ENVIRONMENTAL QUALITY

CHAPTER 30

WATER QUALITY

Sub-Chapter 7

Nondegradation of Water Quality

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Nondegradation of Water Quality

17.30.701 PURPOSE (1) The purpose of this subchapter is to prohibit degradation of high quality state waters, except in certain limited circumstances, by implementing the nondegradation policy set forth in 75-5-303, MCA, and providing criteria and procedures for:

(a) determining which activities will degrade high quality waters;

(b) department review and decision making;

(c) determining the required water quality protection practices if degradation is authorized; and

(d) public review and appeal of department decisions. (History: 75-5-301, 75-5-303, MCA; IMP, 75-5-301, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499.)

17.30.702 DEFINITIONS The following definitions, in addition to those in 75-5-103, MCA, apply throughout this subchapter (Note: 75-5-103, MCA, includes definitions for "degradation", "existing uses", "high quality waters", and "parameter."):

(1) "Bioconcentrating parameters" means the parameters listed in department Circular WQB-7 which have a bioconcentration factor greater than 300.

(2) "Carcinogenic parameters" means the parameters listed as carcinogens in department Circular WQB-7.

(3) "Degradation" is defined in 75-5-103, MCA, and also means any increase of a discharge that exceeds the limits established under or determined from a permit or approval issued by the department prior to April 29, 1993.

(4) "Existing water quality" means the quality of the receiving water, including chemical, physical, and biological conditions immediately prior to commencement of the proposed activity or that which can be adequately documented to have existed on or after July 1, 1971, whichever is the highest quality.

(5) "Ground water" means water occupying the voids within a geologic stratum and within the zone of saturation.

(6) "Harmful parameters" means the parameters listed as harmful in department Circular WQB-7.

(7) "Highest statutory and regulatory requirements" means all applicable effluent limitations, water quality standards, permit conditions, water quality protection practices, or reasonable land, soil, and water conservation practices. It also means compliance schedules or corrective action plans for the protection of water issued under order of a court, department, or board of competent jurisdiction.

(8) "High quality waters" is defined in 75-5-103(9), MCA, and does not include class I surface waters (ARM 17.30.628) or class IV ground waters (ARM 17.30.1002(d)).

(9) "Level 1a treatment" means a subsurface wastewater treatment system (SWTS) that:

(a) removes at least 50%, but less than 60%, of total nitrogen as measured from the raw sewage load to the system; or

(b) discharges a total nitrogen effluent concentration of greater than 24 mg/L, but not greater than 30 mg/L. The term does not include treatment systems for industrial waste. A level 1a designation allows the use of 30 mg/L nitrate (as N) as the nitrate effluent concentration for mixing zone calculations.

(10) "Level 1b treatment" means a SWTS that:

(a) removes at least 34%, but less than 50%, of total nitrogen as measured from the raw sewage load to the system; or

(b) discharges a total nitrogen effluent concentration of greater than 30 mg/L, but not greater than 40 mg/L. The term does not include treatment systems for industrial waste. A level 1b designation allows the use of 40 mg/L nitrate (as N) as the nitrate effluent concentration for mixing zone calculations.

(11) "Level 2 treatment" means a SWTS that:

(a) removes at least 60% of total nitrogen as measured from the raw sewage load to the system; or

(b) discharges a total nitrogen effluent concentration of 24 mg/L or less. The term does not include treatment systems for industrial waste.

(12) "Load" means the mass of a parameter per unit of time.

(13) "Management or conservation practice" means a measure to control or minimize pollution of ground and surface waters from a nonpoint source. Examples of such measures include, but are not limited to, revegetation of disturbed soil, grazing management to prevent overgrazing, contour farming, strip farming, protection of riparian areas, drainage control, and impoundments which detain surface runoff or irrigation return water for sediment control.

(14) "Mixing zone" is defined in 75-5-103, MCA, and also means a limited area of a surface water body or a portion of an aquifer, where initial dilution of a discharge takes place and where water quality changes may occur and where certain water quality standards may be exceeded.

(15) "Montana pollutant discharge elimination system" or "MPDES" means the permit system developed by the state of Montana for controlling the discharge of pollutants from point sources into state waters, pursuant to ARM Title 17, chapter 30, subchapter 13.

(16) "Montana ground water pollution control system" or "MGWPCS" means the permit system developed by the state of Montana for controlling the discharge of pollutants into state ground water, pursuant to ARM Title 17, chapter 30, subchapter 10.

(17) "Nutrients" means total inorganic phosphorus and total inorganic nitrogen.

(18) "New or increased source" means an activity resulting in a change of existing water quality occurring on or after April 29, 1993. The term does not include the following:

(a) sources from which discharges to state waters have commenced or increased on or after April 29, 1993, provided the discharge is in compliance with the conditions of, and does not exceed the limits established under or determined from, a permit or approval issued by the department prior to April 29, 1993;

(b) nonpoint sources discharging prior to April 29, 1993;

(c) withdrawals of water pursuant to a valid water right existing prior to April 29, 1993; and

(d) activities or categories of activities causing nonsignificant changes in existing water quality pursuant to ARM 17.30.715, 17.30.716, or 75-5-301(5)(c), MCA.

