

Water Pollution Control Advisory Council (WPCAC)

Thursday, January 29, 2026, 10:00 A.M.

Wilderness Room, DEQ Colonial Building (2401 Colonial Drive, Helena, MT) &
Zoom Webinar

Join via Zoom:

<https://mt-gov.zoom.us/j/88180924552?pwd=7x8KxYTfE8iEHQl1hIVazliokJSqkx.1>

Dial by Phone: 206-337-9723 **Webinar ID:** 881 8092 4552 **Webinar Passcode:** 704365

Agenda

10:00	Call to Order	Amanda Knuteson
10:03	Approval of Agenda	Amanda Knuteson
10:05	Approval of September 27, 2024 Minutes	Amanda Knuteson

Briefing Items

10:10	Thank you/Opening Remarks	Lindsey Krywaruchka
10:20	Proposed rulemaking to implement House Bill 685 - Nondegradation feasibility allowances	Katie Makarowski
10:40	Proposed rulemaking to amend Circular DEQ-7 - Montana numeric water quality standards	Katie Makarowski Allie Steele Lauren Sweeney
11:00	Municipal Separate Storm Sewer System (MS4) rulemaking update	Tyler Halligan
11:15	Updates from WPCAC members	WPCAC members
11:25	Public Comment During this time, members of the public may comment on any public matter within the jurisdiction of the Council that is not otherwise on the meeting agenda. For items on this meeting agenda, time for public comment will be provided after Council discussion of each item.	Amanda Knuteson
11:40	Agenda Items for Future Meetings	Amanda Knuteson/Tiffany Lyden
11:45	Adjourn	Amanda Knuteson

Please click the link below to join the webinar:

<https://mt-gov.zoom.us/j/88180924552?pwd=7x8KxYTfE8iEHQl1hIVazliokJSqkx.1>

Passcode: 704365

Or Join by Phone: 206-337-9723

Webinar ID: 881 8092 4552 Passcode: 704365



January 20, 2026

TO: Members of the Water Pollution Control Advisory Council and the public
FROM: Katie Makarowski, Standards and Modeling Section Supervisor, Montana DEQ
MEETING DATE: January 29, 2026
SUBJECT: Proposal of Rulemaking to Implement House Bill 685 (2025)

ACTION REQUESTED OF COUNCIL:

The council is requested to review the attached rulemaking documents in advance of the meeting on January 29, 2026, and provide comment as they see fit. The department's Water Quality Division will present a rulemaking summary and answer questions about the rulemaking that members may have.

BACKGROUND:

The Department of Environmental Quality (department) is initiating rulemaking to fulfill requirements of House Bill 685, adopted by the 69th Montana Legislature in 2025.

HB 685 changed the terminology used in several statutes including Montana's nondegradation policy to describe authorizations issued by the department to lower the quality of high-quality waters from "authorizations to degrade" to "feasibility allowances" and directed the department to amend ARM 17.30.707 and 17.30.708 to add references to feasibility allowances.

HB 685 also removed the requirement at 75-5-303(3)(b), MCA, that feasibility allowance applicants affirmatively demonstrate to the department that the proposed activity's economic or social benefit exceeds the costs to society of allowing degradation.

Additionally, HB 685 added language at 75-5-303(3)(b), MCA, that a feasibility allowance applicant must affirmatively demonstrate that a proposed project will result in important economic or social development "in the area that the high-quality waters are located."

To fulfill requirements of House Bill 685, the department is proposing to amend four rules (ARM 17.30.201, 17.30.706, 17.30.707, and 17.30.708) to align rule language with the HB 685 amendments.

RECOMMENDATION:

The recommendation being sought from the Council is to proceed with the rulemaking under the Water Quality Act (Title 75, Chapter 5, MCA).

Please contact the department with any questions:

Katie Makarowski
Standards and Modeling Section Supervisor, Water Quality Planning Bureau
P.O. Box 200901, Helena, MT 59620; 406.444.3639; kmkarowski@mt.gov

Attachments:

1. Proposed rule amendments ("ProposedRuleAmendments_HB685_WPCAC_1.29.26.pdf")
2. House Bill 685

January 20, 2026

Proposed Rule Amendments

This document contains the rules proposed to be amended by the Department of Environmental Quality to implement House Bill 685, adopted by the 69th Montana Legislature in 2025, related to feasibility allowances under Montana's nondegradation policy. This document is being shared with Water Pollution Control Advisory Council (WPCAC) members prior to first publication to provide an opportunity for council members to comment on the proposed action (§ 75-5-307(1), MCA).

The rules as proposed to be amended provide as follows, new matter underlined, deleted matter interlined:

17.30.201 PERMIT APPLICATION, DEGRADATION AUTHORIZATION, AND ANNUAL PERMIT FEES

- (1) The purpose of this rule is to provide fee schedules for use in determining fees to be paid to the department under 75-5-516, MCA. The types of fees provided under this rule are:
 - (a) application fees for individual permits (Schedule I.A);
 - (b) application fees for non-storm water general permits (Schedule 1.B);
 - (c) application fees for storm water general permits (Schedule 1.C);
 - (d) application fees for other activities (Schedule 1.D);
 - (e) degradation authorization fees (Schedule II);
 - (f) annual fees for individual permits (Schedule III.A);
 - (g) annual fees for non-storm water permits (Schedule III.B); and
 - (h) annual fees for storm water general permits (Schedule III.C).
- (2) For purposes of this rule, the definitions contained in ARM Title 17, chapter 30, subchapter 10 and subchapter 13 are incorporated by reference. The following definitions also apply in this rule:
 - (a) "domestic waste" means wastewater from bathrooms, kitchens, and laundry;
 - (b) "flow rate" means the maximum flow during a 24-hour period, expressed in gallons per day (gpd);
 - (c) "industrial waste," as defined in 75-5-103, MCA, means a waste substance from the process of business or industry or from the development of any natural resource, together with any sewage that may be present;
 - (d) "major permit" means a Montana pollutant discharge elimination system permit for a facility that is designated by the department as a major facility pursuant to ARM Title 17, chapter 30, subchapter 13;
 - (e) "minor permit" means a Montana pollutant discharge elimination system permit for

a facility that is not designated by the department as major pursuant to ARM Title 17, chapter 30, subchapter 13;

- (f) "multi-county," for pesticide permit fee purposes, means the general permit authorizing pesticide application within multiple contiguous counties, not to exceed 20, as identified by the applicant;
- (g) "municipal separate storm sewer system" means a conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains, that discharges to surface waters and is owned or operated by the state of Montana, a governmental subdivision of the state, a district, association, or other public body created by or pursuant to Montana law, including special districts such as sewer districts, flood control districts, drainage districts and similar entities, and designated and approved management agencies under section 208 of the federal Clean Water Act, which has jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, and is:
 - (i) designed or used for collecting or conveying storm water;
 - (ii) not a combined sewer; and
 - (iii) not part of a publicly owned treatment works (POTW) as defined in ARM Title 17, chapter 30, subchapter 13;
- (h) "new permit" means a permit for a facility or activity that does not have an effective permit;
- (i) "non-traditional MS4" means a system similar to separate storm sewer systems in municipalities, such as systems at military bases, large educational, hospital, or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings;
- (j) "other wastes," as provided in 75-5-103, MCA, means garbage, municipal refuse, decayed wood, sawdust, shavings, bark, lime, sand, ashes, offal, night soil, oil, grease, tar, heat, chemicals, dead animals, sediment, wrecked or discarded equipment, radioactive materials, solid waste, and all other substances that may pollute state waters;
- (k) "outfall" means a disposal system through which effluent or waste leaves the facility or site;
- (l) "pesticide" means:
 - (i) a substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest;
 - (ii) any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant; and
 - (iii) any nitrogen stabilizer, except that the term "pesticide" shall not include any article that is a "new animal drug" within the meaning of section 201(w) of the federal Food, Drug, and Cosmetic Act, 21 U.S.C. 321(w), that has been determined by the United States Secretary of Health and Human Services not to be a new animal drug by a regulation establishing conditions of use for the article, or that is an animal feed

within the meaning of section 201(x) of 21 U.S.C. 321(x) bearing or containing a new animal drug. The term "pesticide" does not include liquid chemical sterilant products (including any sterilant or subordinate disinfectant claims on such products) for use on a critical or semi-critical device, as defined in section 201 of the federal Food, Drug, and Cosmetic Act, 21 U.S.C. 321. For purposes of the preceding sentence, the term "critical device" includes any device that is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, and the term "semi-critical device" includes any device that contacts intact mucous membranes but that does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body.

- (m) "renewal permit" means a permit for an existing facility that has an effective discharge permit;
- (n) "single county," for pesticide permit fee purposes, means the general permit authorizing pesticide application within one county; and
- (o) "threshold," for pesticide permit fee purposes, means the area of surface water that is impacted annually by pesticide treatment, as designated in the Pesticide General Permit for specific pattern uses.

- (3) A person who applies for a permit, certificate, license, notice of intent, plan review, waiver, determination of significance, or other authorization required by rule under 75-5-201, 75-5-301, or 75-5-401, MCA, or for a modification or renewal of any of these authorizations, shall pay to the department an application fee as determined under (6).
- (4) A person whose activity requires an application ~~for a feasibility allowance to degrade state waters~~ under 75-5-303, MCA, and ARM Title 17, chapter 30, subchapter 7 shall submit a ~~degradation authorization~~ feasibility allowance fee with the application, as determined under (7).
- (5) A person who holds a permit, certificate, license, or other authorization required by rule under 75-5-201 or 75-5-401, MCA, shall pay to the department an annual permit fee as determined under (8).
- (6) The fee schedules for new or renewal applications for, or modifications of, a Montana pollutant discharge elimination system permit under ARM Title 17, chapter 30, subchapter 11 or 13, a Montana ground water pollution control system permit under ARM Title 17, chapter 30, subchapter 10, or any other authorization under 75-5-201, 75-5-301, or 75-5-401, MCA, or rules promulgated under these authorities, are set forth below as Schedules I.A, I.B, I.C, and I.D. Fees must be paid in full at the time of submission of the application. For new applications under Schedule I.A, the annual fee from Schedule III.A for the first year must also be paid at the time of application. For new applications under Schedule I.B and I.C, the annual fee is included in the new permit amount and covers the annual fee for the calendar year in which the permit coverage becomes effective.
 - (a) Under Schedules I.A and I.B, the department shall assess a fee for each outfall, except that MS4 permit fees under Schedule I.A are based on population as provided in (6)(h). An application fee for multiple outfalls is not required if there are multiple outfalls from the same source that have similar effluent characteristics, unless the discharges are to different receiving waters or stream segments, or result in multiple or variable (flow

dependent) effluent limits or monitoring requirements.

- (b) For purposes of (6) and (7), if a resubmitted application contains substantial changes or deficiencies requiring significant additional review, the department shall require an application resubmittal fee under Schedule I.D. The resubmittal fee must be paid before any further review is conducted. The department shall give written notice of the assessment within 30 days after receipt of the resubmittal and provide for appeal as specified in (11). If the department does not receive a response to a deficiency notice within one year, the applicant shall submit a new application and associated fees in order for application processing to continue.
- (c) The department may assess an administrative processing fee under Schedule I.D when a permittee makes substantial alterations or additions, requiring significant additional review, to a sediment control plan, waste management plan, nutrient management plan, pesticide management plan, or storm water pollution prevention plan.
- (d) Application fees are nonrefundable except, as required by 75-5-516(1)(d), MCA, if the permit or authorization is not issued the department shall return a portion of the application fee based on avoided enforcement costs. The department shall return 25% of the application fee if the application is withdrawn or if the department waives federal Clean Water Act section 401 certification within 30 days after submittal.
- (e) Facilities with an expired permit must pay the new permit application fee for individual permit coverage as specified in Schedule I.A.
- (f) Applications for new permits or permit renewals for sources that constitute a new or increased source, as defined in ARM 17.30.702(17), must pay a significance determination fee for each outfall in addition to the application fee.
- (g) Discharges composed entirely of storm water from industrial activities or from mining and oil and gas activities, as defined in ARM 17.30.1105, may be incorporated into a permit application submitted under Schedule I.A. The application fee for each storm water outfall must be submitted to the department with the application.
- (h) The application fee for an individual permit for a municipal separate storm sewer system (MS4) is determined by population based on the latest decennial census from the United States Census Bureau. Applications for MS4 permits with co-permittees will receive a 10% reduction in the application fee.

Schedule I.A Application Fee for Individual Permits

Category	Renewal Fee	New Permit Fee
Publicly owned treatment works - major permit	\$ 4,800	\$ 5,000
Privately owned treatment works - major permit	5,000	5,000
Publicly owned treatment works - minor permit	1,500	2,500
Privately owned treatment works - minor permit	3,000	4,200

Ground water permit, domestic wastes flow rate - gallons per day			
0-10,000 gpd	1,200	2,500	
10,001 to 30,000 gpd	1,500	2,500	
more than 30,000 gpd	2,500	4,000	
Ground water permit, industrial, or other wastes			
0-1,000 gpd	1,000	1,500	
1,001 to 5,000 gpd	1,500	2,500	
5,001 to 10,000 gpd	2,500	3,500	
more than 10,000 gpd	4,800	5,000	
Concentrated animal feeding operation permit	600	600	
Storm water permit construction, industrial, and mining, oil, and gas activities	2,000	3,200	
Traditional storm water municipal separate storm sewer system (MS4) permit			

population greater than 50,000	9,000	11,000
population 10,000 to 50,000	7,000	9,000
population less than 10,000	6,000	8,000
Non-traditional MS4 permit	5,000	7,000
Other MS4 permits	4,000	5,000
Significance determination	4,000	5,000
Storm water outfall - (integrated)	1,000	1,500

Schedule I.B Application Fee for Non-Storm Water General Permits

Category	Renewal Fee	New Permit Fee (includes initial annual fee)
Concentrated animal feeding operation	\$ 600	\$ 1,200
Construction dewatering	400	900
Fish farms	600	1,200
Produced water	900	1,200
Suction dredge		
resident of Montana nonresident of Montana	25 100	50 200
Sand and gravel	900	1,200
Domestic sewage treatment lagoon	800	1,200
Disinfected water	800	1,200
Petroleum cleanup	800	1,200
Pesticides		
single county - less than threshold	25	50
multi-county - less than threshold	50	100
single county - greater than threshold	250	500
multi-county - greater than threshold	600	1,200
Ground water remediation or dewatering	800	1,400
Ground water potable water treatment facilities	800	1,400
Other general permit, not listed above	600	1,200

- (i) Application fees in Schedule I.C for authorizations under the general permit for storm water associated with construction activities are based on the total acreage of disturbed land. Renewal application fees will not be required during the general permit renewal cycle, unless the authorization has been in effect for more than four years.
- (j) Application fees in Schedule I.C for authorizations under the general permits for storm

water associated with industrial activities and mining, oil, and gas activities are based on the total size of the regulated facility or activity in acres.

- (k) Application fees in Schedule I.C for authorizations under a general permit for a municipal separate storm sewer system (MS4) are determined by population based on the latest decennial census from the United States Census Bureau. Applications for MS4 permit coverage with co-permittees will receive a 10% reduction in the application fee.
- (l) Modifications to authorizations under the general permit for storm water associated with construction activities will be processed under Schedule I.D as a minor modification if the modification is submitted within six months after the date of issuance of the authorization. Modifications, except for name changes, submitted six months or more after issuance of the authorization will be processed under Schedule I.C as a new permit application.
- (m) Modifications, except for name changes, to authorizations under a general permit other than the general permit for storm water associated with construction activities must be processed under Schedule 1.B and I.C as a renewed application.
- (n) A facility with a construction storm water no-exposure certification from the department must apply for and receive a new certification every five years in order to maintain a no-exposure status.

Schedule I.C Application Fee for Storm Water General Permits

Category	Renewal Amount	New Permit Amount (includes initial annual fee)
Storm water associated with construction 1 to 5 acres	\$ 900	\$ 900
more than 5 acres, up to 10 acres	1,000	1,000
more than 10 acres, up to 25 acres	1,200	1,200
more than 25 acres, up to 100 acres	2,000	2,000
more than 100 acres	3,500	3,500
Storm water associated with industrial activities		
small - 5 acres or less	1,200	1,500
medium - more than 5 acres, up to 20 acres	1,500	1,800
large - more than 20 acres	1,800	2,000
Storm water associated with mining, oil, and gas		
small - 5 acres or less		1,200
		1,500

medium - more than 5 acres, up to 20 acres	1,500	1,800
large - more than 20 acres	1,800	2,000
Traditional storm water municipal separate storm sewer system (MS4)		
population greater than 50,000 population	7,000	10,000
10,000 to 50,000	6,000	8,000
population less than 10,000	5,000	6,000
County MS4 permit	4,000	5,000
Non-traditional MS4 permit	2,000	3,000
Storm water no-exposure certification required once every five years	300	500
Storm water construction waiver		400

(o) The minimum application fee under Schedule I.D for federal Clean Water Act section 401 certification is \$400 or 1% of the gross value of the proposed project, whichever is greater, and the maximum fee may not exceed \$20,000. If a fee is submitted for a 401 certification and the department waives certification, without review, because the project will require a department permit or authorization identified in ARM 17.30.105(2)(b), the department will credit the fee towards the cost of the applicable permit or authorization.

Schedule I.D Application Fee for Other Activities

Category	Amount
Short-term water quality standard, turbidity "318 authorization"	\$ 250
Short-term water quality standard, remedial activities and pesticide application "308 authorization"	250
Federal Clean Water Act section 401 certification	See ARM 17.30.201(6)(o)
Review plans and specifications to determine if permit is necessary, pursuant to 75-5-402(2), MCA	2,000
Major modification	Renewal fee from Schedule I.A
Minor modification, includes transfer of ownership	500
Resubmitted application fee	500
Administrative processing fee	500

(7) The fee schedule for new or renewal ~~authorizations to degrade state waters feasibility allowances~~ under ARM Title 17, chapter 30, subchapter 7 is set forth in Schedule II. Payment of the ~~degradation authorization feasibility allowance~~ fee is due upon submittal of the applications. For the domestic sewage treatment and industrial activity categories, the department shall assess a fee for each outfall. If an application for ~~authorization to degrade state waters a feasibility allowance~~ is denied, the department shall return 15% of the fee submitted.

Schedule II Review of ~~Authorizations to Degrade~~ Feasibility Allowance Applications

Category	Amount
Domestic sewage treatment	\$5,000
Industrial activity	5,000

(8) The annual permit fees are set forth in Schedules III.A, III.B, and III.C. No annual fee is required for activities listed in Schedule I.D.

(a) Under Schedules III.A and III.B, the department shall assess a fee for each outfall, except that MS4 permit fees under Schedule III.A are based on population as determined by the latest decennial census from the United States Census Bureau. An annual fee for multiple outfalls is not required if there are multiple outfalls from the same source that have similar effluent characteristics, unless the discharges are to different receiving waters or stream segments, or the discharges result in multiple or variable (flow dependent) effluent limits or monitoring requirements. For ground water permits, the department shall assess a fee based on the annual average daily flow in gallons per day for each outfall.

Schedule III.A Annual Fee for Individual Permits

Category	Minimum Fee	Fee Per Million Gallons of Effluent per Day (MGD)
Publicly owned treatment works - major permit	\$ 3,000	\$ 3,000
Privately owned treatment works - major permit	3,000	3,000
Publicly owned treatment works - minor permit	1,500	3,000
Privately owned treatment works - minor permit discharge of non-contact cooling water only	1,500 800	3,000 800
Ground water permit, domestic wastes annual average daily flow - gallons per day		3,000
0 to 10,000 gpd		1,300
10,001 to 30,000 gpd		2,000
more than 30,000 gpd		3,000
Ground water permit, industrial, or other wastes		3,000
0 to 1,000 gpd		2,000

1,001 to 5,000 gpd	2,500
5,001 to 10,000 gpd	2,800
more than 10,000 gpd	3,000
Concentrated animal feeding operation permit	600
Storm water permit construction, industrial, and mining, oil, and gas activities	2,000
Traditional storm water municipal separate storm sewer system (MS4) permit	
population greater than 50,000	3,000
population 10,000 to 50,000	2,500
population less than 10,000	2,000
Non-traditional MS4 permit	1,500
Other MS4 permits	1,500
Storm water outfall - (integrated)	1,000

Schedule III.B Annual Fee for Non-Storm Water General Permits

Category	Amount
Concentrated animal feeding operation	\$600
Construction dewatering	450
Fish farms	450
Produced water	750
Portable suction dredges	
resident of Montana	25
nonresident of Montana	100
Sand and gravel production	750
Domestic sewage treatment lagoon	850
Disinfected water	750
Petroleum cleanup	750

Pesticides		
single county - less than threshold		25
multi-county - less than threshold		50
single county - greater than threshold		250
multi-county - greater than threshold		600
Ground water remediation or dewatering		800
Potable water treatment facilities		800
Other general permit, not listed above		800

- (b) Annual fees in Schedule III.C for authorizations under the general permit for storm water associated with construction activities are based on the total acreage of disturbed land.
- (c) Annual fees in Schedule III.C for authorizations under the general permits for storm water associated with industrial activities and for mining, oil, and gas activities are based on the total size of the regulated facility or activity in acres.
- (d) Annual fees in Schedule III.C for authorizations under the general permit for municipal separate storm sewer systems (MS4s) are determined by population in an urbanized area as defined by the United States Census Bureau. The fees must be based on the latest available decennial census data.

Schedule III.C Annual Fee for Storm Water General Permits

Category	Amount
Storm water associated with construction 1 to 5 acres	\$ 650
more than 5 acres, up to 10 acres	750
than 10 acres, up to 25 acres	1,150
than 25 acres, up to 100 acres	1,800
than 100 acres	2,800
Storm water associated with industrial activities small - 5 acres or less	1,000
medium - more than 5 acres, up to 20 acres	1,200
large - more than 20 acres	1,500
Storm water associated with mining, oil, and gas	1,000

small - 5 acres or less	1,200
medium - more than 5 acres, up to 20 acres	1,500
large - more than 20 acres	
Traditional storm water municipal separate storm sewer system (MS4)	
	5,000
population greater than 50,000	4,000
population 10,000 to 50,000	2,500
population less than 10,000	
County MS4 permit	1,200
Non-traditional MS4 permit	1,200

- (e) A facility that maintains compliance with permit requirements, including effluent limitations and reporting requirements, as determined by the previous year's discharge and compliance monitoring data, is entitled to a 25 percent reduction in its annual permit fee. A new permittee is not eligible for fee reduction in its first year of operation. A permittee that is under a formal enforcement order providing a compliance schedule for correction of permit violations is not eligible for a fee reduction until the violations are corrected. A permittee with a violation of any permit requirement during the previous year is not eligible for fee reduction.
- (f) The annual permit fee is assessed for each calendar year or portion of the calendar year in which the permit is effective.

(9) If a person who is assessed a renewal or annual fee under this rule fails to pay the fee within 90 days after the due date for payment, the department may:

- (a) impose an additional assessment consisting of 20 percent of the fee plus interest on the required fee beginning the first day after the payment is due. Interest must be computed at the rate of 12 percent per year, established under 15-1-216(4), MCA; or
- (b) suspend the processing of the renewal application for a permit or authorization or, if the nonpayment involves an annual permit fee, suspend the permit, certificate, license, or other authorization for which the fee is required. The department may lift the suspension at any time up to one year after the suspension occurs if the holder has paid all outstanding fees, including all penalties, assessments, and interest imposed under this rule.

(10) The department shall give written notice to each person assessed a fee under this rule of the amount of the fee that is assessed and the basis for the department's calculation of the fee. The fee is due 30 days after the date of the written notice. The fee must be paid by a check, money order, or electronic transfer payable to the state of Montana, Department of Environmental Quality. The fee also may be paid on line at the e-bill payment service site.

(11) Persons assessed a fee under this rule may appeal the department's fee assessment to the board within 20 days after receiving written notice of the department's fee determination. The appeal to the board must include a written statement detailing the reasons why the permit holder or applicant considers the department's fee assessment to be erroneous or excessive.

- (a) If part of the department's fee assessment is not in dispute in an appeal, the undisputed portion of the fee must be paid to the department upon written request of the department.
- (b) The contested case provisions of the Montana Administrative Procedure Act, provided for in Title 2, chapter 4, part 6, MCA, apply to a hearing before the board under this rule.

17.30.706 INFORMATIONAL REQUIREMENTS FOR NONDEGRADATION SIGNIFICANCE/AUTHORIZATION FEASIBILITY ALLOWANCE 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), a person may:
 - (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
- (2) submit an application to the department pursuant to (3), for the department to make the determination. 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. If the department determines that additional information is necessary to determine whether the activity is nonsignificant according to criteria established by the department, the department may require the applicant to provide the information in (3)(a) through (e).
- (3) Any person proposing an activity that may cause degradation and is not an activity included under (2) may complete a department "Application for Determination of Significance." Information required for the application includes, but is not limited to:
 - (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; or
 - (e) proposed water quality protection practices.

- (4) The department will review an "Application for Determination of Significance" submitted under (3) 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.
- (5) 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.
- (6) Whenever the department determines that a proposed activity will result in degradation, the applicant shall complete an application for a feasibility allowance 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.
- (7) 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 for a feasibility allowance 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 a feasibility allowance 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);
 - (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.

(8) An applicant must demonstrate that the proposed activity will result in important economic or social development in the area that the high-quality waters are located that exceeds the costs to society of allowing the proposed change in water quality.

(a) 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 (8)(a) 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.

(9) 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.

(10) 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.

- (11) Any application submitted pursuant to this subchapter must comply with the signature and certification requirements of ARM 17.30.1323.
- (12) The department shall notify the applicant in writing within 60 days after receipt of an application ~~to degrade state waters for a feasibility allowance~~ 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.
- (13) The department adopts and incorporates by reference ARM 17.30.1323, as amended on February 14, 2003, 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, P.O. Box 200901, Helena, MT 59620-0901.

17.30.707 DEPARTMENT PROCEDURES FOR NONDEGRADATION REVIEW OF FEASIBILITY ALLOWANCE APPLICATIONS

- (1) Upon a determination by the department that an application ~~for a feasibility allowance to degrade state waters~~ required under this rule is complete, the department will prepare a preliminary decision either authorizing ~~degradation a feasibility allowance~~ or denying the application ~~to degrade~~ according to the procedures in ARM 17.30.708.
- (2) An application ~~to degrade state waters for a feasibility allowance~~ 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) through (6). 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 a feasibility allowance~~ 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 in the area that the high-quality waters are located ~~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) , the department ~~must~~ may weigh ~~any costs associated with the loss of high quality waters against any social or economic benefits~~ the social and economic importance to the public of allowing the proposed project demonstrated by the applicant ~~against the cost to society associated with a lowering of water quality~~. 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~~ feasibility allowance, the department shall consider all available information.
- (6) In order to authorize ~~degradation~~ a feasibility allowance 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 the feasibility allowance~~ 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 for a feasibility allowance~~ with the permitting and approval requirements of other laws or programs administered by the department or by any other local, state, or federal agency.

17.30.708 DEPARTMENT PROCEDURES FOR ISSUING PRELIMINARY AND FINAL DECISIONS REGARDING AUTHORIZATIONS TO DEGRADE FEASIBILITY ALLOWANCES

- (1) A preliminary decision to deny or authorize ~~degradation a feasibility allowance~~ 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 feasibility allowance~~.
- (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;
 - (c) a determination that ~~degradation a feasibility allowance~~ 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 in the area that the high-quality waters are located;
 - (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~~ feasibility allowance. The statement of basis must include, when applicable:

- (a) a description of the proposed activity which is the subject of the ~~authorization~~ feasibility allowance;
- (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~~ feasibility allowance 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). 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 department 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, P.O. Box 200901, Helena, MT 59620-0901.



AN ACT PROVIDING A FEASIBILITY ALLOWANCE TO MEET THE WATER QUALITY NONDEGRADATION POLICY; REVISING A DEFINITION; AMENDING ADMINISTRATIVE RULES; PROVIDING RULEMAKING AUTHORITY; AMENDING SECTIONS 75-5-103, 75-5-301, 75-5-303, 75-5-316, 75-5-516, AND 75-5-605, MCA; AND PROVIDING AN IMMEDIATE EFFECTIVE DATE.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

Section 1. Section 75-5-103, MCA, is amended to read:

"75-5-103. (Temporary) Definitions. Unless the context requires otherwise, in this chapter the following definitions apply:

- (1) "Associated supporting infrastructure" means:
 - (a) electric transmission and distribution facilities;
 - (b) pipeline facilities;
 - (c) aboveground ponds and reservoirs and underground storage reservoirs;
 - (d) rail transportation;
 - (e) aqueducts and diversion dams;
 - (f) devices or equipment associated with the delivery of an energy form or product produced at an energy development project; or
 - (g) other supporting infrastructure, as defined by department rule, that is necessary for an energy development project.
- (2) "Board" means the board of environmental review provided for in 2-15-3502.
- (3) "Contamination" means impairment of the quality of state waters by sewage, industrial wastes, or other wastes, creating a hazard to human health.
- (4) "Council" means the water pollution control advisory council provided for in 2-15-2107.

(5) (a) "Currently available data" means data that is readily available to the department at the time a decision is made, including information supporting its previous lists of water bodies that are threatened or impaired.

(b) The term does not mean new data to be obtained as a result of department efforts.

