



ADMINISTRATIVE RULES OF MONTANA

17.30.1211 TECHNOLOGY-BASED REQUIREMENTS FOR COOLING WATER INTAKE STRUCTURES FOR NEW FACILITIES

- (1) The purpose of this rule is to establish technology-based requirements that apply to the location, design, construction, and capacity of the cooling water intake structures at new facilities. This rule implements section 316(b) of the federal Clean Water Act for new facilities. These requirements are implemented through MPDES permits.
- (2) Section 316(b) of the federal Clean Water Act provides that any standards established pursuant to sections 301 or 306 of the federal Clean Water Act and applicable to a point source must require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact.
- (3) New facilities that do not meet the threshold requirements regarding amount of water withdrawn or percentage of water withdrawn for cooling water purposes in (4) must meet requirements determined on a case-by-case, best professional judgment (BPJ) basis. The owner or operator of a new facility that does not meet the threshold requirements in (4) must submit the application information required in 40 CFR 122.21(r).
- (4) This rule applies to a new facility if it:
 - (a) is a point source that uses or proposes to use a cooling water intake structure;
 - (b) has at least one cooling water intake structure that uses at least 25 percent of the water it withdraws for cooling purposes as specified in (6); and
 - (c) has a design intake flow greater than two million gallons per day (MGD).
- (5) Use of a cooling water intake structure includes obtaining cooling water by any sort of contract or arrangement with an independent supplier, or multiple suppliers, of cooling water if the supplier or suppliers withdraw(s) water from state surface waters. Use of cooling water does not include obtaining cooling water from a public water system or the use of treated effluent that otherwise would be discharged to a state surface water. This provision is intended to prevent circumvention of these requirements by creating arrangements to receive cooling water from an entity that is not itself a point source.
- (6) The threshold requirement that at least 25 percent of water withdrawn be used for cooling purposes must be measured on an average monthly basis. A new facility meets the 25 percent cooling water threshold if, based on the new facility's design, any monthly average over a year for the percentage of cooling water withdrawn is expected to equal or exceed 25 percent of the total water withdrawn.

(7) The owner or operator of a new facility that will withdraw equal to or greater than ten MGD shall comply with either the requirements of (9) or the following:

(a) reduce the facility's intake flow, at a minimum, to a level commensurate with that which can be attained by a closed-cycle recirculating cooling water system;

(b) design and construct each cooling water intake structure at the facility to a maximum through-screen design intake velocity of 0.5 feet per second;

(c) design and construct the cooling water intake structure at the facility such that the total design intake flow from all cooling water intake structures at the facility meets the following requirements:

(i) for cooling water intake structures located in a freshwater river or stream, the total design intake flow must be no greater than five percent of the source water annual mean flow;

(ii) for cooling water intake structures located in a lake or reservoir, the total design intake flow must not disrupt the natural thermal stratification or turnover pattern, where present, of the source water except in cases where the disruption is determined to be beneficial to the management of fisheries for fish and shellfish by any fishery management agency;

(d) select and implement design and construction technologies or operational measures for minimizing the impingement mortality of fish and shellfish if:

(i) there are threatened, endangered, or otherwise protected federal, state, or tribal species, or critical habitat for these species, within the hydraulic zone of influence of the cooling water intake structure;

(ii) based on information submitted by any fishery management agency or other relevant information, there are migratory and/or sport or commercial species of impingement concern to the department that pass through the hydraulic zone of influence of the cooling water intake structure; or

(iii) it is determined by the department, based on information submitted by any fishery management agency or other relevant information, that the proposed facility, after meeting the technology-based performance requirements in (7)(a), (b), and (c), would still contribute unacceptable stress to the protected species, critical habitat of those species, or species of concern;

(e) select and implement design and construction technologies or operational measures for minimizing entrainment of entrainable life stages of fish and shellfish if:

(i) there are threatened, endangered, or otherwise protected federal, state, or tribal species, or critical habitat for these species, within the hydraulic zone of influence of the cooling water intake structure; or

(ii) based on information submitted by any fishery management agency or other relevant information, there are or would be undesirable cumulative stressors affecting entrainable life stages of species of concern to the department and the department determines that the proposed facility, after meeting the technology-based performance requirements in (7)(a), (b), and (c), would still contribute unacceptable stress to the protected species, critical habitat of those species, or these species of concern;

(f) submit the application information required in 40 CFR 122.21(r) and ARM 17.30.1212(2);

(g) implement the monitoring requirements specified in 40 CFR 125.87; and

(h) implement the recordkeeping requirements in 40 CFR 125.88.

