Montana Department of Environmental Quality

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

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Prepared by:
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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.

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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.

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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. ~~Numeric 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/wqctable/~~ 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/

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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 [$1x10^{-5}$] for all carcinogens except arsenic, which is based upon one in one thousand [$1x10^{-3}$]; 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. As all forms of radiation are carcinogenic, the calculation of a numeric standard is derived either from MCLs set

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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 ($1x10^{-5}$) 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.*

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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.

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

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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 § Cyanoethylene § Vinyl cyanide § Propenenitrile § 2-Propenenitrile § Acrylonitrile monomer § RCRA Waste Number U009	107-13-1 AT 5250000	Carcinogen			30	0.61 PP	0.61 PP	N/A	3
Alachlor (includes metabolites Alachlor ESA and Alachlor OA) (31) §§ Lasso § Lazo § Alator § Alanex § Alochlor § 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 MCL	2 MCL		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 MCL	3 MCL	1	0.4

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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 MCL	2 MCL	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 PP		4,670	$7.7x10^{-6}$ PP	0.02 HA	N/A	0.1
Alpha Emitters (11) §§ § Gross Alpha § Adjusted Gross Alpha § Gross Alpha Emitters	Multiple	Carcinogen / Radioactive				15 picoC/liter MCL	15 picoC/liter MCL	N/A	

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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-Chlordane § c (cis)-Chlordane § Chlordane, 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 dichlro-2-	150114-71-9	Toxic				3,000 HA	3,000 HA		0.2

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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	(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	300 PP	2,100 HA	0.04	10
Antimony §§ Sb § Antimony Black § Antimony Regulus § C.I. 77050 § Stibium	7440-36-0 CC 4025000	Toxic			1	5.6 PP	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	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	

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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
Azinophos and degredate 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 §§ § azoksystrobin § 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

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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 PP	5 MCL	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 PP	0.0014 PP	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 PP	0.05 HA	N/A	0.06

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Benzo[b]Fluoranthene (PAH) §§ § B(b)F § Benzo(b)Fluoranthene § Benzo(e)Fluoranthene § 2,3-Benzfluoranthene § 3,4-Benzfluoranthene § 3,4-Benzofluoranthene § 2,3-Benzofluoranthene § 2,3-Benzofluoranthrene § Benz(e)Acephenanthrylene § 3,4-Benz(e)Acephenanthrylene	205-99-2 CU 1400000	Carcinogen			30	0.012 PP	0.5 (29) HA	N/A	5
Benzo[k]fluoranthene (PAH) §§ § Benzo(k)Fluoranthene § 8,9-Benzofluoranthene § Dibenzo(b,jk)Fluorene § 2,3,1'8'-Binaphthylene § 11,12-Benzofluoranthene § 11,12-Benzo(k)Fluoranthene	207-08-9 DF 6350000	Carcinogen			30	0.12 PP	5 (29) HA	N/A	0.1
Benzo[a]anthracene (PAH) §§ § Tetraphene § Benzanthracene § Benzoanthracene § Naphthanthracene § 1,2-Benzanthrene § Benz(a)Anthracene § Benzo(a)Anthracene § 1,2-Benzanthracene § Benzo(b)Phenanthrene § 1,2-Benzoanthracene § Benzanthracene, 1,2- § 1,2-Benz(a)Anthracene § 2,3-Benzophenanthrene § RCRA Waste Number U018	56-55-3 CV 9275000	Carcinogen			30	0.012 PP	0.5 (29) HA	N/A	0.1
Beryllium §§ Be	7440-41-7 DS 1750000	Carcinogen			19	4	4	N/A	0.8

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			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 § ß-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 §§ § ß-BHC § beta-BHC § HCH-beta § beta-HCH § ß-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

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			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 39638-32-9	Toxic			2.47	200 PP	200 PP	0.8	10
Bis(2-Chloroethoxy)Methane §§ § Bis(ß-Chloroethyl)Formal	111-91-1 PA 3675000	Toxic			0.64			0.5	10
Bis(Chloroethyl)Ether §§ § BCEE § DCEE § Clorex § Chlorex § Chloroethyl Ether § Dichloroethyl Ether § Dichloroethyl Oxide § Bis(Chloroethyl) Ether § Di(2-Chloroethyl) Ether § Bis (Chloroethyl) Ether § Bis(2-Chloroethyl) Ether § Bis(ß-Chloroethyl) Ether § ß,ß'-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 PP	0.3 PP	N/A	5