(6) "Degradation" means a change in water quality that lowers the quality of high-quality waters for a parameter. The term does not include those changes in water quality determined to be nonsignificant pursuant to 75-5-301(5)(c).

(7) "Department" means the department of environmental quality provided for in 2-15-3501.

(8) "Disposal system" means a system for disposing of sewage, industrial, or other wastes and includes sewage systems and treatment works.

(9) "Effluent standard" means a restriction or prohibition on quantities, rates, and concentrations of chemical, physical, biological, and other constituents that are discharged into state waters.

(10) "Energy development project" means each plant, unit, or other development and associated developments, including any associated supporting infrastructure, designed for or capable of:

(a) generating electricity;

(b) producing gas derived from coal;

(c) producing liquid hydrocarbon products;

(d) refining crude oil or natural gas;

(e) producing alcohol to be blended for ethanol-blended gasoline and that are eligible for a tax incentive pursuant to Title 15, chapter 70, part 5; or

(f) transmitting electricity through an electric transmission line with a design capacity of equal to or greater than 50 kilovolts.

(11) "Existing uses" means those uses actually attained in state waters on or after July 1, 1971, whether or not those uses are included in the water quality standards.

(12) "High-quality waters" means all state waters, except:

(a) ground water classified as of January 1, 1995, within the "III" or "IV" classifications established by the department's classification rules; and

(b) surface waters that:

- (i) are not capable of supporting any one of the designated uses for their classification; or
- (ii) have zero flow or surface expression for more than 270 days during most years.

(13) "Impaired water body" means a water body or stream segment for which sufficient credible data shows that the water body or stream segment is failing to achieve compliance with applicable water quality standards.

(14) "Industrial waste" means a waste substance from the process of business or industry or from the development of any natural resource, together with any sewage that may be present.

(15) "Interested person" means a person who has a real property interest, a water right, or an economic interest that is or may be directly and adversely affected by the department's preliminary decision regarding degradation of state waters, pursuant to 75-5-303. The term includes a person who has requested ~~authorization to degrade high-quality waters~~ a feasibility allowance.

(16) "Load allocation" means the portion of a receiving water's loading capacity that is allocated to one of its existing or future nonpoint sources or to natural background sources.

(17) "Loading capacity" means the mass of a pollutant that a water body can assimilate without a violation of water quality standards. For pollutants that cannot be measured in terms of mass, it means the maximum change that can occur from the best practicable condition in a surface water without causing a violation of the surface water quality standards.

(18) "Local department of health" means the staff, including health officers, employed by a county, city, city-county, or district board of health.

(19) "Metal parameters" includes but is not limited to aluminum, antimony, arsenic, beryllium, barium, cadmium, chromium, copper, fluoride, iron, lead, manganese, mercury, nickel, selenium, silver, thallium, and zinc.

(20) "Mixing zone" means an area established in a permit or final decision on nondegradation issued by the department where water quality standards may be exceeded, subject to conditions that are imposed by the department and that are consistent with the rules adopted by the department.

(21) "Nutrient work group" means an advisory work group, convened by the department, representing publicly owned and privately owned point sources of pollution, nonpoint sources of pollution, and other interested parties that will advise the department on nutrient standards, the implementation of those

standards, and associated economic impacts.

(22) "Other wastes" means garbage, municipal refuse, decayed wood, sawdust, shavings, bark, lime, sand, ashes, offal, night soil, oil, grease, tar, heat, chemicals, dead animals, sediment, wrecked or discarded equipment, radioactive materials, solid waste, and all other substances that may pollute state waters.

(23) "Outstanding resource waters" means:

(a) state surface waters located wholly within the boundaries of areas designated as national parks or national wilderness areas as of October 1, 1995; or

(b) other surface waters or ground waters classified by the department under the provisions of 75-5-316 and approved by the legislature.

(24) "Owner or operator" means a person who owns, leases, operates, controls, or supervises a point source.

(25) "Parameter" means a physical, biological, or chemical property of state water when a value of that property affects the quality of the state water.

(26) "Person" means the state, a political subdivision of the state, institution, firm, corporation, partnership, individual, or other entity and includes persons resident in Canada.

(27) "Point source" means a discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or vessel or other floating craft, from which pollutants are or may be discharged.

(28) (a) "Pollution" means:

(i) contamination or other alteration of the physical, chemical, or biological properties of state waters that exceeds that permitted by Montana water quality standards, including but not limited to standards relating to change in temperature, taste, color, turbidity, or odor; or

(ii) the discharge, seepage, drainage, infiltration, or flow of liquid, gaseous, solid, radioactive, or other substance into state water that will or is likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, recreation, safety, or welfare, to livestock, or to wild animals, birds, fish, or other wildlife.

(b) The term does not include:

(i) a discharge, seepage, drainage, infiltration, or flow that is authorized under the pollution

discharge permit rules adopted by the department under this chapter;

- (ii) activities conducted under this chapter that comply with the conditions imposed by the department in short-term authorizations pursuant to 75-5-308;
- (iii) contamination of ground water within the boundaries of an underground mine using in situ coal gasification and operating in accordance with a permit issued under 82-4-221.

(c) Contamination referred to in subsections (28)(b)(iii) and (28)(b)(iv) does not require a mixing zone.

(29) "Sewage" means water-carried waste products from residences, public buildings, institutions, or other buildings, including discharge from human beings or animals, together with ground water infiltration and surface water present.

(30) "Sewage system" means a device for collecting or conducting sewage, industrial wastes, or other wastes to an ultimate disposal point.

(31) "Standard of performance" means a standard adopted by the department for the control of the discharge of pollutants that reflects the greatest degree of effluent reduction achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, when practicable, a standard permitting no discharge of pollutants.

(32) (a) "State waters" means a body of water, irrigation system, or drainage system, either surface or underground.

(b) The term does not apply to:

- (i) ponds or lagoons used solely for treating, transporting, or impounding pollutants; or
- (ii) irrigation waters or land application disposal waters when the waters are used up within the irrigation or land application disposal system and the waters are not returned to state waters.

(33) "Sufficient credible data" means chemical, physical, or biological monitoring data, alone or in combination with narrative information, that supports a finding as to whether a water body is achieving compliance with applicable water quality standards.

(34) "Threatened water body" means a water body or stream segment for which sufficient credible data and calculated increases in loads show that the water body or stream segment is fully supporting its designated uses but threatened for a particular designated use because of:

(a) proposed sources that are not subject to pollution prevention or control actions required by a discharge permit, the nondegradation provisions, or reasonable land, soil, and water conservation practices; or

(b) documented adverse pollution trends.

(35) "Total maximum daily load" or "TMDL" means the sum of the individual waste load allocations for point sources and load allocations for both nonpoint sources and natural background sources established at a level necessary to achieve compliance with applicable surface water quality standards.

(36) "Treatment works" means works, including sewage lagoons, installed for treating or holding sewage, industrial wastes, or other wastes.

(37) "Waste load allocation" means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources.

(38) "Water quality protection practices" means those activities, prohibitions, maintenance procedures, or other management practices applied to point and nonpoint sources designed to protect, maintain, and improve the quality of state waters. Water quality protection practices include but are not limited to treatment requirements, standards of performance, effluent standards, and operating procedures and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from material storage.

(39) "Water well" means an excavation that is drilled, cored, bored, washed, driven, dug, jetted, or otherwise constructed and intended for the location, diversion, artificial recharge, or acquisition of ground water.

(40) "Watershed advisory group" means a group of individuals who wish to participate in an advisory capacity in revising and reprioritizing the list of water bodies developed under 75-5-702 and in the development of TMDLs under 75-5-703, including those groups or individuals requested by the department to participate in an advisory capacity as provided in 75-5-704.

75-5-103. (Effective on occurrence of contingency) Definitions. Unless the context requires otherwise, in this chapter the following definitions apply:

(1) "Associated supporting infrastructure" means:

(a) electric transmission and distribution facilities;

(b) pipeline facilities;

(c) aboveground ponds and reservoirs and underground storage reservoirs;

(d) rail transportation;

- (e) aqueducts and diversion dams;
- (f) devices or equipment associated with the delivery of an energy form or product produced at an energy development project; or
- (g) other supporting infrastructure, as defined by department rule, that is necessary for an energy development project.

(2) "Board" means the board of environmental review provided for in 2-15-3502.

(3) "Contamination" means impairment of the quality of state waters by sewage, industrial wastes, or other wastes, creating a hazard to human health.

(4) "Council" means the water pollution control advisory council provided for in 2-15-2107.

(5) (a) "Currently available data" means data that is readily available to the department at the time a decision is made, including information supporting its previous lists of water bodies that are threatened or impaired.

(b) The term does not mean new data to be obtained as a result of department efforts.

(6) "Degradation" means a change in water quality that lowers the quality of high-quality waters for a parameter. The term does not include those changes in water quality determined to be nonsignificant pursuant to 75-5-301(5)(c).

(7) "Department" means the department of environmental quality provided for in 2-15-3501.

(8) "Disposal system" means a system for disposing of sewage, industrial, or other wastes and includes sewage systems and treatment works.

(9) "Effluent standard" means a restriction or prohibition on quantities, rates, and concentrations of chemical, physical, biological, and other constituents that are discharged into state waters.

(10) "Energy development project" means each plant, unit, or other development and associated developments, including any associated supporting infrastructure, designed for or capable of:

- (a) generating electricity;
- (b) producing gas derived from coal;
- (c) producing liquid hydrocarbon products;
- (d) refining crude oil or natural gas;
- (e) producing alcohol to be blended for ethanol-blended gasoline and that are eligible for a tax

incentive pursuant to Title 15, chapter 70, part 5; or

(f) transmitting electricity through an electric transmission line with a design capacity of equal to or greater than 50 kilovolts.

(11) "Existing uses" means those uses actually attained in state waters on or after July 1, 1971, whether or not those uses are included in the water quality standards.

(12) "High-quality waters" means all state waters, except:

(a) ground water classified as of January 1, 1995, within the "III" or "IV" classifications established by the department's classification rules; and

(b) surface waters that:

(i) are not capable of supporting any one of the designated uses for their classification; or

(ii) have zero flow or surface expression for more than 270 days during most years.

(13) "Impaired water body" means a water body or stream segment for which sufficient credible data shows that the water body or stream segment is failing to achieve compliance with applicable water quality standards.

(14) "Industrial waste" means a waste substance from the process of business or industry or from the development of any natural resource, together with any sewage that may be present.

(15) "Interested person" means a person who has a real property interest, a water right, or an economic interest that is or may be directly and adversely affected by the department's preliminary decision regarding degradation of state waters, pursuant to 75-5-303. The term includes a person who has requested authorization to degrade high-quality waters a feasibility allowance.

(16) "Load allocation" means the portion of a receiving water's loading capacity that is allocated to one of its existing or future nonpoint sources or to natural background sources.

(17) "Loading capacity" means the mass of a pollutant that a water body can assimilate without a violation of water quality standards. For pollutants that cannot be measured in terms of mass, it means the maximum change that can occur from the best practicable condition in a surface water without causing a violation of the surface water quality standards.

(18) "Local department of health" means the staff, including health officers, employed by a county, city, city-county, or district board of health.

(19) "Metal parameters" includes but is not limited to aluminum, antimony, arsenic, beryllium, barium, cadmium, chromium, copper, fluoride, iron, lead, manganese, mercury, nickel, selenium, silver, thallium, and zinc.

(20) "Mixing zone" means an area established in a permit or final decision on nondegradation issued by the department where water quality standards may be exceeded, subject to conditions that are imposed by the department and that are consistent with the rules adopted by the department.

(21) "Nutrient work group" means an advisory work group, convened by the department, representing publicly owned and privately owned point sources of pollution, nonpoint sources of pollution, and other interested parties that will advise the department on nutrient standards, the implementation of those standards, and associated economic impacts.

(22) "Other wastes" means garbage, municipal refuse, decayed wood, sawdust, shavings, bark, lime, sand, ashes, offal, night soil, oil, grease, tar, heat, chemicals, dead animals, sediment, wrecked or discarded equipment, radioactive materials, solid waste, and all other substances that may pollute state waters.

(23) "Outstanding resource waters" means:

(a) state surface waters located wholly within the boundaries of areas designated as national parks or national wilderness areas as of October 1, 1995; or

(b) other surface waters or ground waters classified by the department under the provisions of 75-5-316 and approved by the legislature.

(24) "Owner or operator" means a person who owns, leases, operates, controls, or supervises a point source.

(25) "Parameter" means a physical, biological, or chemical property of state water when a value of that property affects the quality of the state water.

(26) "Person" means the state, a political subdivision of the state, institution, firm, corporation, partnership, individual, or other entity and includes persons resident in Canada.

(27) "Point source" means a discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or vessel or other floating craft, from which pollutants are or may be discharged.

(28) (a) "Pollution" means:

(i) contamination or other alteration of the physical, chemical, or biological properties of state waters that exceeds that permitted by Montana water quality standards, including but not limited to standards relating to change in temperature, taste, color, turbidity, or odor; or

(ii) the discharge, seepage, drainage, infiltration, or flow of liquid, gaseous, solid, radioactive, or other substance into state water that will or is likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, recreation, safety, or welfare, to livestock, or to wild animals, birds, fish, or other wildlife.

(b) The term does not include:

(i) a discharge, seepage, drainage, infiltration, or flow that is authorized under the pollution discharge permit rules adopted by the department under this chapter;

(ii) activities conducted under this chapter that comply with the conditions imposed by the department in short-term authorizations pursuant to 75-5-308;

(iii) contamination of ground water within the boundaries of a geologic storage reservoir, as defined in 82-11-101, by a carbon dioxide injection well in accordance with a permit issued pursuant to Title 82, chapter 11, part 1;

(iv) contamination of ground water within the boundaries of an underground mine using in situ coal gasification and operating in accordance with a permit issued under 82-4-221;

(c) Contamination referred to in subsections (28)(b)(iii) and (28)(b)(iv) does not require a mixing zone.

(29) "Sewage" means water-carried waste products from residences, public buildings, institutions, or other buildings, including discharge from human beings or animals, together with ground water infiltration and surface water present.

(30) "Sewage system" means a device for collecting or conducting sewage, industrial wastes, or other wastes to an ultimate disposal point.

(31) "Standard of performance" means a standard adopted by the department for the control of the discharge of pollutants that reflects the greatest degree of effluent reduction achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, when practicable, a standard permitting no discharge of pollutants.

(32) (a) "State waters" means a body of water, irrigation system, or drainage system, either surface or underground.

(b) The term does not apply to:

(i) ponds or lagoons used solely for treating, transporting, or impounding pollutants; or

(ii) irrigation waters or land application disposal waters when the waters are used up within the irrigation or land application disposal system and the waters are not returned to state waters.

(33) "Sufficient credible data" means chemical, physical, or biological monitoring data, alone or in combination with narrative information, that supports a finding as to whether a water body is achieving compliance with applicable water quality standards.

(34) "Threatened water body" means a water body or stream segment for which sufficient credible data and calculated increases in loads show that the water body or stream segment is fully supporting its designated uses but threatened for a particular designated use because of:

(a) proposed sources that are not subject to pollution prevention or control actions required by a discharge permit, the nondegradation provisions, or reasonable land, soil, and water conservation practices; or

(b) documented adverse pollution trends.

(35) "Total maximum daily load" or "TMDL" means the sum of the individual waste load allocations for point sources and load allocations for both nonpoint sources and natural background sources established at a level necessary to achieve compliance with applicable surface water quality standards.

(36) "Treatment works" means works, including sewage lagoons, installed for treating or holding sewage, industrial wastes, or other wastes.

(37) "Waste load allocation" means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources.

(38) "Water quality protection practices" means those activities, prohibitions, maintenance procedures, or other management practices applied to point and nonpoint sources designed to protect, maintain, and improve the quality of state waters. Water quality protection practices include but are not limited to treatment requirements, standards of performance, effluent standards, and operating procedures and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from material storage.

(39) "Water well" means an excavation that is drilled, cored, bored, washed, driven, dug, jetted, or

otherwise constructed and intended for the location, diversion, artificial recharge, or acquisition of ground water.

(40) "Watershed advisory group" means a group of individuals who wish to participate in an advisory capacity in revising and reprioritizing the list of water bodies developed under 75-5-702 and in the development of TMDLs under 75-5-703, including those groups or individuals requested by the department to participate in an advisory capacity as provided in 75-5-704."

Section 2. Section 75-5-301, MCA, is amended to read:

"75-5-301. Classification and standards for state waters. Consistent with the provisions of 80-15-201 and this chapter, the department shall:

(1) establish the classification of all state waters in accordance with their present and future most beneficial uses, creating an appropriate classification for streams that, due to sporadic flow, do not support an aquatic ecosystem that includes salmonid or nonsalmonid fish;

(2) formulate and adopt standards of water quality, considering the economics of waste treatment and prevention. When rules are adopted regarding temporary standards, they must conform with the requirements of 75-5-312. Standards must meet the following requirements:

(a) for carcinogens, the water quality standard for protection of human health must be the value associated with an excess lifetime cancer risk level, assuming continuous lifetime exposure, not to exceed 1×10^{-3} in the case of arsenic and 1×10^{-5} for other carcinogens. However, if a standard established at a risk level of 1×10^{-3} for arsenic or 1×10^{-5} for other carcinogens violates the maximum contaminant level obtained from 40 CFR, part 141, then the maximum contaminant level must be adopted as the standard for that carcinogen.

(b) standards for the protection of aquatic life do not apply to ground water.

(3) review, from time to time at intervals of not more than 3 years and, to the extent permitted by this chapter, revise established classifications of waters and adopted standards of water quality;

(4) adopt rules governing the granting of mixing zones, requiring that mixing zones granted by the department be specifically identified and requiring that mixing zones have:

(a) the smallest practicable size;

(b) a minimum practicable effect on water uses; and

(c) definable boundaries;

(5) adopt rules implementing the nondegradation policy established in 75-5-303, including but not limited to rules that:

(a) provide a procedure for department review and authorization of degradation a feasibility allowance;

(b) establish criteria for the following:

(i) determining important economic or social development; and

(ii) weighing the social and economic importance to the public of allowing the proposed project against the cost to society associated with a loss of water quality;

(c) establish criteria for determining whether a proposed activity or class of activities, in addition to those activities identified in 75-5-317, will result in nonsignificant changes in water quality for any parameter in order that those activities are not required to undergo review under 75-5-303(3). These criteria must be established in a manner that generally:

(i) equates significance with the potential for harm to human health, a beneficial use, or the environment;

(ii) considers both the quantity and the strength of the pollutant;

(iii) considers the length of time the degradation will occur;

(iv) considers the character of the pollutant so that greater significance is associated with carcinogens and toxins that bioaccumulate or biomagnify and lesser significance is associated with substances that are less harmful or less persistent.

(d) provide that changes of nitrate as nitrogen in ground water are nonsignificant if the discharge will not cause degradation of surface water and the predicted concentration of nitrate as nitrogen at the boundary of the ground water mixing zone does not exceed:

(i) 7.5 milligrams per liter from sources other than sewage;

(ii) 5.0 milligrams per liter from sewage discharged from a system that does not use level two treatment in an area where the ground water nitrate as nitrogen is 5.0 milligrams per liter or less;

(iii) 7.5 milligrams per liter from sewage discharged from a system using level two treatment, which must be defined in the rules; or

(iv) 7.5 milligrams per liter from sewage discharged from a system in areas where the ground water nitrate as nitrogen level exceeds 5.0 milligrams per liter primarily from sources other than human waste; and

(e) for septic system discharges that are not subject to ground water permitting requirements under 75-5-401, establish criteria to determine when the discharges result in nonsignificant changes in surface water quality in order that those discharges are not required to undergo review under 75-5-303(3) and no further analysis under law or rule is required. The criteria must:

(i) be adopted by rule before July 1, 2024; and

(ii) be developed in a manner that generally considers soil type, mixing zone dilution and nitrogen credits, horizontal distance between the discharge and the surface water in the direction of ground water flow, and elevation, including:

(A) adopt surface water impacts for low flow conditions based on mixing zone dilution concentrations and other credits for nitrogen;

(B) credit nitrogen degradation at the drainfield and riparian zone attenuation based on soil type;

(C) exempt surface water body impacts when drainfield is lower in elevation than the waterbody;

(D) limit the adjacent to surface water trigger analysis to a maximum of 1/4 or 1/2 mile from the drainfield to a surface water, depending on soil type; and

(E) create nonsignificant surface water impact categories of 500 or more feet from the surface water that consider soil texture, ground water depths and other pertinent information.

(6) to the extent practicable, ensure that the rules adopted under subsection (5) establish objective and quantifiable criteria for various parameters. These criteria must, to the extent practicable, constitute guidelines for granting or denying applications for authorization to degrade high-quality waters under the policy established in 75-5-303(2) and (3).

(7) adopt rules to implement this section."

Section 3. Section 75-5-303, MCA, is amended to read:

"75-5-303. Nondegradation policy. (1) Existing uses of state waters and the level of water quality necessary to protect those uses must be maintained and protected.

(2) Unless authorized by the department under subsection (3) or exempted from review under 75-

5-317, the quality of high-quality waters must be maintained.

(3) The department may ~~not authorize degradation of~~ allow lower water quality through a feasibility allowance in high-quality waters ~~unless when~~ it has been affirmatively demonstrated by a preponderance of evidence to the department that:

(a) ~~degradation a feasibility allowance~~ is necessary because there are no economically, environmentally, and technologically feasible modifications to the proposed project that would result in no degradation;

(b) the proposed project will result in important economic or social development ~~and that the benefit of the development exceeds the costs to society of allowing degradation of~~ in the area that the high-quality waters are located;

(c) existing and anticipated use of state waters will be fully protected; and

(d) the least degrading water quality protection practices determined by the department to be economically, environmentally, and technologically feasible will be fully implemented by the applicant prior to and during the proposed activity.

(4) The department shall issue a preliminary decision either denying or authorizing degradation ~~the feasibility allowance~~ and shall provide public notice and a 30-day comment period prior to issuing a final decision. The department's preliminary and final decisions must include:

(a) a statement of the basis for the decision; and

(b) a detailed description of all conditions applied to ~~any authorization to degrade state waters a feasibility allowance~~, including, when applicable, monitoring requirements, required water protection practices, reporting requirements, effluent limits, designation of the mixing zones, the limits of degradation ~~the authorized feasibility allowance~~, and methods of determining compliance with the ~~authorization for degradation feasibility allowance~~.

(5) An interested person wishing to challenge a final department decision may request a hearing before the board within 30 days of the final department decision. The contested case procedures of Title 2, chapter 4, part 6, apply to a hearing under this section.

(6) Periodically, but not more often than every 5 years, the department may review authorizations ~~to degrade feasibility allowances for~~ state waters. Following the review, the department may, after timely notice

and opportunity for hearing, modify the ~~authorization feasibility allowance~~ if the department determines that an economically, environmentally, and technologically feasible modification to the development exists. The decision by the department to modify ~~an authorization a feasibility allowance~~ may be appealed to the board.

(7) The department may not issue ~~an authorization to degrade a feasibility allowance for state~~ waters that are classified as outstanding resource waters.

(8) The department shall adopt rules to implement this section."

Section 4. Section 75-5-316, MCA, is amended to read:

"75-5-316. Outstanding resource water classification -- rules -- criteria -- limitations -- procedure -- definition. (1) As provided under the provisions of 75-5-301 and this section, the department may adopt rules regarding the classification of waters as outstanding resource waters.

(2) The department may not:

(a) ~~grant an authorization to degrade a feasibility allowance under 75-5-303 in outstanding resource waters; or~~

(b) allow a new or increased point source discharge that would result in a permanent change in the water quality of an outstanding resource water.

(3) (a) A person may petition the department for rulemaking to classify state waters as outstanding resource waters. The department shall initially review a petition against the criteria identified in subsection (3)(c) to determine whether the petition contains sufficient credible information for the department to accept the petition.

(b) The department may reject a petition without further review if it determines that the petition does not contain the sufficient credible information required by subsection (3)(a). If the department rejects a petition under this subsection (3)(b), it shall specify in writing the reasons for the rejection and the petition's deficiencies.

(c) The department may not adopt a rule classifying state waters as outstanding resource waters until it accepts a petition and makes a written finding containing the provisions enumerated in subsection (3)(d) that, based on a preponderance of the evidence:

(i) the waters identified in the petition constitute an outstanding resource based on the criteria

provided in subsection (4);

(ii) the increased protection under the classification is necessary to protect the outstanding resource identified under subsection (3)(a) because of a finding that the outstanding resource is at risk of having one or more of the criteria provided in subsection (4) compromised as a result of pollution; and

(iii) classification as an outstanding resource water is necessary because of a finding that there is no other effective process available that will achieve the necessary protection.

(d) The written finding provided for in subsection (3)(c) must:

(i) identify the criteria provided in subsection (4) that serve as justification for the determination that the water is an outstanding resource;

(ii) specifically identify the criteria that are at risk and explain why those criteria are at risk; and

(iii) specifically explain why other available processes, including the requirements of 75-5-303, will not achieve the necessary protection.

(4) The department shall consider the following criteria in determining whether certain state waters are outstanding resource waters. However, the department may determine that compliance with one or more of these criteria is insufficient to warrant classification of the water as an outstanding resource water. The department shall consider:

(a) whether the waters have been designated as wild and scenic;

(b) the presence of endangered or threatened species in the waters;

(c) the presence of an outstanding recreational fishery in the waters;

(d) whether the waters provide the only source of suitable water for a municipality or industry;

(e) whether the waters provide the only source of suitable water for domestic water supply; and

(f) other factors that indicate outstanding environmental or economic values not specifically

mentioned in this subsection (4).

(5) Before accepting a petition, the department shall:

(a) publish a notice and brief description of the petition in a daily newspaper of general circulation in the area affected and make copies of the proposal available to the public. The cost of publication must be paid by the petitioner.

(b) provide for a 30-day written public comment period regarding whether the petition contains

sufficient credible information, as provided in subsection (3)(b), prior to the hearing required in subsection (5)(c);

(c) hold a public hearing regarding the petition and its contents and allow further written and oral testimony at the hearing;

(d) issue a proposed decision, including:

(i) the written finding provided for in subsection (3)(c); and

(ii) the department's acceptance or rejection of the petition;

(e) provide for a 30-day public comment period regarding the department's proposed decision; and

(f) issue a final decision on acceptance or rejection of the petition, which must include a response to comments received by the department, and make copies of this decision available to the public.

(6) (a) After acceptance of a petition, the department shall prepare an environmental impact statement, as provided under Title 75, chapter 1, part 2, and this section.

(b) (i) The petitioner is responsible for all of the costs associated with gathering and compiling data and information, and completing the environmental impact statement.

(ii) Before the department may initiate work on the environmental impact statement, the petitioner shall pay the estimated cost of completing the environmental impact statement, as determined by the department.

(iii) Upon completion of the environmental impact statement, the petitioner shall pay the department any costs that exceeded the estimated cost. If the cost of the environmental impact statement was less than the estimated cost paid by the petitioner, the department shall reimburse the difference to the petitioner.

(iv) The department may not grant or deny a petition until full payment for the environmental impact statement is received.

(7) The department shall consult with other relevant state agencies and county governments when reviewing outstanding resource water classification petitions.

(8) (a) After completion of an environmental impact statement and consultation with state agencies and local governments, the department may deny an accepted outstanding resource water classification petition if it finds that:

- (i) the requirements of subsection (3)(c) have not been met; or
- (ii) based on information available to the department from the environmental impact statement or otherwise, approving the outstanding resource waters classification petition would cause significant adverse environmental, social, or economic impacts.

- (b) If the department denies the petition, it shall identify its reasons for petition denial.
- (c) If the department grants the petition, the department shall initiate rulemaking to classify the waters as outstanding resource waters.

- (9) A rule classifying state waters as outstanding resource waters under this section may be adopted but is not effective until approved by the legislature.

- (10) The department may not postpone or deny an application for ~~an authorization to degrade state waters a feasibility allowance~~ under 75-5-303 based on pending:
 - (a) department action on an outstanding resource water classification petition regarding those waters; or
 - (b) legislative approval of department action designating those waters as outstanding resource waters.

- (11) As used in this section, "petitioner" means an individual, corporation, partnership, firm, association, or other private or public entity that petitions the department to adopt rules to classify waters as outstanding resource waters."

Section 5. Section 75-5-516, MCA, is amended to read:

"75-5-516. Fees authorized for recovery -- process -- rulemaking. (1) Except as provided in subsections (12) and (13), the department shall by rule prescribe fees sufficient to cover the department's documented costs, both direct and indirect, of:

- (a) reviewing and acting upon an application for a permit, permit modification, permit renewal, certificate, license, or other authorization required by rule under 75-5-201 or 75-5-401;
- (b) reviewing and acting upon a petition for a ~~degradation~~feasibility allowance under 75-5-303;
- (c) reviewing and acting upon an application for a permit, certificate, license, or other authorization for which an exclusion is provided by rule from the permitting requirements established under 75-5-401;

(d) enforcing the terms and conditions of a permit or authorization identified in subsections (1)(a) through (1)(c). If the permit or authorization is not issued, the department shall return this portion of any application fee to the applicant.

(e) conducting compliance inspections and monitoring effluent and ambient water quality; and

(f) preparing water quality rules or guidance documents.

(2) Except as provided in subsection (12), the rules promulgated under this section must include:

(a) a fee on all applications for permits or authorizations, as identified in subsections (1)(a) through (1)(c), that recovers to the extent permitted by this subsection (2) the department's cost of reviewing and acting upon the applications. This fee may not be more than \$5,000 per discharge point for an application addressed under subsection (1), except that an application with multiple discharge points may be assessed a lower fee for those points according to rule.