(8) The owner or operator of a new facility that will withdraw equal to or greater than 2 MGD and less than ten MGD, and that chooses not to comply with (7), shall comply with either the requirements of (9) or the following:

(a) design and construct each cooling water intake structure at the facility to a maximum through-screen design intake velocity of 0.5 feet per second;

(b) design and construct the cooling water intake structure at the facility such that the total design intake flow from all cooling water intake structures at the facility meets the following requirements:

(i) for cooling water intake structures located in a freshwater river or stream, the total design intake flow must be no greater than five percent of the source water annual mean flow;

(ii) for cooling water intake structures located in a lake or reservoir, the total design intake flow must not disrupt the natural thermal stratification or turnover pattern, where present, of the source water except in cases where the disruption is determined to be beneficial to the management of fisheries for fish and shellfish by any fishery management agency;

(c) select and implement design and construction technologies or operational measures for minimizing the impingement mortality of fish and shellfish if:

(i) there are threatened, endangered, or otherwise protected federal, state, or tribal species, or critical habitat for these species, within the hydraulic zone of influence of the cooling water intake structure;

(ii) based on information submitted by any fishery management agency or other relevant information, there are migratory and/or sport or commercial species of impingement concern to the department that pass through the hydraulic zone of influence of the cooling water intake structure; or

(iii) it is determined by the department, based on information submitted by any fishery management agency or other relevant information, that the proposed facility, after meeting the technology-based performance requirements in (8)(a) and (b), would still contribute unacceptable stress to the protected species, critical habitat of those species, or species of concern;

(d) select and implement design and construction technologies or operational measures that minimize entrainment of entrainable life stages of fish and shellfish;

(e) submit the application information required in 40 CFR 122.21(r) and ARM 17.30.1212(2)(b), (c), (d);

(f) implement the monitoring requirements specified in 40 CFR 125.87; and

(g) implement the recordkeeping requirements specified in 40 CFR 125.88.

(9) The owner or operator of a new facility that will withdraw equal to or greater than two MGD, and that chooses not to comply with (7) or (8), shall comply with the following:

(a) demonstrate to the department that the technologies employed will reduce the level of adverse environmental impact from the cooling water intake structure located at the facility to a level comparable to that which would be achieved if the facility implemented the requirements of (7)(a) and

(b). This demonstration must include a showing that the impacts to fish and shellfish, including important forage and predator species, within the watershed will be comparable to those that would result if the facility implemented the requirements of (7)(a) and (b). This showing may include consideration of impacts other than impingement mortality and entrainment, including measures that will result in increases in fish and shellfish, but it must demonstrate comparable performance for species that the department identifies as species of concern. In identifying such species, the department may consider information provided by any fishery management agency along with data and information from other sources;

(b) design and construct the cooling water intake structure such that the total design intake flow from all cooling water intake structures at the facility meet the following requirements:

(i) for cooling water intake structures located in a freshwater river or stream, the total design intake flow must be no greater than five percent of the source water annual mean flow; and

(ii) for cooling water intake structures located in a lake or reservoir, the total design intake flow must not disrupt the natural thermal stratification or turnover pattern, where present, of the source water except in cases where the disruption is determined to be beneficial to the management of fisheries for fish and shellfish by any fishery management agency;

(c) submit the application information required in 40 CFR 122.21(r) and ARM 17.30.1212(3);

(d) implement the monitoring requirements specified in 40 CFR 125.87; and

(e) implement the recordkeeping requirements specified in 40 CFR 125.88.

(10) In addition to the technology-based requirements of (7), (8), and (9), the owner or operator of a new facility must comply with any more stringent requirements relating to the location, design, construction, and capacity of a cooling water intake structure or monitoring requirements that the department determines are reasonably necessary to comply with applicable water quality standards adopted by the department pursuant to 75-5-301 and 75-5-303, MCA.

(11) The department adopts and incorporates by reference the following federal regulations as part of the MPDES:

(a) 40 CFR 125.87 (July 1, 2010), which sets forth monitoring requirements for new facilities with cooling water intake structures;

(b) 40 CFR 125.88 (July 1, 2010), which sets forth record and reporting requirements for new facilities with cooling water intake structures; and

(c) 40 CFR 122.21(r) (July 1, 2010), which sets forth application requirements for new facilities with cooling water intake structures.

(d) Copies of these federal regulations may be obtained from the Department of Environmental Quality, Water Protection Bureau, P.O. Box 200901, Helena, MT 59620.

Authorizing statute(s): 75-5-305, 75-5-401, MCA

Implementing statute(s): 75-5-305, 75-5-401, MCA

History: NEW, 2011 MAR p. 2131, Eff. 10/14/11; AMD, 2024 MAR p. 257, Eff. 2/10/24.