(19) "Nonpoint source" means a diffuse source of pollutants resulting from the activities of man over a relatively large area, the effects of which normally must be addressed or controlled by a management or conservation practice.

(20) "Outstanding resource waters" or "ORW" means all state waters that are located in national parks, national wilderness or primitive areas. ORW also means state waters that have been identified as possessing outstanding ecological, or domestic water supply significance and subsequently have been classified as an ORW by the board.

(21) "Permit" means either an MPDES permit or an MGWPCS permit.

(22) "Reporting values" means the values listed as reporting values in department Circular WQB-7, and are the detection levels that must be achieved in reporting ambient monitoring results to the department unless otherwise specified in a permit, approval or authorization issued by the department.

(23) "Surface waters" means any water on the earth's surface including, but not limited to, streams, lakes, ponds, and reservoirs and irrigation drainage systems discharging directly into a stream, lake, pond, reservoir or other water on the earth's surface. Water bodies used solely for treating, transporting or impounding pollutants are not considered surface water for the purposes of this subchapter.

(24) "Toxic parameters" means the parameters listed as toxins in department Circular WQB-7.

(25) "Trigger values" means the values listed as trigger values in department Circular WQB-7 for parameters categorized as toxic, and are used to determine if proposed activities will cause degradation.

(26) The board adopts and incorporates by reference:

(a) department Circular WQB-7, entitled "Montana Numeric Water Quality Standards" (January 2004 edition), which establishes water quality standards for toxic, carcinogenic, bioconcentrating, nutrient, radioactive, and harmful parameters; and

(b) 40 CFR Part 136, as they existed on July, 1992, which contain guidelines establishing test procedures for the analysis of pollutants.

(c) Copies of this material may be obtained from the Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901. (History: 75-5-301, 75-5-303, MCA; IMP, 75-5-303, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; AMD, 1995 MAR p. 1798, Eff. 9/15/95; AMD, 1996 MAR p. 555, Eff. 2/23/96; TRANS, from DHES, 1996 MAR p. 1499; AMD, 1999 MAR p. 94, Eff. 1/15/99; AMD, 1999 MAR p. 2257, Eff. 10/8/99; AMD, 1999 MAR p. 2275, Eff. 10/8/99; AMD, 2002 MAR p. 387, Eff. 2/15/02; AMD, 2003 MAR p. 217, Eff. 2/14/03; AMD, 2004 MAR p. 725, Eff. 4/9/04; AMD, 2004 MAR p. 1384, Eff. 6/18/04.)

Rules 17.30.703 and 17.30.704 reserved

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17.30.705 NONDEGRADATION POLICY--APPLICABILITY AND LIMITATION (1) The provisions of this subchapter apply to any activity of man resulting in a new or increased source which may cause degradation.

(2) Department review of proposals for new or increased sources will determine the level of protection required for the impacted water as follows:

(a) For all state waters, existing and anticipated uses and the water quality necessary to protect those uses must be maintained and protected.

(b) For high quality waters, degradation may be allowed only according to the procedures in ARM 17.30.708. These rules apply to any activity that may cause degradation of high quality waters, for any parameter, unless the changes in existing water quality resulting from the activity are determined to be nonsignificant under ARM 17.30.715 or 17.30.716. If degradation of high quality waters is allowed, the department will assure that within the United States geological survey hydrologic unit upstream of the proposed activity, there shall be achieved the highest statutory and regulatory requirements for all point and nonpoint sources. This assurance will be achieved through ongoing administration by the department of mandatory programs for control of point and nonpoint discharges.

(c) For outstanding resource waters, no degradation is allowed and no permanent change in the quality of outstanding resource waters resulting from a new or increased point source discharge is allowed.

(3) The department will comply with the provisions of the Montana Environmental Policy Act in the implementation of this subchapter. (History: 75-5-301, 75-5-303, MCA; IMP, 75-5-303, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499; AMD, 2000 MAR p. 843, Eff. 3/31/00.)

17.30.706 INFORMATIONAL REQUIREMENTS FOR NONDEGRADATION SIGNIFICANCE/AUTHORIZATION REVIEW (1) Any person proposing an activity that may cause degradation is responsible for compliance with 75-5-303, MCA. Except as provided in (2) and (3), a person may either:

(a) determine for themselves, using the standards contained in ARM 17.30.715 and 17.30.716, that the proposed activity will not cause significant changes in water quality as defined in ARM 17.30.705; or

(b) submit an application to the department pursuant to (4), for the department to make the determination.

(2) The department will determine whether a proposed activity may cause degradation based on information submitted by the applicant for all activities that are permitted, approved, licensed, or otherwise authorized by the department.

(3) Any person proposing to discharge unaltered ground water into surface or ground water for purposes of developing coal bed methane must complete a department "Application for Determination of Significance", as described in (4), unless the person applies for a permit pursuant to ARM Title 17, chapter 30, subchapter 13. The department shall review the application and determine whether the discharge is nonsignificant according to criteria established by the board. If the department determines that the discharge is nonsignificant, the department shall issue a "Determination of Nonsignificance", which must include any conditions or limitations on the discharge that are reasonably necessary to ensure compliance with its determination. No person may violate the conditions or limitations included in the department's "Determination of Nonsignificance" and any violation of those conditions or limitations constitutes degradation in violation of 75-5-605(1)(d), MCA.