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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

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			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 1,2-Benzenedicarboxylate § 1,2-Benzenedicarboxylic Acid, 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 §§ § Yaltox § 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

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			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 § Toxichlor § 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	0.0031 PP	1 HA	N/A	0.1
Chlorimuron Ethyl §§ Classic §	90982-32-4	Toxic				600 HA	600 HA	0.1	0.1

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			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 § Chlorbenzene § Phenyl Chloride § Benzene Chloride § Benzene, Chloro- § Monochlorbenzene § NCI C54886 § RCRA Waste Number U037	108-90-7 CZ 0175000	Toxic			10.3	100 PP	100 MCL	0.5	0.8
Chlorodibromomethane §§ Monochlorodibromomethane § CDBM § NCI C55254 § Methane, Dibromochloro- § Dibromochloromethane (THM)	124-48-1 PA 6360000	Carcinogen			3.75	8 PP	8 PP	N/A	0.6
Chloroethane §§ Ethyl Chloride § Aethylis § Aethylis Chloridum § Anodynon § 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	

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			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 § Piridane § 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 NPP	0.041 NPP		2 HA	2 HA	0.25	0.1

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			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

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			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) PP	2.85@ 25 mg/L hardness (12) PP	36	1,300 PP	1,300 PP	0.5	2
Cyanazine §§ Bladex	21725-46-2	Toxic				10 HA	10 HA		0.02
Cyanide, free §§ § Cyanide § RCRA Waste Number P030	57-12-5 GS 7175000	Toxic					200 MCL	0.5	27
Cyanide, total §§ § Cyanide § Isocyanide § Cyanides, includes soluble salts and complexes § RCRA Waste Number P030	57-12-5 GS 7175000	Toxic	22 PP	5.2 PP	1	4 PP	~~200~~ ~~MCL~~	0.5	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

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			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 MCL	200 MCL	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 HA	0.3 HA	0.25	0.01

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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

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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-Benzanthracene § 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 PP	0.05 (29) HA	N/A	0.1
Dibromoethane, 1,2- §§ Ethylene Dibromide § DBE § EDB § Nephis § Kopfume § Celmide § 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				0.2~~0.01 7~~ HA	0.2~~0.01 7~~ HA	N/A	~~0.01~~

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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 C§ 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 § Termitkil § 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

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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 MCL	75 MCL		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 PP	0.49 PP	N/A	5

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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 § Arcton 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 HA	1,000 HA	0.05	0.8
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 MCL	4 HA	N/A	0.5
Dichloroethylene, 1,1- §§ Vinylidene Chloride § VDC § 1,1-DCE § Sconatex § 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 MCL	7 MCL	N/A	0.7

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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- § a,ß-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

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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 PP	2.7 PP	N/A	0.3
Dichlorprop §§ § Canapur DP § Basagran DP § Cornox RX § Hedonil DP § Kildip § Mayclene § Polyclene § Weedone DP § Polytox	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 PP	0.056 PP	4,670	$1.2x10^{-5}$ PP	0.02 HA	N/A	0.02

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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)phenyl1]-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 degredate 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

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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 PP	2,000 PP	0.04	10
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 PP	100 PP	10	10
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 § 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 PP	2 PP		10

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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 § Solfo Black B § alpha-Dinitrophenol § Dinitrophenol, 2,4- § Tertrosulphur 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	25550-58-7 ~~2555-05-87~~	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

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ DNBP § DBNF § Aretit § Basanite § Caldon § Sparic § Kiloseb § Spurge § Premerge § Dinitro § Hel-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		

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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	$5x10^{-8}$ (10) PP	$2x10^{-6}$ (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 Dipyridylium Dibromide § 1,1-Ethylene 2,2-Dipyridylium Dibromide § 5,6-Dihydro-Dipyrido(1,2a,1c)Pyraziniu m Dibromide § 9,10-Dihydro-8a,10a-	2764-72-9 JM 5690000	Toxic				20 MCL	20 MCL	0.44	2

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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,'-Bipyridylium)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) PP	0.056 (39) PP	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 (39) PP	0.056 (39) 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