(b) an annual fee to be assessed according to the volume and concentration of waste discharged into state waters. The annual fee may not be more than \$3,000 per million gallons discharged per day on an annual average for any activity under permit or authorization, as described in subsection (1), except that:

(i) a permit or authorization with multiple discharge points may be assessed a lower fee for those points according to rule; and

(ii) a facility that consistently discharges effluent at less than or equal to one-half of its effluent limitations and that is in compliance with other permit requirements, using the previous calendar year's discharge data, is entitled to a 25% reduction in its annual permit fee. Proportionate reductions of up to 25% of the permit fee may be given to facilities that consistently discharge effluent at levels between 50% and 100% of their effluent limitations. However, a new permittee is not eligible for a fee reduction in its first year of operation, and a permittee with a violation of any effluent limit during the previous calendar year is not eligible for a fee reduction for the following year.

(3) To the extent permitted under subsection (2)(b), the annual fee must be sufficient to pay the department's estimated cost of conducting all tasks described under subsection (1) after subtracting:

(a) the fees collected under subsection (2)(a);

(b) state general fund appropriations for functions administered under this chapter; and

(c) federal grants for functions administered under this chapter.

(4) For purposes of subsection (3), the department's estimated cost of conducting the tasks described under subsection (1) is the amount authorized by the legislature for the department's water quality discharge permit programs.

(5) If the applicant or holder fails to pay a fee assessed under this section or rules adopted under this section within 90 days after the date established by rule for fee payment, the department may:

(a) impose an additional assessment consisting of not more than 20% of the fee plus interest on the required fee computed as provided in 15-1-216; or

(b) suspend the permit or exclusion. The department may lift the suspension at any time up to 1 year after the suspension occurs if the holder has paid all outstanding fees, including all penalties, assessments, and interest imposed under subsection (5)(a).

(6) Fees collected pursuant to this section must be deposited in an account in the special revenue fund type pursuant to 75-5-517.

(7) The department shall give written notice to each person assessed a fee under this section of the amount of fee that is assessed and the basis for the department's calculation of the fee. This notice must be issued at least 30 days prior to the due date for payment of the assessment.

(8) A holder of or an applicant for a permit, certificate, or license may appeal the department's fee assessment to the board within 20 days after receiving written notice of the fee determination under subsection (7). The appeal must include a written statement detailing the reasons that the permitholder or applicant considers the department's fee assessment to be erroneous or excessive.

(9) If part of the department's fee assessment is not in dispute in an appeal filed under subsection (8), the undisputed portion of the fee must be paid to the department upon written request of the department.

(10) The contested case provisions of the Montana Administrative Procedure Act, provided for in Title 2, chapter 4, part 6, apply to a hearing before the board under this section.

(11) A municipality may raise rates to cover costs associated with the fees prescribed in this section for a public sewer system without the hearing required in 69-7-111.

(12) (a) The application fee assessed pursuant to this section for a suction dredge, as described in 82-4-310(2), may not be more than:

(i) \$25 if it is owned and operated by a resident of this state; or

- (ii) \$100 if it is owned and operated by a nonresident of this state.
- (b) The annual fee assessed pursuant to this section for a suction dredge, as described in 82-4-310(2), may not be more than:
 - (i) \$25 if it is owned and operated by a resident of this state; or
 - (ii) \$100 if it is owned and operated by a nonresident of this state.
- (13) A county, an incorporated city or town, or a conservation district formed pursuant to Title 76, chapter 15, is not subject to fees for authorizations pursuant to 75-5-318 or certifications related to section 401 of the federal Clean Water Act, 33 U.S.C. 1341."

Section 6. Section 75-5-605, MCA, is amended to read:

"75-5-605. Prohibited activity -- exemption. (1) It is unlawful to:

- (a) cause pollution, as defined in 75-5-103, of any state waters or to place or cause to be placed any wastes where they will cause pollution of any state waters. Any placement of materials that is authorized by a permit issued by any state or federal agency is not a placement of wastes within the prohibition of this subsection (1)(a) if the agency's permitting authority includes provisions for review of the placement of materials to ensure that it will not cause pollution of state waters.
- (b) violate any provision set forth in a permit or stipulation, including but not limited to limitations and conditions contained in the permit;
- (c) cause degradation of state waters without ~~authorization~~ a feasibility allowance pursuant to 75-5-303;
- (d) violate any order issued pursuant to this chapter; or
- (e) violate any provision of this chapter.

(2) Except for the permit exclusions identified in 75-5-401(5), it is unlawful to carry on any of the following activities without a current permit from the department:

- (a) construct, modify, or operate a disposal system that discharges into any state waters;
- (b) construct or use any outlet for the discharge of sewage, industrial wastes, or other wastes into any state waters; or
- (c) discharge sewage, industrial wastes, or other wastes into any state waters.

(3) Activities associated with routine or periodic maintenance, repair, replacement, or operation of irrigation water conveyance systems, including activities associated with any constructed channel, canal, ditch, pipeline, or portion of any constructed channel, canal, ditch, or pipeline, are not prohibited activities under this chapter if the activities do not result in exceeding water quality standards for any receiving water outside the irrigation water conveyance system. The diversion of water in accordance with an existing water right or permit pursuant to Title 85, chapter 2, is not a prohibited activity under this chapter."

Section 7. Department to amend rules. The department shall amend ARM 17.30.707 and 17.30.708 to add references to feasibility allowances.

Section 8. Severability. If a part of [this act] is invalid, all valid parts that are severable from the invalid part remain in effect. If a part of [this act] is invalid in one or more of its applications, the part remains in effect in all valid applications that are severable from the invalid applications.

Section 9. Effective date. [This act] is effective on passage and approval.

- END -

I hereby certify that the within bill,
HB 685, originated in the House.

Chief Clerk of the House

Speaker of the House

Signed this _____ day
of _____, 2025.

President of the Senate

Signed this _____ day
of _____, 2025.

HOUSE BILL NO. 685

INTRODUCED BY S. FITZPATRICK

AN ACT PROVIDING A FEASIBILITY ALLOWANCE TO MEET THE WATER QUALITY NONDEGRADATION POLICY; REVISING A DEFINITION; AMENDING ADMINISTRATIVE RULES; PROVIDING RULEMAKING AUTHORITY; AMENDING SECTIONS 75-5-103, 75-5-301, 75-5-303, 75-5-316, 75-5-516, AND 75-5-605, MCA; AND PROVIDING AN IMMEDIATE EFFECTIVE DATE.



January 20, 2026

TO: Members of the Water Pollution Control Advisory Council and the public
FROM: Katie Makarowski, Standards and Modeling Section Supervisor, Montana DEQ
MEETING DATE: January 29, 2026
SUBJECT: Proposal of Rulemaking to Amend Department Circular DEQ-7 and associated references to DEQ-7 in the Administrative Rules of Montana

ACTION REQUESTED OF COUNCIL:

The council is requested to review the attached rulemaking documents in advance of the meeting on January 29, 2026, and provide comment as they see fit. The department's Water Quality Division will present a rulemaking summary and answer questions about the rulemaking that members may have.

BACKGROUND:

The Department of Environmental Quality (department) is initiating rulemaking to amend department Circular DEQ-7. Circular DEQ-7 contains numeric water quality standards for surface water and ground water and is incorporated by reference into the Administrative Rules of Montana.

The department is proposing several amendments to Circular DEQ-7:

- Amend human health standard for cyanide in ground water to express cyanide as free cyanide rather than total cyanide, to add a required reporting value, and to add a trigger value.
- Amend human health standards for lead in surface water and ground water, lowering the criteria from 15 µg/L to 10 µg/L, and update the reference for the source used to derive the criteria.
- Amend human health standards for four pesticides (i.e., 1,2-Dibromoethane, Nicosulfuron, Chlorsulfuron, and Imazapic) to correct errors made when calculating their criteria prior to their adoption in 2017.
- Amend various text and tables to correct grammatical errors and improve clarity.

The department also proposes to amend ten rules to replace references to the June 2019 edition of Circular DEQ-7 with references to the effective month and year of this rule amendment.

RECOMMENDATION:

The recommendation being sought from the Council is to proceed with the rulemaking under the Water Quality Act (Title 75, Chapter 5, MCA).

Please contact the department with any questions:

Katie Makarowski
Standards and Modeling Section Supervisor, Water Quality Planning Bureau
P.O. Box 200901, Helena, MT 59620; 406.444.3639; kmkarowski@mt.gov

Attachments:

1. Proposed rule amendments ("ProposedRuleAmendments_DEQ-7_WPCAC_1.29.26.pdf")
2. Revised Circular DEQ-7 ("DEQ-7_June2019_ProposedRevisions2026.pdf")

January 20, 2026

PROPOSED RULE AMENDMENTS

This document contains the rules proposed to be amended by the Department of Environmental Quality to replace references to the 2019 edition of Circular DEQ-7 (Montana numeric water quality standards) with references to the amended 2026 edition. The proposed 2026 edition of department Circular DEQ-7 includes several amendments that were identified during the department's triennial review of water quality standards; additional amendments were identified to improve clarity and correct clerical errors. This document is being shared with the Water Pollution Control Advisory Council (WPCAC) members prior to first publication to provide an opportunity for council members to comment on proposed action (75-5-307(1), MCA).

The rules as proposed to be amended provide as follows, new matter underlined, deleted matter interlined:

17.24.645 GROUND WATER MONITORING

- (1) Ground water levels, subsurface flow and storage characteristics, and the quality of ground water must be monitored based on information gathered pursuant to ARM 17.24.304 and the monitoring program submitted pursuant to ARM 17.24.314 and in a manner approved by the department to determine the effects of strip or underground mining operations on the recharge capacity of reclaimed lands and on the quantity and quality of water in ground water systems in the permit and adjacent areas. When operations may affect the ground water system, ground water levels and ground water quality must be periodically monitored using wells that can adequately reflect changes in ground water quantity and quality resulting from such operations. The information must be submitted to the department in a format approved by the department.
- (2) Monitoring must:
 - (a) include the measurement of the quantity and quality of water in all disturbed or potentially affected geologic strata within and adjacent to the permit area. Affected strata are all those adjacent to or physically disturbed by mining disturbance and any aquifers below the base of the spoils that could receive water from or discharge water to the spoils. Monitoring must be of sufficient frequency and extent to adequately identify changes in ground water quantity and quality resulting from mining operations; and
 - (b) be adequate to plan for modification of strip or underground mining operations, if necessary, to minimize disturbance of the prevailing hydrologic balance.
- (3) The department may require the permittee to expand the ground water monitoring system whenever a significant impact to the hydrologic balance of the permit and adjacent area is likely and the expanded monitoring is needed to adequately monitor the ground water system. As specified and approved by the department, additional observations and analyses, such as infiltration tests and aquifer tests, must be undertaken by the permittee to demonstrate compliance with this rule.

- (4) Whenever an applicant demonstrates by the use of the probable hydrologic consequences determination (see ARM 17.24.314) and other available information that a particular water bearing stratum in the proposed permit or adjacent areas does not have a significant role in maintaining the hydrologic balance within the cumulative impact area, the department may waive monitoring of that stratum.
- (5) Ground water monitoring must proceed through mining and continue until phase IV bond release. The department may allow modification of the monitoring requirements, except those required by the Montana pollutant discharge elimination system permit, including the parameters covered and sampling frequency, if the operator or the department demonstrates, using the monitoring data obtained under this rule, that:
 - (a)
 - (i) the operation has minimized disturbance to the hydrologic balance in the permit and adjacent areas and prevented material damage to the hydrologic balance outside the permit area;
 - (ii) water quantity and quality are suitable to support approved postmining land uses; and
 - (iii) the water rights of other users have been protected or replaced;
 - (b) monitoring is no longer necessary to achieve the purposes set forth in the monitoring plan approved under this rule; or
 - (c) with regard to monitoring related to an alluvial valley floor, monitoring of the essential hydrologic function of the alluvial valley floor is ensured under the modified program.
- (6) Methods of sample collection, preservation, and sample analysis must be conducted in accordance with 40 CFR Part 136 titled "Guidelines Establishing Test Procedures for the Analysis of Pollutants" (July 2015) and the department's document titled "Department Circular DEQ-7, Montana Numeric Water Quality Standards," June 2019 [effective month and year of this rule amendment] edition. Copies of Department Circular DEQ-7 are available at the Department of Environmental Quality, 1520 E. 6th Ave., P.O. Box 200901, Helena, MT 59620-0901. Sampling and analyses must include a quality assurance program acceptable to the department.
- (7) Whenever monitoring reveals noncompliance with the permit, the Act, or the rules adopted thereunder, the permittee shall immediately take steps to minimize adverse effects. Those steps include, but are not limited to, accelerated or additional monitoring, abatement, and warning of all persons whose health or safety is in imminent danger. The permittee shall, within five days of discovery of noncompliance, notify the department of noncompliance and remedial measures taken.
- (8) Results of ground water monitoring activities must be reported to the department semiannually, and all monitoring data must be maintained on a current basis for inspection at the mine office. Any sample results indicating a permit violation must be reported to the department within five days of receipt of results.

17.24.646 SURFACE WATER MONITORING

- (1) Surface water monitoring must be based on information submitted pursuant to ARM 17.24.304 and must be conducted in accordance with the monitoring program submitted under ARM 17.24.314 and approved by the department. Monitoring must:
 - (a) be adequate to measure accurately and record water quantity and quality of all discharges from the permit area;
 - (b) in all cases in which analytical results of the sample collections indicate noncompliance with a permit condition or an applicable standard, result in the operator immediately taking appropriate remedial measures. Within five days of the discovery of the noncompliance, the operator shall notify the department of the noncompliance and of the remedial measures taken and shall comply with (6). These remedial measures include, but are not limited to, accelerated or additional monitoring, abatement, and warning of all persons whose health and safety is in imminent danger. Whenever a violation of a Montana pollutant discharge elimination system (MPDES) permit occurs, the operator shall forward the analytic results concurrently with the written notice of noncompliance;
- (2) The operator shall submit semi-annual reports including analytical results from each sample taken during the semester to the department. Sampling results must be submitted in a format approved by the department. In addition, all monitoring data must be maintained on a current basis for review at the minesite. Any sample results that indicate a permit violation must be reported immediately to the department. However, whenever the discharge for which water monitoring reports are required is also subject to regulation by a MPDES permit and that permit requires filing of the water monitoring reports within 90 days or less of sample collection, the operator shall submit to the department on the time schedule required by the MPDES permit or within 90 days following sample collection, whichever is earlier, a copy of the completed reporting form filed to meet MPDES permit requirements.
- (3) Monitoring must be conducted at appropriate frequencies to measure normal and abnormal variations in concentrations.
- (4) After disturbed areas have been regraded and stabilized according to ARM 17.24.501, the operator shall monitor surface water flow and quality. Data from this monitoring must be used to determine whether the quality and quantity of runoff without treatment is consistent with the requirements of this rule to minimize disturbance to the prevailing hydrologic balance, to demonstrate that the drainage basin has stabilized to its previous, undisturbed state, and to attain the approved postmining land use. These data must also be used by the department to review requests for removal of water quality or flow control systems and for bond release. With department approval, other information or methods, such as models, may be used, in conjunction with monitoring data, for these purposes.
- (5) Equipment, structures, and other devices necessary to measure and sample accurately the quality and quantity of surface water discharges from the disturbed area must be properly installed, maintained, and operated and must be removed when no longer required.
- (6) Methods of sample collection, preservation, and sample analysis must be conducted in accordance with 40 CFR Part 136 titled "Guidelines Establishing Test Procedures for the Analysis of Pollutants" (July 2015) and Part 434 titled "Coal Mining Point Source Category BPT, BAT, BCT Limitations and New Source Performance Standards" (January 2002), and the June 2019[effective month and year of this rule amendment] edition of the department's

document titled "Department Circular DEQ-7, Montana Numeric Water Quality Standards." Copies of 40 CFR Part 136, 40 CFR 434, and Department Circular DEQ-7 are available at the Department of Environmental Quality, 1520 E. 6th Ave., P.O. Box 200901, Helena, MT 59620-0901. Sampling and analyses must include a quality assurance program acceptable to the department.

(7) Surface water monitoring must proceed through mining and continue until phase IV bond release. The department may allow modification of the monitoring under the same criteria as are contained in ARM 17.24.645(5).

17.30.502 DEFINITIONS

The following definitions, in addition to those in 75-5-103, MCA, and ARM Title 17, chapter 30, subchapters 6 and 7, apply throughout this subchapter:

- (1) "Acute toxicity" means a condition in which ambient water concentrations exceed the applicable acute aquatic life standards given in department Circular DEQ-7.
- (2) "Chronic toxicity" means a condition in which ambient water concentrations exceed the applicable chronic aquatic life standards given in department Circular DEQ-7.
- (3) "Constructed wetland" means a wetland intentionally designed, constructed and operated for the primary purpose of wastewater or stormwater treatment or environmental remediation.
- (4) "Currently available data" means data that is readily available to the department at the time a decision is made. It does not mean new data to be obtained as a result of departmental efforts or required of the applicant.
- (5) "Human health standard" means the parameters listed as human health standards in department Circular DEQ-7.
- (6) "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.
- (7) "Nearly instantaneous mixing zone" means an area where dilution of a discharge to water by the receiving water occurs at a nearly instantaneous rate, with the result that its boundaries are either at the point of discharge or are within two stream widths downstream of the point of discharge.
- (8) "Narrative standards" means those parameters listed as narrative standards in department Circular DEQ-7.
- (9) "Numeric acute standards" means the parameters listed as acute aquatic life standards in department Circular DEQ-7.
- (10) "Numeric chronic standards" means the parameters listed as chronic aquatic life standards in department Circular DEQ-7.
- (11) "Standard mixing zone" means a mixing zone that meets the requirements of ARM 17.30.516 and 17.30.517 and involves less data collection and demonstration than required for a source specific mixing zone.

- (12) "Wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.
- (13) "Zone of influence" means the area under which a well can be expected to remove water.
- (14) The department adopts and incorporates by reference Department Circular DEQ-7, entitled "Montana Numeric Water Quality Standards" (~~June 2019[effective month and year of this rule amendment]~~ edition), which establishes numeric water quality standards for toxic, carcinogenic, bioconcentrating, nutrient, radioactive, and harmful parameters. Copies of Department Circular DEQ-7 are available from the Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901.

17.30.619 INCORPORATIONS BY REFERENCE

- (1) The department adopts and incorporates by reference the following state and federal requirements and procedures as part of Montana's surface water quality standards:
 - (a) Department Circular DEQ-7, entitled "Montana Numeric Water Quality Standards" (~~June 2019[effective month and year of this rule amendment]~~ edition), which establishes numeric water quality standards for toxic, carcinogenic, bioconcentrating, radioactive, and harmful parameters and also establishes human health-based water quality standards for the following specific nutrients with toxic effects:
 - (i) nitrate;
 - (ii) nitrate + nitrite; and
 - (iii) nitrite;
 - (b) the Water Quality Standards Handbook, Second Edition, EPA-823-B-94-005a, August 1994, that sets forth procedures for development of site-specific criteria;
 - (c) 40 CFR Part 136 (July 1, 2015), which establishes guidelines and procedures for the analysis of pollutants;
 - (d) 40 CFR 131.10(g), (h) and (j) (2000), which establishes criteria and guidelines for conducting a use attainability analysis;
 - (e) Department Circular DEQ-12A, entitled "Montana Base Numeric Nutrient Standards" (July 2014 edition), which establishes numeric water quality standards for total nitrogen and total phosphorus in surface waters; and
 - (f) the provision in ARM 17.30.1350(1) that authorizes compliance schedules contained in the Montana Pollutant Discharge Elimination System Permit regulations.
- (2) If a court of competent jurisdiction declares 75-5-313, MCA, or any portion of that statute invalid, or if the United States Environmental Protection Agency disapproves 75-5-313, MCA, or any portion of that statute, under 30 CFR 131.21, or if rules adopted pursuant to 75-5-313(6) or (7), MCA, expire and general variances are not available, then (1)(e) and all references to DEQ-12A, base numeric nutrient standards and nutrient standards variances in ARM 17.30.201, 17.30.507, 17.30.516, 17.30.602, 17.30.622 through 17.30.629, 17.30.635, 17.30.702, and 17.30.715 are void, and the narrative water quality standards

contained in ARM 17.30.637 are the standards for total nitrogen and total phosphorus in surface water, except for the Clark Fork River, for which the standards are the numeric standards in ARM 17.30.631.

- (3) Copies of the materials listed in (1) may be obtained from the Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901.

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 "base numeric nutrient standards," "degradation," "existing uses," "high quality waters," "mixing zone," and "parameter"):

- (1) "Bioconcentrating parameters" means the parameters listed in department Circular DEQ-7 which have a bioconcentration factor greater than 300.
- (2) "Carcinogenic parameters" means the parameters listed as carcinogens in department Circular DEQ-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 DEQ-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(13), MCA, and does not include Class I surface waters (ARM 17.30.628) or Class III or Class IV ground waters (ARM 17.30.1006(3) through (4)).
- (9) "Level 1a treatment" means a wastewater treatment system that:
 - (a) removes at least 50 percent, but less than 60 percent, 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 wastewater treatment system that:

- (a) removes at least 34 percent, but less than 50 percent, 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 wastewater treatment system that:

- (a) removes at least 60 percent of total nitrogen as measured from the raw wastewater 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) "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 17.30.670, 17.30.715, 17.30.716, or 75-5-301(5)(c), MCA.

- (18) "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.
- (19) "Ordinary high-water mark" is defined in 23-2-301, MCA.
- (20) "Outstanding resource waters" or "ORW" has the meaning set out in 75-5-103, MCA.
- (21) "Permit" means either an MPDES permit or an MGWPCS permit.
- (22) "Reporting values (RRV)" means the detection level that must be achieved in reporting surface water or ground water monitoring or compliance data to the department unless otherwise specified in a permit, approval, or authorization issued by the department. The RRV is the department's best determination of a level of analysis that can be achieved by the majority of commercial, university, or governmental laboratories using EPA approved methods or methods approved by the department. The RRV is listed in Department Circular DEQ-7, Department Circular DEQ-12A, and in the definition of "total inorganic phosphorus."
- (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) "Total nitrogen" means the sum of all nitrate, nitrite, ammonia, and organic nitrogen, as N, in an unfiltered water sample. Total nitrogen in a sample may also be determined by persulfate digestion, or as the sum of total kjeldahl nitrogen plus nitrate plus nitrite.
- (25) "Total phosphorus" means the sum of orthophosphates, polyphosphates, and organically bound phosphates, as P, in an unfiltered water sample. Total phosphorus may also be determined directly by persulfate digestion.
- (26) "Toxic parameters" means the parameters listed as toxic in department Circular DEQ-7.
- (27) "Trigger values" means the values listed as trigger values in department Circular DEQ-7 for parameters categorized as toxic, and are used to determine if proposed activities will cause degradation.
- (28) The department adopts and incorporates by reference:
 - (a) Department Circular DEQ-7, entitled "Montana Numeric Water Quality Standards" (June 2019[effective month and year of this rule amendment] edition), which establishes numeric water quality standards for toxic, carcinogenic, bioconcentrating, radioactive, and harmful parameters and also establishes human health-based water quality standards for the following specific nutrients with toxic effects:
 - (i) nitrate;
 - (ii) nitrate + nitrite; and
 - (iii) nitrite;
 - (b) Department Circular DEQ-12A, entitled "Montana Base Numeric Nutrient Standards" (December 2013 edition), which establishes numeric water quality standards for total nitrogen and total phosphorus in surface waters;

- (c) Department Circular DEQ-4, entitled "Montana Standards for Subsurface Wastewater Treatment Systems" (2023 edition), which establishes technical standards for construction of subsurface wastewater treatment systems; and
- (d) 40 CFR Part 136 (July 1, 2015) which contains guidelines establishing test procedures for the analysis of pollutants.
- (e) Copies of this material may be obtained from the Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901.

17.30.1001 DEFINITIONS

For the purposes of this subchapter, unless the context clearly indicates otherwise, the following terms have the meanings indicated below and are supplemental to the definitions in 75-5-103, MCA:

- (1) "Beneficial use" means a use of ground water designated under the appropriate classification in ARM 17.30.1006.
- (2) "DEQ-7" means Department Circular DEQ-7, entitled "Montana Numeric Water Quality Standards" (~~June 2019[effective month and year of this rule amendment]~~ edition), which establishes numeric water quality standards for toxic, carcinogenic, radioactive, bioconcentrating, nutrient, and harmful parameters.
 - (a) The department adopts and incorporates by reference Department Circular DEQ-7, entitled "Montana Numeric Water Quality Standards" (~~June 2019[effective month and year of this rule amendment]~~ edition), which establishes numeric water quality standards for toxic, carcinogenic, bioconcentrating, nutrient, radioactive, and harmful parameters.
- (3) "Discharge" means the addition of any pollutant to waters of the state.
- (4) "Discharge limitations" means limitations imposed on the design or operation of a source to control the entry of pollutants into ground water.
- (5) "Existing source" means a source which is or has been in operation or on which construction has commenced on October 29, 1982.
- (6) "Ground water" means water occupying the voids within a geologic stratum and within the zone of saturation.
- (7) "Mixing zone" is defined in 75-5-103, MCA.
- (8) "Modification" means any change to a sewage system, treatment works, or disposal system including expansions, production increases, or process modifications which may result in new or increased discharges of pollutants into state ground waters.
- (9) "Montana ground water quality standards" means the standards for ground water quality set forth in ARM 17.30.1006.
- (10) "Montana pollutant discharge elimination system (MPDES)" means the system developed by the state of Montana for issuing permits for the discharge of pollutants from point sources into state surface waters pursuant to ARM Title 17, chapter 30, subchapter 12.
- (11) "MGWPCS" means the Montana ground water pollution control system established in this subchapter.

- (12) "MPDES permit" means any permit issued by the department pursuant to ARM Title 17, chapter 30, subchapter 13 to regulate the discharge of pollutants from point sources into state surface waters.
- (13) "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 practice rather than by an engineered containment or structure.
- (14) "Owner or operator" means any person who owns, leases, operates, controls, or supervises a source discharging pollutants to ground waters.
- (15) "Public sewage system" has the meaning specified in ARM 17.38.101.
- (16) "Reclaimed wastewater" is defined in 75-6-102, MCA.
- (17) "Sewage" is defined in 75-5-103, MCA.
- (18) "Source" means any sewage system, treatment works, point source, disposal system, concentration of pollutants, or pond containing process wastes or pollutants used, employed, or operated so that the same results or under normal operating conditions may reasonably be expected to result in the discharge of pollutants to ground waters of the state.
- (19) "UIC program" means the underground injection control program established in compliance with the federal Safe Drinking Water Act, 42 USCA 300f, et seq.
- (20) "Unrestricted reclaimed wastewater" means wastewater that is treated to the standards for Class A-1 or Class B-1 reclaimed wastewater, as set forth in Appendix B of Department Circular DEQ-2, entitled "Montana Department of Environmental Quality Design Standards for Public Sewage Systems" (2018 edition).
 - (a) The department adopts and incorporates by reference Department Circular DEQ-2, entitled "Department of Environmental Quality Design Standards for Public Sewage Systems" (2018 edition). Copies are available from the Department of Environmental Quality, Engineering Bureau, P.O. Box 200901, Helena, MT 59620-0901.
- (21) "Wastewater" has the meaning specified in ARM 17.38.101.

17.36.126 ADOPTION BY REFERENCE

- (1) For purposes of this chapter, the department adopts and incorporates by reference the following documents. All references to these documents in this chapter refer to the edition set out below:
 - (a) Department Circular DEQ-1, "Standards for Water Works," 2024 edition;
 - (b) Department Circular DEQ-2, "Design Standards for Public Sewage Systems," 2018 edition;
 - (c) Department Circular DEQ-3, "Standards for Small Water Systems," 2023 edition;
 - (d) Department Circular DEQ-4, "Montana Standards for Subsurface Wastewater Treatment Systems," 2023 edition;
 - (e) Department Circular DEQ-7, "Montana Numeric Water Quality Standards" (June 2019~~effective month and year of this rule amendment~~ edition);

- (f) Department Circular DEQ-8, "Montana Standards for Subdivision Storm Drainage," 2024 edition;
- (g) Department Circular DEQ-10, "Standards for the Development of Springs for Public Water Systems," 2014 edition;
- (h) Department Circular DEQ-16, "Standards for Hauled Water Cisterns for Noncommunity Public Systems," 2014 edition;
- (i) Department Circular DEQ-20, "Standards for Non-Public Water Systems," 2023 edition;
- (j) Department Circular PWS-5, "Ground Water Under the Direct Influence of Surface Water Evaluation," 2022 edition;
- (k) Department Circular PWS-6, "Source Water Protection Delineation," 1999 edition;
- (l) the U.S. Department of Agriculture's National Soil Survey Handbook (USDA, NRCS, September 1999), and the Soil Survey Manual (USDA, October 1993), which contain a recognized set of methods for identifying the nature and characteristics of soils; and
- (m) ARM 17.30.1702 regarding setbacks between sewage lagoons and wells.

(2) Copies of the documents incorporated by reference in this rule may be obtained from the Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901.