(4) Any person proposing an activity or class of activities that may cause degradation and is not an activity included under (2) or (3) may complete a department "Application for Determination of Significance". Information required on the application includes, but is not limited to, the following:

(a) quantity and concentration of the parameters expected to change as a result of the proposed activity;

(b) length of time that the water quality is expected to be changed;

(c) character of the discharge;

(d) an analysis of the existing water quality of the receiving water, and any other downstream or downgradient waters which may be reasonably expected to be impacted, including natural variations and fluctuations in the parameter(s) which may change as a result of the proposed activity;

(e) proposed water quality protection practices.

(5) The department will review an "Application for Determination of Significance" and make a determination whether the proposed change in water quality is nonsignificant according to ARM 17.30.715 or 17.30.716 within 60 days of receipt of the completed application.

(6) Whenever the department determines that a proposed activity will not result in degradation, the department may require monitoring to verify compliance with this subchapter and 75-5-303, MCA.

(7) Whenever the department determines that a proposed activity will result in degradation, the applicant shall

complete an application to degrade state waters if the applicant decides to proceed with the proposed activity as planned. The department will not begin review of the application until the required fee has been paid to the department.

(8) In order to provide the information that is required for the department to determine whether or not degradation is necessary because there are no economically, environmentally, and technologically feasible alternatives to the proposed activity that would result in no degradation, an application to degrade state waters shall include, but not be limited to, the following, when applicable:

(a) a complete description of the proposed activity;

(b) the proposed effluent or discharge limitation(s);

(c) a statement of reasons for the proposed effluent or discharge limitation(s);

(d) an analysis of alternatives to the proposed activity, consistent with accepted engineering principles, demonstrating there are no economically, environmentally, and technologically feasible alternatives that are less-degrading or non-degrading. The analysis must be limited to only those alternatives that would accomplish the proposed activity's purpose;

(e) an analysis of the existing water quality of the receiving water and any other downstream or downgradient waters which may be impacted, including natural variations and fluctuations in the water quality parameter(s) for which an authorization to degrade is requested;

(f) the concentration, likely environmental fate, biological effects, and load for each parameter in the discharge likely to degrade existing water quality;

(g) the distribution of existing flows and their expected frequency;

(h) an analysis demonstrating the expected surface or ground water quality for all alternatives considered in (d) above;

(i) an analysis of the ground water flow system, including water-bearing characteristics of subsurface materials, rate and direction of ground water flow, and an evaluation of surface and ground water interaction;

(j) data concerning cumulative water quality effects of existing and authorized activities;

(k) a proposed monitoring and reporting plan that will determine the actual water quality changes.

(9)(a) An applicant must demonstrate that the proposed activity will result in important economic or social development that exceeds the costs to society of allowing the proposed change in water quality. Factors to be addressed in the application may include, but are not limited to, the positive and negative effects of the following:

(i) allowing the proposed change in water quality;

(ii) employment considering the existing level of employment, unemployment, and wage levels in the area (i.e., increasing, maintaining, or avoiding a reduction in employment);

(iii) the fiscal status of the local, county, or state government and local public schools;

(iv) the local or state economies (i.e., increased or reduced diversity, multiplier effects);

(v) social or historical values;

(vi) public health;

(vii) housing (i.e., availability and affordability);

(viii) existing public service systems and local educational systems; or,

(ix) correction of an environmental or public health problem.

(b) Factors included in the demonstration required in (a) above must be quantified whenever this can be done reliably and cost-effectively. Other factors, which cannot be quantified, may be represented by an appropriate unit of measurement. If the department determines that more information is required, the department may require additional information from the applicant or seek such additional information from other sources.

(10) To determine whether or not existing and anticipated uses will be fully protected, the department shall require the following information:

(a) a showing that the change will not result in violations of Montana water quality standards outside of a mixing zone; and

(b) an analysis of the impacts of the proposed water quality changes on the existing and anticipated uses of the impacted state water.

(11) To demonstrate the least degrading water quality protection practices will be fully implemented prior to, during, and after the proposed activity, the applicant shall provide to the department a complete description and schedule for implementation of the water quality protection practices associated with the proposed activity and a viable plan showing the ability to implement the water quality protection practices.

(12) Any application submitted pursuant to this subchapter must comply with the signature and certification requirements of ARM 17.30.1323.

(13) The department shall notify the applicant in writing within 60 days after receipt of an application to degrade state waters that the application does or does not contain all the information necessary for the department's nondegradation review. If the information from the supplemental submittal and any subsequent supplemental submittal is inadequate, the department shall notify the applicant in writing, within 30 days after receipt of the supplemental submittal, what additional information must be submitted. In any review subsequent to the first, the department may not make a determination of incompleteness on the basis of a deficiency which could have been noted in the first review.

(14) The board hereby adopts and incorporates by reference ARM 17.30.1323, which sets forth signature and certification requirements for MPDES permit applications. A copy of ARM 17.30.1323 may be obtained from the Department of Environmental Quality, PO Box 200901, Helena, MT 59620-0901. (History: 75-5-301, 75-5-303, MCA; IMP, 75-5-303, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499; AMD, 2003 MAR p. 1274, Eff. 6/27/03.)

