation of water uses, the establishment of numeric and narrative water quality criteria sufficient to protect the water's designated uses and the implementation of antidegradation procedures. Except for the specific requirements of Section 35, these rule changes are designed to meet the minimum requirements of the federal law and regulations.

Proposed Revisions to Chapter 1 of the Wyoming Water Quality Rules and Regulations

Section 1 - Authority

This section has been amended to include a reference to WS 35-11-302(b)(i) and (ii) which are 1999 amendments to the Environmental Quality Act. This section of the Act provides a policy relating to the level of data necessary to make protected use designations and to determine water quality impairment *(Credible Data Legislation)*.

Additional language has also been added to clarify the limits of the department's authority as provided by WS 35-11-1104.

Section 2 - Definitions

This part of the rule has been segregated into two subsections. Section 2(a) contains the relevant statutory definitions in the Wyoming Environmental Quality Act and are repeated in the regulations for convenience.

Section 2(b) contains definitions for terms that have a unique meaning for the purposes of the regulations and supplement the statutory definitions. A number of the current definitions have been modified to clarify their meaning and various new terms have been defined where public comment had indicated a need.

Of the numerous modifications that have been made to the definitions in Section 2(b), two have special significance. A new definition for "historic data" *(Section 2(b)(xxi))*has been added to implement the new changes to the Environmental Quality Act for the "Credible Data Law."

A modification has also been made to the definition of "storm water" *(Section 2(b)(xli))* which clarifies that the existing exclusion for activities subject to federal effluent limitations only applies in circumstances where there is a potential for the federally limited pollutant to actually affect the receiving water. With this modification, surface runoff from activities that are subject to effluent limitations may be considered "storm water" if there is no potential for the receiving water to be affected by the subject pollutant. This modification was made to provide a common sense application of the Section 7 rule that was adopted in 1998. The WQD has recognized that there are circumstances where the federal effluent limits associated with certain industrial activities do not have a practical application, and prohibiting an activity in those situations is unreasonable. One example is alluvial sand and gravel excavation along Class 1 waters

where the material mined is inert and cannot have an effect on pH *(pH is the only constituent limited for gravel mining in the federal rules)* in the nearby Class 1 water. Another example would be the operation of an asphalt hot mix plant necessary for road paving in Yellowstone Park, where all surface waters are Class1. A permit for this type of operation would require that storm water runoff is totally contained, not that the activity itself is prohibited.

Section 3 - Water Uses

This section has been expanded to include a narrative description of each protected water use. Additionally, the water use previously described as *"Protection and propagation of fish and wildlife"* has been separated into three discrete uses, "Fisheries", "Aquatic Life other than Fish" and "Wildlife." The water use previously described as "Human consumption" has also been separated into two more discrete uses, "Drinking Water" and "Fish Consumption."

These modifications serve several purposes. They more accurately articulate what it is that is being protected and also serve as the basis for the revised classification approach contained in Section 4. The descriptions accompanying each listed use help to clarify which of the subsequent criteria sections are applicable to the protection of that use and how the criteria would be applied.

Section 4 - Surface Water Classes and Uses

Substantial modifications have been made to the surface water classification approach. These modifications have been made to correct deficiencies in the previous classification system and to ensure EPA approval of the standards. The new classification system is more scientifically defensible and provides a number of advantages in relation to the department's water quality permitting programs and assessment responsibilities. These changes have a profound effect throughout the surface water protection program.

The language in this section has been modified to clarify how waters are assigned a classification and which uses are protected under each classification. In order to completely understand Section 4, it must be looked at in conjunction with Appendix A which contains a detailed listing of water classifications. It is structured in such a way that there are no gaps, i.e., the classification and uses that are protected on any surface water in the state can be determined whether or not it is specifically listed in Appendix A. This is a basic requirement of the federal regulations and is necessary to obtain EPA approval for Clean Water Act purposes. This requirement was previously met by the application of a "tributary rule" in the 1990 version of the rule. Under the tributary approach, the waters that were named on a 1:500,000 hydrologic map of the state were assigned an appropriate classification and listed in Appendix A. All other waters were given the same classification as the first listed water to which they flowed. In addition to the tributary rule, many waters were assigned classifications based on political boundaries. For example, all waters in wilderness areas were Class 1 and all waters on National Forests were Class 2. This "tributary rule" approach is no longer proposed in favor of a method that more closely ties classifications to the uses that can be reasonably attained on each water.

The tributary rule has been replaced by placing greater reliance on factual data or known information about each water. Classification is more closely tied to documented fisheries information (Game & Fish inventory database), aquatic habitat occurrence (National Wetlands Inventory mapping), or known information on public drinking water supply use. This approach has not totally eliminated the need to make assumptions on many waters because factual data is not always available. It does, however, provide for more valid assumptions on actual or potential water uses than the tributary rule and facilitates the future mechanism to have more accurate classifications.

