

Appendix A:

Administrative Rules of Montana (ARM) [Floodplain Management]

36.15.601 USES ALLOWED WITHOUT PERMITS

(1) The following open space uses shall be allowed without a permit anywhere within the designated floodway provided that they are not prohibited by any other ordinance or statute and provided that they do not require structures other than portable structures, fill, or permanent storage of materials or equipment:

- (a) agricultural uses;
- (b) industrial-commercial uses such as loading areas, parking areas, and emergency landing strips;
- (c) private and public recreational uses such as golf courses, driving ranges, archery ranges, picnic grounds, boat-launching ramps, swimming areas, parks, wildlife management and natural areas, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, and hiking and horseback riding trails;
- (d) forestry, including processing of forest products with portable equipment; and
- (e) residential uses such as lawns, gardens, parking areas, and play areas.

(2) In addition to the uses specified in the preceding subsection, the following uses and their accessories do not in the judgment of the board endanger health or safety or cause increased flood heights and shall thus be allowed without a permit in the designated floodway:

- (a) irrigation and livestock supply wells provided that they are located at least 500 feet from domestic water supply wells; and
- (b) fences, except permanent fences crossing channels.

History: Sec. [76-5-208](#) and [76-5-406](#), MCA; [IMP](#), Sec. [76-5-401](#), Sec. [76-5-405](#), and [76-5-406](#), MCA; [NEW](#), Eff. 9/4/74; [AMD](#), 1989 MAR p. 1665, Eff. 10/27/89.

36.15.602 USES REQUIRING PERMITS

In addition to the uses allowed under ARM [36.15.601](#), the following artificial obstructions may be permitted within the designated floodway subject to the issuance of a permit by the permit issuing authority under the conditions set forth in this rule and ARM [36.15.603](#) and [36.15.604](#):

- (1) excavation of material from pits or pools provided that:
 - (a) a buffer strip of undisturbed land of sufficient width to prevent flood flows from channeling into the excavation is left between the edge of the channel and the edge of the excavation;
 - (b) the excavation meets all applicable laws and regulations of other local and state agencies; and
 - (c) excavated material is stockpiled outside the designated floodway;
- (2) railroad, highway, and street stream crossings provided that the crossings are designated to offer minimal obstruction to flood flow;
- (3) limited filling for highway, street, and railroad embankments not associated with stream crossings provided that:
 - (a) reasonable alternative transportation routes outside the designated floodway are not available; and

- (b) such floodway encroachment is located as far from the stream channel as possible;
 - (4) Buried or suspended utility transmission lines provided that:
 - (a) suspended utility transmission lines are designed such that the lowest point of the suspended line is at least 6 feet higher than the elevation of the base flood;
 - (b) towers and other appurtenant structures are designed and placed to withstand and offer minimal obstruction to flood flows; and
 - (c) utility transmission lines carrying toxic or flammable materials are buried to a depth at least twice the calculated maximum depth of scour for the base flood. The maximum depth of scour may be determined from any of the accepted hydraulic engineering methods, but the final calculated figure shall be subject to approval by the permit issuing authority;
 - (5) storage of materials and equipment provided that:
 - (a) the material or equipment is not subject to major damage by flooding and is properly anchored to prevent flotation or downstream movement; or,
 - (b) the material or equipment is readily removable within the limited time available after flood warning. Storage of flammable, toxic, or explosive materials shall not be permitted;
 - (6) domestic water supply wells provided that:
 - (a) they are driven or drilled wells located on ground higher than surrounding ground to assure positive drainage from the well;
 - (b) well casings are watertight to a distance of at least 25 feet below the ground surface;
 - (c) water supply and electrical lines have a watertight seal where the lines enter the casing;
 - (d) all pumps and electrical lines and equipment are either of the submersible type or are adequately floodproofed; and
 - (e) check valves are installed on main water lines at wells and at all building entry locations;
 - (7) buried and sealed vaults for sewage disposal in recreational areas provided that they meet applicable laws and standards administered by the department of health and environmental sciences;
 - (8) Public or private campgrounds provided that:
 - (a) access roads require only limited fill and do not obstruct or divert flood waters; and,
 - (b) no dwellings or permanent mobile homes are allowed;
 - (9) structures accessory to the uses permitted in this subsection such as boat docks, marinas, sheds, permanent fences crossing channels, picnic shelters and tables, and toilets provided that:
 - (a) the structures are not intended for human habitation;
 - (b) the structures will have a low flood damage potential;
 - (c) the structures will insofar as possible be located on ground higher than the surrounding ground and as far from the channel as possible;
 - (d) the structures will be constructed and placed so as to offer a minimal obstruction to flood flows;
 - (e) the structures will be firmly anchored to prevent flotation; and,
 - (f) service facilities within these structures such as electrical, heating, and plumbing facilities are floodproofed in accordance with ARM [36.15.901](#) through [36.15.903](#);
 - (10) all other artificial obstructions not specifically listed in this subsection or in ARM [36.15.606](#), not allowed under ARM [36.15.601](#), and not prohibited under ARM [36.15.605](#).
- History: Sec. [76-5-208](#), MCA; [IMP](#), Sec. [76-5-404](#) through [76-5-406](#), MCA; [NEW](#), Eff. 9/4/74; [AMD](#), 1989 MAR p. 1665, Eff. 10/27/89.