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17.30.707 DEPARTMENT PROCEDURES FOR NONDEGRADATION REVIEW

(1) Upon a determination by the department that an application to degrade state waters required under this rule is complete, the department will prepare a preliminary decision either authorizing degradation or denying the application to degrade according to the procedures in ARM 17.30.708.

(2) An application to degrade state waters will be denied unless the applicant has affirmatively demonstrated and the department finds, based on a preponderance of evidence, the proposed activity to be in full compliance with 75-5-303, MCA, using the standards set out in (3)-(6) of this rule. The department shall consider an analysis by the applicant and any substantive relevant information either submitted by the public or otherwise available.

(3) To determine that degradation is necessary because there are no economically, environmentally, and technologically feasible alternatives to the proposed activity that would result in no degradation, the department shall consider the following:

(a) The department will determine the economic feasibility of the alternative water quality protection practices by evaluating the cost effects of the proposed alternatives on the economic viability of the project and on the applicant by using standard and accepted financial analyses.

(b) In order to determine the environmental feasibility of an alternative, the department will consider whether such alternative practices are available and will compare the overall environmental impacts of the various alternatives and the commitment of resources necessary to achieve the alternatives.

(c) In order to determine technological feasibility of an alternative, the department will consider whether such alternative practices are available and consistent with accepted engineering principles.

(4)(a) To determine that the proposed activity will result in important economic or social development that exceeds the benefit to society of maintaining existing high-quality waters and exceeds the costs to society of allowing degradation of high-quality waters, the department must find that the proposed activity will provide important economic or social development which outweighs any cost to society of allowing the proposed change in water quality. In making its determination, the department may consider factors that include, but are not limited to, the following:

(i) effects on the state or local community resulting from increased employment opportunities considering the existing level of employment, unemployment, and wage levels in the area;

(ii) effects on the state or local economies;

(iii) effects on the fiscal status of the local, county or state governments and local public schools;

(iv) effects on the local or state economies (i.e.,

increased or reduced diversity, multiplier effects);

(v) effects on social or historical values;

(vi) effects on public health;

(vii) effects on housing (i.e., availability and affordability);

(viii) effects on existing public service systems and local educational systems; or,

(ix) correction of an environmental or public health problem.

(b) In making the determination required in (a) above, the department must weigh any costs associated with the loss of high quality waters against any social or economic benefits demonstrated by the applicant. The department may also consider as a cost to society any identified and/or quantifiable negative social or economic effects resulting from the proposed activity.

(5) To determine that existing and anticipated uses of the receiving waters will be fully protected and that water quality standards will not be violated as a result of the proposed degradation, the department shall consider all available information.

(6) In order to authorize degradation under this rule, the department must determine that the least degrading water quality protection practices determined by the department to be economically, environmentally, and technologically feasible will be implemented prior to, during, and after the proposed activity until the degradation no longer occurs.

(7) The department shall make its preliminary decision either authorizing degradation or denying the application to degrade within 180 days after receipt of a complete application from the applicant. This time period may be extended upon agreement of the applicant or whenever an environmental impact statement must be prepared pursuant to Title 75, chapter 1, parts 1 and 2, MCA.

(8) To the maximum extent possible, the department will coordinate any application to degrade state waters with the permitting and approval requirements of other laws or programs administered by the department or by any other local, state, or federal agency. (History: 75-5-301, 75-5-303, MCA; IMP, 75-5-303, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499.)

17.30.708 DEPARTMENT PROCEDURES FOR ISSUING PRELIMINARY AND FINAL DECISIONS REGARDING AUTHORIZATIONS TO DEGRADE (1) A preliminary decision to deny or authorize degradation must be accompanied by a statement of basis for the decision and, if applicable, a detailed statement of conditions imposed upon any authorization to degrade.

(2) The preliminary decision must include the following information, if applicable:

(a) a description of the proposed activity;

(b) the level of protection required, e.g. for high-quality waters or ORW;

(c) a determination that degradation is or is not necessary based on the availability of economically, environmentally and technologically feasible alternatives that will prevent degradation;

(d) a determination of economic or social importance;

(e) a determination that all existing and anticipated uses will or will not be fully protected;

(f) the amount of allowed degradation;

(g) a description of the required water quality protection practices;

(h) a description of all monitoring and reporting requirements; and

(i) a specific identification of any mixing zone the department proposes to allow.

(3) A statement of basis for the decision must be prepared for every preliminary decision. In general, the statement of basis must briefly set forth the principal facts and significant factual, legal, methodological or policy questions considered in preparing the authorization. The statement of basis must include, when applicable:

(a) a description of the proposed activity which is the subject of the authorization;

(b) the type and quantity of degradation which will result if the proposed activity is authorized;

(c) a summary of the basis for the conditions imposed in any preliminary decision, including references to applicable statutory or regulatory provisions;

(d) a summary and analysis of alternatives to the proposed activity;

(e) a description of the procedures for reaching a final decision on the draft authorization including:

(i) the beginning and ending dates of the comment period and the address where comments will be received;

(ii) procedures for requesting a hearing; and

(iii) any other procedures by which the public may participate in the final decision;

(f) name and telephone number of a person to contact for additional information; and

(g) reasons supporting the preliminary decision.