17.55.109 INCORPORATION BY REFERENCE

- (1) For the purposes of this subchapter, the department adopts and incorporates by reference:
 - (a) Department Circular DEQ-7, "Montana Numeric Water Quality Standards" (June 2019~~[effective month and year of this rule amendment]~~ edition);
 - (b) Drinking Water Maximum Contaminant Levels, published at 40 CFR 141.11, 40 CFR 141.61, 40 CFR 141.62, 40 CFR 141.63, 40 CFR 141.64, 40 CFR 141.65, and 40 CFR 141.66 (2023);
 - (c) Montana Risk-based Corrective Action Guidance for Petroleum Releases (February 2024);
 - (d) U.S. Environmental Protection Agency, Regional Screening Level (RSL) Tables (November 2023), except when:
 - (i) comparing contaminant concentrations to the regional screening levels, with the exception of lead, the department will adjust the non-carcinogenic levels by dividing by ten to account for cumulative potential health effects;
 - (ii) comparing contaminant concentrations to the protection of ground water soil screening levels, the department will adjust the dilution attenuation factor to ten to account for a state-specific attenuation factor;
 - (iii) comparing contaminant concentrations to the protection of ground water soil screening levels, the department will apply an appropriate adjustment based upon either the ratio of the department Circular DEQ-7 human health standard and the maximum contaminant level or the ratio of the department Circular DEQ-7 human health standard and the U.S. Environmental Protection

Agency tapwater screening level found in (1)(d) to ensure that contaminants potentially leaching to ground water will not exceed Montana numeric water quality standards found in Department Circular DEQ-7;

- (e) Montana Department of Environmental Quality, Remediation Division, Table 4-4, Background Concentrations of Inorganic Constituents in Montana Surface Soil (September 2013); and
- (f) U.S. Environmental Protection Agency Region 3 Biological Technical Assistance Group Freshwater Sediment Screening Benchmarks (August 2006).

- (2) All references in this subchapter to the documents incorporated by reference in this rule are to the edition specified in this rule.
- (3) Copies of the documents incorporated by reference in this rule may be obtained from the Department of Environmental Quality, Remediation Division, P.O. Box 200901, Helena, MT 59620-0901.
- (4) The references adopted in (1)(c) through (1)(f) are to be used as screening levels. When the department uses screening levels referenced in (1)(d) and (1)(e) rather than site-specific data to make a listing decision under ARM 17.55.108, it shall use the higher applicable screening level provided for in (1)(d) or (1)(e). The department's use of these screening levels for purposes of ARM 17.55.108(1) does not establish these levels as cleanup standards.
- (5) An exceedance of a screening level alone is not sufficient for the department to initiate condemnation proceedings under 75-10-720, MCA.

17.56.507 ADOPTION BY REFERENCE

- (1) For purposes of this subchapter, the department adopts and incorporates by reference:
 - (a) Department Circular DEQ-7, "Montana Numeric Water Quality Standards" (June 2019~~[effective month and year of this rule amendment]~~ edition);
 - (b) Montana Risk-Based Corrective Action Guidance for Petroleum Releases (RBCA) (February 2024);
 - (c) U.S. Environmental Protection Agency, Regional Screening Level (RSL) Tables (November 2023); and
 - (d) Reportable Quantities for Hazardous Substances under section 102(a) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) published at 40 CFR Part 302 (2023).
- (2) All references in this subchapter to the documents incorporated by reference in this rule are to the edition specified in this rule.
- (3) Copies of the documents incorporated by reference in this rule may be obtained from the Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901.

17.56.608 ADOPTION BY REFERENCE

- (1) For purposes of this subchapter, the department adopts and incorporates by reference:

- (a) Department Circular DEQ-7, "Montana Numeric Water Quality Standards" (June 2019[effective month and year of this rule amendment] edition);
- (b) Drinking Water Maximum Contaminant Levels, published at 40 CFR 141.11, 40 CFR 141.61, 40 CFR 141.62, 40 CFR 141.63, 40 CFR 141.64, 40 CFR 141.65, and 40 CFR 141.66 (2023);
- (c) Montana Risk-Based Corrective Action Guidance for Petroleum Releases (RBCA) (February 2024); and
- (d) U.S. Environmental Protection Agency Office of Solid Waste and Emergency Response Directive 9200.4-17P, "Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites" (April 1999).

- (2) All references in this subchapter to the documents incorporated by reference in this rule are to the edition specified in this rule.
- (3) Copies of the documents incorporated by reference in this rule may be obtained from the Department of Environmental Quality, Remediation Division, P.O. Box 200901, Helena, MT 59620-0901.

Summary of proposed amendments to Circular DEQ-7: Montana Numeric Water Quality Standards (see draft DEQ-7 provided alongside this summary to WPCAC members):

Modifications to the circular and reasons for the modifications are as follows:

Update the form of the cyanide ground water standard and add a required reporting value and a trigger value: The department is proposing to change the form of cyanide upon which the human health criteria for cyanide in ground water is based, from total cyanide to free cyanide; the numeric criteria will remain unchanged. This will align Montana's ground water standard with the maximum contaminant level for drinking water set by the US Environmental Protection Agency which is expressed as free cyanide.

The department is also proposing to add a required reporting value of 27 µg/L calculated according to the method described in Circular DEQ-7, using method detection limits for free cyanide that were reported to the department by local and regional laboratories, multiplied by a conversion factor of 3.18.

The department also proposes to add a trigger value for both free cyanide and total cyanide for use when implementing Montana's nondegradation policy for toxic parameters pursuant to ARM 17.30.715(a)(c). The proposed trigger values reflect published method detection limits for free cyanide and total cyanide.

Update the lead human health criteria: The department is proposing to amend the human health water quality criteria for lead in surface water and ground water from 15 µg/L to 10 µg/L to align Montana's human health standards with the federal Safe Drinking Water Act Lead and Copper Rule Improvements issued in 2024. The department is also proposing to amend the references to the EPA guidance that the lead human health criteria are based on in both the table and in footnote 17, to clarify that the criteria are based on the Safe Drinking Water Act action level (AL) rather than a maximum contaminant level (MCL). There is no MCL for lead under the Safe Drinking Water Act.

Correction of errors for four pesticides: The department is proposing to amend human health water quality criteria for four pesticides in surface water and ground water: chlorsulfuron, imazapic, 1,2-dibromoethane, and nicosulfuron. These criteria are based on health advisories calculated by the department using methods consistent with the US Environmental Protection Agency (EPA) drinking water health advisory calculation methods and current EPA guidance on human health water quality criteria development. The following amendments are being proposed to correct errors made in the previous calculation of the human health water quality standards that were adopted in 2017:

The department is proposing to amend the human health water quality criteria for chlorsulfuron in surface water and ground water from 100 µg/L to 300 µg/L to correct the reference dose (RfD) used in the previous calculation; the RfD used in the calculation of the proposed criteria is sourced from the 2021 Human Health Benchmarks for Pesticides published by EPA. The RfD is an estimate of the amount of a chemical a person can ingest daily over a lifetime that is unlikely to lead to harmful health effects.

The department is proposing to amend the human health water quality criteria for imazapic in surface water and ground water from 3,000 µg/L to 913 µg/L to correct the RfD used in the previous calculation; the RfD used in the calculation of the proposed criteria is sourced from the 2021 Human Health Benchmarks for Pesticides published by EPA.

The department is proposing to amend the human health water quality criteria for nicosulfuron in surface water and ground water from 8,500 µg/L to 8,330 µg/L to correct a rounding error made in the previous calculation of these criteria; the criteria should be rounded to three significant figures to align with EPA guidance for the rounding of human health criteria.

The department is also proposing to amend the human health water quality criteria for 1,2-dibromoethane in surface and ground water from 0.017 µg/L to 0.2 µg/L to correct an error in decimal placement made during the previous calculation of these criteria; the decimal placement is corrected in the proposed criteria and criteria are rounded to one significant figure to align with EPA guidance for rounding of human health criteria.

Grammar, wordsmithing, and technical edits: The department proposes the following edits to improve the readability and accuracy of Circular DEQ-7: updating the hyperlink to the location on the department's website where Circular DEQ-7 can be found; removing the reference to department Circular DEQ-12A following the direct, legislative repeal of Circular DEQ-12A by the 69th Montana Legislature (House Bill 664) in 2025; replacing outdated hyperlinks with current hyperlinks to EPA websites referenced in introduction footnotes; replacing the incorrect usage of the term 'toxin' with the correct term 'toxic'; adding a hyphen to 'risk-based' to be consistent with formatting used throughout the circular; adding commas to improve clarity; clarifying which health effect data is used in human health criteria calculations; removing the word 'number' after CASRN to eliminate redundancy as CASRN already abbreviates the word number; correct the hyphen placement in the CASRN for Dinitrophenols; remove the word 'footnote' from the row containing dioxin in the table to be consistent in referencing footnotes throughout the table; add a zero to the left of the decimal for perfluorooctane sulfonate and perfluorooctanoic acid criteria to be consistent with formatting used throughout the table; fix a typo in the pollutant name propiconazole to remove the extra letter o; and clarify references to drinking water regulations in Footnote 17 to specify Safe Drinking Water Act regulations to improve clarity.



CIRCULAR DEQ-7

MONTANA NUMERIC WATER QUALITY STANDARDS



June 2019 April 2026

Formatted: Strikethrough

Formatted: Underline

Formatted: Underline

Prepared by:

Montana Department of Environmental Quality
Water Quality Planning Bureau
Water Quality Standards and Modeling Section
1520 E. Sixth Avenue
P.O. Box 200901
Helena, MT 59620-0901



Suggested citation: Montana DEQ, Water Quality Division, Water Quality Planning Bureau, Water Quality Standards and Modeling Section. ~~2019~~²⁰²⁶. DEQ-7 Montana Numeric Water Quality Standards. Helena, MT: Montana Dept. of Environmental Quality.

Formatted: Strikethrough

Formatted: Underline

INTRODUCTION

The Department of Environmental Quality (Department) Circular DEQ-7 (DEQ-7) contains numeric water quality standards for Montana's surface and ground waters. The standards were developed in compliance with Section 75-5-301, Montana Code Annotated (MCA) of the Montana Water Quality Act, Section 80-15-201, MCA (the Montana Agricultural Chemical Groundwater Protection Act), and Section 303(c) of the Federal Clean Water Act (CWA). Together, these provisions of state and federal law require the adoption of narrative and numeric standards that will protect the designated beneficial uses of state waters, such as growth and propagation of fishes and associated wildlife, waterfowl and furbearers, drinking water, culinary and food processing purposes, recreation, agriculture, and industry and other commercial purposes.

DEQ-7 contains a great deal of information about Montana's numeric standards in a compact form. In addition to providing the numeric water quality standards for each parameter, DEQ-7 also contains the following:

- The primary synonyms of each parameter. This section also includes any identification numbers used by the U.S. Environmental Protection Agency (EPA), such as the Resource Conservation and Recovery Act (RCRA) waste number, if available, as the last entry in the synonyms section;
- the Chemical Abstracts Service Registry Number (CASRN) for each chemical, as well as the National Institute for Occupational Safety and Health (NIOSH);
- the categorization of each parameter according to the type of pollutant;
- the bioconcentration factor, if known;
- trigger values used to determine "non-significant changes in water quality" under Montana's nondegradation policy (ARM 17.30.701-718); and
- required reporting values (RRV). See footnote 19 for a further explanation of RRV usage.

The numeric water quality standards in DEQ-7 have been established for parameters (i.e., "pollutants") in five categories: toxic, carcinogenic, radioactive, nutrients and harmful. An explanation of each of these categories is given below under "Explanation of Terms".

Parameters are listed in alphabetical order. In order to facilitate listing by alphabetical order, parameters that are normally written with the numbers first are listed with the numbers last. For example, 2,4-Dinitrophenol is listed as Dinitrophenol, 2,4-.

There are many explanatory notes following the table portion of DEQ-7. Footnotes referencing the explanatory notes are found in both the table headings and in individual line items. The notes following the table explain various aspects of the standards. For example, the standards for some metals, ammonia, and dissolved oxygen cover a range of values that are computed by using tables or formulas, using such parameters as pH, hardness, or temperature.

The Department will provide hard copies of this document upon request or the document may be retrieved from the Department website at,

<http://deq.mt.gov/Portals/112/Water/WQPB/Standards/PDF/DEQ7/FinalApprovedDEQ7.pdf>

<https://deq.mt.gov/water/resources>. Use of an electronic copy will enable the reader to search for synonyms or CASRN. Such searches will make this document easier to use. Please note that when searching for a chemical with a hyphenated name, a dash must be used in the name as hyphens are not recognized in the pdf search function.

Formatted: Strikethrough

Formatted: Strikethrough

Formatted: Hyperlink, Not Strikethrough

Standards Development

Montana's numeric water quality standards were developed using guidance from the EPA which includes:

- National Recommended Water Quality Criteria (NRWQC)¹ for the protection of human health and aquatic life, developed under Section 304(a) of the CWA. These include criteria for priority pollutants (PP), non-priority Pollutants (NPP), and organoleptic pollutants (OL); and
- Drinking Water Health Advisories (HA), ~~and Maximum Contaminant Levels (MCLs), and Action Levels (AL)~~ developed under the Safe Drinking Water Act.²

The 2016 versions of NRWQC and the 2012 and 2018 editions of EPA's Drinking Water Standards and Health Advisories were used to develop the standards in this version of DEQ-7.

Aquatic life criteria take into consideration the magnitude (how much of a pollutant is allowable), duration of exposure to the pollutant (averaging period), and frequency (how often criteria can be exceeded). Acute criteria are based on a one hour exposure event and can only be exceeded once, on average, in a three year period. Chronic criteria are based on a 96 hour exposure and can only be exceeded, on average, once in a three year period. For more information, see EPA's *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses*.³ The techniques used for determining aquatic life numeric standards are complex and take a great deal of time to develop. They require a detailed accumulation of scientific evidence from multiple studies, reviewed by experts in their field that may take years to complete. Aquatic life standards are added to DEQ-7 as they become available.

Nutrients in the aquatic environment are essential substances (organic or inorganic) which are used by living organisms such as algae or bacteria for cellular metabolism or construction. Examples include nitrogen (typically as ammonia, nitrate, or nitrite) and phosphorus. If present in excessive amounts (which depends on the ecosystem involved), nutrients can produce excessive algal and plant growth, which can lead to undesirable deterioration of beneficial uses of state waters. ~~Nutrient nutrient standards for aquatic life and recreation are not included in DEQ-7, but are addressed in Department Circular DEQ-12A.~~ The human health standards for nitrogenous compounds are found in DEQ-7 and are listed as toxic compounds.

Human health criteria also have a magnitude, duration and frequency component. The standard assumption in calculating the magnitude of the pollutant for groundwater exposure is that an 80 kg person will consume 2.4 liters a day for 70 years. Water consumption is assumed to be the only route of exposure in that time frame. For surface water criteria, two routes of exposure are considered, water consumption and fish consumption. EPA and the Department use a fish consumption rate of 22 grams of fish per day. In some instances, the Department has developed human health criteria using assumptions different from the standard ones, and/or used guidance/data other than those listed above. In these instances, the criteria are cross-referenced via footnote in this circular to the Montana Administrative Record (MAR) chapter, pages, and date where the details of the Department's methods are documented.

Other publications used by the Department in the development of standards include: the *1986 Quality Criteria for Water*, EPA 440/5/86-001 (the "Gold Book") and numerous updates; *Toxics Criteria for those States not Complying with Clean Water Act 303(c)(2)(B)*; *The National Toxics Rule [NTR]*, which was published in the Code of Federal Regulations, 40 CFR 131.36 (1992); and *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California*, 62 F.R. 42159 [1997].

¹ See <http://www.epa.gov/waterscience/criteria/wqtable/> <https://www.epa.gov/wqc/national-recommended-water-quality-criteria-tables>

² See <https://www.epa.gov/dwstandardsregulations/drinking-water-contaminant-human-health-effects-information#dw-standards> <https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations>

³ Available at: <http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/>

Formatted: Underline
Formatted: Strikethrough
Formatted: Underline

Formatted: Strikethrough

Formatted: Strikethrough
Formatted: Strikethrough
Formatted: Strikethrough

EXPLANATION OF TERMS

Toxics: A ~~toxin~~ toxic chemical is any chemical which has an immediate, deleterious effect on the metabolism of a living organism. The surface water quality standards for human health ~~toxins~~ toxics are the more restrictive of either the MCL or the NRWQC. The ground water standards for human health ~~toxins~~ toxics are the drinking water MCL or, if an MCL is not available, the NRWQC criteria. If neither an MCL nor an NRWQC criteria is available, an HA will be developed by the Department with the aid of the regional EPA toxicologist.

Carcinogens: The Montana Water Quality Act requires that human health standards for carcinogens be the more restrictive of either of the following: (1) the risk-based level of one in one hundred thousand [1×10^{-5}] for all carcinogens except arsenic, which is based upon one in one thousand [1×10^{-3}]; or, (2) the MCL. For surface water, the risk-based levels in EPA's NRWQC criteria or the MCL was used, or if not available, HA information was used. In cases where a ~~risk-based~~ risk-based level was not available, the most recent oral reference dose (RfD) or cancer potency factor (q1*) in the Integrated Risk Information System (IRIS) was used to compute the standard. In cases where no risk-based levels were available for known carcinogens, the standards in DEQ-7 are based on toxic effects. Ground water standards are based on EPA Drinking Water MCLs or HAs, NRWQC criteria, or IRIS information.

Pesticides: The Montana Agricultural Chemical Ground Water Protection Act requires that federal water quality criteria be adopted as ground water standards for pesticides if they are available. Pesticides are not a separate category in DEQ-7, but are included in either the toxic or carcinogenic categories. The criteria derivation would follow the process described above for those categories. If no MCLs or other federal criteria are available, standards must be developed using available data on health effects (*i.e.*, RfDs and/or q1*) and standard assumptions. The standard assumptions are that 2.4 liters of water are consumed per day and that adults weighing 80 kilograms are exposed for 70 years (life-long exposure) to a single source of water. When information was available, a relative source contribution (RSC) factor was also applied. The RSC is the percentage of a parameter's intake through drinking water versus other dietary sources. A RSC of 0.2 was used in most cases to develop ground water standards for pesticides. In some cases, no data was available to develop a water quality standard for a pesticide in surface water. In these cases, the ground water standard (developed for a pesticide according to the risk-based analysis provided above) was also adopted as a surface water standard. Other federal data sources were used when the EPA's most recent drinking water regulations and health advisories did not include data for a pesticide.

Bioconcentration: Bioconcentration factors (BCF) are not a separate category in DEQ-7, but are included with each pollutant for which there is a known bioconcentration effect. Bioconcentration is a biological amplification process which results in a higher concentration of a pollutant in a living organism than in the environment to which the organism is exposed. Pollutants such as mercury can be hundreds of times more concentrated in fish tissues than in the water the fish lives in. The calculation of a BCF is complex and is dependent on the age of the organism and the chemistry of its environment. A detailed discussion of bioconcentration can be found in EPA 823-B-94-004 *Guidance for Assessing Chemical Contaminant Data for use in Fish Advisories*.

The human health standards for carcinogens and other parameters that exhibit bioconcentration were developed using the assumption that there are two routes of human exposure: through consumption of water and fish. EPA's water quality criteria are derived using an average fish consumption rate of 22 grams/day and water consumption of 2.4 liters per day. The Department follows the EPA guidance for fish consumption rates.

Radioactive: All elements that emit alpha, beta, or gamma radiation are regulated in ground water by the EPA. All forms of radiation are carcinogenic, the calculation of a numeric standard is derived either from MCLs set

Formatted: Strikethrough
Formatted: Underline, Not Strikethrough
Formatted: Strikethrough
Formatted: Strikethrough

Formatted: Underline
Formatted: Strikethrough

Formatted: Underline
Formatted: Underline
Formatted: Underline

DEQ-7 Montana Numeric Water Quality Standards

by the EPA or calculated from the Oral Cancer Slope Factor (OCSF) provided by the EPA Region VIII toxicologist, the use of a ~~risk-based~~risked-based level of one in one hundred thousand (1×10^{-5}) and the consumption of 2.4 liters of water daily for 70 years for an adult weighing 80 kilograms. Unlike pesticides, a relative source correction (RSC) is not applied to the calculation of numeric standards for radioactive substances as discussed in EPA 402-R-11-001, *EPA Radiogenic Cancer Risk Models and Projections*.

Formatted: Strikethrough

Harmful: Pollutants typically classified as harmful include substances or measures which are controlled by numeric standards. Examples of harmful numeric standards are iron and *Escherichia coli*.

Required Reporting Value: Each pollutant's required reporting value (RRV) is the Department's selection of a laboratory reporting limit that can be met by the majority of local laboratories. In most cases, the RRV is sufficiently sensitive to meet the most stringent numeric water quality standard. The Department's RRV calculation is modified from EPA Guidance 821-B-04-005, "Revised Assessment of Detection and Quantitation Approaches," and uses method detection limits (MDLs) provided by laboratories. An MDL, as defined in 40 CFR 136 Appendix B, is "the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte." EPA's guidance is based on MDL studies conducted at individual labs and recommends multiplying the MDL by 3.18 to calculate the RRV. Since the Department calculates RRVs based on an inter-laboratory study, the guidance has been modified to use the 75th percentile of the MDLs from the labs multiplied by 3.18.

Because DEQ-7 contains numeric standards for pollutants regulated under 40 CFR 136, EPA's Safe Drinking Water Act (SDWA), and EPA's Office of Pesticides, MDLs used to calculate RRVs in DEQ-7 include those from methods in 40 CFR 136 Appendix A, EPA's SDWA methods, and select methods approved by EPA for the analysis of pesticides. It is the responsibility of the sampling entity to ensure that appropriate methods and reporting limits are requested from the laboratory to meet analytical and reporting limit needs. For pollutants with low standards and RRVs, the Department realizes that the RRVs may be below the laboratory's lowest calibration standards. In these cases, laboratories are encouraged to report values down to the RRV when possible, and to qualify data reported below their lowest calibration standard.

RULES CONTAINING MONTANA'S WATER QUALITY STANDARDS

The Administrative Rules of Montana (ARM), 17.30.620 through 17.30.670, contain numeric surface water quality standards that vary with each stream classification. Additionally, both Montana's surface water and ground water rules contain narrative standards (ARM 17.30.620 through 17.30.670 and ARM 17.30.1001 through 17.30.1045). The narrative standards cover a number of parameters, such as alkalinity, chloride, hardness, sediment, sulfate, and total dissolved solids for which sufficient information does not yet exist to develop specific numeric standards. These narrative standards are directly translated to protect beneficial uses from adverse effects, supplementing the existing numeric standards.

CIRCULAR DEQ-7, MONTANA NUMERIC WATER QUALITY STANDARDS (9)

No number indicates that a standard has not been adopted or information is currently unavailable. A '()' indicates that a detailed footnote of explanation is provided.

Formatted: Strikethrough

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Acenaphthene §§ § 3Acenaphthalene § Naphthyleneethylene § 1,8-Ethylenenaphthalene § 1,8-Ethylene Naphthalene § 1,2-Dihydroacenphthylene § Acenphthylene, 1,2-Dihydro-	83-32-9 AB 1255500	Toxic			242	70 PP	70 PP		10
Acetochlor (30) §§ § Acenit § Azetochlor § C10925 § Erunit § Harness § MG 02 § MON 097 § Nevirex	34256-82-1	Toxic				100 HA	100 HA		0.4
Acifluorfen §§ Blazer § Tackle § Scepter § as sodium salt	62476-59-9	Carcinogen				9.4 HA	9.4 HA	N/A	0.5
Acrolein §§ Aqualine § Biocide § Crolean § Aqualin § Propenal § SHA 00701 § 2-propenal § Acraldehyde § Acrylaldehyde § Acrylic Aldehyde § Ethylene Aldehyde	107-02-8 AS 1050000	Toxic	3 PP	3 PP	215	3 PP	3 PP	N/A	3
Acrylamide §§ 2-Propenamide § Propenamide§ Acrylic Amide § Ethylenecarboxamide § RCRA Waste Number U007	79-06-1 AS 3325000	Carcinogen				0.7 HA	0.7 HA	N/A	0.008

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Acrylonitrile §§ Fumigrain § Ventox § ENT 54 § TL 314 § Carbacryl § Cynoethylene § Vinyl cyanide § Propenenitrile § 2-Propenenitrile § Acrylonitrile monomer § RCRA Waste Number U009	107-13-1 AT 5250000	Carcinogen			30	0.61	0.61	N/A	3
Alachlor (includes metabolites Alachlor ESA and Alachlor OA) (31) §§ Lasso § Lazo § Alator § Alanex § Alachlor § Pillarzo § Metachlor § Chimiclor § SHA 090501 § Methachlor § 2-Chloro-N-(2,6-Diethyl)Phenyl-N-Methoxymethylacetamide § 2-Chloro-2',6'-Diethyl-N-(Methoxymethyl)Acetanilide	15972-60-8 AE 1225000	Toxic			2	2			0.3
Aldicarb (37) §§ Temik § Temic § Ambush § OMS 771 § Temik G 10 § Aldecarb § Carbamyl § SHA 098301 § Carbanolate § Sulfone Aldoxycarb § Union Carbide 21149 §§ Propanal, 2-Methyl-2-(Methylthio)-, O-[(Methylamino)Carbonyl] Oxime RCRA Waste Number P070	116-06-3 UE 2275000	Toxic			3	3	1	0.4	

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Aldicarb Sulfone (37) §§ Aldoxycarb § Standak § UC 21865 § Sulfocarb § SHA 110801 § Propionaldehyde, 2-Methyl-2-(Methylsulfonyl)-, O-(Methylcarbomoyl)Oxime § 2-Methyl-2-(Methylsulfonyl) Propanal O-[(Methylamino)Carbonyl] Oxime	1646-88-4 UE 2080000	Toxic				2	2	2	0.5
Aldicarb Sulfoxide (37) §§	1646-87-3	Toxic				4 MCL	4 MCL	2	0.4
Aldrin §§ § HHDN § Altox § Drinox § Aldrex § Aldrite § Seedrin § Octalene § SHA 045101 § Hexachlorohexahydro-endo-exo-Dimethanonaphthalene § 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8, 8a-Hexahydro-1,4,5,8-Dimethanonaphthalene § 1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-Hexahydro-endo,exo- § 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-Hexa-Hydro-1,4:5,8-Endo,Exo-Dimethanonaphthalene § RCRA Waste Number P004	309-00-2 IO 2100000	Carcinogen	1.5		4,670	7.7x10 ⁻⁶	0.02	N/A	0.1
Alpha Emitters (11) §§ § Gross Alpha § Adjusted Gross Alpha § Gross Alpha Emitters	Multiple	Carcinogen / Radioactive				15 picoC/liter	15 picoC/liter	N/A	
						MCL	MCL		

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
alpha-Chlordane §§ -Chlordane § cis-Chlordan § cis-Chlordan § c (cis)-Chlordan § Chlordan, cis-Isomer	5103-71-9 PB 9705000	Carcinogen			14,100	0.008 HA	1 HA	N/A	0.006
alpha-Hexachlorocyclohexane §§ § a-BHC § alpha-BHC § HCH-alpha § alpha-HCH § alpha-Lindane § a Hexachlorocyclohexane § alpha-Benzenehexachloride § alpha-Hexachlorocyclohexane § Benzene Hexachloride-alpha-isomer § alpha-1,2,3,4,5,6-Hexachlorocyclohexane § Cyclohexane, alpha-1,2,3,4,5,6-Hexachloro- § 1-alpha,2-alpha,3-beta,4-alpha,5-beta,6-beta-Hexachlorocyclohexane § Cyclohexane, alpha-1,2,3,4,5,6-Hexachloro-, (1-alpha, 2-alpha, 3-beta, 4-alpha, 5-beta, 6-beta)-	319-84-6 GV 3500000	Carcinogen			130	0.0036 PP	0.0036 PP	N/A	0.03
Aluminum, dissolved, pH 6.5 to 9.0 only §§ Al	7429-90-5 BD 0330000	Toxic	750 NPP	87 NPP				30	9
Ametryn §§ Ametrex	834-12-8	Toxic				60 HA	60 HA		6
Aminomethylphosphonic Acid (AMPA) § Glyphosate metabolite §§		Toxic				2,000 HA	2,000 HA		200
Aminopyralid § 4-amino-3,6-dichloropyridine-2carboxilic acid, § 4 amino-3,6 dichloro-2-	150114-71-9	Toxic				3,000 HA	3,000 HA		0.2

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
pyridinecarboxilic acid § Milestone									
Ammonia [total ammonia nitrogen (NH3-N plus NH4-N)] as ug/L N §§ § Ammonia Anhydrous § Anhydrous Ammonia § Spirit of Hartshorn	7664-41-7 BO 0875000	Toxic NPP	(7)(8) NPP	(7)(8) NPP				10	70
Ammonium Sulfamate §§	7773-06-0	Toxic				1,000 HA	1,000 HA		200
Anthracene (PAH) §§ Paranaphthalene § Green Oil § Anthracin § Tetra Olive N2G	120-12-7 CA 9350000	Toxic			30 PP	300 HA	2,100 HA	0.04	10
Antimony §§ Sb § Antimony Black § Antimony Regulus § C.I. 77050 § Stibium	7440-36-0 CC 4025000	Toxic			1 PP	5.6 MCL	6 MCL	0.4	0.5
Arsenic (36) §§ As § Arsenicals § Arsenic-75 § Arsenic Black § Colloidal Arsenic § Grey Arsenic § Metallic Arsenic	7440-38-2 CG 0525000	Carcinogen	340 PP	150 PP	44 MCL	10 MCL	10 MCL	N/A	1
Asbestos, fibers longer than 10 microns in length §§ § Amianthus § Amosite (Obs.) § Amphibole § Asbestos Fiber § Fibrous Grunerite § NCI CO8991 § Serpentine, includes Chrysotile, Actinolite, Aurosite, Anthophyllite, Crocidolite, and Tremolite	Multiple	Carcinogen				7x10 ⁶ fibers/liter MCL	7x10 ⁶ fibers/liter MCL	N/A	