The effect of this new approach to classification and use designation is described below for each water class.

Class 1 waters (Section 4(a)): The department is recommending no changes to the process for designating Class 1 waters except that tributary designations are no longer used. Each new Class 1 designation must be specifically adopted through a rule making process. Tributaries to these specifically designated waters shall not be Class 1 but shall be Class 2, 3 or 4 depending upon existing or potential uses of the water. All waters which were previously designated Class 1 remain except for their unnamed or unlisted tributaries. All waters in congressionally designated wilderness areas remain Class 1 because this global designation was specifically made in past rule makings. Likewise, all tributaries to Fish Creek in Teton County remain Class 1 because they too, are a specific designation in the rules.

Class 2 Waters (Sections 4(b)(i) through (iv)): Class 2 waters are waters that are known to support or have the potential to support fish populations or drinking water supplies. Subcategories have been developed to address whether a water is a game or non-game fishery, cold or warm water fishery, a drinking water supply but not a fishery, or a fishery but not a drinking water supply. These categories are logical divisions to which different water quality criteria apply.

Several assumptions may be made in designations in this classification. All waters that appear in the Game & Fish Department's streams and lakes inventory database as having any fish present are placed in this classification according to the species present. These are the waters that are known to support fish and are protected for that use. Perennial tributaries to known fisheries are also included by rule, even if they are not listed in the G&F inventory database. It is logical to assume that perennial tributaries to known fisheries have a high potential to support the same species or serve as food supply or nursery areas and are afforded the same level of protection. Non perennial tributaries that are not listed in the G&F inventory database are not designated Class 2.

Waters that are protected as game fisheries are also assumed to have the potential to support drinking water supplies. This assumptions is made because game fisheries are generally waters that have sufficient water quality and volume to be potentially developed as a drinking water supply. Therefore, game fisheries are all initially designated as Class 2AB and protected for both uses. In specific instances where it is shown through a Use Attainability Analysis (UAA) that a water may support game fish but cannot support a drinking water supply, that water can be reclassified to Class 2B - fish only. The numeric pollutant criteria (Appendix B) that apply to Class 2B waters represent the levels necessary to protect human populations from exposure to pollutants from the

consumption of fish. The criteria that apply to 2AB waters is protective of two routes of exposure, drinking the water and eating fish.

Class 2C waters are waters that are known or have the potential to support only non-game species of fish. Perennial tributaries of known non-game fisheries are also classified 2C for the reasons explained above while non-perennial tributaries are not. Class 2C waters are not protected as drinking water supplies because it is not assumed that these waters have sufficient volume to support that use. This classification is essentially the same as the previous Class 3 designation and is protected for the same uses.

Class 3 waters (Section 4(c)): Class 3 waters are those waters that support or have the potential to support species of aquatic life other than fish. Class 3 is the basic default classification for all waters and provides the minimum aquatic life and recreation protections required under Section 102(a)(2) of the Clean Water Act. It is not the lowest classification in the state rules, however, it is considered a default because a Use Attainability Analysis (see Section 33) is required prior to removing any of the protections afforded in this classification. All of the waters designated as Class 3 in this rule making were previously designated as Class 4 and were not protected for aquatic life uses. This modification has been made to bring the Wyoming standards into compliance with the minimum federal requirements provided in 40 CFR Part 131.10.

Section 101(a)(2) of the federal Clean Water Act (CWA) provides a national goal that wherever attainable, water quality standards shall provide for the protection and propagation of fish, shellfish and wildlife and provide for recreation in and on the water. This goal is sometimes referred to as the "fishable/swimmable" goal and serves as the basis for the federal regulations at 40 CFR Part 131.10 regarding the designation of uses. EPA interprets the language referring to "the protection and propagation of fish, shellfish and wildlife" as meaning the protection of all the life forms that make up an aquatic community. The federal regulations *(40 CFR Part 131.10(j))* set up a rebuttable presumption that the "fishable/swimmable uses are attainable on all waters. Under those regulations, a UAA must be developed for each water or category of waters where aquatic life or recreational uses are not protected. The proposed Class 3 designation captures this regulatory intent by serving as a default classification and providing basic aquatic life and recreation protection on all waters. The proposed regulations require a UAA prior to designating a water in a lower classification or applying less stringent criteria.

There are three subcategories of Class 3 waters: (1) 3A is isolated waters and wetlands that do not support fish species; (2) 3B is non-perennial stream channels that do not support fish but may support other species of aquatic life; and (3) 3C is perennial waters that cannot support fish because of natural low water quality conditions. The same water quality criteria apply to all three subcategories. The different subcategories were created to help identify and clarify which types of waters fall into this classification.

Class 4 waters (Section 4(d)): Class 4 waters are those that are not provided protection for aquatic life uses. All Class 4 designations must be based upon a UAA in order to comply with the federal regulations provided in 40 CFR 131.10(j). There are three subcategories of Class 4 waters.