[36.15.603](#) PERMITS FOR WATER DIVERSIONS

(1) As provided in the Montana Water Use Act of 1973, sections [85-2-302](#) and [85-2-402](#), MCA, all new surface water diversions and changes in place of diversion after July 1, 1973, require permits or approval, respectively, from the department. Within designated floodways, the department shall review each proposed diversion and change in place of diversion to determine if flood flows may be affected.

(2) If it appears that a proposed diversion or change in place of diversion may significantly affect flood flows, the department may require the applicant to provide additional information and to apply for a permit with the permit issuing authority under Title 76, chapter 5, MCA, as amended.

(3) A permit under Title 76, chapter 5, MCA, as amended, shall not be granted if in the judgment of the permit issuing authority:

(a) the proposed diversion will increase the upstream elevation of the base flood a significant amount (0.5 of a foot or as otherwise determined by the permit issuing authority) ;

(b) the proposed diversion is not designed and constructed to minimize potential erosion from a base flood; and,

(c) any permanent diversion structure crossing the full width of the stream channel is not designed and constructed to safely withstand up to a base flood.

History: Sec. [76-5-208](#), MCA; [IMP](#), Sec. [76-5-404](#) through [76-5-406](#), MCA; [NEW](#), Eff. 9/4/74; [AMD](#), 1989 MAR p. 1665, Eff. 10/27/89.

36.15.604 MINIMUM CRITERIA FOR PERMITS

(1) In addition to the requirements of ARM [36.15.602](#) and [36.15.603](#), a permit shall not be approved for new construction, substantial improvement, or alteration of an artificial obstruction under this rule if it will increase the upstream elevation of the base flood 0.5 of a foot or as otherwise determined by the permit issuing authority or significantly increase flood velocities.

History: Sec. [76-5-208](#), MCA; [IMP](#), Sec. [76-5-404](#) through [76-5-406](#), MCA; [NEW](#), Eff. 9/4/74; [AMD](#), 1989 MAR p. 1665, Eff. 10/27/89.

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36.15.605 PROHIBITED USES

(1) The following artificial obstructions are prohibited within the designated floodway except as allowed by permit under ARM [36.15.602](#) through [36.15.604](#) and ARM [36.15.606](#):

(a) a building for living purposes or place of assembly or permanent use by human beings;

(b) a structure or excavation that will cause water to be diverted from the established floodway, cause erosion, obstruct the natural flow of water, or reduce the carrying capacity of the floodway;

(c) the construction or permanent storage of any object subject to floatation or movement during flood level periods.

(2) The following artificial obstructions are also prohibited within the designated floodway:

(a) mobile homes and manufactured homes;

(b) commercial buildings;

(c) solid and hazardous waste disposal and individual or multiple family sewage

disposal systems;

(d) storage of toxic, flammable, hazardous, or explosive materials.