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Atrazine (includes metabolites deethyl atrazine, deisopropyl atrazine, and deethyl deisopropyl atrazine) (32) §§ § Aatrex § Aktikon § Atrasine § Atred § Candex § Crisatrina § Crisazine § Cyazin § Fenamin § Fenamine § Zeaphos § Fenatrol § Gesaprim § Hungazin § Inakor § Primatol § Malermais § Radazin § Radizine § Shell Atrazine herbicide § Strazine § Zeazine § SHA 080803 § 1-Chloro-3-Ethylamino-5-Isopropylamino-2,4,6-Triazine § s-Triazine, 2-Chloro-4-Ethylamino-6-Isopropylamino- § 2-Chloro-4-Ethylamino-6-Isopropylamino-s-Triazine	1912-24-9 XY 5600000	Toxic				3 MCL	3 MCL	0.1	0.3
Azinphos and degradate azinphos methyl oxon metiltriazotion § Azimil § Bay 9027 § Bay 17147 § Carfene § Cotnion-methyl § Gusathion § Gusathion-M § Guthion § Methyl-Guthion	86-50-0	Toxic				10 HA	10 HA		0.1
Azoxystrobin §§ § azokystrobin § Azoxistrobin § Azoxistrobina § Azoxystrobin (BSI, ISO) § azoxystrobine § Azoxystrolin	131860-33-8	Toxic				1,200 HA	1,200 HA		0.03
Barium §§ Ba	7440-39-3 CA 8370000	Toxic				1,000 NPP	1,000 NPP	2	3
Bentazon §§	25057-89-0	Toxic				210	210		3

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ Basagran						HA	HA		
Benzene §§ § Phene § Benzol § Benzolene § Pyrobenzol § Carbon Oil § SHA 109301 § Coal Naphtha § Motor Benzol § Phenyl hydride § Cyclohexatriene C § Caswell Number 077 § EPA Pesticide Chemical Code 008801 § NCI C55276 § RCRA Waste Number U019	71-43-2 CY 1400000	Carcinogen			5.2	5	5	N/A	0.6
Benzidine §§ § p,p'-Bianiline § 4,4'-Bianiline § 4,4'-Biphenyldiamine § p,p'-Diaminobiphenyl § 4,4'-Diaminodiphenyl § 4,4'-Biphenylenediamine § 4,4'-Diphenylenediamine § Biphenyl, 4,4'-Diamino-§ 4,4'-Diamino-1,1'-Biphenyl § (1,1'-Biphenyl)-4,4'-Diamine § NCI C03361 § RCRA Waste Number U021	92-87-5 DC 9625000	Carcinogen			87.5	0.0014	0.0014	N/A	5
Benzo(g,h,i)perylene (PAH) §§ § 1,12-Benzoperylene § 1,12-Benzperylene § Benzo(ghi)Perylene	191-24-2 DI 6200500	Toxic			30			0.076	10
Benzo[a]Pyrene (PAH) §§ § BaP § 3,4-BP § Benz(a)Pyrene § Benzo-a-Pyrene § 3,4-Benzpyrene § 6,7-Benzopyrene § 3,4-Benzopyrene § 3,4-Benz(a)Pyrene § Benzo(d,e,f)Chrysene	50-32-8 DJ 3675000	Carcinogen			30	0.0012	0.05	N/A	0.06

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Benzo[b]Fluoranthene (PAH) §§ § B(b)F § Benzo(b)Fluoranthene § Benzo(e)Fluoranthene § 2,3-Benzofluoranthene § 3,4-Benzofluoranthene § 3,4-Benzofluoranthene § 2,3-Benzofluoranthene § 2,3-Benzofluoranthene § Benz(e)Acephenanthrylene § 3,4-Benz(e)Acephenanthrylene	205-99-2 CU 1400000	Carcinogen			30	0.012	0.5 (29)	N/A	5
PP	HA								
Benzo[k]fluoranthene (PAH) §§ § Benzo(k)Fluoranthene § 8,9-Benzofluoranthene § Dibenzo(b,j)Fluorene § 2,3,1'8'-Binaphthylene § 11,12-Benzofluoranthene § 11,12-Benzo(k)Fluoranthene	207-08-9 DF 6350000	Carcinogen			30	0.12	5 (29)	N/A	0.1
PP	HA								
Benzo[a]anthracene (PAH) §§ § Tetraphene § Benzanthracene § Benzanthracene § Naphthalanthracene § 1,2-Benzanthrene § Benz(a)Anthracene § Benzo(a)Anthracene § 1,2-Benzanthracene § Benzo(b)Phenanthrene § 1,2-Benzoanthracene § Benzanthracene, 1,2-§ 1,2-Benzo(a)Anthracene § 2,3-Benzophenanthrene § RCRA Waste Number U018	56-55-3 CV 9275000	Carcinogen			30	0.012	0.5 (29)	N/A	0.1
PP	HA								
Beryllium §§ Be	7440-41-7 DS 1750000	Carcinogen			19	4	4	N/A	0.8

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ Beryllium-9 § Glucinum § RCRA Waste Number P015						MCL	MCL		
Beta Emitters (11) §§ § Gross Beta	Multiple	Carcinogen / Radioactive				4 mrem /yr MCL	4 mrem /yr MCL	N/A	
Beta-Chloronaphthalene §§ 2-Chloronaphthalene § β-Chloronaphthalene § Naphthalene, 2-Chloro- § 2 Chlornaftalen § A13-01537 § CCRIS 5995 § HSDB 4014 § Halowax § EINECS 202-079-9 § RCRA waste number U047	91-58-7 QJ 2275000	Toxic			202	800 PP	800 PP	0.94	10
beta-Hexachlorocyclohexane §§ § β-HC § beta-BHC § HCH-beta § beta-HCH § β-Lindane § beta-Lindane § Hexachlorocyclohexane, beta- § trans-alpha-Benzenehexachloride § Cyclohexane, 1,2,3,4,5,6-Hexachloro-, beta- § 1-alpha,2-beta,3-alpha,4-beta,5-alpha,6-beta-Hexachlorocyclohexane § Cyclohexane, 1,2,3,4,5,6-Hexachloro-, (1-alpha, 2-beta, 3-alpha, 4-beta, 5-alpha, 6-beta)- § Benzenehexachloride, trans-alpha- § beta-1,2,3,4,5,6-Hexachlorocyclohexane	319-85-7 GV 4375000	Carcinogen			130	0.08 PP	0.08 PP	N/A	0.02

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Bis(2-Chloroisopropyl) Ether §§ § DCIP § NCI C50044 § Dichlorodiisopropyl Ether § 2,2'-Oxybis(1-Chloropropane) § Bis (2-Chloroisopropyl) ether § Propane, 2,2'-Oxybis(2-Chloro- § Propane, 2,2'-Oxybis[1-Chloro- § 2',2'-Dichlorodiisopropyl Ether § Dichlorodiisopropyl Ether (DOT) § Bis(2-Chloro-1-Methylethyl) Ether § RCRA Waste Number U027 Reregistration decision CAS-RN	108-60-1 KN 1750000	Toxic		2.47	200	200	0.8	10	
Bis(2-Chloroethoxy)Methane §§ § Bis(β-Chloroethyl)Formal	111-91-1 PA 3675000	Toxic		0.64			0.5	10	
Bis(Chloroethyl)Ether §§ § BCEE § DCEE § Clorex § Clorex § Chloroethyl Ether § Dichloroethyl Ether § Dichloroethyl Oxide § Bis(Chloroethyl) Ether § Di(2-Chloroethyl) Ether § Bis (Chloroethyl) Ether § Bis(2-Chloroethyl) Ether § Bis(β-Chloroethyl) Ether § β,β'-Dichloroethyl Ether § 2,2'-Dichloroethyl Ether § Bis (2-Chloroethyl) Ether § 1,1'-Oxybis(2-Chloro)Ethane § Ethane, 1,1'-Oxybis[2-Chloro- § beta,beta'-Dichloroethyl Ether § 1-Chloro-2-(beta-Chloroethoxy)Ethane § RCRA Waste Number U025	111-44-4 KN 0875000	Carcinogen		6.9	0.3	0.3	N/A	5	

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Bis(Chloromethyl)ether §§ § BCME § bis-CME § Chloromethyl Ether § Oxybis(Chloromethane) § Bis (Chloromethyl) Ether § sym-Dichlorodimethyl Ether § 1,1'-Dichlorodimethyl Ether § Dimethyl-1,1'-Dichloroether § Chloro(Chloromethoxy) Methane § RCRA Waste Number P016	542-88-1 KN 1575000	Carcinogen			63	0.0015 NPP	0.0015 NPP	N/A	1x10 ⁻⁴
Bromacil §§ Hyvar §	314-40-9	Carcinogen				700 HA	700 HA	N/A	0.03
Bromate	7789-38-0	Carcinogen				10 MCL	10 MCL	N/A	1
Bromodichloromethane (HM) §§ Dichlorobromomethane § BDCM § NCI C55243 § Methane, bromodichloro- § Dichloromonobromomethane § Monobromodichloromethane	75-27-4 PA 5310000	Carcinogen			3.75	9.5 PP	10 HA	N/A	0.6
Bromoform (HM) §§ Tribromomethane § NCI C55130 § Methane, Tribromo- § Methenyl Tribromide § RCRA Waste Number U225	75-25-2 PB 5600000	Carcinogen			3.75	70 PP	80 HA	N/A	5
Bromoxynil §§	1689-84-5	Carcinogen				3.2 HA	3.2 HA	N/A	0.3

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Butyl Benzyl Phthalate §§ § BBP § Sicol 160 § Unimoll BB § Palatinol BB § Santicizer 160 § Butylbenzylphthalate § Butylbenzyl Phthalate § Benzyl Butyl Phthalate § n-Benzyl Butyl Phthalate § Benzyl n-Butyl Phthalate § Phthalic Acid, Benzyl Butyl Ester § Butyl Phenylmethyl Ester § NCI C54375	85-68-7 TH 9990000	Carcinogen			414	1 PP	1 PP	N/A	10
Butylate §§ Sutan §	2008-41-5	Toxic				300 HA	300 HA		0.02
Cadmium §§ Cd § C.I. 77180 § Colloidal Cadmium	7440-43-9 EU 9800000	Toxic	0.49 @25 mg/L hardness (12) PP	0.25 @25 mg/L hardness (12) PP	64	5 MCL	5 MCL	0.1	0.03
Carbaryl §§ Sevin §	63-25-2	Toxic	2.1 NP	2.1 NP		70 HA	70 HA	2	1
Carbofuran §§ § Yalox § Euradan § Furadan § Curaterr § Furacarb § SHA 090601 § Niagra 10242 § 2,2-Dimethyl-7-Coumaranyl N-Methylcarbamate § 2,2-Dimethyl-2,3-Dihydro-7-Benzofuranyl N-Methylcarbamate § Carbamic Acid, Methyl-, 2,3-Dihydro-2,2-Dimethyl-7-Benzofuranyl Ester	1563-66-2 FB 9450000	Toxic				40 MCL	40 MCL	1	1

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Carbon Tetrachloride §§ Freon 10 § R 10 § Univerm § Tetrasol § Fasciolin § Flukoids § Necatorina § Necatorine § Halon 104 § Tetraform § Carbon Tet § Benzinoform § Carbon Chloride § Perchloromethane § Tetrachloromethane § Methane Tetrachloroide § RCRA Waste Number U211	56-23-5 FG 4900000	Carcinogen			18.75	4 PP	3 HA	N/A	0.6
Carboxin §§ Vitavax §	5234-68-4	Toxic				700 HA	700 HA	1	70
Chloramben §§ Vegiben §	133-90-4	Toxic				100 HA	100 HA		0.5
Chlordane §§ Termex § Belt § Niran § Dowchlor § Chlortox § Chlordan § Clordano § Chlor Kil § Toxicchl § Octa-Klor § Ortho-Klor § SHA 058201 § Gold Crest C-100 § Chlordane, Technical § Octachloro-4, 7-Methanohydroindane § Octachlorodihydrodicyclopentadiene § Octachloro-4,7-Methanotetrahydroindane-4,7-Methylene Indane § 4,7-Methanoindan, 1,2,4,5,6,7,8,8-Octachloro-3a,4,7,7a-tetrahydro- § 4,7-Methano-1H-Indene § RCRA Waste Number U036	57-74-9 PB 9800000	Carcinogen	1.2 PP	0.0043 PP	14,100 PP	0.0031 PP	1 HA	N/A	0.1
Chlorimuron Ethyl §§ Classic §	90982-32-4	Toxic				600 HA	600 HA	0.1	0.1

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Chlorine, total residual §§ Cl § Bertholite § Chlorine, molecular § Molecular Chlorine	7782-50-5 FO 2100000	Toxic	19 NPP	11 NPP		4,000 MCL	4,000 MCL		100
Chlorite	7758-19-2	Toxic				1,000 MCL	1,000 MCL		100
Chlorobenzene §§ Monochlorobenzene § MCB § Chlorobenzol § Chlorobenzene § Phenyl Chloride § Benzene Chloride § Benzene, Chloro- § Monochlorobenzene § NCI C54886 § RCRA Waste Number U037	108-90-7 CZ 0175000	Toxic			10.3 PP	100 MCL	100 MCL	0.5	0.8
Chlorodibromomethane §§ Monochlorodibromomethane § CDBM § NCI C55254 § Methane, Dibromochloro- § Dibromochloromethane (THM)	124-48-1 PA 6360000	Carcinogen			3.75 PP	8 PP	8 PP	N/A	0.6
Chloroethane §§ Ethyl Chloride § Aethylis § Aethylis Chloridum § Anodyn § Chelen § Chlorethyl § Chloridum § Chloryl § Chloryl Anesthetic § Ether Chloratus § Ether Hydrochloric § Ether Muriatic § Hydrochloric Ether § Kelene § Monochlorethane § Muriatic Ether § Narcotile § NCI C06224	75-00-3 KH 7525000	Toxic						0.52	

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Chloroform (THM) §§ Trichloromethane § TCM § Freon 20 § Trichloroform § R-20 Refrigerant § Methenyl Chloride § Formyl Trichloride § Methyl Trichloride § Methane Trichloride § Methane, Trichloro- § Methenyl Trichloride § NCI CO2686§ RCRA Waste Number U044	67-66-3 FS 9100000	Carcinogen			3.75	60 PP	70 HA	N/A	0.9
Chlorophenol, 2- §§ Phenol, 2-Chloro § o-Chlorophenol § 2-Chlorophenol § Phenol, o-Chloro- § RCRA Waste Number U048	95-57-8 SK 2625000	Toxic			134	30 PP	30 PP	0.3	10
Chlorophenyl Phenyl Ether, 4- §§ § 4- Chlorophenyl Phenyl Ether	7005-72-3	Toxic with BCF >300			1,200				10
Chlorsulfuron §§ Glean §§ Telar	64902-72-3	Toxic			300 100 HA	300 100 HA		0.02	
Chlorothalonil §§ Bravo §	1897-45-6	Carcinogen			14 HA	14 HA	N/A	0.05	
Chlorpyrifos §§ Dursban § Ethion § Brodan § Eradex § Lorsban § Pyrinex § NA 2783 § Pirimade § DowCo 179 § SHA 059101 § Ethion, dry § Chlorothalonil § Chlorpyrifos-Ethyl § O,O-Diethyl O-3,5,6-Trichloro-2-Pyridyl Phosphorothioate § Phosphorothioic Acid, O,O-Diethyl O-(3,5,6-Trichloro-2-Pyridyl) Ester	2921-88-2 TF 6300000	Toxic	0.083	0.041 NPP NPP	2 HA	2 HA	0.25	0.1	

Formatted: Strikethrough

Formatted: Underline

Formatted: Strikethrough

Formatted: Underline

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Chromium, all forms §§ Cr § Chrome	7440-47-3 GB 4200000	Toxic				100 MCL	100 MCL	1	10
Chromium, hexavalent §§ Chromium (VI) §	18540-29-9	Toxic	16 PP	11 PP	16				2
Chromium, trivalent §§ Chromium (III) §	16065-83-1	Toxic	579 @ 25mg/L hardness (12) PP	27.7 @ 25 mg/L hardness (12) PP	16			1	3
Chrysene (PAH) §§ § Benz(a)Phenanthrene § Benzo(a)Phenanthrene § 1,2-Benzphenanthrene § 1,2-Benzophenanthrene § 1,2,5,6-Dibenzonaphthalene § RCRA Waste Number U050	218-01-9 GC0700000	Carcinogen			30	1.2 PP	50 (29) HA	N/A	0.1
cis-1,2-Dichloroethylene §§ 1,2-Dichloroethylene § cis-Dichloroethylene § cis-1,2-Dichloroethene § 1,2,cis-Dichloroethylene § ethylene, 1,2-Dichloro-, (z)-	156-59-2 KV 9420000	Toxic				70 MCL	70 MCL	0.002	0.9
cis-1,3-Dichloropropene §§ Telone II § 1,3-Dichloropropene § 1,3-Dichloropropylene § (Z)-1,3-Dichloropropene § cis-1,3-Dichloropropylene § 1-Propene, 1,3-Dichloro-, (Z)-	10061-01-5 UC 8325000	Carcinogen			1.91	3.4 HA	4 HA	N/A	0.6
Clothianidin	210880-92-5	Toxic				650 HA	650 HA		
Clopyralid §§ Stinger §	1702-17-6	Toxic				1,000 HA	1,000 HA	1	0.3

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Copper §§ Cu § Allbri Natural Copper § ANAC 110 § Arwood Copper § Bronze Powder § CDA 101 § CDA 102 § CDA 110 § CDA 122 § C.I. 77400 § C.I. Pigment Metal 2 § Copper Bronze § 1721 Gold § Gold Bronze § Kafar Copper § M1 (Copper) § M2 (Copper) § OFHC Cu § Raney Copper	7440-50-8 GL 5325000	Toxic	3.79@ 25mg/L hardness (12)	2.85@ 25 mg/L hardness (12)	36	1,300	1,300	0.5	2
Cyanazine §§ Bladex	21725-46-2	Toxic				10 HA	10 HA		0.02
<u>Cyanide, free</u> §§ § Cyanide § RCRA Waste Number P030	<u>57-12-5</u> <u>GS 7175000</u>	<u>Toxic</u>				<u>200</u>	<u>0.5</u>	<u>27</u>	
Cyanide, total §§ § Cyanide § Isocyanide § Cyanides, includes soluble salts and complexes § RCRA Waste Number P030	57-12-5 GS 7175000	Toxic	22	5.2	1	4	<u>200</u> <u>MCL</u>	<u>0.5</u>	3
Dacthal §§ DCPA §	1861-32-1	Toxic				70 HA	70 HA	0.025	1
Dalapon §§ Revenge	75-99-0 UF 0690000	Toxic				200	200	1.3	3

Formatted: Strikethrough

Formatted: Underline

Formatted: Underline

Formatted: Underline

Formatted: Underline

Formatted: Underline

Formatted: Underline

Formatted Table

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ Dalpon § Unipon § Dowpon § Radapon § Basinex § Ded-Weed § Dalacide § Gramevin § Crisapon § Dalpon Sodium § 2,2-Dichloropropionic Acid § SHA 28902, for sodium salt § SHA 28901, for dalapon only Propionic Acid, 2,2-Dichloro- § Sodium 2,2-Dichloropropionate § a-Dichloropropionic Acid § a,a-Dichloropropionic Acid § alpha-alpha-Dichloropropionic Acid						MCL	MCL		
Dalapon, sodium salt §§ Dalpon § Unipon § Dowpon § Radapon § Revenge § Basinex § Ded-Weed § Dalacide § Gramevin § Crisapon § Dalpon Sodium § Sodium Dalapon § 2,2-Dichloropropionic Acid § SHA 28902, for sodium salt § SHA 28901, for dalapon only § Propionic Acid, 2,2-Dichloro- § Sodium 2,2-Dichloropropionate § alpha-alpha-Dichloropropionic Acid	127-20-8 UF 1225000	Toxic				200	200	1.3	3
Demeton §§ Systox § Bay 10756 § Bayer 8169 § Demox § Diethoxy Thiophosphoric Acid Ester of 2-Ethylmercaptoethanol § O,O-Diethyl 2-Ethylmercaptoethyl Thiophosphate § O,O-Diethyl O(and S)-2-(Ethyl-Thio)Ethyl Phosphorothioate Mixture	8065-48-3 TF 3150000	Toxic	0.1	NPP		0.3	0.3	0.25	0.01

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ E 1059 § ENT 17,295 § Mercaptophos § Systemox § Systox § ULV § Demeton-O + Demeton-S									
Di(2-Ethylhexyl)Phthalate (PAE) §§ Bis(2-Ethylhexyl)Phthalate § BEHP § DEHP § Octoil § Fleximel § Flexol DOP § Kodaflex DOP § Ethylhexyl Phthalate § Diethylhexyl Phthalate § 2-Ethylhexyl Phthalate § Di(Ethylhexyl)phthalate § Di(2-Ethylhexyl)phthalate § Bis (2-Ethylhexyl) Phthalate § Bis(2-Ethylhexyl)-1,2-Benzene-Dicarboxylate § 1,2-Benzenedicarboxylic Acid, Bis(2-Ethylhexyl)Ester	117-81-7 TI 0350000	Carcinogen		130	3.2 PP	6 MCL	N/A	2	
Di(2-Ethylhexyl)Adipate §§ Hexanedioic Acid § DEHA § BEHA § Bisoflex DOA § Effemoll DOA § Ergoplast AdDO § Flexol A 26 § PX-238 § Reomol DOA § Vestinol OA § Wickenol 158 § Kodaflex DOA § Monoplex DOA § NCI C54386 § Octyl Adipate § Dioctyl Adipate § Di-2-Ethylhexyl Adipate § Di (2-Ethylhexyl) Adipate § Bis(2-Ethylhexyl) Adipate § Adipic Acid, Bis(2-Ethylhexyl) Ester § Hexanedioic Acid, Bis(2-Ethylhexyl) Ester	103-23-1 AU 9700000	Carcinogen			280 HA	280 HA	N/A	6	
Diallate §§	2303-16-4	Carcinogen					5.5 (40)		
Diazinon §§	333-41-5	Toxic	0.17 NPP	0.17 NPP		1 HA	1 HA	0.25	0.03

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dibenz[a,h]Anthracene (PAH) §§ § DBA § DB(a,h)A § Dibenz(a,h)Anthracene § Dibenzo(a,h)anthracene § 1,2:5,6-Benzoanthracene § Dibenzo (a,h) Anthracene § 1,2,5,6-Dibenzanthracene § 1,2:5,6-Dibenz(a)Anthracene § RCRA Waste Number U063	53-70-3 HN 2625000	Carcinogen			30	0.0012	0.05 (29)	N/A	0.1
Dibromoethane, 1,2- §§ Ethylene Dibromide § DBE § EDB § Nephis § Kopfume § Celmidie § E-D-Bee § Soilfume § Bromofume § Dowfume 40 § SHA 042002 § Pestmaster § Soilbrom-40§ Dibromoethane § Ethylene Bromide § Glycol Dibromide § 1,2-Dibromoethane § 1,2-Ethylene Dibromide § RCRA Waste Number U067	106-93-4 KH 9275000	Carcinogen			0.20-01 7	0.20-01 7	N/A	0.01	

Formatted: Strikethrough

Formatted: Underline

Formatted: Strikethrough

Formatted: Underline

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dibutyl Phthalate §§ § DPB § Celluflex DPB § Elaol § Hexaplas M/B § Palatinol C8 Polycizer DBP § PX 104 § Staflex DBP § Witcizer § SHA 028001 § Butylphthalate § N-Butylphthalate § Di-n-Butylphthalate § Di-n-Butylphthalate § Dibutyl-o-Phthalate § Di-n-Butyl Phthalate § RCRA Waste Number U069 § Phthalic Acid Dibutyl Ester § Dibutyl 1,2-Benzene Dicarboxylate § 1,2-Benzenedicarboxylic Acid Dibutyl Ester § 1,2-Benzenedicarboxylic Acid, Dibutyl Ester § Benzene-o-Dicarboxylic Acid Di-n-Butyl Ester	84-74-2 TI 0875000	Toxic			89	20 PP	20 PP	0.25	10
Dicamba §§ Banvel §	1918-00-9	Toxic				200 HA	200 HA	0.28	0.7
Dichlorobenzene, 1,2- §§ DCB § ODB § ODCB § Dizene § Cloroben § Chloroben § Chloroden § Termikil § Dilatin DB § Dowtherm E § Dilantin DB § o-Dichlorobenzene § Orthodichlorobenzene § ortho-Dichlorobenzene § Special Termite Fluid § Benzene, 1,2-Dichloro- § RCRA Waste Number U070	95-50-1 CZ 4500000	Toxic			55.6	600 MCL	600 MCL	0.02	10
Dichlorobenzene, 1,3- §§ Benzene, 1,3-Dichloro § M-Dichlorobenzene § m-Dichlorobenzene § meta-Dichlorobenzene § 1,3-Dichlorobenzene-	541-73-1 CZ 4499000	Toxic			55.6	7 PP	600 HA	0.006	5

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dichlorobenzene, 1,4- §§ Benzene, 1,4-Dichloro- § 1,4- Dichlorobenzene § PDB § PDCB § NCI C54955 § Evola § Paradi § Paradow § Persia-Perazol § Paracide § Parazene § Paramoth § Santochlor § Paranuggets § di- Chloricide § Para Chrystals § p-Dichlorobenzene § Caswell Number 632 § Paradichlorobenzene § para-Dichlorobenzene- § p-Chlorophenyl Chloride § EPA Pesticide Chemical Code 061501 § RCRA Waste Number U070 § RCRA Waste Number U071 § RCRA Waste Number U072	106-46-7 CZ 4550000	Toxic			55.6	75	75		5
Dichlorobenzidine, 3,3'- §§ DCB § C.I. 23060 § Curithane C126 § Dichlorobenzidine § o,o'-Dichlorobenzidine § Dichlorobenzidine Base § Benzidine, 3,3'-Dichloro- § 3,3'-Dichloro-4,4'- Diaminodiphenyl § 3,3'- Dichloro-(1,1'-Biphenyl)- 4,4'-Diamine § 1,1'- Biphenyl-4,4'-Diamine, 3,3'-Dichloro- § RCRA Waste Number U073	91-94-1 DD 0524000	Carcinogen			312	0.49	0.49	N/A	5

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dichlorodifluoromethane (HM) §§ Freon 12 § F 12 § R 12 § FC 12 § Halon § CFC-12 § Arcon 6 § Electro-CF 12 § Eskimon 12 § Frigen 12 § Gentron 12 § Isceon 122 § Kaiser Chemicals 12 § Ledon 12 § Ucon 12 § Propellant 12 § Refrigerant 12 § Fluorcarbon-12 § Difluorodichloromethane § Methane, dichlorodifluoro- § RCRA Waste Number U075	75-71-8 PA 8200000	Toxic			3.75	1,000	1,000	0.05	0.8
HA						HA	HA		
Dichloroethane, 1,2- §§ Ethylene Chloride § EDC § Brocide § 1,2-DCE § NCI C00511 § Dutch Oil § Dutch Liquid § Dichloremulsion § Di-Chlor-Mulsion § 1,2-Bichlorethane § 1,2-Dichlorethane § Ethane Dichloride § 1,2-Bichloroethane § Ethylene Dichloride § 1,2-Dichloroethane § Ethane, 1,2-Dichloro- § 1,2-Ethylene Dichloride § alpha,beta-Dichloroethane § RCRA Waste Number U077	107-06-2 KI 0525000	Carcinogen		1.2	5	4	N/A	0.5	
						MCL	HA		
Dichloroethylene, 1,1- §§ Vinylidene Chloride § VDC § 1,1-DCE § Sconate § NCI C54262 § 1,1-Dichloroethene § Vinylidene Chloride § 1,1-Dichloroethylene § Vinylidene Dichloride § Ethene, 1,1-Dichloro- § Vinylidene Chloride II § Dichloroethylene, 1,1- § Ethylene, 1,1-Dichloro- §	75-35-4 KV 9275000	Carcinogen		5.6	7	7	N/A	0.7	
						MCL	MCL		

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
RCRA Waste Number U078									
Dichlorophenol, 2,4- §§ Phenol, 2,4-Dichloro § DCP § 2,4-DCP § NCI C55345 § 2,4- Dichlorophenol § RCRA Waste Number U081	120-83-2 SK 8575000	Toxic			40.7	10 PP	10 PP	10	10
Dichlorophenoxyacetic Acid, 2,4- §§ Dichlorophenoxyacetic Acid § Chlorophenoxy herbicide § 2,4-D § Salvo § Phenox § Farmco § Amidox § Miracle § Agrotect § Weedtrol § Herbidal § Ded-Weed § Lawn-Keep § Fernimine § Crop Rider § Dichlorophenoxyacetic Acid, 2,4- § Acetic Acid, (2,4-Dichlorophenoxy)- § 2,4- Dichlorophenoxyacetic Acid, salts and esters	94-75-7 AG 6825000	Toxic				70 MCL	70 MCL	0.02	1
Dichloropropane, 1,2- §§ Propylene Chloride § 1,2-Dichloropropane § NCI C55141 § Propylene Dichloride § Caswell Number 324 § Propane, 1,2-Dichloro- § α,β-Propylene Dichloride § alpha,beta- Dichloropropane § EPA Pesticide Chemical Code 029002 § RCRA Waste Number U083	78-87-5 TX 9625000	Carcinogen			4.11	5 MCL	5 MCL		0.7