Class 4A waters are artificial canals and ditches. These are considered to be "surface waters of the state" under the Environmental Quality Act and are protected for the basic industrial and agricultural uses for which they were constructed along with an additional minimum level of protection for wildlife uses and human contact. They are not protected for aquatic life uses because the managed flow conditions and other routine operation and maintenance procedures normally preclude aquatic life support. Water is only present in these systems during the irrigation season and aquatic vegetation and habitat that may begin to develop while water is present usually must be removed at some point for the canal or ditch to effectively deliver water. Any temporary occurrences of aquatic life within these facilities are generally insignificant and incidental to their primary purposes.

Class 4B waters are essentially ephemeral streams, dry washes, arroyos etc. where aquatic life uses cannot be attained because of low flow conditions. Though there is only one stream classified as 4B in this rule making, there are many stream channels which can potentially fall within this classification. Each, however, must first be individually identified through the requisite UAA. The relative occurrence of wetlands within or along the stream channels can be used as an indicator of whether there is normally sufficient hydrology to support and sustain species of aquatic life, however, the extent and occurrence of wetlands may not be the only indicator.

Class 4C waters are those for which it has been determined through a UAA that aquatic life uses are not attainable for any other acceptable reason. The acceptable reasons for making such a determination are provided in Section 33 of the revised rules and in 40 CFR Part 131.10(g) of the federal regulations. There are no waters so classified in this rule making, however, as with Class 4B there is a potential for this classification to become significantly populated over time. It is intended that this classification would include waters that are essentially comprised of 100% permitted effluent and support aquatic life only because of the artificially augmented flows.

Because this classification approach relies heavily upon UAAs to determine the appropriate level of protection for many waters, several new sections have been incorporated into the rules to provide a formal structure to that process. Sections 33 and 34 are directly related to the requirements and implementation of UAAs. An additional "Use Attainability Analysis Implementation Policy" has also been developed in conjunction with the new rules to provide a level of detail necessary to interpret and implement Sections 33 and 34. This policy document is not part of the regulation but has been developed to disclose the procedures that will be utilized by the agency to make decisions and take actions under the respective sections of the rules.

Section 4(e): Section 4(e) has been revised to provide certainty and consistency in the use of fish inventory information for the purposes of stream classification. It is not possible to specifically list all stream channels, ponds, lakes, wetlands, impoundments and other water bodies that occur in the state in the regulations, however, the level of protection that will be provided to these unlisted waters must be disclosed. The Game & Fish Department's inventory database is relied upon for this purpose. The information in the database may change over time with the collection of new data, however, the classifications in these rules cannot change without a formal rule making process. Therefore, it is necessary to provide a precise identification of which information is used as the basis for the classifications in this rule. Section 4(e) identifies the information that

was made available to the Department of Environmental Quality in September, 1999 as the basis for the listings in Appendix A and for the classifications of the unlisted waters. This information is set in time and will be used for the purposes expressed until the use of new information is formally approved through a rule revision.

Section 5 - Standards Enforcement

This section has been modified to include a reference to the implementation policies for antidegradation, mixing zones, turbidity and use attainability analysis that have been developed in conjunction with this rule.

It also has been amended to include a statement that permit program schedules of compliance are allowable under these rules. The details and applicability of schedules of compliance are a function of the pollutant discharge permitting regulations and are not addressed in this set of rules. Schedules of compliance are provided for under the state permitting regulations and the purpose of the new statement in these rules is to clarify that there is no conflict between the permitting requirements and the water quality standards.

Section 8 - Antidegradation

The baseline date for the protection of water uses in Section 8(a) has been changed from June 27, 1979 to November 28, 1975 to make the date consistent with the federal regulations. The 1979 date referred to a previous state rule making while the November 28, 1975 date refers to the effective date of the federal Clean Water Act standards regulations. The use of the CWA date is more technically correct for the purposes of the standards.

A new section 8(b) has been added to clarify that the administrator of the Water Quality Division may require an applicant for a water quality permit to submit the information that is necessary to make the determinations required under Section 8(a).

A new section 8(c) has been created to provide a reference to the implementation policy for antidegradation that has been developed in conjunction with this rule.

Section 9 - Mixing Zones

Language has been added to this section to clarify that mixing zones cannot be implemented for whole effluent toxicity requirements because these, by their nature, must be met at the end-of-pipe, prior to dilution. Other language has been included to clearly provide necessary restrictions on the use of mixing zones to eliminate unacceptable risk to drinking water supplies and aquatic life. A reference has also been made to the implementation policy for mixing zones, that has been developed in conjunction with this rule.

Section 11 - Flow Conditions

The language in this section has been modified to clarify how water quality standards will be enforced during abnormally low flow conditions. There are no substantive changes to

how the standards apply in these situations, but the language has been improved to more clearly articulate how the circumstances are handled when NPDES discharge permits are involved.