(4) The preliminary decision, accompanying statement of basis, and, if applicable, the statement of conditions imposed, must be publicly noticed and made available for public comment for at least 30 days but not more than 60 days prior to a final decision. In providing public notice, the department shall comply with the following:

(a) procedures for public notice set forth in ARM

17.30.1372; and

(b) procedures for the distribution of information set forth in ARM 17.30.1041.

(5) During the public comment period any interested person may submit written comments on the preliminary decision and may request a public hearing. A request for a public hearing must be in writing and must state the nature of the issues proposed to be raised in the hearing. The department shall hold a hearing if it determines that there may be a significant degree of public interest in the preliminary decision. Any public hearing conducted under this subsection is not a contested case hearing under the provisions of the Montana Administrative Procedure Act, Title 2, chapter 4, MCA.

(6) Within 60 days after the close of the public comment period, the department shall issue a final decision accompanied by a statement of basis for the decision and, if applicable, a statement of conditions. The final decision and statement of basis will be prepared according to the requirements of (2) and (3) of this rule. In addition, the statement of basis for a final decision must include the following:

(a) which provisions, if any, of the preliminary decision have been changed in the final decision and the reasons for the change; and

(b) a description and response to all substantive comments on the preliminary decision raised during the public comment period or during any hearing.

(7) Upon issuing a final decision, the department shall notify the applicant and each person who has submitted written comments or requested notice of that decision. The notice must include reference to the procedures for appealing the decision. The final decision is effective upon issuance.

(8) The board hereby adopts and incorporates by reference ARM 17.30.1372, which sets forth procedures for issuing public notices of MPDES permit applications and hearings, and ARM 17.30.1041 which sets forth requirements for distribution and copying of public notices and permit applications. Copies of ARM 17.30.1372 and 17.30.1041 may be obtained from the Department of Environmental Quality, PO Box 200901, Helena, MT 59620-0901. (History: 75-5-301, 75-5-303, MCA; IMP, 75-5-303, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499.)

Rules 17.30.709 through 17.30.714 reserved

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17.30.715 CRITERIA FOR DETERMINING NONSIGNIFICANT CHANGES IN WATER QUALITY (1) The following criteria will be used to determine whether certain activities or classes of activities will result in nonsignificant changes in existing water quality due to their low potential to affect human health or the environment. These criteria consider the quantity and strength of the pollutant, the length of time the changes will occur, and the character of the pollutant. Except as provided in (2) of this rule, changes in existing surface or ground water quality resulting from the activities that meet all the criteria listed below are nonsignificant, and are not required to undergo review under 75-5-303, MCA:

(a) activities that would increase or decrease the mean monthly flow of a surface water by less than 15% or the 7-day 10 year low flow by less than 10%;

(b) discharges containing carcinogenic parameters or parameters with a bioconcentration factor greater than 300 at concentrations less than or equal to the concentrations of those parameters in the receiving water;

(c) discharges containing toxic parameters or nutrients, except as specified in (d) and (e) below, which will not cause changes that equal or exceed the trigger values in department Circular WQB-7. Whenever the change exceeds the trigger value, the change is not significant if the resulting concentration outside of a mixing zone designated by the department does not exceed 15% of the lowest applicable standard;

(d) changes in the concentration of nitrate in ground water which will not cause degradation of surface water if the sum of the predicted concentrations of nitrate at the boundary of any applicable mixing zone will not exceed the following values:

(i) 7.5 mg/L for nitrate sources other than domestic sewage;

(ii) 5.0 mg/L for domestic sewage effluent discharged from a conventional septic system;

(iii) 7.5 mg/L for domestic sewage effluent discharged from a septic system using level two treatment, as defined in ARM 17.30.702; or

(iv) 7.5 mg/L for domestic sewage effluent discharged from a conventional septic system in areas where the groundwater nitrate level exceeds 5.0 mg/L primarily from sources other than human waste.

For purposes of this subsection (d), the word "nitrate" means nitrate as nitrogen; and

(e) changes in concentration of total inorganic phosphorus in ground water if water quality protection practices approved by the department have been fully implemented and if an evaluation of the phosphorus adsorptive capacity of the soils in the area of the activity indicates that phosphorus will be

removed for a period of 50 years prior to a discharge to any surface waters;

(f) changes in the quality of water for any harmful parameter for which water quality standards have been adopted other than nitrogen, phosphorous, and carcinogenic, bioconcentrating, or toxic parameters, in either surface or ground water, if the changes outside of a mixing zone designated by the department are less than 10% of the applicable standard and the existing water quality level is less than 40% of the standard;

(g) changes in the quality of water for any parameter for which there are only narrative water quality standards if the changes will not have a measurable effect on any existing or anticipated use or cause measurable changes in aquatic life or ecological integrity.

(2) Notwithstanding compliance with the criteria of (1), the department may determine that the change in water quality resulting from an activity which meets the criteria in (1) is degradation based upon the following:

(a) cumulative impacts or synergistic effects;

(b) secondary byproducts of decomposition or chemical transformation;

(c) substantive information derived from public input;

(d) changes in flow;

(e) changes in the loading of parameters;

(f) new information regarding the effects of a parameter; or

(g) any other information deemed relevant by the department and that relates to the criteria in (1).