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dichloropropene, 1,3- §§ Telone II § Telone § NCI C03985 § Vidden D § Dichloropropene § a- Chloroallyl Chloride § g- Chloroallyl Chloride § 1,3- Dichloropropene § 1,3- Dichloropropylene § 1,3- Dichloro-2-Propene § Propene, 1,3-Dichloro- § Telone II Soil Fumigant § 3-Chloropropenyl Chloride § alpha,gamma- Dichloropropylene	542-75-6 UC 8310000	Carcinogen			1.91	2.7	2.7	N/A	0.3
Dichlorprop §§ § Canapur DP § Basagran DP § Cornox RX § Hedonil DP § Kildip § Mayclene § Polyclene § Weedone DP § Polytol	120-36-5	Toxic			300 HA	300 HA			1
Dieldrin §§ § Alvit § Quintox § Octalox § IlloxoL § Dieldrex § NCI C00124 § Dieldrite § Hexachloroepoxyoctahydro-endo,exo- Dimethanonaphthalene § 3,4,5,6,9,9-Hexachloro- 1a,2,2a,3,6,6a,7,7a- Octahydro-2,7:3,6- Dimethanonaphth(2,3- b)Oxirene § 2,7:3,6- Dimethanonaphth(2,3- b)Oxirene, 3,4,5,6,9,9- Hexachloro- 1a,2,2a,3,6,6a,7,7a- Octahydro- § SHA 045001 § 1,4:5,8- Dimethanonaphthalene § RCRA Waste Number P037	60-57-1 IO 1750000	Carcinogen	0.24	0.056	4,670	1.2x10 ⁻⁵	0.02	N/A	0.02

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Diethyl Phthalate §§ § Anozol § Neantine § Solvanol § NCI C60048 § Placidole E § Ethyl Phthalate § Diethylphthalate § Diethyl-o-Phthalate § 1,2-Benzenedicarboxylic Acid, Diethyl Ester § RCRA Waste Number U088	84-66-2 TI 1050000	Toxic			73	600 PP	600 PP		10
Difenoconazole §§ § 1-[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2ymethyl]-1H-1,2,4-triazole § CGA169374 § Dividend § Dragon § Plover § Score § Score EC250	119446-68-3	Toxic			70 HA	70 HA	N/A	0.06	
Dimethenamid and degradate demethenamid OA § 2-Chloro-N-(2,4-dimethyl-3-thienyl)-N-(2-methoxy-1-methylethyl)acetamide § San 682H § Frontier herbicide § EPA pesticide Code 129051	87674-68-8	Carcinogen			300 HA	300 HA	N/A	0.03	
Dimethoate §§	60-51-5	Toxic			15 HA	15 HA		6	
Dimethrin §§	70-38-2	Toxic			2,000 HA	2,000 HA		200	

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dimethyl Phthalate §§ § DMP § NTM § ENT 262 § Mipax § Avolin § Fermine § Solvanom § Solvarone § Palatinol M § Methyl Phthalate § Dimethylphthalate § Phthalic Acid, Dimethyl Ester § Dimethyl Benzene-o-Dicarboxylate § Dimethyl 1,2-Benzenedicarboxylate § 1,2-Benzenedicarboxylic Acid, Dimethyl Ester	131-11-3 TI 1575000	Toxic			36	2,000	2,000	0.04	10
PP	PP								
Dimethylphenol, 2,4- §§ Phenol, 2,4-Dimethyl- § m-Xylenol § 2,4-Xylenol § 4,6-Dimethylphenol § Caswell Number 907A § 2,4-Dimethyl Phenol § 1-Hydroxy-2,4-Dimethylbenzene § 4-Hydroxy-1,3-Dimethylbenzene § EPA Pesticide Chemical Code 086804 § RCRA Waste Number U101	105-67-9 ZE 5600000	Toxic			93.8	100	100	10	10
PP	PP								
Dinitro-o-Cresol, 4,6- §§ Dinitrocresol § Detal § Sinox § DNOC § Arborol § Capsine § Dinitrol § Trifocide § Antinonin § Winterwash § Dinitro-o-Cresol § 2,4-Dinitro-o-Cresol § 4,6-Dinitro-o-Cresol § 4,6-dinitro- § 2-Methyl-4,6-Dinitrophenol § 4,6-Dinitro-2-Methylphenol § 2,4-Dinitro-6-Methylphenol § 3,5-Dinitro-2-Hydroxytoluene § Phenol, 2-Methyl-4,6-Dinitro- §	534-52-1 GO 9625000	Toxic			5.5	2	2		10
PP	PP								

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Caswell Number 390 § RCRA Waste Number P047									
Dinitrophenol, 2,4- §§ Phenol, 2,4-Dinitro § Nitro § Kleenup § Aldifen § 2,4-Dinitrophenol § 2,4-DNP § Chemox PE § Maroxol-50 § Solflo Black B § alpha-Dinitrophenol § Dinitrophenol, 2,4- § Tetrosulphur Black PB § 1-Hydroxy-2,4-Dinitrobenzene § RCRA Waste Number P048	51-28-5 SL 2800000	Toxic			1.5	10 PP	10 PP	13	60
Dinitrophenols	<u>25550-58-</u> 25555-05- 87	Toxic				10 NPP	10 NPP		
Dinitrotoluene, 2,4- §§ Toluene, 2,4-Dinitro § 2,4-DNT § NCI C01865 § 2,4-Dinitrotoluol - § Benzene, 1-Methyl-2,4-Dinitro- § RCRA Waste Number U105	121-14-2 XT 1575000	Carcinogen			3.8	0.49 PP	0.49 PP	N/A	0.2
Dinitrotoluene, 2,6- §§ Toluene-dinitro § 2,4-DNT § Methyl-1,3-Dinitrobenzene § RCRA Waste Number U106	606-20-2 XT 1925000	Carcinogen				0.5 HA	0.5 HA	N/A	0.2
Dinoseb §§	88-85-7 SJ 9800000	Toxic				7	7	0.19	1

Formatted: Strikethrough

Formatted: Underline

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ DNBP § DBNF § Aretit § Basanite § Caldon § Sparic § Kiloseb § Spurge § Premerge § Dinitro § Hell-Fire § SHA 037505 § Dow General § Sinox General § Dow General Weed Killer § Vertac General Weed Killer § 2-sec-Butyl-4,6-Dinitrophenol § Dinitro-Ortho-Sec-Butyl Phenol § 2-(1-Methylpropyl)-4,6-Dinitrophenol § 4,6-Dinitro-2-(1-Methyl-n-Propyl)Phenol § Phenol, 2-(1-Methylpropyl)-4,6-Dinitro- § RCRA Waste Number P020						MCL	MCL		
Dioxane, 1,4- §§ Dioxane § P-Dioxane § 1,4-Diethylene dioxide § Diethylene ether § Dioxan § 1,4-Dioxacyclohexane § Dioxanne § Di(ethylene oxide) § Tetrahydro-p-dioxin § Tetrahydro-1,4-dioxin § Diethylene dioxide § Glycol ethylene ether § 1,4-Dioxan § p-Dioxan § Dioxan-1,4 § Dioxyethylene ether § Diokan § Dioksan § para-Dioxane	123-91-1	Carcinogen				3 HA			

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dioxin Chlorinated Dibenzo-p-dioxins and Chlorinated Dibenzofurans Calculation of an equivalent concentration of 2,3,7,8-TCDD is to be based on congeners of CDDs/CDFs and the toxicity equivalency factors (TEF) in van den Berg, M: et al. (2006) The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds. Toxicological Sciences 93(2):223-241.	1746-01-6	Carcinogen			5,000	5×10^{-8} (10) PP	2×10^{-6} (10) HA	N/A	footnote (10)
Diphenamid §§	957-51-7	Carcinogen				200 HA	200 HA	N/A	20
Diphenylhydrazine, 1,2- §§ Hydrazine, 1,2-Diphenyl- § Hydrazobenzene § NCI C01854 § N,N'-Bianiline § Benzene, Hydrazodi- § (sym)-Diphenylhydrazine § 1,2-Diphenylhydrazine § RCRA Waste Number U109	122-66-7 MW 2625000	Carcinogen			24.9	0.3 PP	0.3 PP	N/A	0.04
Diquat §§ § Actor § Feglox § Deiquat § Reglone § Aquacide § Dextrone § Paraquat § Preeglove § SHA 032201 § Weedtrine-D § Diquat Dibromide § Ethylene Dipyridylum Dibromide § 1,1-Ethylene 2,2-Dipyridylum Dibromide § 5,6-Dihydro-Dipyrido(1,2a,1c)Pyrazinium Dibromide § 9,10-Dihydro-8a,10a-	2764-72-9 JM 5690000	Toxic				20 MCL	20 MCL	0.44	2

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Diazoniaphenanthrene(1,1'-Ethylene-2,2'-Bipyridylum)Dibromide									
Disulfoton §§ § Disyston	298-04-4	Toxic				0.3 HA	0.3 HA	0.07	0.09
Diuron §§ § Karmex	330-54-1	Toxic				10 HA	10 HA	1	0.5
Endosulfan §§ § NCI C00566 § Malixv § Ensure § Beosit § Endocel § Thiodan § Cyclodan § Crisulfan § Benzoepin § Thiosulfan § SHA 079401 § Chlorthiepin § Endosulfan (mixed isomers) § Hexachlorohexahydromethano 2,4,3-Benzodioxathiepin-3-Oxide § 1,4,5,6,7,7-Hexachloro-5-Norbornene-2,3-Dimethanol Cyclic Sulfite § 5-Norbornene-2,3-Dimethanol, 1,4,5,6,7,7-Hexachloro Cyclic Sulfite § RCRA Waste Number P050	115-29-7 RB 9275000	Toxic	0.11 (39)	0.056 (39)	270	20 PP	20 PP	0.014	see Cis and trans isomers
Endosulfan, I (the cis isomer of Endosulfan) §§ § Thiodan I § Endosulfan-I § Alpha-Endosulfan § alpha-Endosulfan	959-98-8	Toxic	0.11 PP	0.056 PP	270	20 PP	20 PP		0.02
Endosulfan, II (the trans isomer of endosulfan)	33213-65-9	Toxic	0.11	0.056	270	20	20	0.004	0.02

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§§ § Thiodan II § Endosulfan-II § Beta-Endosulfan § beta-Endosulfan			(39)	(39)		PP	PP	PP	PP
Endosulfan Sulfate §§ § 6,9-Methano-2,3,4-Benzodioxathiepin, 6,7	1031-07-8	Toxic			270	20	20	0.05	0.05
Endothall §§ § Hydout § Hydrothal-47 § Aquathol § SHA 038901 § Accelerate § Tri-Endothal § Endothal Hydout § 3,6-Endooxohexahydrophthalic Acid § Phthalic Acid, Hexahydro-3,6-endo-Oxy-§ 7-Oxabicyclo(2,2,1)Heptane-2,3-Dicarboxylic Acid § 1,2-Cyclohexanedicarboxylic Acid, 3,6-endo-Epoxy- § RCRA Waste Number P088	145-73-3 RN 7875000	Toxic				100	100	1	2
Endrin §§ § NCI C00157 § Endrex § Mendlrin § Nendrin § Hexadrin § SHA 041601 § Compound 269 § 1,2,3,4,10,10-Hexachloro-6,7-Epoxy-1,4,4(a)5,6,7,8,8a-Octahydro-endo § 3,4,5,6,9,9-Hexachloro-1a,2,2a,3,6,6a,7,7a-Octahydro-2, 7:3,6-Dimethanonaphth[2,3-b]oxirene § 1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-Hexachloro-6,7-Epoxy-1,4,4a,5,6,7,8,8a-Octahydro-Endo,Endo- § RCRA Waste Number P051	72-20-8 IO 1575000	Toxic with BCF >300	0.086	0.036	3,970	0.03	2		0.006
Endrin Aldehyde	7421-93-4	Toxic with			3,970	1	1		0.03

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§§		BCF >300				PP	PP		
Epichlorohydrin §§ § ECH § Epoxy Propane § - Epichlorohydrin § Chloromethyloxirane § RCRA Waste Number U041 § y- Chloropropyleneoxide § 2- Chloropropylene Oxide § Glycerol Epichlorhydrin § 2,3-Epoxypropyl Chloride § 1-Chlor-2,3- Epoxypropane§ 3-Chlor- 1,2-Epoxypropane	106-89-8 TX 4900000	Carcinogen				10 HA	10 HA	N/A	3
<i>Escherichia coli</i> (Bacteria)	N/A	Harmful			(13)	Less than 1 (6)	N/A	1 per 100ml	
Ethion §§ Phosphorodithioic acid, S,S'-methylene O,O,O',O'-tetraethyl ester § Diethion § Embathion § Ethanox § Ethiol 100 § Ethodan § Ethopaz § ethyl methylene phosphorodithioate § FMC-1240 § Fosfatox E § Fosfona P § HSDB 399 § Hylemox § KWIT § NIA 1240 § Niagara 1240 § Nialate § Phosphotox E § RP 8167 § Rhodocide § Rodocid § Vegfru fomisate	563-12-2	Toxic			3 HA	3 HA		0.3	
Ethofumesate §§ 2-Ethoxy-2,3-dihydro-3,3-dimethyl-5-benzofuranyl methanesulfonate § BRN 5759730 § CR 14658 § Caswell #427BB § HSDB 7451 § Nortron § Progress § Tramat	26225-79-6	Toxic				2,000 HA	2,000 HA		0.08
Ethylbenzene §§ § EB § NCI C56393 § Ethylbenzol §	100-41-4 DA 0700000	Toxic			37.5	68 PP	700 MCL	0.002	1

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Phenylethane § Ethyl Benzene § Benzene, Ethyl									
Fenamiphos §§ § Nemacur	22224-92-6	Toxic				1.7 HA	1.7 HA		0.2
Fenbuconazole §§ 1H-1,2,4-Triazole-1-propanenitrile,alp-ha-(2-(4-chlorophenyl)ethyl)-alpha-phenyl-§ 4-(4-chlorophenyl)-2-(1H-1,2,4-triazol-1-ylmethyl)butyronitrile	114369-43-6	Carcinogen				93 HA	93 HA	N/A	0.02
Fipronil §§ §HSDB 7051 §MB 46030 §RM1601 §Regent §UNII-QGH063955F	120068-37-3	Carcinogen				1 HA	1 HA	N/A	0.004
Flucarbazone §§ Flucarbazone § 1H-1,2,4-Triazole-1carboxamide, 4,5-dihydro-3-methoxy-4-methyl-5-oxo-N(2-(trifluoromethoxy)phenyl)sulfonyl)-	145026-88-6	Toxic				3,000 HA	3,000 HA		300
Flucarbazone sulfonamide §§ §	37526-59-3	Toxic				3,000 HA	3,000 HA		300
Fluometuron §§ § Flo-Met	2164-17-2	Carcinogen				83 HA	83 HA	N/A	0.5
Fluoranthene §§ § Idryl § Benzo(jk)Fluorene § Benzo(j,k)Fluorene § 1,2-Benzacenaphthene § 1,2-(1,8-Naphthylene)Benzene § Benzene, 1,2-(1,8-Naphthalenediyl)- § RCRA Waste Number U120	206-44-0 LL 4025000	Toxic BCF >300			1,150	20 PP	20 PP		10
Fluorene (PAH) §§	86-73-7	Toxic			30	50	50	0.25	5

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ 9H-Fluorene § Diphenylenemethane § o-Biphenylenemethane § 2,2'-Methylenebiphenyl						PP	PP		
Fluoride §§ Flourine § Fluoride § Fluoride(1-) § Perfluoride § Fluoride Ion § Fluorine, Ion § Soluable§ Fluoride § Hydrofluoric Acid, on(1-) § RCRA Waste Number P056	16984-48-8 LM 6290000	Toxic				4,000	4,000	5	200
						MCL	MCL		
Fluroxypyr	69377-81-7	Toxic				7,000 HA	7,000 HA		0.1
Fonofos §§ § Dyfonate	944-22-9	Toxic				10	10		1
						HA	HA		
Gamma Emitters (11) §§ Photon activity with Beta particles	Multiple	Carcinogen / Radioactive				4 mrem /yr	4 mrem /yr	N/A	
						MCL	MCL		
gamma-Chlordane §§ § Chlordane, beta-Isomer	5566-34-7	Carcinogen			14,100	0.008	1	N/A	0.006
					HA	HA			
gamma-hexachlorocyclohexane §§ Lindane § BHC § -BHC § Gamene § Lintox § Lentox § Hexicide § Aparsin § Agrocide § Aficide § BHC-gamma § gamma-BHC § HCH-gamma § gamma-HCH § Hexachlorocyclohexane § gamma-Hexachlorobenzene § gamma-Benzenehexachloride § gamma-Benzene Hexachloride § Hexachlorocyclohexane-gamma § Hexachlorocyclohexane (gamma)	58-89-9 GV 4900000	Toxic	0.95	PP	130	0.2	0.2		0.02
						MCL	MCL		

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Gases, dissolved, total-pressure (20) §§	Multiple	Toxic	110% of saturation						
Glufosinate ammonium	77182-82-2	Toxic				40 HA	40 HA		
Glyphosate §§ § Jury § Honcho § Rattler § Weedoff § Roundup § Glifonox § n-(Phosphonomethyl)-Glycine § Glycine, n-(Phosphonomethyl)- § Glyphosate plus inert ingredients § MON 0573	1071-83-6 MC 1075000	Toxic				700 MCL	700 MCL	6	6
Glyphosate Isopropylamine Salt §§ § SHA 103601	38641-94-0	Toxic				700 HA	700 HA	6	70
Guthion §§ § DBD § NCI C00066 § Carfene § Gothnion § Azinphos § Crythyon § Gusathion § Bay 17147 § Methylazinphos § Methyl Guthion § Methyl-Guthion § Azinphos-Methyl § Azinphos Methyl § Caswell Number 374 § o,o-Dimethylphosphorodithioate S-Ester § Benzotriazinedithiophosphoric Acid Dimethoxy Ester § Phosphorodithioic Acid, O,O-Dimethyl Ester, S-Ester with 3-(Mercaptomethyl)-1,2,3-Benzotriazin-4(3H)-One § EPA Pesticide Chemical Code 058001	86-50-0 TE 1925000	Toxic	0.01 NPP					0.1	
Halocyclic acids (38)	various	Carcinogen				60	60	N/A	1

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ Dichloroacetic acid (79-43-6) § Trichloroacetic acid (76-03-9) § Chloroacetic acid (79-11-8) § Bromoacetic acid(79-08-3) § Dibromoacetic acid (631-64-1)						MCL	MCL		
Heptachlor §§ § NCI C00180 § Drinox § Heptamul § Agroceris § Heptagran § SHA 04481 § Rhodiachlor § Velsicol-104 § 3,4,5,6,7,8,8a-heptachlorodicyclopentadiene § Dicyclopentadiene, 3,4,5,6,7,8,8a-Heptachloro- § 1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-Tetrahydro-4,7-Methanol-1H-Indene § 4,7-Methano-1H-Indene, 1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-Tetrahydro- § 1(3a),4,5,6,7,8,8-Heptachloro-3a(1),4,7,7a-Tetrahydro-4,7-Methanoindene § RCRA Waste Number P059	76-44-8 PC 0700000	Carcinogen HAR000	0.26 PP	0.0038 PP	11,200	5.9x10 ⁻⁵ PP	0.08 HA	N/A	0.02
Heptachlor Epoxide §§ § HCE § Velsicol 53-CS-17 § Epoxyheptachlor § 1,4,5,6,7,8,8-Heptachloro-2,3-Epoxy-2,3,3a,4,7,7a-Hexahydro-4,7-Methanoindene § 2,5-Methano-2H-Indeno[1,2b]Oxirene, 2,3,4,5,6,7,7-Heptachloro-1a,1b,5,5a,6,6a-Hexahydro- (alpha, beta, and gamma isomers)	1024-57-3 PB 9450000	Carcinogen	0.26 PP	0.0038 PP	11,200	3.2x10 ⁻⁴ PP	0.04 HA	N/A	0.01
Hexachlorobenzene §§	118-74-1 DA 2975000	Carcinogen			8,690	7.9x10 ⁻⁴	0.2	N/A	0.03

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ HCB § Amatin § Smut-Go § Sanocide § Anticarie § Bunt-Cure § Bunt-No-More § Perchlorobenzene § Phenyl Perchloryl § No Bunt Liquid § Julin's Carbon Chloride § Co-op Hexa § Hexa C.B. § Benzene, Hexachloro-						PP	HA		
Hexachlorobutadiene §§ § 1,3-Hexachlorobutadiene § 1,3-Butadiene, Hexachloro- § 1,1,2,3,4,4-Hexachloro-1,3-Butadiene § 1,3-Butadiene, 1,1,2,3,4,4-Hexachloro- § HCBD § Dolan-Pur § Perchlorobutadiene § RCRA Waste Number U128	87-68-3 EJ 0700000	Carcinogen			2.78	0.1	5	N/A	0.5
Hexachlorocyclohexane §§	608-73-1	Carcinogen				0.066 NPP	0.066 NPP	N/A	0.01
Hexachlorocyclopentadiene §§ § HEX § HCP § PCL § C-56 § HCCPD § NCI C55607 § Hexachloropentadiene § Perchlorocyclopentadiene § 1,3-Cyclopentadiene, 1,2,3,4,5,5-Hexachloro- § RCRA Waste Number U130	77-47-4 GY 1225000	Toxic			4.34	4	50	1	5
Hexachloroethane §§ § Avlotane § Distokal § Distopan § Distopin § Egitol § Falkitol § Fasciolin § NCI C04604 § Phenohep § Mottenhexe § Perchloroethane § Hexachloroethylene § Ethane, Hexachloro- § Carbon Hexachloride §	67-72-1 KI 4025000	Carcinogen			86.9	1	30	N/A	1

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Ethane Hexachloride § Ethylene Hexachloride § 1,1,1,2,2,2-Hexachloroethane § RCRA Waste Number U131									
Hexazinone §§	51235-04-2	Toxic				300 HA	300 HA	1	0.02
Hydrogen Sulfide §§ § Stink Damp § Sulfur Hydride § Hydrogen Sulphide § Dihydrogen Sulfide § Dihydrogen Monosulfide § Hydrogen Sulfuric Acid § Hydrosulfuric Acid § Sulfurated Hydrogen § RCRA Waste Number U135	7783-06-4 MX 1225000	Toxic		2 NPP					20
Hydroxyatrazine §§ § Hydroxydechloroatrazine	2163-68-0	Toxic				70 HA	70 HA		7
Imazalil (Parent name Enilconazole) §§ 1-(2-(2,4-dichlorophenyl)-2-(2-propenyl)ethyl)-1H-imidazole § Enilconazole § BRN 054683 § Caswell #497AB § Chloramizol § Decozil § Secozil S 75 § Fungaflor § HSDB 6672 § R 23979 § EPA Pesticide Code 111901	35554-44-0	Carcinogen				5.5 HA	5.5 HA	N/A	0.6
Imazamethabenz-methyl ester (includes the metabolite imazamethabenz methyl acid) (33) §§ Assert §	81405-85-8	Toxic				1,700 HA	1,700 HA		40
Imazamox §§	114311-32-9	Toxic				2x10 ⁴	2x10 ⁴		0.04

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ Ammonium salt of imazamox						HA	HA		
Imazapic §§ Imazapic § AC263222, Cadre, Imazameth, Imazamethapyr, Imazamethapyr	104098-48-8	Toxic				9133,00 θ	9133,00 θ		0.01
Imazapyr §§ Arsenal §	81334-34-1	Toxic				1.7x10 ⁴ HA	1.7x10 ⁴ HA		0.01
Imazethapyr §§ 3-pyridinecarboxilic acid, 2-(4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl)-5-ethyl- § AC 263,499 § CL263499 § HSDB 6678 § Pivot § Pursuit § EPA Pesticide Code# 128922	81335-77-5	Toxic				1.7x10 ⁴ HA	1.7x10 ⁴ HA		0.03
Imidacloprid §§	105827-78-9 138261-41-3	Toxic				380 HA	380 HA		0.07
Indeno(1,2,3-cd)pyrene (PAH) §§ § o-Phenylenepyrene § 2,3-Phenylenepyrene § 2,3-o-Phenylenepyrene § Indeno (#1,2,3-cd) Pyrene § 1,10-(o-Phenylene)Pyrene § 1,10-(1,2-Phenylene)Pyrene § RCRA Waste Number U137	193-39-5 NK 9300000	Carcinogen			30 PP	0.012 HA	0.5 (29)	N/A	0.08
Iron §§ Fe § Ancor EN 80/150+A622 § Armco Iron	7439-89-6 NO 4565500	Harmful		1,000 NPP				N/A	20
Isophorone §§ § Isoforon § NCI C55618 § Isoacetophorone § alpha-Isophorone § 1,1,3-Trimethyl-3-Cyclohexene-5-One § 3,5,5-Trimethyl-2-	78-59-1 GW 7700000	Carcinogen			4.38 PP	340 HA	400	N/A	10

Formatted: Strikethrough

Formatted: Underline

Formatted: Strikethrough

Formatted: Underline

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Cyclohexene-1-One § 3,5,5-Trimethyl-2-Cyclohexone									
Lead §§ Pb § C.I. 77575 § C.I. Pigment Metal 4 § Glover § Lead Flake § Lead 22 § Omaha § Omaha & Grant § SI § SO	7439-92-1 OF 7525000	Toxic	13.98 @ 25 mg/L hardness (12) PP	0.545 @ 25 mg/L hardness (12) PP	49	10⁴ AL MCL	10⁴ AL MCL	0.1	0.3
m-Xylene §§ § m-Xylol § 1,3-Xylene § meta-Xylene § m-Dimethylbenzene § m-Methyltolulene § 1,3-Dimethylbenzene § 1,3-Dimethyl Benzene	108-38-3 ZE 2275000	Toxic			1.17	1x10 ⁴ MCL	1x10 ⁴ MCL	0.5	2
Malathion §§ § Formal § Sumitox § Emmatos § Celthion § Forthion § Malacide § Kop-Thion § Calmathion § Carbethoxy § NCI C00215 § Carbethoxy Malathion § SHA 057701 § Phosphothion § S-1,2-Bis(Ethoxycarbonyl)Ethyl-O,O-Dimethyl Thiophosphate § O, O-Dimethyl-S-(1,2-Dicarbethoxyethyl) Dithiophosphate § O,O-Dimethyl S-1,2-Di(Ethoxycarbamyl)Ethyl Phosphorodithioate § Succinic Acid, mercapto-, diethyl ester, S-Ester with O,O-Dimethyl Phosphorodithioate	121-75-5 WM 8400000	Toxic		0.1 NPP	470	470 HA	470 HA		0.09
MCPA §§ 4-chloro-2-methylphenoxy acetic acid	94-74-6	Toxic				3 HA	3 HA		0.008

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
MCPP §§ 2-(4-chloro-2-methylphenoxy)propionic acid § Mecoprop § 2M 4KHP § 2M-4CP § Anicon B § Anicon P § CMPP § Caswell #559 § Celatox CMPP § iso-Cornox § Isocarnox § Kilprop § Liranox § Mechlorprop § Mecomec § Mecopar § Mecopeop § Mecoper § Mecopex § Mecoprop § Mecoturf § Mecoprop § Mepro § Methoxone § Morogal § Okultin § Proponex-plus § RD 4593 § Rankotex § Runcatex § SYS 67 Mecmin § U 46 KV fluid § Vi-Par § Vi-Pex § EPA pesticide Code #031501	7085-19-0 93-65-2	Toxic				300 HA	300 HA		0.007
Mercury §§ Hg § Colloidal Mercury § Mercury, Metallic § NCI C60399 § Quick Silver § RCRA Waste Number U151	7439-97-6 OV 4550000	Toxic with BCF >300	1.7 PP	0.91 PP	5,500	0.05 PP	2 MCL		0.005
Metalaxyl § Ridomil §	57837-19-1	Toxic				400 HA	400 HA	3.5	0.04
Methamidophos §§ Monitor §	10265-92-6	Toxic				2 HA	2 HA		0.2
Methomyl §§ Lannate §	16752-77-5	Toxic				170 HA	170 HA	1	1

