



ADMINISTRATIVE RULES OF MONTANA



36.16.105B APPLICATION CONTENT - DETERMINATION OF AMOUNT

- (1) The amount of water for the reservation being sought must be expressed in terms of volume, rate, and period of use. An application shall contain an explanation of the methods and assumptions used to calculate the amount of water to be reserved. The firm yield of any proposed reservoir, as required in ARM 36.16.106(1)(a), shall be considered when determining the desired amount. Where an applicant is already served by existing projects, the total amount requested shall take into account the cost-effectiveness of increasing water-use efficiencies of the existing projects.
 - (a) The amount of water for municipal uses must be established by:
 - (i) identifying the historical peak daily use, the historical peak annual use, and the current per capita water use;
 - (ii) describing population growth projections or other assumptions underlying the application for additional water in the proposed local service area;
 - (iii) determining future peak daily use and future total and per capita use consistent with the assumptions described in (ii); and
 - (iv) determining the additional amount of water required to be reserved based on the information provided in (i), (ii), and (iii), in terms of volume, rate and period of use.
 - (b) The amount of water for future full-service and supplemental irrigation uses must be determined on the basis of monthly crop irrigation requirements, conveyance and on-farm delivery system efficiencies, and the acreage of irrigable land to be served.
 - (i) Irrigable lands shall include those lands as defined in ARM 36.16.102(15) for which landowners have expressed an interest in developing new or supplemental irrigation.
 - (ii) Interest may be determined from a survey of all potential irrigators in the area that would be affected by the proposed reservation; or by other methods acceptable to the department.
 - (iii) The following lands may only be included in an application if the application also includes an explanation as to how landowner interest in developing irrigation on these lands was determined:
 - (A) lands for which no survey of landowners was taken;
 - (B) lands to which no response to the survey was received; and/or
 - (C) lands to which a negative response to the survey was received.

- (c) The amount of water for future industrial uses must be determined on the basis of estimated water requirements for the proposed industrial process as reflected by the preliminary design plans required in ARM 36.16.106.
 - (d) The amount of water for hydroelectric generation uses must be determined on the basis of preliminary estimates of head (feet), generating capacity (megawatts), and generating facility design as required in ARM 36.16.106.
 - (e) The amount of water for other diversionary uses must be calculated using a methodology approved by the department for determining water requirements.
 - (f) The amount of water for instream uses such as water quality, recreation, and fish and wildlife, must be determined using methodologies that estimate the amount of water needed to maintain instream benefits at the applicants' desired level. A justification for selecting the methodology used must be presented, including a literature review on the chosen methodology. Where such a methodology indicates a range of flows in a specified river reach, the applicant shall present the factors considered in selecting the requested flow.
- (2) An analysis of the physical availability of flows or aquifer yields must be provided. The department may, upon written request, assist in the design of this analysis subject to available budget and personnel.
- (a) For gaged streams where there is a record sufficient to identify long-term hydrologic conditions, the physical availability of flows on a monthly basis must be demonstrated using available water resources data. Statistical information on streamflows must include monthly means and 20th, 50th, and 80th percentile exceedance frequency flows. Consideration shall be given to the need for adjusting flows to a prescribed level of development.
 - (b) For drainages in which gaging records are not sufficient or available, monthly flows must be calculated using a flow estimation technique approved by the department.
 - (c) For applications involving the use of ground water, estimates of aquifer supplies must be based on information collected from the aquifer(s) involved.
 - (i) Where available, descriptions and maps of pertinent hydrologic information, including but not limited to aquifer extent, stratigraphic relationships, and aquifer transmission capability shall be presented.
 - (ii) Where this information is not available, a study plan must be presented in the application showing steps that will be taken to develop the information.

Authorizing statute(s): 85-2-113, MCA

Implementing statute(s): 85-2-316, 85-2-331, 85-2-605, MCA

History: NEW, 1986 MAR p. 1584, Eff. 9/26/86; AMD, 1988 MAR p. 2396, Eff. 11/11/88; AMD, 1994 MAR p. 1297, Eff. 5/13/94; AMD, 2015 MAR p. 1909, Eff. 10/30/15.