(3) The department may determine that a change in water quality resulting from an activity or category of activities is nonsignificant based on information submitted by an applicant that demonstrates conformance with the guidance found in 75-5-301(5)(c), MCA. In making a determination under this subsection, the department shall allow for public comment prior to a decision pursuant to the public notice procedures in ARM 17.30.1372.

(4) The board adopts and incorporates by reference department Circular WQB-7, entitled "Montana Numeric Water Quality Standards" (January 2004 edition), which establishes water quality standards for toxic, carcinogenic, bioconcentrating, nutrient, radioactive, and harmful parameters. (History: 75-5-301, 75-5-303, MCA; IMP, 75-5-303, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; AMD, 1995 MAR p. 1040, Eff. 6/16/95; AMD, 1995 MAR p. 2256, Eff. 10/27/95; TRANS, from DHES, 1996 MAR p. 1499; AMD, 2002 MAR p. 387, Eff. 2/15/02; AMD, 2003 MAR p. 217, Eff. 2/14/03; AMD, 2004 MAR p. 725, Eff. 4/9/04.)

17.30.716 CATEGORIES OF ACTIVITIES THAT CAUSE NONSIGNIFICANT CHANGES IN WATER QUALITY (1) In addition to the activities listed in 75-5-317, MCA, the categories or classes of activities that are identified in this rule have been determined by the department to cause changes in water quality that are nonsignificant due to their low potential for harm to human health or the environment and their conformance with the guidance found in 75-5-301, MCA.

(2) Except as provided in (5), a subsurface wastewater treatment system (SWTS) that meets all of the criteria in (2)(a) and falls within one of the categories in (2)(b) is nonsignificant.

(a) The SWTS, including primary and replacement drainfields must meet all of the following criteria:

(i) the drainfield must be 1,000 feet or more (400 feet or more for lots that meet the criteria in (2)(b)(iv)) from the nearest downgradient high quality state surface water that might be impacted. This distance may be reduced by 50% (to 500 and 200 feet, respectively) if the drainfield is pressure-dosed;

(ii) if the drainfield is not pressure-dosed:

(A) the soil percolation rate must be between 16 and 50 minutes per inch, if a percolation test has been conducted for the drainfield; and

(B) the natural soil beneath the absorption trench must contain at least six feet of very fine sand, sandy clay loam, clay loam, or silty clay loam;

(iii) the SWTS must serve no more than two single-family residences, or must serve a facility that produces non-residential, non-industrial wastewater with a wastewater design flow of 700 gallons per day or less;

(iv) there must be only one SWTS receiving wastewater from the lot;

(v) the SWTS must be located on the lot where wastewater is produced;

(vi) the SWTS must meet the current design standards defined in ARM Title 17, chapter 36, subchapter 3 and department Circular DEQ-4, 2004 edition; and

(vii) for lots smaller than 20 acres, and for lots 20 acres and larger on which the drainfield is 500 feet or less from the downgradient property boundary, the background nitrate (as N) concentration in the shallowest ground water must be less than two mg/L.

(A) The department may require multiple ground water samples over a specified time period to determine whether seasonal variation of ground water nitrate concentrations may affect compliance with this requirement.

(b) The SWTS must fall within one of the following five categories:

(i) for category one:

(A) the lot size is two acres or larger;

(B) the percolation rate is 16 minutes per inch or slower, if a percolation test has been conducted for the drainfield;

(C) the natural soil beneath the absorption trench contains at least six feet of very fine sand, sandy clay loam or finer soil; and

(D) the depth to bedrock and seasonally high ground water is eight feet or greater;

(ii) for category two:

(A) the drainfield is pressure-dosed;

(B) the lot size is two acres or larger;

(C) the percolation rate is six minutes per inch or slower, if a percolation test has been conducted for the drainfield;

(D) the natural soil beneath the absorption trench contains at least six feet of medium sand, sandy loam or finer soil; and

(E) the depth to bedrock and seasonally high ground water is 12 feet or greater;

(iii) for category three:

(A) the drainfield is pressure-dosed;

(B) the lot size is one acre or larger;

(C) the subdivision consists of five lots or fewer;

(D) there is no existing or approved SWTS within 500 feet of the subdivision boundaries;

(E) the percolation rate is six minutes per inch or slower, if a percolation test has been conducted for the drainfield;

(F) the natural soil beneath the absorption trench contains at least six feet of medium sand, sandy loam or finer soil; and

(G) the depth to bedrock and ground water is 100 feet or greater;

(iv) for category four:

(A) the total number of subdivision lots that were reviewed pursuant to 76-4-101 et seq., MCA, and were created in a county during the previous 10 state fiscal years is fewer than 150; and

(B) the lot is not within one mile of the city limits of an incorporated city or town with a population greater than 500 as determined by the most recent census; or

(v) for category five:

(A) the SWTS is a level II system;

(B) the lot size is two acres or larger;

(C) the bottom of the drainfield absorption trenches is not more than 18 inches below ground surface; and

(D) the depth to limiting layer (based on test pit data) is greater than six feet below ground surface.

(3) A mixing zone is not required for SWTSs that meet the criteria in this rule. However, SWTS drainfields must be located so that there is a 100-foot setback between existing and approved water supply wells and the boundaries of a 100-foot mixing zone that is provisionally designated for purposes of applying this setback.