History: Sec. [76-5-208](#), MCA; [IMP](#), Sec. [76-5-403](#) and [76-5-406](#), MCA; [NEW](#), Eff. 9/4/74; [AMD](#), 1989 MAR p. 1665, Eff. 10/27/89.

36.15.606 PERMITS FOR FLOOD CONTROL WORKS

(1) Since structural flood control works often significantly obstruct and affect floodway flow capacity, the following flood control measures shall be allowed within designated floodways subject to the issuance of a permit by the permit issuing authority and certification by a registered professional engineer of compliance with the conditions set forth in this rule:

(a) Flood control levees and floodwalls if:

(i) the proposed levees and floodwalls are designed and constructed to safely convey the base flood;

(ii) the cumulative effect of the levees and floodwalls combined with allowable flood fringe encroachments does not increase the unobstructed elevation of the base flood more than 0.5 of a foot at any point;

(b) riprap, except that which is hand placed, if:

(i) the riprap is designed to withstand the base flood;

(ii) the riprap does not increase the elevation of the base flood;

(iii) the riprap will not increase erosion upstream, downstream, or across stream from the riprap site;

(c) channelization projects if they do not significantly increase the magnitude, velocity, or elevation of the flood;

(d) dams provided that:

(i) they are designed and constructed in accordance with approved safety standards, and the Montana Dam Safety Act;

(ii) they will not increase flood hazards downstream either through operational procedures or improper hydrologic design.

(2) The permit issuing authority may establish either a lower or higher permissible increase in the elevation of the base flood than that established in subsection (1) (a) (ii) for individual levee projects based on consideration of the following criteria:

(a) the proposed levees and floodwalls, except those to protect agricultural land only, are constructed at least 3 feet higher than the elevation of the base flood;

(b) the estimated cumulative effect of other reasonably anticipated future permissible uses;

(c) the type and amount of existing flood prone development in the affected area;

(d) no detrimental impact occurs to existing or foreseeable development.

History: Sec. [76-5-208](#), MCA; [IMP](#), Sec. [76-5-404](#) through [76-5-406](#), MCA; [NEW](#), Eff. 9/4/74; [AMD](#), 1989 MAR p. 1665, Eff. 10/27/89.

36.15.701 ALLOWED USES

(1) All uses allowed in the designated floodway without a permit under ARM [36.15.601](#) shall also be allowed without a permit in the flood fringe.

(a) In addition, individual or multiple family subsurface sewage disposal systems are allowed only when they are reviewed and approved under laws and regulations administered by the department of health and environmental sciences or the local health board.

(2) All uses allowed in the designated floodway subject to the issuance of a permit under ARM [36.15.602](#) through [36.15.604](#) and ARM [36.15.606](#) shall also be allowed in the flood fringe subject to the issuance of a permit.

(3) In addition, structures including, but not limited to residential, commercial, and industrial structures, and suitable fill shall be allowed by permit from the permit issuing authority within the flood fringe subject to the following conditions and the requirements of ARM [36.15.702](#) and [36.15.901](#) through [36.15.903](#):

(a) Such structures or fill must not be prohibited by any other statute, regulation, ordinance, or resolution;

(b) Such structures or fill must be compatible with local comprehensive plans, if any;

(c) Roads, streets, highways, and rail lines shall be designed to minimize increases in flood heights. Where failure or interruption of transportation facilities would result in danger to the public health or safety, the facilities shall be located 2 feet above the elevation of the base flood;

(d) Public or private structures and facilities for liquid or solid waste treatment and disposal must be floodproofed to insure that no pollutants enter flood waters. These facilities must be allowed and approved under laws and standards administered by the department of health and environmental sciences prior to any approval given by the permit issuing authority; and

(e) Agricultural structures that have a low flood damage potential such as sheds, barns, shelters, and hay and grain storage structures must meet the requirements of ARM [36.15.602](#)(9).

History: Sec. [76-5-208](#), MCA; [IMP](#), Sec. [76-5-402](#), [76-5-404](#) through [76-5-406](#), MCA; [NEW](#), Eff. 9/4/74; [AMD](#), 1989 MAR p. 1665, Eff. 10/27/89.