Section 12 - Protection of Wetlands

New language has been added to this section to more clearly describe the relationship of the water quality standards to wetland mitigation and banking activities. This language does not represent any substantive change but simply adds clarity.

Section 14 - Dead Animals & Solid Waste

The language in this section has been modified to more clearly express the intent and application of the standard. These modifications are not considered to be substantive.

Section 18 - Human Health

The changes in this section were made to accommodate the revised classification system and to provide a reference to the new human health criteria for fish consumption only *(see Appendix B)* for waters where that criteria apply.

Section 21 - Protection of Aquatic Life

Section 21(a)(i): Language has been added to this section to indicate that the numeric ammonia criteria apply only to Class 1 and 2 waters. This does not represent a substantive change since this is essentially the same application as under the previous standards. Previously, the ammonia criteria applied to Class 3 waters *(non-game fisheries)* also, however, under the revised classification system, non-game fisheries are now Class 2C.

Section 21(a)(ii) provides a narrative rather than numeric criterion for application on Class 3 waters. Class 3 waters are those that support only species of aquatic life other than fish. The numeric criteria in Appendix C are designed primarily for the protection of fish and cannot be appropriately applied to the types of water bodies in the new Class 3 categories. Elevated levels of ammonia, may have adverse affects on other species of aquatic life and some level of protection is warranted even though more precise numeric values have not been developed. This section provides the ability to compel a remedy or corrective action or prescriptive permit condition in circumstances where ammonia concentrations are believed to be a problem.

Section 21(c) has been amended to reflect the revised classifications. This change is not substantive.

The language in Sections 21(e) and (f) has been substantially expanded to more clearly express the relationship between the water quality standards and the application of aquatic pesticides and fish toxicants. The language has been improved by more explicitly identifying who may apply such substances and under what conditions.

Section 22 - Radioactive Material

Sections 22(a) and (b) have been modified to reflect the revised water classifications. The reference to the federal drinking water standards has been improved to include a more accurate citation. Section 22(c) has been amended to clarify that the narrative standard for radioactive materials that apply to all waters refers to those materials "attributable to or influenced by the activities of man." None of the changes to this section are considered substantive.

Section 23 - Turbidity

Sections 23(a) and (b) have been modified to reflect the revised water classifications. A new section 23(c)(ii) has been developed to solve problems experienced by the department in implementing the previous standard without compromising environmental protection. Turbidity is an important water quality consideration from various standpoints. There are aesthetic considerations on normally clear running waters, it can have adverse effects on drinking water supplies, in some circumstances high turbidity can have acute adverse effects on resident aquatic life, and the turbidity standard is also used as an important control of sediment discharge and erosion control efficiency on construction sites. Because of these important considerations, the turbidity limits of 10 and 15 NTUs above background are essential to the water quality protection program.

However, short term increases in turbidity associated with construction in or around stream channels are usually unavoidable and may have little or no measurable effect on water uses. The previous standard made no allowance for those short-term, limited increases in turbidity and made the permitting of many benign activities problematic. The new Section 23(c) provides a solution to the problems associated with the permitting of activities that involve minor discharges of turbidity that may exceed the numeric limits. It provides an exception to the numeric limits on a case-by-case basis where adverse effects are expected to be minimal. In authorizing an exception under this section, the Administrator of the Water Quality Division may impose whatever controls are necessary to ensure that all water uses are fully protected. An associated policy has also been developed containing a detailed explanation of the procedures that will be employed to implement this part of the rule. This policy is referenced in the new section and has been developed in conjunction with the rule revision.

Section 24 - Dissolved Oxygen

Section 24 has been modified to reflect the revised water classifications. The first paragraph of the section has been amended to provide a narrative standard applicable to Class 3 waters. The numeric dissolved oxygen values contained in Appendix D were developed primarily for the protection of fish species and are not directly applicable to the species of aquatic life embraced by the new Class 3 designation. It is recognized, however, that aquatic life other than fish have dissolved oxygen requirements even though they have not been described as discrete numeric values. The narrative standard provides the ability to compel a remedy, corrective action or prescriptive permit condition in circumstances where dissolved oxygen concentrations are believed to be a problem with respect to existing uses or resident aquatic life.

A new second paragraph has been inserted to clarify that the numeric dissolved oxygen values in Appendix D apply only to those classes of waters that are designated as fisheries *(Classes 1, 2AB, 2B and 2C)*.

Section 25 - Temperature

Section 25(a) provides a narrative limit on temperature effects from permitted effluent discharges. The new language refers to a change in "ambient" temperature rather than the previous "natural temperature" because it is the ambient temperature which is measurable and relevant in the context of the standard. Referencing "natural" temperature is problematic because the natural temperature may not be known or easily calculated in any given circumstance. The language has also been improved by making references to "harmful acute or chronic effects" and "existing and designated uses" in place of the previous standard of "harmful to aquatic life." The new language addresses both short and long-term effects and applies to all uses, not just aquatic life. This section is intended to provide the basis for permit conditions which limit rapid changes in temperature that may have adverse effects on aquatic life or other uses.