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Methoxychlor §§ § DMDT § Metox § Moxie § Methoxicide § NCI C00497 § Methoxy-DDT § Dimethoxy-DDT § 1,1,1-Trichloro-2,2-Bis(p-Methoxyphenyl)Ethane § Benzene, 1,1'-(2,2,2-Trichloroethylidene)Bis[4-Methoxy- § 1,1'-(2,2,2-Trichloroethylidene)Bis[4-Methoxybenzene] § Ethane, 1,1,1-Trichloro-2,2-Bis(p-Methoxyphenyl)-§ RCRA Waste Number U247	72-43-5 KJ 3675000	Toxic		0.03 NPP		0.02 NPP	40 MCL		0.02
Metsulfuron Methyl §§ Ally §	74223-64-6	Toxic				1,700 HA	1,700 HA	0.1	0.08
Methyl Bromide §§Bromomethane (HM) § EDCO § Celfume § Dowfume § Methogas § SHA 053201 § Brom-O-Sol § Brom-O-Gas § Terr-O-Gas § Halon 1001 § Terr-O-Cide § Bromo-O-Gas § Bromo Methane § Methylbromide § Methane, Bromo- § Monobromomethane § RCRA Waste Number U029	74-83-9 PA 4900000	Toxic			3.75 PP	100 HA	10 HA	0.11	1
Methyl Chloride §§ Chloromethane § Arctic § Monochloromethane § RCRA Waste Number U045	74-87-3 PA 6300000	Toxic			3.75 HA	600 HA	600 HA	0.08	1
Methylene chloride §§ Dichloromethane (HM)	75-09-2 PA 8050000	Carcinogen			0.9	5	5	N/A	2

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ R 30 § DCM § Freon 30 § Aerothene MM § NCI C50102 § Solmethine § Methane Dichloride § Methane, Dichloro- § 1,1-Dichloromethane § Methylene Bichloride § Methylene Dichloride						MCL	MCL		
Metolachlor (includes the metabolites metolachlor ESA and metolachlor OA (34) §§ Dual §	51218-45-2	Carcinogen				1,000 HA	1,000 HA	N/A	0.2
Metribuzin §§ Sencor §	21087-64-9	Toxic				170 HA	170 HA	10	0.1
Mirex §§ NCI C06428 § Dechlorane § Bichlorendo § Ferriamicide § Perchloropentacyclodocene § Dodecachloropentacyclodocene § Hexachlorocyclopentadiene Dimer § Cyclopentadiene, Hexachloro-, Dimer § Perchloropentacyclo(5.2.1.0[sup 2,6].0[sup 3,9].0[sup 5,8])Decane § Dodecachlorooctahydro-1,3,4-Metheno-2H-Cyclobuta (c,d)Pentalene § 1,3,4-Metheno-1H-Cyclobuta[cd]Pentalene, 1,1a,2,2,3,3a,4,5,5a,5b,6,-Dodecachlorooctahydro-	2385-85-5 PC 8225000	Carcinogen	0.001 NPP		1 NPP	1 NPP	N/A	0.01	
MTBE §§ Methyl Tertiary-Butyl Ether	1634-04-4	Harmful				30 (21)	30 (21)	N/A	1
Myclobutanil §§	88671-89-0	Toxic				170 HA	170 HA		0.03

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ EPA PCC 128857 § Nova § Rally § Systhane § Systhane 12E § Systhane 6 Flo									
N-Nitrosodimethylamine §§ DimethylNitrosamine A707 § DMN § NDMA § DMNA § Nitosodimethylamine § DimethylNitrosoamine § N-Nitrosodimethylamine § N,N-DimethylNitrosamine § Methylamine, N-Nitrosodi- § Dimethylamine, N-Nitroso- § N-Methyl-N-Nitrosomethanamine § Methamine, N-Methyl-N-Nitroso- § Methanamine, N-Methyl-N-Nitroso- § RCRA Waste Number P082	62-75-9 IQ 0525000	Carcinogen			0.026	0.0069	0.0069	N/A	5
N-Nitrosodiphenylamine §§ § NDPA § NDPhA § Vultrol § Curetard A § NCI C02880 § Redax § TJP § Retarder J § Vulcalent A § Vulcatard § Vultrol § Nitrosodiphenylamine § DiphenylNitrosamine § N,N-DiphenylNitrosamine § N-Nitroso-N-Phenylaniline § Diphenylamine, N-Nitroso- § Benzenamine, N-Nitroso-N-Phenyl-	86-30-6 JJ 9800000	Carcinogen			136	33	33	N/A	10
n-Diethyl Phthalate §§ § DNOP § PX-138 § Vinicizer 85 § Dinopol NOP § n-Octyl Phthalate § Octyl Phthalate § Diethyl Phthalate § Di-n-Octyl Phthalate § Di-sec-Octyl Phthalate § 1,2-Benzenedicarboxylic Acid,	117-84-0 TI 1925000	Carcinogen						N/A	10

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Diethyl Ester § RCRA Waste Number U107									
N-Nitrosodi-N-Propylamine §§ § DPN § DPNA § NDPA § Dipropylnitrosamine § N-Nitrosodipropylamine § Di-n-Propylnitrosamine § Dipropylamine, N-Nitroso-§ N-Nitrosodi-n-propylamine § N-Nitroso-di-n-propylamine § 1-Propanamine, N-Nitroso-n-Propyl- § RCRA Waste Number U111	621-64-7 JL 9700000	Carcinogen			1.13	0.05	0.05	N/A	5
					PP	PP			
N-Nitrosopyrrolidine §§ § NPYR § NO-pyr § N-N-pyr § 1-Nitrosopyrrolidene § Pyrrolidine, 1-Nitroso- § Tetrahydro-N-Nitrosopyrrole § Pyrrole, Tetrahydro-N-Nitroso- § RCRA Waste Number U180	930-55-2 UY 1575000	Carcinogen			0.055	0.16	0.16	N/A	0.02
					NPP	NPP			
Naphthalene §§ Moth Balls § Mighty 150 § NCI C52904 § Naphthene § White Tar § Naphthalin § Tar Camphor § Caswell Number 587 § EPA Pesticide Chemical Code 055801 § RCRA Waste Number U165	91-20-3 QJ 0525000	Carcinogen			10.5	100	100	N/A	10
					HA	HA			
Nickel §§ Ni § C.I. 77775 § Ni 270 § Nickel 270 § Ni 0901-S § Ni 4303T § NP 2 § Raney Alloy § Raney Nickel	7440-02-0 QR 5950000	Toxic	145@ 25mg/L hardness (12)	16.1 @ 25 mg/L hardness (12)	47	100	100	0.5	2
			PP	PP	HA	HA			
Nicosulfuron	111991-09-4	Toxic				8.330₈₇ 500	8.330₈₇ 500	0.01	0.03

Formatted: Strikethrough

Formatted Table

Formatted: Underline

Formatted: Strikethrough

Formatted: Underline

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§§ Accent §						HA	HA		
Nitrate (as Nitrogen[N])	14797-55-8	Toxic	(8)	(8)		1x10 ⁴	1x10 ⁴	surface water= 10, ground water= 5,000, see ARM 17.30.7 15	20
§§ NO ₃						NPP	NPP		
Nitrate plus nitrite (as Nitrogen[N])	See nitrate and nitrite	Toxic	(8)	(8)		1x10 ⁴	1x10 ⁴	surface water= 10, ground water= 5,000, see ARM 17.30.7 15	20
§§ NO ₃ + NO ₂						MCL	MCL		
Nitrite (as Nitrogen[N]) §§ NO ₂	14797-65-0	Toxic	(8)	(8)		1,000 MCL	1,000 MCL	4	10
Nitrobenzene §§ § NCI C60082 § Mirbane Oil § Nitrobenzol § Oil of Mirbane § Benzene, Nitro- § Essence of Myrbane § RCRA Waste Number U169	98-95-3 DA 6475000	Carcinogen			2.89	10	10	N/A	10
Nitrogen, total inorganic (as Nitrogen[N]) §§ the sum of ammonia, nitrite, and nitrate	See ammonia, nitrate and nitrite	Nutrient	(8)	(8)		PP	PP		
Nitrophenol, 4- §§ p-Nitropheno (DOT) I § 4-Hydroxynitrobenzene § NCI C55992) § RCRA Waste Number U170	100-02-7 SM 2275000	Toxic			3.31	50	50	2.4	60
o-Nitrophenol §§	88-75-5 SM 2100000	Toxic			2.33	HA	HA	0.45	10

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ 2-Nitrophenol oxynitrobenzene									
Nitrosamines §§ -Nitrosamide § -NSC223080	35576-91-1	Carcinogen				0.008 NPP	0.008 NPP	N/A	8x10 ⁻⁴
Nitrosodibutylamine, N §§ Dibutylnitrosamine § -1-Butanamine § BRN 1760378 § CCRIS 217 § EINECS 213-101-1 § HSDB 5107 § N-butyl-N-nitroso-1-butamine § NDBA § NSC 6830 § RCRA waste number U172	924-16-3	Carcinogen				0.063 NPP	0.063 NPP	N/A	3
Nitrosodiethylamine, N §§ Diethylnitrosamine § -BRN 1744991 § CCRIS 239 § DEN § EINECS 200-226-1 § Ethanamine, N-ethyl-N-nitroso § HSDB 4001 § NDEA § NSC 132 § RCRA waste number U174	55-18-5	Carcinogen				0.008 NPP	0.008 NPP	N/A	8x10 ⁻⁴
Nonylphenol §§ § 2,6-Dimethyl-4-heptylphenol § Hydroxyl No. 253	25154-52-3	Toxic	28	6.6 NPP					0.7
o-Xylene §§ § o-Xylool § 1,2-Xylene § ortho-Xylene § o-Methyltoluene § o-Dimethylbenzene § 1,2-Dimethylbenzene § 1,2-Dimethyl Benzene	95-47-6 ZE 2450000	Toxic			1.17	1x10 ⁴ MCL	1x10 ⁴ MCL	0.5	1

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Oxamyl §§ § D-1410 § DPX 1410 § Insecticide-Nematicide 1410 § Vydate § Thioxamyl § Methyl 2-(Dimethylamino)-N- § Vydate L, Insecticide/Nematicide § ([[Methylamino]Carbonyl] Oxy)-2- Oxoethanimidothioate § 2-Dimethylamino-1-(Methylthio)Glyoxal O-Methylcarbamoylmonozi me § Methyl N',N'-Dimethyl-N-({Methylcarbamoyl}Oxy)-1-Thioxamimidate § N',N'-Dimethyl-N-[(Methylcarbamoyl)oxy]-1-Methylthioxamimidic Acid	23135-22-0 RP 2300000	Toxic				200	200	1	1
Oxydemeton Methyl §§ Metasystox R §	301-12-2	Toxic				0.7	0.7	1.4	0.07
Oxygen, dissolved (20) §§ O2 § Oxygen, Compressed § Oxygen, Refrigerated Liquid	7782-44-7 RS 2060000	Toxic	(15)	(15)		HA	HA		0.3 mg/L

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
p,p'-Dichlorodiphenyldichloroethylenes §§ DDE § DDE § p,p'-DDE § 4,4'-DDE § NCI C00555 § Dichlorodiphenyldichloroethylenes § Dichlorodiphenyldichloroethylenes, p,p'- § 2,2'-bis(4-Chlorophenyl)-1,1'-Dichloroethylene § 1,1'-(Dichloroethenylidene)bis[4-Chlorobenzene] § 2,2'-bis(p-Chlorophenyl)-1,1'-Dichloroethylene § Benzene, 1,1'-(Dichloroethenylidene)bis[4-Chloro-	72-55-9 KV 9450000	Carcinogen			53,600	1.8x10 ⁻⁴ PP	1.8x10 ⁻⁴ PP	N/A	0.02
p,p'-Dichlorodiphenyldichloroethane §§ DDD § TDE § Dilene § NCI C00475 § Rothane § Rothane § 4,4'-DDD § p,p'-DDD § p,p'-TDE § 4',4'-D-DDD § RCRA Waste Number U060 § Tetrachlorodiphenylethane § Dichlorodiphenyldichloroethane § Dichlorodiphenyl Dichloroethane § 2,2-bis(4-Chlorophenyl)-1,1'-Dichloroethane § 1,1'-Dichloro-2,2-bis(p-Chlorophenyl) Ethane § 1,1-bis(4-Chlorophenyl)-2,2-Dichloroethane § 2,2-bis(p-Chlorophenyl)-1,1'-Dichloroethane § Benzene, 1,1'(2,2-Dichloroethylidene)Bis[4-Chloro-	72-54-8 KI 0700000	Carcinogen			53,600	0.0012 PP	0.0012 PP	N/A	0.02

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
p,p'-Dichlorodiphenyltrichloroethane §§ DDT § DDT § 4,4'-DDT § Agritan § Anoflex § Arkotine § Azotox § Bosan Supra § Bovidermol § Chlorophenothan § Chlorophenothane § Chlorophenotoxum § Citox § Clofenantane § Dedelo § § Chlorophenothane § Diphenyltrichloroethane § Dichlorodiphenyltrichloroethane § 4,4'-Dichlorodiphenyltrichloroethane § 1,1,1-Trichloro-2,2,-bis(p-Chlorophenyl) Ethane § 1,1,1-Trichloro-2,2,-bis(p-Chlorophenyl)Ethane	50-29-3 KJ 3325000	Carcinogen	0.5	0.001	53,600	3x10 ⁻⁴	3x10 ⁻⁴	N/A	0.02
p-Bromodiphenyl Ether §§ Benzene, 1-Bromo-4-Phenoxy- § p-Bromodiphenyl Ether § 4-Bromophenoxybenzene § 4-Bromodiphenyl Ether § 1-Bromo-4-Phenoxybenzene § p-Bromophenylphenyl Ether § 4-Bromophenyl Phenyl Ether	101-55-3	Toxic with BCF >300			1,640				10
p-Chloro-m-Cresol §§3-methyl-4-chlorophenol	59-50-7 GO 7100000	Toxic				500	500	N/A	10

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
						PP	PP		
§ PCMC § Parol § Aptal § Baktol § Baktolan § Ottafact § Raschit § Rasen-Anicon § Parmetol § Candasetpi § Chlorocresol § Preventol CMK § Parachlorometra Cresol § 4-Chloro-3-methylphenol § 2-Chloro-Hydroxytoluene § Phenol, 4-Chloro-3-methyl- § Chlorophenol, 4-, methyl, 3- § RCRA Waste Number U039									
p-Xylene §§ § p-Xylo § Chromar § Scintillar § 1,4-Xylene § para-Xylene § p-Methyltoluene § p-Dimethylbenzene § 1,4-Dimethylbenzene § 1,4-Dimethyl Benzene	106-42-3 ZE 2625000	Toxic			1.17	1x10 ⁴ MCL	1x10 ⁴ MCL	0.5	2
Paraquat Dichloride §§	1910-42-5	Toxic				30 HA	30 HA	0.8	3
Parathion §§ § DNTP § Niran § Phoskil § Paradust § Stathion § Strathion § Pestox Plus § Nitrostigmine § Parathion Ethyl § Parathion-ethyl § Ethyl Parathion § Diethylparathion § Diethylpara-Nitrophenol Thiophosphate § Diethyl-p-Nitrophenyl Monothiophosphate § O,O-Diethyl O-4-Nitrophenyl Thiophosphate § Phosphorothioic Acid, O,O-Diethyl O-(4-Nitrophenyl) Ester § Caswell Number 637 § EPA Pesticide Chemical	56-38-2 TF 4920000,dry- liquid PAC250,dry	Carcinogen	0.065	0.013 NPP				N/A	0.2

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Code 057501 § RCRA Waste Number P089									

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Pentachlorobenzene §§ Benzene, Pentachloro- § QCB- § RCRA Waste Number U183	608-93-5 DA 6640000	Toxic with BCF >300			2,125	0.1 NPP	0.1 NPP		5
Pentachlorophenol §§ Penta § PCP § Durotox § Weedone § Chem-Tol § Lauxtol A § NCI C54933 § NCI C55378 § NCI C56655 § Permite § Dowicide 7 § Permacide § Penta-Kil § Permagard § Penchlorol § Chlorophen § Pentachlorphenol § Pentaclorofenolo § Thompson's Wood Fix § Phenol, Pentachloro- § 2,3,4,5,6- Pentachlorophenol § 1-Hydroxy- 2,3,4,5,6- Pentachlorobenzene	87-86-5 SM 6300000	Carcinogen	5.3 @ pH of 6.5 (14)	4 @ pH of 6.5 (14)	11	0.3 PP	1 MCL	N/A	0.1
Perfluorooctane Sulfonate (PFOS) §§ § Perfluorooctane sulfonic acid § heptadecafluoro-1-octane sulfonic acid § PFOS acid	1763-23-1	Toxic					<u>0.07</u> HA (41)		
Perfluorooctanoic Acid (PFOA) §§ § pentadecafluoroctanoic acid § Pentadecafluoro-1-octanoic acid § Pentadecafluoro-n-octanoic acid § Octanoic acid, pentadecafluoro- § Perfluorocaprylic acid § Pentadecafluoroctanoic acid; Perfluoroheptanecarboxylic acid	335-67-1	Toxic					<u>0.07</u> HA (41)		

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Phenanthrene (PAH) §§ § Phenanthrin	85-01-8 SF 7175000	Toxic			30			0.01	0.2
Phenol §§ § Baker's P and S Liquid and Ointment § NCI C50124 § Benzenol § Monophenol § Oxybenzene § Phenic Acid § Carabolic Acid § Phenyllic Acid § Hydroxybenzene § Hydroxybenzene § Phenyl Alcohol § Phenyl Hydrate § Phenyllic Alcohol § Phenyl Hydroxide § Benzene, Hydroxy- § Monohydroxybenzene § RCRA Waste Number U188	108-95-2 SJ 3325000	Toxic			1.4	4,000	4,000	100	10
Phosphorus, inorganic (20) §§ § Ortho-phosphorus § phosphorus, Ortho- § reactive phosphorus	14265-44-2 7723-14-0	Nutrient	(8)	(8)				1	1
Picloram §§ Tordon § ATCP § K-Pin § Borolin § Amdon Grazon § NCI C00237 § Tordon 10K § Tordon 22K § Tordon 101 Mixture § 3,5,6-Trichloro-4-Aminopicolinic Acid § 4-Amino-3,5,6-Trichloropicolinic Acid	1918-02-1 TJ 7525000	Toxic				500	500	0.14	1
Pinoxaden (NOA 407855) (includes metabolites Pinoxaden NOA 407854 and pinoxaden NOA 447204) (35) §§	N/A	Toxic				2,000	2,000		200
Polychlorinated Biphenyls, (sum of all homolog, all isomer, all congener or all Aroclor analyses)	Multiple	Carcinogen		0.014	31,200	6.4x10 ⁻⁴	0.5	N/A	0.08

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§§ PCB's § Aroclor 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1268, 2565, 4465 § Chlophen § Chloorextol § Chlorinated Biphenyl § Chlorinated Diphenyl § Chlorinated Diphenylene § Chloro Biphenyl § Chloro-1,1-Biphenyl § Clophen § Dykanol § Fenclor § Inerteen § Kanechlor 300, 400, 500 § Montar § Noflamol § PCB (DOT) § Phenochlor § Polychlorobiphenyl § Pyralene § Pyranol § Santotherm § Sovol § Therminol FR-1				PP		PP	MCL		
Primisulfuron Methyl §§ Beacon § Exceed	86209-51-0	Toxic				1,700 HA	1,700 HA	0.1	200
Prometon §§ Pramitol §	1610-18-0	Toxic				100 HA	100 HA	0.3	0.002
Pronamide §§ Kerb §	23950-58-5	Carcinogen				500 HA	500 HA	N/A	5
Propachlor §§ Ramrod §	1918-16-7	Toxic				87 HA	87 HA	0.5	0.2
Propane, 1,2-Dibromo-3-Chloro- §§ Dibromochloropropane § 1,2-Dibromo-3-Chloropopane § Fumagon § Fumazone § NCI C00500 § Nemabrom § Nemafume § Nemagon § Nemagone § Nemagone Soil Fumigant § Nemanax § Nemapaz § Nemaset § Nematocide § Nematox § OS 1897 § OXY DBCP § SD 1897 § Caswell Number 287 § 1-Chloro- 2,3-Dibromopropane §	96-12-8 TX 8750000	Toxic				0.2 MCL	0.2 MCL		0.02

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
DBCP § EPA Pesticide Chemical Code 011301 § RCRA Waste Number U066									
Propazine §§	139-40-2	Carcinogen				100 HA	100 HA	N/A	0.03
Propham §§	122-42-9	Toxic				100 HA	100 HA	0.13	0.5
<u>Propiconazole</u> <u>Propiconazole</u>	60207-90-1	Carcinogen				700	700	N/A	70
§§ 1-((2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl)methyl)-1H-1,2,4-triazole § Banner § CGA-64250 § Caswell#323EE § Desmel § HSDB 6731 § Orbit § Radar § Tilt § EPA Pesticide # 122101						HA	HA		
Propoxur §§ Baygon §	114-26-1	Carcinogen				24 HA	24 HA	N/A	0.4
Prosulfuron §§ Benzenesulfonamide, N((4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino)carbonyl)-2-(3,3,3-trifluoropropyl)-	94125-34-5	Toxic				350 HA	350 HA		0.02
Pyrasulfotole §§ pyrasulfotole §	365400-11-9	Toxic				70 HA	70 HA		0.07
Pyrene (PAH) §§ β-Pyrine § beta-Pyrine § Benzo(def)Phenanthrene § Benzo[def]Phenanthrene	129-00-0 UR 2450000	Toxic			30	20 PP	20 PP	0.25	10
Pyroxulam	422556-08-9	Toxic				7,000 HA	7,000 HA		0.09
Radium 226	13982-63-6	Carcinogen /Radioactive				5 picoC/liter	5 picoC/liter	N/A	

Formatted: Strikethrough

Formatted: Strikethrough

Formatted: Underline

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§§						Note: The sum of Radium 226 and 228. MCL	Note: The sum of Radium 226 and 228. MCL		
Radium 228 §§	15262-20-1	Carcinogen / Radioactive				5 picoC/liter Note: The sum of Radium 226 and 228. MCL	5 picoC/liter Note: The sum of Radium 226 and 228. MCL	N/A	
Radon 222 §§	14859-67-7	Carcinogen / Radioactive				300 picoC/liter HA	300 picoC/liter HA	N/A	
Saflufenacil	372137-35-4	Toxic				310 HA	310 HA		
Selenium §§ Se § C.I. 77805 § Colloidal Selenium § Elemental Selenium § Selenium Alloy § Selenium Base § Selenium Dust § Selenium Elemental § Selenium Homopolymer § Selenium Metal Powder, Non-Pyrophoric § Vandex	7782-49-2 VS 7700000 and VS 8310000, colloidal	Toxic	20 PP	5 PP	4.8 MCL	50 MCL	50 MCL	0.6 0.2	1
Silver §§ Ag § Argentum § C.I. 77820 § Shell Silver § Silver Atom	7440-22-4 NIOSH: VW 3500000	Toxic	0.374 @ 25 mg/L hardness (12) PP		0.5 HA	100 HA	100 HA	0.2 0.2	0.2
Simazine	122-34-9	Carcinogen				4	4	N/A	0.5

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§§ § CDT § Herbex § Framed § Bitemol § Radokor § A 2079 § Batazina § Cat (Herbicide) § CET § G 27692 § Geigy 27,692 § Gesaran § Gesatop 50 § Simazine 80W § Symazine § Taphazine § W 6658 § Zeapur § Princep § Aquazine § Herbazin § Tafazine § 2,4-bis(Ethylamino)-6-Chloro-s-Triazine § 1-Chloro, 3,5-Bisethylamino-2,4,6-Triazine § 2-Chloro-4,6-Bis(Ethylamino)-1,3,5-Triazine § 6-Chloro-N,N'-Diethyl-1,3,5-Triazine-2,4-Diyl diamine	XY 5250000					MCL	MCL		
Strontium §§	7447-24-6	Toxic				4,000 HA	4,000 HA	100	20
Styrene §§ § Styrol § Cinnamol § Cinnamene § CinnamenoI § NCI C02200 § Styrole § Strolene § Styron § Stropor § Vinylbenzol § Phenethylene § Phenylethene § Vinylbenzene § Ethenylbenzene § Phenylethylene § Benzene, Vinyl- § Stryene, Monomer	100-42-5 WL 3675000	Carcinogen				100	100	N/A	0.9
Sulfentrazone	122836-35-5	Toxic				700 HA	700 HA		
Sulfometuron Methyl §§ Oust §	74222-97-2	Toxic				1,800 HA	1,800 HA	0.01	0.02
Sulfosulfuron	141776-32-1	Toxic				1,600	1,600		30

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§§ imidazo(1,2-a)pyridine-3-sulfonamide,N-((4,6-dimethoxy-2-pyrimidinyl)amino)cabonyl-2-(ethylsulfonyl)-§ Sulfosulfuron (ISO)						HA	HA		
Tebuconazole §§ 1H-1,2,4-Triazole-1-ethanol, alpha-(2-(4-chlorophenyl)ethyl)-apha-(1,1-dimethylethyl)-§ BAY-HWG 1608 § Elite § Ethyltrianol § Etiltrianol § Fenetraazole § Folicur § LYNX § Preventol A 8 § Raxil § Terbucanazole § Terbutrazole § HWG 1608 § HSDB 7448	107534-96-3	Carcinogen				190	190	N/A	0.04
Tebuthiuron §§ TebuconazoleSpike	34014-18-1	Toxic				500	500	2	0.002
Terbacil §§ Sinbar §	5902-51-1	Toxic				83	83	2.2	0.02
Terbufos §§ Counter §	13071-79-9	Toxic				0.83	0.83	0.5	0.07
Tetrachlorobenzene, 1,2,4,5-§§ Benzene, 1,2,4,5-Tetrachloro-§ RCRA Waste Number U207 § 1,2,4,5-Tetrachlorobenzene	95-94-3 DB 9450000	Toxic with BCF >300			1,125	0.03	0.03		5
Tetrachloroethane, 1,1,2,2-§§ Tetrachloroethane § TCE § Cellon § Weston § Bonoform § sym-Tetrachloroethane § Acetylene Tetrachloride § 1,1,2,2-Tetrachloroethane § Ethane, 1,1,2,2-Tetrachloro- § 1,1-Dichloro-2,2-	79-34-5 NIOSH: KI 8575000	Carcinogen			5	2	2.0	N/A	0.5

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dichloroethane § RCRA Waste Number U209									
Tetrachloroethylene §§ Perchlorethylene	127-18-4 KX 3850000	Carcinogen			30.6	5	5	N/A	0.7
§ NCI C04580 § PCE § Perk § PERC § ENMA § Dow-Per § Perchlor § Perclene § Perkhone § Didakene § Tetra Cap § Percosolve § Perchloroethylene § Tetrachloroethene § Carbon Bichloride § Carbon Dichloride § Ethylene Tetrachloride § Ethylene, Tetrachloro- § 1,1,2,2-Tetrachloroethylene § RCRA Waste Number U210						MCL	MCL		
Thallium §§ TI § Ramor	7440-28-0 XG 3425000	Toxic			119	0.24 PP	2 MCL	0.3	0.2
Thiamethoxam	153719-23-4	Toxic				80 HA	80 HA		
Thifensulfuron Methyl §§ Harmony § Pinnacle	79277-27-3	Toxic				290 HA	290 HA	1	90
Toluene §§ Antisal 1a § NCI C07272 § Toluol § Tolu-Sol § Methacide § Methylbenzol § Methylbenzene § Phenylmethane § Phenyl-Methane § Methyl-Benzene § Benzene, Methyl § RCRA Waste Number U220	108-88-3 XS 5250000	Toxic			10.7	57 PP	1,000 MCL	0.01	1
Toxaphene §§ § Attac 4-2 § Alltox § Alltex § Attac 6 § Toxakil § Agricide § Chem-Phene § Clor Chem T-590 § Compound 3956 §	8001-35-2 XW 5250000	Carcinogen	0.73 PP	0.0002 PP	13,100	0.007 PP	0.3 HA	N/A	1

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Crestoxo § Estonox § Geniphene § Gy-Phene § Hercules 3956 § Melipax § Motox § PCC § Phenacide § Toxaphene mixture § Chlorinated-Camphene § Camphene, Octachloro- § RCRA Waste Number P123									
Tralkoxydim (28) §§ Achieve	87820-88-0	Carcinogen	3,750			30 HA	30 HA	N/A	2
trans-1,2-Dichloroethylene §§ § trans-Dichloroethylene § RCRA Waste Number U079 § trans-1,2-Dichloroethane § trans-1,2-Dichloroethene § Dichloroethylene, trans- § trans-Acetylene Dichloride § 1,2-trans-Dichloroethylene § Ethene, 1,2-Dichloro-, €- § 1,2-Dichloroethylene, trans-	156-60-5 KV 9400000	Toxic			1.58	100 PP	100 MCL	0.05	0.6
trans-1,3-Dichloropropene §§ § 1,3-Dichloropropene § 1,3-Dichloropropylene § (E)-1,3-Dichloropropene § trans-1,3-Dichloropropylene § 1-Propene, 1,3-Dichloro-, (E)-	10061-02-6 UC 8320000	Carcinogen			1.91	2 HA	2 HA	N/A	0.3
trans-Nonachlor (Chlordane component) §§ § Chlordane, trans-Isomer	39765-80-5	Carcinogen			14,100	0.008 PP	1 HA	N/A	0.1
Triallate §§ § Avadex BW § BRN 1875853 § Dipthal § Far-Go § Triamyl	2303-17-5	Carcinogen				4.6 HA	4.6 HA	N/A	5
Triasulfuron §§ Amber	82097-50-5	Toxic				70 HA	70 HA	1	0.03
Tribenuron Methyl	101200-48-0	Carcinogen				50	50	N/A	6