36.15.703 PROHIBITED USES

The following artificial obstructions and nonconforming uses are prohibited within the flood fringe:

(1) solid and hazardous waste disposal; and

(2) storage of toxic, flammable, hazardous, or explosive materials. Storage of petroleum products may be allowed by permit if stored on compacted fill at least 2 feet above the elevation of the base flood and anchored to a permanent foundation that is properly anchored to the ground.

History: Sec. [76-5-208](#), MCA; [IMP](#), Sec. [76-5-404](#) through [76-5-406](#), MCA; [NEW](#), Eff. 9/4/74; [AMD](#), 1989 MAR p. 1665, Eff. 10/27/89.

36.15.801 ALLOWED USES WHERE FLOODWAY NOT DESIGNATED OR NO FLOOD ELEVATIONS

(1) For those watercourses or drainways in which there is a designated floodplain but not a designated floodway or where no flood elevations are available, all uses allowed in a designated floodway under ARM [36.15.601](#) without a permit shall also be allowed without a permit in such designated floodplain.

(2) All other uses within the designated floodplain shall require permits from the permit issuing authority. The following conditions insofar as each is applicable shall be attached to each permit approval:

(a) If the elevation of the base flood is available, residential structures must be built on compacted fill as specified in ARM [36.15.702](#)(1). If such elevation is not available, the highest known historical flood elevation may be used to establish fill heights;

(b) If the elevation of the base flood is available, commercial and industrial structures must meet the flood proofing requirements set forth in ARM [36.15.702\(2\)](#) . If such elevation is not available, the highest known historical flood elevation may be used to establish flood proofing heights;

(c) Proposed structures must be anchored to prevent flotation or collapse and must be located as far from stream channels as is practicable; and

(d) Sanitary sewage systems must be allowed and approved under laws and standards administered by the department of health and environmental sciences or the local health board.

(3) Where a proposed development within such designated floodplain may significantly increase flood velocities or depths, the permit issuing authority may require a permit applicant to furnish additional hydraulic and survey information before acting upon the permit application.

This information may include, but is not limited to, any of the following:

(a) valley cross sections of the watercourse and adjoining floodplain;

(b) certification by a qualified professional engineer that floodproofing measures are reasonably adequate to protect against major flood damages; or

(c) a hydrologic study documenting probable effect on upstream or downstream property owners.

(4) Permits for such proposed developments may be modified or denied if the additional information shows that proposals would increase flood damages to other properties or would cause a threat to the health or safety of its occupants.

History: Sec. [76-5-208](#), MCA; IMP, Sec. [76-5-402](#), [76-5-404](#) through 76 -5-406, MCA; NEW, Eff. 9/4/74; AMD, 1989 MAR p. 1665, Eff. 10/27/89.

36.15.702 FLOOD PROOFING FOR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL STRUCTURES

(1) The new construction, substantial improvement, and alteration of residential structures shall meet the following conditions:

(a) Residential structures shall be constructed on suitable fill with a permanent foundation such that the lowest floor (including basement) level is 2 or more feet above the base flood elevation. The suitable fill shall be at a level no lower than the base flood elevation extending 15 feet at that elevation beyond the structure in all directions. Where existing streets, utilities, lot dimensions, or additions onto existing structures, make strict compliance with this provision impossible, the permit issuing authority may authorize a lesser amount of fill or alternative flood proofing measures. Alternative flood proofing measures must, at a minimum, meet the conditions of ARM [36.15.702](#) and ARM [36.15.901](#) through [36.15.903](#).

(i) The new placement of manufactured and mobile homes must be elevated on fill with a permanent foundation as prescribed for residential structures.

(ii) Replacement manufactured and mobile homes in an existing mobile home park or subdivision may, instead of using suitable fill, be elevated on a concrete or mortared block foundation, or other suitable permanent foundation, and anchored to prevent flotation or downstream movement.