Section 25(b) limits temperature increases on cold water fisheries attributable to permitted effluents to two degrees F. It is intended to apply to the persistent water temperature rather than rapid temperature changes which are addressed in Section 25(a). This standard has been modified in such a way that the two degree temperature change would not apply until the ambient water temperature is above 60° F. It also only applies to temperature increases rather than changes in temperature. The modifications have been made for several reasons. The 60° F ambient temperature trigger was developed because public comment received on the issue made it clear that municipal wastewater discharges to Class 2 waters could not be expected to comply with a two degree limit during the cold weather seasons when ambient water conditions were near freezing. Water entering a wastewater treatment facility through sewerage collection systems is considerably warmer than ambient stream temperatures in the winter months. It would be prohibitively expensive to manage the temperature of this water to be within two degrees of the receiving stream temperature prior to discharge, and there is little reason to believe that doing so would have a beneficial effect on existing or designated uses. The 60° F threshold is proposed because neither cold nor warm water fish species would be expected to be adversely affected by water temperatures of 60° or less. As long as the rate of temperature changes are within the narrative limits in Section 25(a), there should be no significant adverse effect.

The standard has been modified to apply to temperature increases rather than changes because it is generally warmer water that is associated with adverse effects on aquatic life. The inverse of the wastewater treatment example in the paragraph above can be expected to occur in the summer months when the ambient stream temperature may be warmer than the effluent temperature. The revised language eliminates the possibility that the rule could be interpreted to require a municipality to heat its effluent in order to match the receiving stream temperature.

Section 25(c) which applies to warm water fisheries has also been modified in the same manner as Section 25(b) for the same reasons.

Section 25(f) which prohibits any change in temperature during spawning seasons has been eliminated. It is recognized that water temperature is a critical element for successful fish spawning and the narrative standard in Section 25(a) will be relied upon to provide necessary protection for that use.

Section 26 - pH

A new Section 26(b) has been added that provides the ability to compel a remedy, corrective action, or prescriptive permit condition in circumstances where pH levels are believed to be a problem with respect to designated uses or resident aquatic life even if those levels are within the numeric limits established in Section 26(a).

Section 27 - Fecal Coliform Bacteria

Section 27(a) has been modified to base compliance with the standard on a minimum of at least three separate samples. This is a change from the previous reference to 10 percent of the samples when less than 5 samples over the previous 30 days are available. The standard provides a more instantaneous maximum limit on fecal coliform concentrations and allows the department to compel a timely corrective action where pathogen concentrations pose an immediate threat to public health. The requirement for three separate samples adds a reasonable level of accuracy to the measurement.

Section 24(b) which provided an exemption from the fecal coliform limitations on Class 4 waters from October through April has been eliminated. The result of this change is that the pathogen limits will apply on all waters at all times.

Section 24(c) which provided relaxed limits on fecal coliform bacteria on specifically listed waters below municipal wastewater treatment facilities has been eliminated. The original reason for the relaxed standards was based on a concern over the ability of the municipal discharges to meet the more stringent primary contact values. Current conventional disinfection technologies, however, can be used to effectively achieve primary contact uses at all times of the year and the relaxed standards are not necessary.

Section 28 - Undesirable Aquatic Life

This section has been modified by including a reference to substances or conditions that are "influenced by the activities of man" to be consistent with the language that is used in similar narrative criteria in other sections of the regulations.

Section 29 - Oil and Grease

This section has been split into two separate subsections. Section 29(a) provides the numeric limit on oil and grease concentrations and Section 29(b) provides the narrative criteria. This was done to match the format used for other constituents that have both numeric and narrative limitations. No substantive change has been made.

Section 32 - Biological Criteria

This is a new section which provides a narrative standard related to the biological condition of all waters and provides protection from pollutants or conditions that are not specifically identified elsewhere in the standards or in unique circumstances where the adopted criteria are shown not to be sufficiently protective of resident aquatic life. EPA has indicated that a narrative biological criterion of this type is necessary to obtain federal approval of the standards.

Section 33 - Reclassifications and Site Specific Criteria

In order to designate uses and establish criteria on all waters, it is necessary to make assumptions where detailed data is not available. As new information becomes available, it may be appropriate to revise the uses and criteria that were based on assumptions. This new section provides the structure for amending the standards when it is appropriate.

Section 33(b) applies when a classification is proposed to be lowered or the water quality criteria relaxed. It provides a requirement that such changes must be based on a structured scientific study (Use Attainability Analysis) that demonstrates one or more of a list of factors. Those factors are listed in Section 33(b) (i) through (vi).