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§§ § Thiodan II § Endosulfan-II § Beta-Endosulfan § beta-Endosulfan			(39) PP	(39) PP		PP	PP		
Endosulfan Sulfate §§ § 6,9-Methano-2,3,4-Benzodioxathiepin, 6,7	1031-07-8	Toxic			270	20 PP	20 PP	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 MCL	100 MCL	1	2
Endrin §§ § NCI C00157 § Endrex § Mendrin § 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 PP	0.036 PP	3,970	0.03 PP	2 MCL		0.006
Endrin Aldehyde	7421-93-4	Toxic with			3,970	1	1		0.03

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			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
Escherichia coli (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 § Fosfono 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

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			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

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			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 MCL	4,000 MCL	5	200
Fluroxypyr	69377-81-7	Toxic				7,000 HA	7,000 HA		0.1
Fonofos §§ § Dyfonate	944-22-9	Toxic				10 HA	10 HA		1
Gamma Emitters (11) §§ Photon activity with Beta particles	Multiple	Carcinogen / Radioactive				4 mrem /yr MCL	4 mrem /yr MCL	N/A	
gamma-Chlordane §§ § Chlordane, beta-Isomer	5566-34-7	Carcinogen			14,100	0.008 HA	1 HA	N/A	0.006
gamma-hexachlorocyclohexane §§ Lindane § BHC § -BHC § Gamene § Lintox § Lentox § Hexcide § Aparsin § Agrocide § Afcide § 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 MCL	0.2 MCL		0.02

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			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-(Phosphonomrthyl)- § Glyphosate plus inert ingrediants § 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 § Crysthyon § 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
Haloacetic acids (38)	various	Carcinogen				60	60	N/A	1

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			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 HAR000	Carcinogen	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

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			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 PP	5 HA	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 PP	50 MCL	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 PP	30 HA	N/A	1

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			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-propenyloxy)ethyl)-1H-imidazole § Enilconazole § BRN 054683 § Caswell #497AB § Chloramizol § Deccozil § 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

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ Ammonium salt of imazamox						HA	HA		
Imazapic §§ Imazapic § AC263222, Cadre, Imazameth, Imazamethapyr, Imazmethapyr	104098-48-8	Toxic				9133,000 HA	9133,000 HA		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)-5oxo-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 (ł1,2,3-cd) Pyrene § 1,10-(o-Phenylene)Pyrene § 1,10-(1,2-Phenylene)Pyrene § RCRA Waste Number U137	193-39-5 NK 9300000	Carcinogen			30	0.012 PP	0.5 (29) HA	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	340 PP	400 HA	N/A	10

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			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	10~~15~~ AL~~MCL~~	10~~15~~ 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 HA	470 HA		0.09
MCPA §§ 4-chloro-2 methylphenoxy acetic acid	94-74-6	Toxic				3 HA	3 HA		0.008

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			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 § Mecprop § Mepro § Methoxone § Morogal § Okultin § Proponex-pluse § 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

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Methoxychlor §§ § DMDT § Metox § Moxie § Methoxcide § 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	100 PP	10 HA	0.11	1
Methyl Chloride §§ Chloromethane § Arctic § Monochloromethane § RCRA Waste Number U045	74-87-3 PA 6300000	Toxic			3.75	600 HA	600 HA	0.08	1
Methylene chloride §§ Dichloromethane (HM)	75-09-2 PA 8050000	Carcinogen			0.9	5	5	N/A	2

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			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 § Perchloropentacyclodecane § Dodecachloropentacyclodecane § 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,4,5,5,5a,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

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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 § Nitrosodimethylamine § 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 PP	0.0069 PP	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 PP	33 PP	N/A	10
n-Dioctyl Phthalate §§ § DNOP § PX-138 § Vinicizer 85 § Dinopol NOP § n-Octyl Phthalate § Octyl Phthalate § Dioctyl Phthalate § Di-n-Octyl Phthalate § Di-sec-Octyl Phthalate § 1,2-Benzenedicarboxylic Acid,	117-84-0 TI 1925000	Carcinogen						N/A	10

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dioctyl 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 PP	0.05 PP	N/A	5
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 NPP	0.16 NPP	N/A	0.02
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 HA	100 HA	N/A	10
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) PP	16.1 @ 25 mg/L hardness (12) PP	47	100 HA	100 HA	0.5	2
Nicosulfuron	111991-09-4	Toxic				~~8,330~~ 8,500	~~8,330~~ 8,500	~~0.01~~	~~0.03~~