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§§ Express						HA	HA		
Tributyltin (TBT)	56573-85-4	Toxic	0.46	0.072				0.007	
§§ §Tin-San § Tributyltin chloride complex § EPA Pesticide Chemical #083108			NPP	NPP					
Trichlorobenzene, 1,2,4- §§ Benzene, 1,2,4-Trichloro- § unsym-Trichlorobenzene § 1,2,4-Trichlorobenzene	120-82-1 DC 2100000	Toxic			114	0.071 PP	70 MCL	0.02	10
Trichloroethane, 1,1,2- §§ Vinyl Trichloride § 1,1,2-Trichloroethane § β-T § Ethane Trichloride § beta-Trichloroethane § NCI C04579 § Ethane, 1,1,2-Trichloro- § Caswell Number 875A [NLM] § EPA Pesticide Chemical Code 081203 [NLM]§ 1,2,2-Trichloroethane § RCRA Waste Number U227	79-00-5 KJ 3150000	Carcinogen			4.5	5 MCL	3 HA	N/A	0.7
Trichloroethane, 1,1,1- §§ Methyl Chloroform § -T § Strobane § Inhibisol § 1,1,1-TCE § Tri-Ethane § Solvent 111 § Aerothene TT § Chlороethene § Chlorten § NCI C04626 § Methylchloroform § Chloroform, Methyl- § 1,1,1-Trichloroethene § alpha-Trichloroethane § Methyltrichloromethane § 1,1,1-Trichloroethane § Ethane, 1,1,1-Trichloro- § RCRA WAste Number U226	71-55-6 KJ 2975000	Toxic			5.6	200 MCL	200 MCL	0.5	0.7
Trichloroethylene §§	79-01-6 KX 4550000	Carcinogen			10.6	5	5	N/A	0.5

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ TCE § Triad § Vitran § Algylen § Dow-Tri § Lanadin § Vestrol § Anamenth § Benzinol § Tri-Plus § Tri-Clene § Trichlorethane § Trichloroethene § Trichloroethane § Trichlorethylene § Ethene, Trichloro- § Ethylene Trichloride § Ethylene, Trichloro- § Acetylene Trichloride § 1,1,2- Trichloroethylene § 1,2,2- Trichloroethylene § 1- Chloro-2,2- Dichloroethylene § 1, 1- Dichloro-2-Chloroethylene						MCL	MCL		
Trichlorofluoromethane (HM) §§ Freon 11 § F 11 § FC 11 § Arcton 9 § Eskimon 11 § Halocarbon 11 § Algfren Type 1 § Fluorocarbon Number 11 § NCI C04637 § Isotron 11 § Fluorotrichloromethane § Iscon 131 § Monofluorotrichloromethane § Ucon Refrigerant 11 § Trichloromonofluoromethane § RCRA Waste Number U121	75-69-4 PB 6125000	Toxic			3.75	2,000	2,000	0.07	0.8
HA	HA								
Trichlorophenol, 2,4,5- §§ Dowcide B § 2,4,5-Trichlorophenol § Nurelle § Dowcide 2 § Collunosol § Preventol 1 § NCI C61187 § RCRA Waste Number U230	95-95-4 SN 1400000	Toxic			110	300	300	10	60
PP	PP								
Trichlorophenol, 2,4,6- §§ Phenachlor § Omal § Phenol, 2,4,6-trichloro- § NCI C02904 § 2,4,6-Trichlorophenol §	88-06-2 SN 1575000	Carcinogen			150	15	30	N/A	10
HA	HA								

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dowcide 2S § RCRA Waste Number U231									
Trichlorophenoxy Propionic Acid, 2 (2,4,5-) §§ Fenoprop § 2 (2,4,5- Trichlorophenoxy) Propionic Acid § Kuran § Propox § Silvex § Aquavex § Ded-Weed § Sta-Fast § 2,4,5-TP § Color-Set § Weed-B-Gon § Double Strength § 2,4,5- Trichlorophenoxypropionic Acid § (2,4,5- Trichlorophenoxy)Propionic Acid § 2-(2,4,5- Trichlorophenoxy)- Propionic Acid § (+/-)-2-(2,4,5- Trichlorophenoxy)propanoic Acid § RCRA Waste Number U233	93-72-1 UF 8225000	Toxic				50 MCL	50 MCL	0.075	0.2
Trichlorophenoxyacetic Acid §§ Brush-Rhap § 2,4,5-T (Brush-Rhap)	93-76-5	Toxic				70 HA	70 HA		0.2
Triclopyr §§ 3,4,5-Trichloro-2-pyridinoloxycetic acid § Confront § Dowco 233 § Garlon § Garlon 2 § Garlon 250 § Grazon 250 § Redeem § Release § Turflon § Caswell# 8821 § HSDB 7060 § EPA Pesticide Chemical #116001	55335-06-3	Toxic				300 HA	300 HA		0.5
Trifluralin §§ Treflan § Buckle	1582-09-8	Carcinogen				43 HA	43 HA	N/A	0.5
Trihalomethanes, total §§ § TTHMs	Multiple	Carcinogen				80 MCL	80 MCL	N/A	3
Triticonazole §§	131983-72-7	Toxic				1,100 HA	1,100 HA		0.1

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Uranium, natural §§ U § Uranium Metal, Pyrophoric	7440-61-1 YR 3490000	Carcinogen / Radioactive				30 MCL	30 MCL	N/A	0.2
Vinyl 2-Chloroethyl Ether §§ Vinyl β-Chloroethyl Ether- § 2-Chloroethyl Vinyl Ether § (2-Chloroethoxy)Ethene § RCRA Waste Number U042	110-75-8 KN 6300000	Carcinogen			0.557			N/A	2
Vinyl Chloride §§ § VC § VCM § Chlorethene § Chloroethene § Chloroethylene § Chloroethylene § Ethylene, Chloro- § Monochloroethylene § Ethylene Monochloride § Vinyl Chloride Monomer § Vinyl C Monomer § Trovidur § RCRA Waste Number U043	75-01-4 KU 9625000	Carcinogen			1.17	0.22 PP	0.2 HA	N/A	0.4
Xylenes, total §§ Xylool § Violet 3 § Mixed Xylenes § Methyl Toluene § Dimethylbenzene § NCI C55232 § Total equals the sum of meta, ortho, and para. § RCRA Waste Number U239	1330-20-7 ZE 2100000	Toxic			1.17	1x10 ⁴ MCL	1x10 ⁴ MCL	0.5	3

Formatted: Strikethrough

DEQ-7 Montana Numeric Water Quality Standards

Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names	CASRN numbers, NIOSH number (25) (26)	Category (1) (2)	Aquatic Life Standards (µg/L except where indicated)		Bio-concentration Factor (BCF) (µg/L) (5)	Human Health Standards (µg/L except where indicated) (17) (16)		Trigger Value (µg/L) (22)	Required Reporting Value (µg/L except where indicated) (19)
			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Zinc §§ Zn § Blue Powder § C.I. 77945 § C.I. Pigment Black 16 § C.I. Pigment Metal 6 § Emanay Zinc Dust § Granular Zinc § Jasad § Merrillite § Pasco § Zinc, Powder or Dust, non-Pyrophoric § Zinc, Powder or Dust, Pyrophoric	7440-66-6 ZG 8600000	Toxic	37 @ 25 mg/L hardness (12)	37 @ 25 mg/L hardness (12)	47	7,400	2,000	5	8

Formatted: Strikethrough

FOOTNOTES

- (1) Categories include toxic, carcinogen, and harmful. Parameters categorized as toxic and carcinogenic are based on EPA's Integrated Risk Information System (IRIS). Parameters categorized by the Department as harmful include biological agents (such as E. coli), parameters that cause taste and/or odor effects (such as MTBE), and parameters that generate physical effects (such as iron).
- (2) Chemicals classified by EPA as carcinogens for an oral route of exposure in the drinking water regulations and health advisories (EPA 822-B-96-002 and EPA 820-R-11-002) and those listed as carcinogens in the EPA priority pollutants list. In 2005, the EPA added a new scale to describe carcinogens and both the 1986 and 2005 scales are now in simultaneous use. The classifications considered carcinogenic in the 1986 scale are as follows: A (human carcinogen); B1 or B2 (probable human carcinogens); and C (possible human carcinogen). In the 2005 scale, the following categories are considered carcinogens: H (human carcinogen); L (likely carcinogen); L/N (likely to be carcinogenic above a specified dose) and S (suggestive evidence of carcinogenic potential).
- (3) The one-hour average concentration of these parameters in surface waters may not exceed these values more than once in any three year period, on average, with the exception of silver, which, at present, is interpreted as a "not to exceed" value.
- (4) The 96 hour average concentration of these parameters in surface waters may not exceed these values more than once in any three year period, on average.
- (5) All bioconcentration factors (BCFs) were developed by the EPA as part of the Standards development as mandated by Section 304(a) of the federal Clean Water Act. National Recommended Water Quality Criteria: 2002 Human Health Criteria Calculation Matrix (EPA-822-R-02-012).
- (6) The 24 hour geometric mean value must not exceed these values.
- (7) Freshwater Aquatic Life Standards for total ammonia nitrogen (mg/L NH₃-N plus NH₄-N).

Because these formulas are non-linear in pH and temperature, the Standard is the average of separate evaluations of the formulas reflective of the fluctuations of pH and temperature within the averaging period; it is not appropriate to apply the formula to average pH and temperature.

1. The one-hour average concentration of total ammonia nitrogen (in mg/L) does not exceed the CMC (acute criterion) calculated using the following equations.

Where salmonid fish are present:

$$CMC = \frac{0.275}{1 + 10^{7.204 - pH}} + \frac{39.0}{1 + 10^{pH - 7.204}}$$

Or where salmonid fish are not present:

$$CMC = \frac{0.411}{1 + 10^{7.204 - pH}} + \frac{58.4}{1 + 10^{pH - 7.204}}$$

Formatted: Strikethrough
Formatted: Underline

2. The thirty-day average concentration of total ammonia nitrogen (in mg/L) does not exceed the CCC (chronic criterion) calculated using the following equations.

When fish early life stages¹ are present:

$$CCC = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) \times \text{MIN} (2.85, 1.45 \times 10^{0.028 \times (25 - T)})$$

When fish early life stages¹ are absent:

$$CCC = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) \times 1.45 \times 10^{0.028 \times (25 - \text{MAX}(T, 7))}$$

¹ Includes all embryonic and larval stages and all juvenile forms of fish to 30-days following hatching.

3. In addition, the highest four-day average within the 30-day period should not exceed 2.5 times the CCC.

Table 1. pH-Dependent Values of the CMC (Acute Criterion) for Ammonia.

pH	CMC, total ammonia nitrogen ($\mu\text{g/L}$ $\text{NH}_3\text{-N}$ plus $\text{NH}_4\text{-N}$)	
	Salmonids Present	Salmonids Absent
6.5	32600	48800
6.6	31300	46800
6.7	29800	44600
6.8	28100	42000
6.9	26200	39100
7.0	24100	36100
7.1	22000	32800
7.2	19700	29500
7.3	17500	26200
7.4	15400	23000
7.5	13300	19900
7.6	11400	17000
7.7	9650	14400
7.8	8110	12100
7.9	6770	10100
8.0	5620	8400
8.1	4640	6950
8.2	3830	5720
8.3	3150	4710
8.4	2590	3880
8.5	2140	3200
8.6	1770	2650
8.7	1470	2200
8.8	1230	1840
8.9	1040	1560
9.0	885	1320

Formatted: Strikethrough

Formatted: Underline

Table 2. Temperature and pH-Dependent Values of the CCC (Chronic Criterion) for *Fish Early Life Stages Present* and for *Fish Early Life Stages Absent*.

CCC for Fish Early Life Stages Present, total ammonia nitrogen (µg/L NH₃-N plus NH₄-N)

pH	Temperature, °C									
	0	14	16	18	20	22	24	26	28	30
6.5	6670	6670	6060	5333	4680	4120	3620	3180	2800	2460
6.6	6570	6570	5970	5250	4610	4050	3560	3130	2750	2420
6.7	6440	6440	5860	5150	4520	3980	3500	3070	2700	2370
6.8	6290	6290	5720	5030	4420	3890	3420	3000	2640	2320
6.9	6120	6120	5560	4890	4300	3780	3320	2920	2570	2250
7.0	5910	5910	5370	4720	4150	3650	3210	2820	2480	2180
7.1	5670	5670	5150	4530	3980	3500	3080	2700	2380	2090
7.2	5390	5390	4900	4310	3780	3330	2920	2570	2260	1990
7.3	5080	5080	4610	4060	3570	3130	2760	2420	2130	1870
7.4	4730	4730	4300	3780	3320	2920	2570	2260	1980	1740
7.5	4360	4360	3970	3490	3060	2690	2370	2080	1830	1610
7.6	3980	3980	3610	3180	2790	2450	2160	1900	1670	1470
7.7	3580	3580	3250	2860	2510	2210	1940	1710	1500	1320
7.8	3180	3180	2890	2540	2230	1960	1730	1530	1330	1170
7.9	2800	2800	2540	2240	1960	1730	1520	1330	1170	1030
8.0	2430	2430	2210	1940	1710	1500	1320	1160	1020	897
8.1	2101	2101	1910	1680	1470	1290	1140	1000	879	773
8.2	1790	1790	1630	1430	1260	1110	973	855	752	661
8.3	1520	1520	1390	1220	1070	941	827	727	639	562
8.4	1290	1290	1170	1030	906	796	700	615	541	475
8.5	1090	1090	990	870	765	672	591	520	457	401
8.6	920	920	836	735	646	568	499	439	386	339
8.7	788	788	707	622	547	480	422	371	326	287
8.8	661	661	601	528	464	408	359	315	277	244
8.9	565	565	513	451	397	349	306	269	237	208
9.0	486	486	442	389	342	300	264	232	204	179

*At 15 C and above, the criterion for fish *ELS absent* is the same as the criterion for fish *ELS present*

- (8) A plant nutrient, excessive amounts of which may cause violations of Administrative Rules of Montana (ARM) 17.30.637 (1)(e).
- (9) Approved methods of sample preservation, collection, and analysis for determining compliance with the standards set forth in DEQ-7 are found in the surface water quality standards (ARM17.30.601, et seq.) and the ground water rules (ARM 17.30.1001, et seq.).

Standards for metals (except aluminum) in surface water are based upon the analysis of samples following a "total recoverable" digestion procedure (EPA Method 200.2, Supplement I, Rev. 2.8, May, 1994).

Standards for alpha emitters, beta emitters and gamma emitters in surface waters are based upon the analysis of unfiltered samples and appropriate EPA approved analysis methods.

Formatted: Strikethrough

Formatted: Underline

Standards for metals in ground water are based upon the dissolved portion of the sample (after filtration through a 0.45 µm membrane filter, as specified in "Methods for Analysis of Water and Wastes" 1983, Environmental Monitoring and Support Laboratory, U.S. Environmental Protection Agency, EPA-600/4-79-020, or equivalent). Standards for alpha emitters, beta emitters and gamma emitters in ground water are based upon the analysis of unfiltered samples and appropriate EPA approved analysis methods.

Standard for organic parameters in surface water and ground water are based on unfiltered samples.

(10) Calculation of an equivalent concentration of 2,3,7,8-TCDD is to be based on congeners of CDDs/CDFs and the toxicity equivalency factors (TEF) in van den Berg, M: et al. (2006) The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds. *Toxicological Sciences* 93(2):223-241. The analysis method to be used is EPA Method 1613, Revision B, Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, EPA Method 8290, or other method approved by the department on case by case basis. The Required Reporting Value(s) (RRV) for Dioxin and congeners are to be the lowest detection level for the analysis method approved by the Department.

(11) Radionuclides consisting of alpha emitters, beta emitters and gamma emitters are classified as carcinogens. "Alpha emitters" means the total radioactivity due to alpha particle emission. "Beta emitters" means the total radioactivity due to beta particle emission. "Gamma emitters" means the total radioactivity due to gamma particle emission. The emitters covered under this Standard include but are not limited to: Cesium, radioactive Iodine, radioactive Strontium-89 and -90, radioactive Tritium Gamma photon emitters.

(12) Freshwater aquatic life standards for these metals are expressed as a function of total hardness (mg/L, CaCO₃). The values displayed in the chart correspond to a total hardness of 25 mg/L. The hardness relationships are:

	Acute =		Chronic =	
	exp.{ma[ln(hardness)]+ba}	ma	exp.{mc[ln(hardness)]+bc}	mc
Cadmium	0.9789	-3.866	0.7977	-3.909
Copper	0.9422	-1.700	0.8545	-1.702
Chromium (III)	0.819	3.7256	0.819	0.6848
Lead	1.273	-1.46	1.273	-4.705
Nickel	0.846	2.255	0.846	0.0584
Silver	1.72	-6.52		
Zinc	0.8473	0.884	0.8473	0.884

Note: If the hardness is <25mg/L as CaCO₃, the number 25 must be used in the calculation. If the hardness is greater than or equal to 400 mg/L as CaCO₃, 400 mg/L must be used in the calculation.

(13) The surface water E. coli human health standards were adopted to protect recreational uses of surface waters in Montana and vary based on the water-use classification. See Administrative Rules of Montana (ARM), title 17, Chapter 30 - Water Quality, Sub-Chapter 6 - Surface Water Quality Standards.

Formatted: Strikethrough

Formatted: Underline

(14) Freshwater aquatic life standard for pentachlorophenol is dependent on pH. Values displayed in the chart correspond to a pH of 6.5 and are calculated as follows:

Acute = $\exp[1.005(\text{pH}) - 4.869]$ Chronic = $\exp[1.005(\text{pH}) - 5.134]$

(15) Freshwater aquatic life standards for dissolved oxygen in milligrams per liter are as follows:

	Standards for Waters Classified A-1, B-1, B-2, C-1, and C-2		Standards for Waters Classified B-3, C-3, and I	
	Early Life Stages ^{1,2}	Other Life Stages	Early Life Stages ²	Other Life Stages
30 Day Mean	N/A ³	6.5	N/A ³	5.5
7 Day Mean	9.5 (6.5)	N/A ³	6.0	N/A ³
7 Day Mean	N/A ³	5.0	N/A ³	4.0
Minimum				
1 Day Minimum ⁴	8.0 (5.0)	4.0	5.0	3.0

¹ These are water column concentrations recommended to achieve the required inter-gravel dissolved oxygen concentrations shown in parentheses. For species that have early life stages exposed directly to the water column, the figures in parentheses apply.

² Includes all embryonic and larval stages and all juvenile forms of fish to 30 days following hatching.

³ N/A (Not Applicable).

⁴ All minima should be considered as instantaneous concentrations to be achieved at all times.

(16) Surface or groundwater concentrations may not exceed these values.

(17) Source of the criteria used to derive the standard:

PP = priority pollutant criteria

NPP = non-priority pollutant criteria

OL= organoleptic pollutant criteria

MCL = ~~maximum contaminant level from the drinking water~~ [Safe Drinking Water Act](#) regulations

AL = [action level from Safe Drinking Water Act regulations](#)

HA = health advisory developed from EPA's "Drinking Water Standards and Health Advisories"

(October 1996) guidance, using recent scientific evidence and verified by EPA Region VIII toxicologist

Formatted: Strikethrough

Formatted: Underline

Formatted: Strikethrough

(18) Reserved

(19) The required reporting value (RRV) is the Department's selection of a laboratory reporting limit that can be met by the majority of local laboratories. In most cases, the RRV is sufficiently sensitive to meet the most stringent numeric water quality standard. The RRV shall be used when reporting surface water or ground water monitoring or compliance data to the Department unless otherwise specified by the Department in a permit, approval or authorization issued by the Department.

Montana Pollutant Discharge Elimination System (MPDES) applicants and permittees must use EPA-approved analytical methods that are capable of detecting and measuring the pollutants at, or below, the applicable water quality standards or permit limits ("sufficiently sensitive methods"). If an RRV included in this document is not lower than the applicable water quality standard or permit limit but an EPA-approved analytical method is capable of detecting and measuring the pollutant

Formatted: Strikethrough

Formatted: Underline

at, or below, the applicable water quality standard, then the minimum level for the sufficiently sensitive method supersedes the RRV.

It is the responsibility of the sampling entity to ensure that appropriate methods and reporting limits are requested from the laboratory to meet analytical and reporting limit needs.

- (20) Applicable to surface waters only.
- (21) Based on taste and odor thresholds given in EPA 822-f-97-008 December 1997.
- (22) Trigger Values are used to determine if a given increase in the concentration of toxic parameters is significant or non-significant as per the nondegradation rules ARM 17.30.701 et seq. The acronym "N/A" means "not applicable".
- (23) Reserved
- (24) Reserved
- (25) CASRN is an acronym for the American Chemical Society's Chemical Abstracts Service Registry Number.
- (26) The NIOSH RTECS number is a unique number used for identification in the National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances.
- (27) Reserved
- (28) The sum of the concentrations of tralkoxydim and its breakdown products shall not exceed the standards listed. For a list of known breakdown products, see EPA memorandum "EFED's Section 3 Review for Tralkoxydim (Chemical #121000; Case # 060780; DP Barcodes 0234682, 0234752, 0238697, 0235723 & 0239519)," and the associated "Environmental Fate Assessment for Tralkoxydim."
- (29) Ground water human health standard is based on the relative potency for selected PAH compounds listed in Table 8 of the EPA "Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons" July 1993, EPA/600/R-93/089.
- (30) The sum of the concentrations of acetochlor and the breakdown products, acetochlor ESA and acetochlor OA, shall not exceed the standards listed.
- (31) The sum of the concentrations of alachlor and the breakdown products, alachlor ESA and alachlor OA, shall not exceed the standards listed.
- (32) The sum of the concentrations of atrazine and the breakdown products, deethyl atrazine, deisopropyl atrazine, and deethyl deisopropyl atrazine, shall not exceed the standards listed.
- (33) The sum of the concentrations of imazamethabenz-methyl ester and the breakdown product, imazamethabenz-methyl acid, shall not exceed the standards listed.

Formatted: Strikethrough
Formatted: Underline

- (34) The sum of the concentrations of metolachlor and the breakdown products, metolachlor ESA and metolachlor OA, shall not exceed the standards listed.
- (35) The sum of the concentrations of pinoxaden (NOA 407855) and the breakdown products, pinoxaden NOA 407854 and pinoxaden NOA 447204, shall not exceed the standards listed.
- (36) The human health criterion for arsenic is the more restrictive of the ~~risk-based~~risk-based level of 1 in 1,000 [1×10^{-3}] or the MCL.
- (37) The quantitative combination of two or more of aldicarb, aldicarb sulfone and aldicarb sulfoxide shall not exceed 7 $\mu\text{g}/\text{L}$ because each has a similar mode of action.
- (38) The quantitative sum of all listed haloacetic acids is used in determining the total haloacetic acid concentration.
- (39) The sum of the concentrations of endosulfan and its isomers endosulfan I and endosulfan II shall not exceed the standards listed.
- (40) The following human health standards were developed by the Department using non-standard assumptions and/or using data or guidance not listed at the start of this circular. The details of the Department's methods for deriving these criteria are found in the Montana Administrative Record (MAR) chapter, pages, and date associated with the specified standards. Refer to the most recent MAR for standards which have been changed repeatedly. (A) ground-water diallate: 24 Mont. Admin. Register 2446, 2452 (Dec. 21, 2018).
- (41) The sum of the concentrations of PFOA and PFOS ($[\text{PFOA}] + [\text{PFOS}]$) shall not exceed the individual standards listed (0.07 $\mu\text{g}/\text{L}$).

Formatted: Strikethrough

Formatted: Underline

Formatted: Strikethrough

Formatted: Underline



January 16, 2026

TO: Members of the Water Pollution Control Advisory Council & the public

FROM: Tyler Halligan, WPB MPDES Stormwater Program Coordinator & Permit Writer

MEETING DATE: January 29, 2026

SUBJECT: Montana Municipal Separate Storm Sewer System (MS4) Rulemaking Update

ACTION REQUIRED BY COUNCIL:

Briefing item. No action required by council.

BACKGROUND:

This agenda item provides a briefing on a proposed rulemaking package that would amend select provisions of ARM Title 17, chapter 30 governing Montana Pollutant Discharge Elimination System permitting for small municipal separate storm sewer systems (MS4s). The proposal updates state rule language to align with current federal terminology and census-based classifications, replaces outdated references to “urbanized areas” with population-based thresholds tied to the most recent decennial census, and ensures consistency across MS4 fee, definition, and designation provisions. These changes are technical in nature and are intended to maintain conformity with revised federal Phase II stormwater regulations while preserving existing regulatory structure, thresholds, and program expectations.

In addition to terminology updates, the proposal reflects changes in MS4 designation status resulting from population growth identified in the 2020 Census. Certain MS4s now meet the federal criteria for automatic designation based on population, while one jurisdiction is proposed for discretionary designation under existing state criteria due to its population and potential water quality impacts. The agenda item is informational only and is intended to brief the council on the scope, purpose, and content of the proposal.

RECOMMENDATION:

Briefing item only.

Please contact us with any questions *Tyler Halligan, DEQ – Colonial Building P.O. Box 200901, Helena, MT 59620; 406.444.2897; Tyler.Halligan@mt.gov*

Attachments: "MS4 Agenda Attachment_1"

PROPOSED RULEMAKING

This document presents the proposed amendments to ARM 17.30.201, 17.30.1102, and 17.30.1107 related to Montana Pollutant Discharge Elimination System permitting for Small Municipal Separate Storm Sewer Systems (MS4s). The proposed amendments update rule language to align with current federal terminology and census-based population thresholds and reflect changes in MS4 designation status resulting from the most recent decennial census. The amendments do not alter existing regulatory structure or program requirements but clarify how MS4 applicability, designation, and associated provisions are identified under state rule.

17.30.201 PERMIT APPLICATION, DEGRADATION AUTHORIZATION, AND ANNUAL PERMIT FEES

- (1) through (7) remain the same.
- (8) The annual permit fees are set forth in Schedules III.A, III.B, and III.C. No annual fee is required for activities listed in Schedule I.D.
 - (a) through (c) remains the same.
 - (d) Annual fees in Schedule III.C for authorizations under the general permit for municipal separate storm sewer systems (MS4s) are ~~determined by population in an urbanized area as defined by based on population as determined by the latest decennial census from~~ the United States Census Bureau. The fees must be based on the latest available decennial census data.
 - (e) through (11) remain the same.

17.30.1102 DEFINITIONS

In this subchapter, the following terms have the meanings or interpretations indicated below and shall be used in conjunction with and are supplemental to those definitions contained in 75-5-103, MCA. If not defined in this rule, terms used in this subchapter have the meanings set out in the definitions in ARM Title 17, chapter 30, subchapter 13.

- (1) through (22) remain the same.
- (23) "Small municipal separate storm sewer system" means:
 - (a) (a) small MS4s, and portions of them, that are located in the following ~~urbanized areas~~ ~~urban areas with a population of 50,000 or more people~~ as determined by the latest decennial census by the United States ~~census bureau~~ Census Bureau;
 - (i) the City of Billings and Yellowstone County;
 - (ii) the City of Bozeman and Gallatin County;
 - (iii) the City of Great Falls and Cascade County;
 - (iv) the City of Helena, City of East Helena, and Lewis & Clark County; and
 - (v) the City of Missoula and Missoula County; and
 - (b) the following small MS4s serving a population of at least 10,000 as determined by the latest decennial census by the United States ~~census bureau~~ Census Bureau and

that are located outside of an ~~urbanized area~~urban area with a population of 50,000 or more people:

- (i) MS4s located in the City of ~~Bozeman~~Belgrade;
- (ii) MS4s located in the City of Butte; and
- ~~(iii) MS4s located in the city of Helena; and~~
- ~~(iv)~~(iii) MS4s located in the City of Kalispell;

(c) through (35) remain the same.

17.30.1107 DESIGNATION PROCEDURES: SMALL MS4S

- (1) Remains the same.
- (2) The department shall designate an MS4 other than those identified in ARM 17.30.1102(23) if a discharge from the MS4 results in, or has the potential to result in, exceedances of water quality standards, including impairment of designated uses, or has other significant water quality impacts, including habitat and biological impacts. In making a designation under this subsection, the department shall:
 - (a) consider whether the MS4:
 - (i) has discharges to a listed impaired waterbody that is on the most recent 303(d) list;
 - (ii) has high growth or growth potential;
 - (iii) has high population density;
 - (iv) is contiguous to an ~~urbanized area~~urban area with a population of 50,000 or more people as determined by the latest decennial census by the United States Census Bureau; and
 - (v) is a significant contribution of pollutants to surface waters; and
 - (b) place a high priority on evaluating small MS4s that have a combined permanent and seasonal population of over 10,000, as determined by the latest decennial census by the United States ~~census bureau~~Census Bureau plus the number of commercially advertised bedroom accommodations that will allow for an overnight stay, as listed through the chamber of commerce, or any local resort or property management company.
- (3) through (9) remain the same.
- (10) The department may waive the permit requirements of this subchapter for an MS4, which would otherwise be regulated because it is located within an ~~urbanized area~~urban area with a population of 50,000 or more people as determined by the latest decennial census of the United States Census Bureau, if the MS4 serves a population of under 1,000 and both of the following criteria are met:
 - (a) and (b) remain the same.
- (11) The department may waive the permit requirements of this subchapter for an MS4, which would otherwise be regulated because it is located within an ~~urbanized area~~urban area with a population of 50,000 or more people as determined by the latest decennial census by the United States Census Bureau, if the MS4 serves a population of between 1,000 and 10,000 and both of the following criteria are met:
 - (a) through (13) remain the same.