The Section 33(b) factors are based on the federal requirements contained in 40 CFR Part 131.10(g) relative to the development of a UAA. The federal UAA requirements apply if a use protection is removed or a subcategory of a use that requires less stringent criteria is established. These intents are addressed in Section 33(b), however, the section goes slightly beyond the scope of the federal regulations by requiring a UAA for the purpose of lowering the water quality criteria even though the use designation does not change. Although site-specific criteria changes are not addressed in the referenced section of the federal regulations, it is necessary to establish the rationale for making such changes to ensure that appropriate water quality protections are in place. The UAA requirements provide an appropriate structure for making those types of decisions and it would be redundant to establish separate procedures for that purpose.

Section 33(c) applies when a classification is proposed to be raised or a use designation added. This action must also be based upon a UAA even though there is no corresponding federal requirement. The basis for this requirement in the state regulations is related to the credible data provisions of the Wyoming Environmental Quality Act provided in WS 35-11-302(b)(i). The required UAA under this subsection is different from Section 33(b) in the demonstration that must be made. The Section 33(b) factors do not apply and it is only necessary to demonstrate that a higher use exists on the water or can be attained with the imposition of more stringent controls or practices.

The purpose of Section 33(d) is to clarify that the UAA provisions are not applicable for Class 1 designations. This is because a Class 1 designation represents only an antidegradation tier and not the use designation or water quality criteria. The removal of a Class 1 designation, for example, would not change the uses that are designated on that water or the criteria that are established to protect those uses. Instead, the reclassification would involve the removal of an administrative prohibition on new or increased point source discharges and the more stringent goal of maintaining existing water quality.

Section 33(e) has been created to provide a reference to the implementation policy for Use Attainability Analysis that has been developed in conjunction with this rule.

Section 34 - Use Attainability Analysis

This new section is closely related to Section 33. The purpose is to provide a reasonable mechanism for implementation of the findings of a UAA in the interim between when an adequate scientific study is complete and the results of the study are adopted as a revised rule. Because of the revised classification approach, it is expected that the review and approval of UAAs will be a routine and continual process. It is recognized that rule changes based upon a UAA must be formally adopted under the provisions of the Wyoming Administrative Procedures Act. However, because of the expected large number of actions that will occur and the time lag for rule making, it is necessary to provide a procedure to enable the department to take appropriate regulatory and non-regulatory actions while the administrative rule making processes occur. This section will allow the department to systematically prepare and initiate the rule making processes and at the same time implement the agency's water quality protection programs in a defensible manner.

The new section provides for public involvement in the review and approval of UAAs and the administrative processes are detailed in the Use Attainability Analysis implementation policy that has been developed in conjunction with this rule.

Section 35 - Credible Data

This new section has been added to describe the data requirements and procedures for designating protected uses and making level of support determinations on Wyoming surface waters. The proposed revisions are intended to provide a scientifically defensible methodology for making these types of decisions and to achieve the goals of the Wyoming Environmental Quality Act as amended in the 1999 legislative session. These purposes will be accomplished by setting data quality objectives and a schedule and process for achieving these objectives. This section is intended to implement the specific requirements of WS 35-11-302(b)(i) and (ii) and to achieve the goals of the Act. Section 35 contains several subsections addressing each of the basic components of the statute.

Section 35(a)(i): As defined by the legislation, credible data must be "scientifically valid" and collected under an accepted sampling and analysis plan. The proposed rule in Section 35(a)(i) develops the concepts of scientific validity and acceptable sampling and analysis plans by prescribing the use of field and laboratory procedures that are referenced in current scientific literature and also requiring sampling to be conducted by adequately trained personnel. The resulting data and interpretation must be reproducible and free from preconceived bias.

Section 35(a)(ii): Section 35(a)(ii) addresses the requirement that an acceptable sampling and analysis plan must include quality assurance procedures and documentation to validate the data. It is intended that acceptance of sampling and analysis plans, quality assurance plans, and data validation will be an administrative decision made by the Water Quality Division administrator.

Section 35(b): In order to be considered complete, a credible data set shall also include consideration of various environmental conditions in addition to the essential chemical, physical, biological and historical data components required in the definition. The proposed rule in Section 35(b) provides a weight-of-evidence approach that considers soil, geology, hydrology, geomorphology, climate, stream succession and the influences of man in addition to the core credible data elements. When applying a "weight-of-evidence" approach, the department would not presumptively favor one type of data over another but would examine a collection of information and apply a relative "weight" or importance to each relevant part according to the specific circumstances and the decision to be made. Consideration of these additional factors is intended to provide support for and/or qualify any use designation or use-attainment determination made by the department. The statute has not been interpreted to mean that data on all of these environmental conditions must be developed in all cases but rather that this type of applicable information shall be evaluated when it is available, or developed in instances where the chemical, physical, and biological data are by themselves, inconclusive. The section also recognizes the legislative intent that a complete suite of data is not necessary prior to making a decision on non-perennial waters where chemical or biological sampling is not practical or feasible.