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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]) §§ NO3	14797-55-8	Toxic	(8)	(8)		$1x10^4$ NPP	$1x10^4$ NPP	surface water= 10, ground water= 5,000, see ARM 17.30.715	20
Nitrate plus nitrite (as Nitrogen[N]) §§ NO3 + NO2	See nitrate and nitrite	Toxic	(8)	(8)		$1x10^4$ MCL	$1x10^4$ MCL	surface water= 10, ground water= 5,000, see ARM 17.30.715	20
Nitrite (as Nitrogen[N]) §§ NO2	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 PP	10 PP	N/A	10
Nitrogen, total inorganic (as Nitrogen[N]) §§ the sum of ammonia, nitrite, and nitrate	See ammonia, nitrate and nitrite	Nutrient	(8)	(8)				10	10
Nitrophenol, 4- §§p-Nitropheno (DOT)l § 4-Hydroxynitrobenzene § NCI C55992) § RCRA Waste Number U170	100-02-7 SM 2275000	Toxic			3.31	50 HA	50 HA	2.4	60
o-Nitrophenol §§	88-75-5 SM 2100000	Toxic			2.33			0.45	10

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			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 NPP	6.6 NPP					0.7
o-Xylene §§ § o-Xylol § 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

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			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-Methylcarbamoylmonozime § Methyl N',N'-Dimethyl-N-({Methylcarbamoyl}Oxy)-1-Thiooxamimidate § N',N'-Dimethyl-N-[(Methylcarbamoyl)oxy]-1-Methylthiooxamimidic Acid	23135-22-0 RP 2300000	Toxic				200 MCL	200 MCL	1	1
Oxydemeton Methyl §§ Metasystox R §	301-12-2	Toxic				0.7 HA	0.7 HA	1.4	0.07
Oxygen, dissolved (20) §§ O2 § Oxygen, Compressed § Oxygen, Refrigerated Liquid	7782-44-7 RS 2060000	Toxic	(15)	(15)					0.3 mg/L

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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'-Dichlorodiphenyldichloroethylene §§ DDE § DDE § p,p'-DDE § 4,4'-DDE § NCI C00555 § Dichlorodiphenyldichloroethylene § Dichlorodiphenyldichloroethylene, 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'-(DichloroethenylideneBis[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 § Rhothane § 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

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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 § Clofenotane § 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 PP	0.5 PP	0.001 PP	53,600	$3x10^{-4}$ PP	$3x10^{-4}$ PP	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

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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		
§ PCMC § Parol § Aptal § Baktol § Baktolan § Ottafact § Raschit § Rasen-Anicon § Parmetol § Candasetpic § 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						PP	PP		
p-Xylene §§ § p-Xylol § 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 § Diethyl para-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 NPP	0.013 NPP				N/A	0.2

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Code 057501 § RCRA Waste Number P089									

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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 § Dowcide 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) PP	4 @ pH of 6.5 (14) PP	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					0.07 HA (41)		
Perfluorooctanoic Acid (PFOA) §§ § pentadecafluorooctanoic acid § Pentadecafluoro-1-octanoic acid § Pentadecafluoro-n-octanoic acid § Octanoic acid, pentadecafluoro- § Perfluorocaprylic acid § Pentadecafluorooctanoic acid; Perfluoroheptanecarboxylic acid	335-67-1	Toxic					0.07 HA (41)		

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Phenanthrene (PAH) §§ § Phenantrin	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 § Carbolic Acid § Phenylic Acid § Hydroxybenzene § Hydroxybenzene § Phenyl Alcohol § Phenyl Hydrate § Phenylic Alcohol § Phenyl Hydroxide § Benzene, Hydroxy- § Monohydroxybenzene § RCRA Waste Number U188	108-95-2 SJ 3325000	Toxic			1.4	4,000 PP	4,000 PP	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 MCL	500 MCL	0.14	1
Pinoxaden (NOA 407855) (includes metabolites Pinoxaden NOA 407854 and pinoxaden NOA 447204) (35) §§	N/A	Toxic				2,000 HA	2,000 HA		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

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§§ PCB~~'~~s § Aroclor 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1268, 2565, 4465 § Chlophen § Chlorextol § 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

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			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
~~Propiconazole~~ Propiconazole §§ 1-((2-(2,4-dichlorophenyl)-4propyl-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	60207-90-1	Carcinogen				~~700~~ HA	~~700~~ HA	N/A	~~70~~
Propoxur §§ Baygon §	114-26-1	Carcinogen				24 HA	24 HA	N/A	0.4
Prosulfuron §§ Benezenesulfonamide, 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) §§ § ß-Pyrine § beta-Pyrene § Benzo(def)Phenanthrene § Benzo[def]Phenanthrene	129-00-0 UR 2450000	Toxic			30	20 PP	20 PP	0.25	10
Pyroxsulam	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	