(4) The department may require that on-site information be provided to verify any of the criteria required in this rule.

(5) Notwithstanding an activity's designation as nonsignificant in this rule, the department may review the activity for significance under the criteria in ARM 17.30.715(1) based upon the following:

(a) cumulative impacts or synergistic effects;

(b) secondary byproducts of decomposition or chemical transformation;

(c) substantive information derived from public input;

(d) changes in flow;

(e) changes in the loading of parameters;

(f) new information regarding the effects of a parameter; or

(g) any other information deemed relevant by the department and that relates to the criteria in ARM 17.30.715(1).

(6) The department may determine that the categorical exclusion in (2) does not apply to lots within a specific geographic area. This determination must be based upon information submitted in a petition demonstrating that the categorical exclusions should not apply within that area.

(a) A petition submitted under this rule may be considered only if it is submitted by a local governing body, a local department or board of health, a local water quality district, or by either 10% or 20, whichever is fewer, of the landowners (or persons with a contract interest in land) within the affected geographic area.

(b) A petition submitted under this rule must contain the following information:

(i) a legal description of the petition area, which is the geographic area within which the categorical exclusions would not apply;

(ii) a detailed description of the soils, geology, and hydrogeology of the area described in (6)(b)(i);

(iii) a current listing from a title insurance company of the names and addresses of all persons who either own or have a contract interest in land within the petition area; and

(iv) data from ground water samples taken from wells that withdraw water from the uppermost aquifer underlying the petition area or from wells that withdraw water from the uppermost aquifer underlying an area within the same or adjacent county with similar climatic, soil, geologic, and hydrogeologic conditions and a density of individual sewage systems similar to that allowed in (2)(b). The ground water data must demonstrate that one of the following conditions is met:

(A) nitrate as nitrogen concentrations exceed 5.0 mg/L in ground water samples from more than 25% of at least 30 wells that are not located within a standard mixing zone, as defined in ARM 17.30.517(1)(d)(viii), for a septic system; or

(B) data from ground water samples collected at least three years apart from the same 15 wells indicate a statistically significant increase of greater than 1.0 mg/L in nitrate as nitrogen concentrations in the uppermost aquifer.

(c) Within 90 days after receipt of the information required in (6)(b), the department shall issue a preliminary decision as to whether the petitioner has satisfied the requirements in (6)(b), and describe the reasons for either granting or denying the petition. The preliminary decision must be mailed to the petitioner and to all landowners or persons with a contract interest in land within the petition area and must include the following information:

(i) a description of the petition area;

(ii) a summary of the basis for the preliminary decision including any modifications to the boundaries of the petition area;

(iii) a description of the procedures for public participation and of the opportunity to comment prior to the department's final decision on the petition;

(iv) the ending dates of the comment period and the address where comments will be received;

(v) procedures for requesting a hearing; and

(vi) the name and telephone number of a person to contact for additional information.

(d) Within 60 days after the close of the public comment period, the department shall issue a final decision and provide written notice of its decision to the petitioner and to each person who submitted written comments. The final decision must set forth the department's reasons for granting or denying the petition and must include a response to all substantive comments received by the department during the public comment period or during any hearing. (History: 75-5-301, 75-5-303, MCA; IMP, 75-5-303, 75-5-317, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499; AMD, 1997 MAR p. 2071, Eff. 11/18/97; AMD, 1998 MAR p. 936, Eff. 4/17/98; AMD, 2003 MAR p. 2274, Eff. 10/17/03; AMD, 2004 MAR p. 2579, Eff. 10/22/04.)

17.30.717 IMPLEMENTATION OF WATER QUALITY PROTECTION PRACTICES (1) The owner of a new or increased source for which no water quality protection practices are approved by the department must design and submit a viable plan for implementation of the necessary water quality protection practices for department review, modification, and approval prior to implementation. (History: 75-5-301, 75-5-303, MCA; IMP, 75-5-303, 75-5-317, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499.)

17.30.718 CRITERIA FOR NUTRIENT REDUCTION FROM SUBSURFACE WASTEWATER TREATMENT SYSTEM (SWTS) (1) This rule describes the information that must be submitted to obtain a department classification of a SWTS as level 1a, level 1b or level 2, as those terms are defined in ARM 17.30.702. The nitrogen treatment efficiency that a SWTS is granted under this rule may be used as the effluent concentration in mixing zone calculations.

(2) A person seeking classification of a SWTS as level 1a, level 1b, or level 2 must submit the following background information to the department regarding the SWTS, in addition to any other information the department determines is necessary to verify the long-term treatment capabilities of the system:

(a) a description of the technology utilized by the system and the system components;

(b) engineering details regarding component sizes and materials specifications. Components include, but are not limited to, tanks, pumps, piping, control panels, and treatment media;

(c) operation and maintenance requirements;

(d) a description of the long-term reliability of the system components;

(e) a description of the installation process; and

(f) information verifying the reliability of the SWTS manufacturer and vendor. At a minimum, the vendor or manufacturer must either:

(i) have maintained an office in Montana for the past five years with a significant portion of its business related to design, construction, or installation of SWTSs; or

(ii) demonstrate an equivalent level of experience and reliability in Montana.