Section 35(c): The proposed rule in section 35(c) is intended to address the statutory requirement that the water quality rules shall prescribe a schedule for the use of credible data in designating uses of surface water consistent with the requirements of the Clean Water Act. The rule does not interpret the legislative language to require an exhaustive listing of all of the surface waters in the state and a timetable for sampling and analyzing chemical, physical, biological and historical data on each. It would not be possible to contrive and implement such a schedule nor would it be consistent with the requirements of the federal Clean Water Act.

Chapter 1 water quality standards provide a systematic approach for designating uses and classifying waters. That system is designed to meet the Clean Water Act requirement that state water quality standards provide use designations for all surface waters. Section 35(c) provides a procedural rather than a substantive schedule for basing use designations on credible data which will begin upon adoption of this rule. Once adopted, all future changes to any use designation will be based upon credible data.

Section 35(c) also makes a reference to the consideration of credible data "relevant to the decision." This reference is necessary because the statute defines "credible data" as a set of data that includes chemical, physical, biological and historical information that has been collected under an accepted process. In most instances, one or more of these categories of data will not be relevant to making a determination of whether any particular water body should be protected for a particular use. The rule does not interpret the statute to require the development of extraneous data but rather to ensure that the information used to make a designation is scientifically valid and defensible. Additionally, federal regulations regarding use designations involve other factors than those expressed in the definition of credible data and the clear intent of the statute is to designate uses in a manner consistent with the federal requirements. The proposed Section 35(c) shall result in defensible use designations that are consistent with the Clean Water Act.

Section 35(d): The proposed Section 35(d) is intended to address the statutory requirement for the use of credible data in determining the level of attainment of designated uses on waters in the state. The primary purpose of the statutory language is to address the addition and removal of waters on the state's Section 303(d) list and the development of Total Maximum Daily Loads (TMDLs) for waters which are listed. Because decisions relating to the level of use-support are intrinsically more complicated than designating a use, Section 35(d) does not contain a reference to "relevant" data. Other than those instances specifically exempted in the statute, a full suite of chemical, physical, biological and historical data are considered to be relevant and necessary for making use-support determinations.

In effect, Section 35 provides that the Department of Environmental Quality shall not make changes to use designations on any Wyoming water except where the level and quality of data relied upon to make such changes conforms to the requirements of the associated section.

Section 35 also provides that the department shall not add waters to the Wyoming 303(d) list nor remove waters from the list unless such action is supported by a comprehensive suite of chemical, physical, biological and available historical data. The department may rely on less than a complete suite of data only in instances where low flow conditions prevent complete sampling or when chemical sampling alone demonstrates an exceedance of a numeric standard. All water quality data must be collected under a sampling and analysis plan accepted by the Water Quality Division administrator and validated by appropriate quality assurance procedures. Field sampling and laboratory analyses must be performed by adequately trained personnel using methods referenced in current scientific literature.

These revisions apply only to data requirements relative to designating uses on Wyoming waters and determining the level of support of those uses. They do not require the department to develop credible data before taking enforcement actions to compel compliance with water quality standards.

The provisions of Section 35 do not apply to the designation of Class 1 waters. Clearly, they apply to the *designation of protected uses* but they do not necessarily apply to the *classification of waters*. These two concepts are not synonymous especially in the case of Class 1 waters. Use designations are relatively straightforward and certain use designations are specified under the federal regulations. Wyoming's water classifications on the other hand, are more complex and involve multiple factors. Use designations may be one of the factors on which a classification is based, but not necessarily the only one. Another factor in the state's classification scheme is the assigned antidegradation tier. In Wyoming's current classification system, the Class 1 category indicates only the antidegradation tier and has no relationship to the existing or designated uses of the water. The lower classes (2, 3 & 4) include a consideration of both use designations and antidegradation. Because the identification of Class 1 waters is based on antidegradation and factors other than the water uses listed in Section 3 of the regulations, this proposed rule shall have no effect on their designation.

Appendix A - Surface Water Classifications

Subsection (a) has been modified to specifically name Yellowstone and Grand Teton National Parks as the areas to which a global Class 1 designation is applied on all waters. The date January 1, 1999 has also been inserted relative to the global Class 1 designation

on all waters in congressionally designated wilderness areas. The purpose of this date is to clarify that new wilderness designations in Wyoming will not automatically result in new Class 1 water designations.

Subsection (b) has been revised to provide a new approach to the classification of waters that are not specifically listed in the Appendix A tables. This new approach involves the elimination of the "tributary rule" and the reliance on the information contained in the Wyoming Game and Fish Department's Streams and Lakes Inventory database as was explained in the discussion on the revisions to Section 4 of these regulations. Subsection (b)(iii)(A) also provides for unlisted waters to be classified based on the results of a UAA.