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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 § Selinium Homopolymer§ Selenium Metal Powder, Non-Pyrophoric § Vandex	7782-49-2 VS 7700000 and VS 8310000, colloidal	Toxic	20 PP	5 PP	4.8	50 MCL	50 MCL	0.6	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	100 HA	100 HA	0.2	0.2
Simazine	122-34-9	Carcinogen				4	4	N/A	0.5

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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-Diyldiamine	XY 5250000					MCL	MCL		
Strontium §§	7447-24-6	Toxic				4,000 HA	4,000 HA	100	20
Styrene §§ § Styrol § Cinnamol § Cinnamene § Cinnamenol § NCI C02200 § Styrole § Strolene § Styron § Stropor § Vinylbenzol § Phenethylene § Phenylethene § Vinylbenzene § Ethenylbenzene § Phenylethylene § Benzene, Vinyl- § Stryene, Monomer	100-42-5 WL 3675000	Carcinogen				100 MCL	100 MCL	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

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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 § Fenetrazole § Folicur § LYNX § Preventol A 8 § Raxil § Terbucanazole § Terbutrazole § HWG 1608 § HSDB 7448	107534-96-3	Carcinogen				190 HA	190 HA	N/A	0.04
Tebuthiuron §§ TebuconazoleSpike	34014-18-1	Toxic				500 HA	500 HA	2	0.002
Terbacil §§ Sinbar §	5902-51-1	Toxic				83 HA	83 HA	2.2	0.02
Terbufos §§ Counter §	13071-79-9	Toxic				0.83 HA	0.83 HA	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 NPP	0.03 NPP		5
Tetrachloroethane, 1,1,2,2- §§ Tetrachloroethane § TCE § Cellon § Westron § 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 PP	2.0 HA	N/A	0.5

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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 § Perklone § 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 §§ Tl § 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

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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

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			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 § Tributylin 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 § ß-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 § Chloroethene § 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

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
§ TCE § Triad § Vitran § Algylen § Dow-Tri § Lanadin § Vestrol § Anamenth § Benzinol § Tri-Plus § Tri-Clene § Trichlorethene § 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 § Algofrene Type 1 § Fluorocarbon Number 11 § NCI C04637 § Isotron 11 § Fluorotrichloromethane § Isceon 131 § Monofluorotrichloromethane § Ucon Refrigerant 11 § Trichloromonofluoromethane § RCRA Waste Number U121	75-69-4 PB 6125000	Toxic			3.75	2,000 HA	2,000 HA	0.07	0.8
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 NPP	300 NPP	10	60
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 PP	30 HA	N/A	10

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			Acute (3)	Chronic (4)		Surface Water	Ground Water		
Dowcide 2S § RCRA Waste Number U231									
Trichlorophenoxy Proprionic Acid, 2 (2,4,5-) §§ Fenoprop § 2 (2,4,5-Trichlorophenoxy) Proprionic Acid § Kuran § Propon § Silvex § Aqua-Vex § 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)-Proprionic 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-2pyridinyloxyacetic 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

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			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 ß-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 § Chlorethylene § 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 §§ § Xylol § 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

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			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) PP	37 @ 25 mg/L hardness (12) PP	47	7,400 PP	2,000 HA	5	8

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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 NH_3-N plus NH_4-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:

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

Or where salmonid fish are not present:

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

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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 stages[1] are present:

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

When fish early life stages[1] are absent:

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

[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.

	CMC, total ammonia nitrogen (µg/L NH_3-N plus NH_4-N)	
pH	**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

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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 NH_3-N plus NH_4-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.

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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 = exp.{ma[ln(hardness)]+ba}		**Chronic = exp.{mc[ln(hardness)]+bc}**	
	ma	**ba**	**mc**	**Bc**
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.

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(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(pH) - 4.869] Chronic = exp[1.005(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 Minimum	N/A[3]	5.0	N/A[3]	4.0
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 = ~~M~~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

(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

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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.

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(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 [$1x10^{-3}$] or the MCL.

(37) The quantitative combination of two or more of aldicarb, aldicarb sulfone and aldicarb sulfoxide shall not exceed 7 µg/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 ([PFOA] + [PFOS]) shall not exceed the individual standards listed (0.07 µg/L).

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