(2) The new construction, substantial improvement, and alteration of commercial and industrial structures shall be elevated on fill as prescribed for residential structures in ARM [36.15.702\(1\)](#) or flood proofed to a level no lower than 2 feet above the base flood elevation. Flood proofing shall be accomplished in accordance with ARM [36.15.901](#) through [36.15.903](#) and shall further include the following:

(a) If the structure is designed to allow internal flooding of the lowest floor, use of the floor shall be limited to such uses as parking, loading areas, and storage of equipment or materials not appreciably affected by flood water. Further, the floors and walls shall be designed and constructed of materials resistant to flooding up to an elevation of 2 or more feet above the elevation of the base flood. Structures designed to allow internal flooding shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the exit and entry of flood waters.

(b) Structures whose lowest floors are used for purposes other than parking, loading or storage of materials resistant to flooding shall be flood proofed up to an elevation no lower than 2 feet above the elevation of the base flood. Flood proofing shall include impermeable membranes or materials for floors and walls and watertight enclosures for all windows, doors, and other openings. These structures shall be designed to withstand the hydrostatic pressures and hydrodynamic forces resulting from the base flood.

(c) The new construction, substantial improvement and alteration of commercial or industrial structures floodproofed according to these requirements must be designed and flood proofing measures certified as adequate by a registered professional engineer or architect.

History: Sec. [76-5-208](#), MCA; IMP, Sec. [76-5-404](#) through [76-5-406](#), MCA: NEW, Eff. 9/4/74; AMD, 1989 MAR p. 1665, Eff. 10/27/89.

36.15.901 FLOOD PROOFING REQUIREMENTS FOR ELECTRICAL SYSTEMS

(1) All electrical service materials, equipment, and installation for uses permitted with or without a permit in a designated floodplain or floodway shall conform to the following conditions:

(a) All incoming power service equipment including all metering equipment, control centers, transformers, distribution and lighting panels, and all other stationary equipment must be located at least 2 feet above the elevation of the base flood;

(b) Portable or movable electrical equipment may be placed below the elevation of the base flood provided that the equipment can be disconnected by a single plug-and-socket assembly of the submersible type;

(c) The main power service line shall have automatically operated electrical disconnect equipment or manually operated electrical disconnect equipment located at an accessible remote location outside the designated floodplain and above the elevation of the base flood; and

(d) All electrical wiring systems installed below the elevation of the base flood shall be suitable for continuous submergence and may not contain fibrous components.

History: Sec. [76-5-208](#), MCA; IMP, Sec. [76-5-401](#) through [76-5-402](#), and Sec. [76-5-404](#) through [76-5-406](#), MCA; NEW, Eff. 9/4/74; AMD, 1989 MAR p. 1665, Eff. 10/27/89.

36.15.902 FLOODPROOFING REQUIREMENTS FOR HEATING SYSTEMS

(1) Heating systems for allowed and permitted floodplain and floodway uses shall conform to the following conditions

(a) Float operated automatic control valves must be installed in supply lines to gas furnaces so that the fuel supply is automatically shut off when flood waters reach the floor level where the furnaces are located;

(b) Manually operated gate valves that can be operated from a location above the elevation of the base flood shall also be provided in gas supply lines; and

(c) Electric heating systems must be installed in accordance with ARM [36.15.901](#).

History: Sec. [76-5-208](#), MCA; IMP, Sec. [76-5-401](#) through [76-5-402](#), and [76-5-404](#) through [76-5-406](#), MCA; NEW, Eff. 9/4/74; AMD, 1989 MAR p. 1665, Eff. 10/27/89.

36.15.903 FLOOD PROOFING REQUIREMENTS FOR PLUMBING SYSTEMS

(1) Plumbing systems for allowed and permitted floodplain and floodway uses shall conform to the following conditions:

(a) Sewer lines, except those to buried and sealed vaults, must have check valves installed to prevent sewage backup into permitted structures; and

(b) All toilet stools, sinks, urinals, and drains must be located such that the lowest point of possible water entry is at least 2 feet above the elevation of the base flood.

History: Sec. [76-5-208](#), MCA; IMP, Sec. [76-5-401](#) through [76-5-402](#), and Sec. [76-5-404](#) through [76-5-406](#), MCA; NEW, Eff. 9/4/74; AMD, 1989 MAR p. 1665, Eff. 10/27/89.