Subsection (c) designates all adjacent wetlands with the same classification as the water to which they are adjacent.

A list of the designated Class 1 waters has been added to Appendix A. This was done so those waters could be more easily identified than by searching through the basin-by-basin listings. This is a non-substantive change and has not modified the number or extent of the previous Class 1 listings. The individual water bodies are also listed in their appropriate places in the basin tables. None of these modifications result in an increase or decrease in the extent of the associated Class 1 reach.

The tables containing the specifically listed stream classifications have been revised to reflect the new classification categories and subclasses.

Appendix B - Pollutant Criteria

The values for the specific priority and non priority pollutants listed in the tables in Appendix B have been revised to meet the most current EPA recommendations and are based on either the Clean Water Act, Section 304(a) criteria or the federal Safe Drinking Water Act maximum contaminant levels (MCLs). Explanatory footnotes have also been added where appropriate. The aquatic life values for metals have been changed to refer to dissolved metals because the dissolved fraction is the amount of the metal which is biologically available and is recommended by EPA.

A new column has been added to the Appendix B tables containing human health values for a number of pollutants. These values are based on a single route of exposure to humans - consumption of fish and are applicable on classes of waters that are protected as fisheries but not drinking water supplies.

The aquatic life values for manganese which previously applied only to certain specifically listed waters have been expanded to apply to all Class 1, 2 and 3 waters that are protected for aquatic life uses.

Appendix C

The ammonia values contained in Appendix C have been revised to meet the most current EPA recommendations. The new values refer to total ammonia nitrogen in Mg/L and the

equations used to derive the values for varying pH and temperature are included in the Appendix.

Appendix D

Appendix D has been modified to refer to the new fisheries' classifications.

Appendix F

Appendix F has been revised to include the most current equations for calculating acute and chronic aquatic life values for hardness dependant metals. These equations are based on the Clean Water Act, Section 304(a) criteria documents. A footnote has also been added to clarify the upper and lower hardness values that can be used.

Effect of the Rule Revision

The Council anticipates that the result of these proposed revisions will provide a level of surface water protection sufficient to address public health and environmental concerns. The revised standards update the Wyoming surface water protection program to meet the most current federal requirements provided in 40 CFR Part 131. The revised standards also implement new statutory requirements provided in recent amendments to the Wyoming Environmental Quality Act, specifically WS 35-11-103(c)(xix) and 35-11-302(b)(i) and (ii).

Public Participation

On March 2, 1998, a public notice announcing the department's intention to revise the Chapter 1 surface water regulations was released for the purpose of soliciting comment relating to the proposal. A public meeting was held via the Wyoming Video Conference System on April 6, 1998 during which the department accepted both oral and written comments. Comments received as a result of this public outreach were considered in the drafting of the proposed revisions.

In addition to the original outreach document, five draft iterations of proposed regulations have been developed and public comments were solicited on three of the five drafts. The Water and Waste Advisory Board held public meetings on September 25, 1998 and June 22, 1999 to receive oral and written comment on the first two drafts respectively. The department did not seek public comment on the third draft which was discussed at the Advisory Board's regular meeting on October 21, 1999. At this meeting the board made further recommendations and revisions resulting in the development of a fourth draft which was made available for public review and comment. Written comments only were solicited and were accepted by the board on January 14, 2000. A fifth draft was developed based on the January, 2000 comment period on which the Advisory Board took a final action at a public meeting on February 25, 2000.

On June 15, 1999, a public notice announcing the department's intention to revise the Chapter 1 surface water regulations to implement the credible data legislation was released for the purpose of soliciting comments relating to the proposal. A public meeting was held via the Wyoming Video Conference System on September 8, 1999 during which the department accepted both oral and written comments. Comments received as a result of this public outreach were considered in the drafting of the proposed revisions.

A draft rule revision was developed and public comments were solicited in a public notice dated January 22, 2000. The Water and Waste Advisory Board held a public meeting on February 25, 2000 to receive oral and written comment on the draft regulations. This public meeting was held in Cheyenne and broadcast to various locations around the state on the Wyoming Video Conferencing System. The Advisory Board recommended that the proposed credible data rule be combined with the proposed triennial review revisions at their meeting on February 25, 2000.

All of the comments received throughout the processes described above along with the Advisory Board's recommendations have been considered and addressed in this rule revision. The Advisory Board recommended this rule to the Council at their meeting on February 25, 2000.

Finally, the Council held a public hearing [DATE]. All public comments were considered during the adoption of these rules.

Conclusion. The Council has determined that the adoption of these rules is necessary to update the Wyoming surface water standards to comply with federal regulations and to implement new state statutory requirements.

EXECUTED THIS _____ DAY OF _____, 2000.

FOR THE ENVIRONMENTAL QUALITY COUNCIL

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Chairperson

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