(3) A person seeking classification of a SWTS as level 1a, level 1b, or level 2 must submit monitoring information as provided in this section. The department may require additional information (particularly for technologies not included in department Circular DEQ-4) if necessary to verify the long-term reliable treatment capabilities of the system.

(a) The following background information must be submitted for each system monitored:

(i) system address (including legal description);

(ii) system start-up date;

(iii) description of current and historical system use, particularly during the performance monitoring period; and

(iv) monitoring data collected prior to and after the required performance monitoring period.

(b) For a SWTS that uses the effluent total nitrogen concentration to determine treatment efficiency, the monitoring must be from at least six systems. For a SWTS that uses the percent total nitrogen removed from measured raw sewage to determine treatment efficiency, the monitoring must be from at least three systems.

(c) For each SWTS that is monitored, at least one representative sample of raw sewage must be collected and analyzed for nitrate (as N), nitrite (as N), ammonia (as N), total kjeldahl nitrogen (TKN) (as N), biological oxygen demand (BOD), and total suspended solids (TSS). This information will be used to determine the raw sewage strength, which must not exceed residential strength. Chemical characterization of raw sewage must be based on one of the following representative samples:

(i) if the septic tank or other initial tank is used only for primary treatment of the sewage, the sample should be collected from that tank;

(ii) if the septic tank or other initial tank is used for treatment beyond primary treatment, the sample should be collected prior to start-up of the SWTS from that tank; or

(iii) another department-approved location.

(d) Each SWTS must be monitored for one year. At least one SWTS must be monitored for at least two years.

(e) Sampling frequency must be at least monthly (or equivalent frequency as approved by the department) during the winter months (November through April), and at least quarterly during the summer months (May through October). At least 50% of the monitoring data from each SWTS must be collected during the winter months.

(f) Each effluent sample must be analyzed for nitrate (as N), nitrite (as N), ammonia (as N), TKN (as N), BOD, TSS, and flow. If influent monitoring is conducted, each influent sample must be analyzed for TKN (as N) or total nitrogen. If the SWTS is experiencing significant infiltration and inflow, the department may require that influent samples be collected and analyzed during each effluent monitoring event to determine an accurate representation of the nitrogen-reducing capabilities of the system.

(g) Monitored SWTSs must be in Montana or located in a climate similar to Montana.

(h) The arithmetic mean of the available data will be used to determine compliance with this rule.

(i) All water analyses, except for temperature, must be conducted according to an EPA-approved method by an independent laboratory. Temperature measurements must be conducted on-site.

(j) The department may waive specific requirements in this rule if:

(i) the monitoring data are substantially equivalent to those requirements; or

(ii) the SWTS uses a proven nutrient reduction technology listed in DEQ-4 with proprietary variations.

(4) The results from a SWTS that is tested under the EPA/national science foundation (NSF) environmental technology verification (ETV) program may be used to demonstrate compliance with the requirements in (3).

(5) In response to a request for classification of a SWTS as level 1a, level 1b, or level 2, the department may, after evaluating the SWTS under the criteria in this rule:

(a) approve the request;

(b) approve the request with modifications or conditions;

(c) deny the request; or

(d) deny the request pending submittal of additional information.

(6) If a SWTS that is classified as level 1a, level 1b, or level 2 is modified, the department may require that the SWTS be re-evaluated under the criteria in this rule.

(7) If subsequent data indicate that a SWTS classified under this rule is not reliable or cannot meet required nutrient reductions, the department may rescind the classification.

(8) All SWTSs classified as a level 1a, level 1b, or level 2 must have an operation and maintenance (O&M) contract in perpetuity for each system installed. The O&M contract will be required in the subdivision approval, or as a deed restriction if a subdivision plat approval is not required for the property. O&M must be conducted by the system manufacturer, an approved vendor, or other qualified personnel. The SWTS vendor or manufacturer must offer an O&M plan that meets the requirements of this section and the requirements in department Circular DEQ-4. At a minimum, the O&M contract must include:

(a) an on-site inspection of all the major components of the SWTS twice a year for the first two years after use of the system begins, and annually thereafter. Inspections of suspended growth systems must be twice as frequent. Inspection items must include verifying proper operation of the visual/audible alarm system required in (9) and determining whether any water treatment devices have been added, modified or removed from the water system that discharges to the SWTS; and

(b) annual effluent sampling and analysis for nitrate (as N), nitrite (as N), ammonia (as N), TKN (as N), BOD, TSS, fecal coliform, specific conductance and temperature. Effluent sampling must be conducted after all treatment is complete, but before discharge to the absorption area. All monitoring data collected from a type of SWTS may be requested by the department if the department has reason to believe that a type of SWTS that has been approved as a nutrient-reducing system is not meeting the required treatment efficiencies.

(9) All SWTSs classified as level 1a, level 1b, or level 2 must have the following features:

(a) a visual and/or audible alarm warning that indicates if a hydraulic malfunction is occurring in any portion of the treatment system prior to the absorption system; and

(b) a physical barrier that prevents the discharge of wastewater to the absorption system if a hydraulic malfunction is occurring in any portion of the treatment system prior to the absorption system. (History: 75-5-301, 75-5-303, MCA; IMP, 75-5-303, MCA; NEW, 2004 MAR p. 1384, Eff. 6/18/04.)

Sub-Chapters 8 and 9 reserved

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