

## **Intent**

This Regulation is passed in order to comply with the Montana Floodplain and Floodway Management Act (Title 76, Chapter 5 MCA) and to ensure compliance with the requirements for the continued participation by Big Horn County in the National Flood Insurance Program. These land-Use Regulations are hereby adopted and apply to all identified 100-year floodplains within the jurisdictional areas of Big Horn County, as described in 3.01 of these Regulations.

## **Statutory Authority**

Authority for counties to adopt Floodplain Regulations is provided for in 76-5-401 through 406, MCA.

## **Adoption**

This Regulation adopts the set of comprehensive land-use regulations for identified 100-year floodplains within the jurisdictional area of Big Horn County as described in 3.01 of these Regulations.

Identification of the 100-year floodplain is based on the Big Horn County Flood Insurance Study, dated March 2, 1981. All other resolutions/ordinances are hereby repealed to the extent of any inconsistencies. These Regulations hereby replace the Big Horn County Floodplain Management Ordinance, Resolution #99-10, Revised March 18, 1999.

## CHAPTER I: TITLE AND PURPOSE

### 1.01 **Title**

These Regulations shall be known and cited as the Big Horn County Floodplain Regulations. These Regulations are in accordance with exercising the authority of the laws of the State of Montana.

### 1.02 **Purpose**

To promote the public health, safety, and general welfare, to minimize flood losses in areas subject to flood hazards, and to promote wise use of the floodplain. These Regulations have been established with following purposed intended:

- A. To guide development of the 100-year floodplain areas of Big Horn County consistent with the enumerated findings by:
  - 1. Recognizing the right and need of water courses to periodically carry more than the normal flow of water;
  - 2. Participating in coordinated efforts of federal, state, and local management activities for 100-year floodplains, and
  - 3. Ensuring the regulations and minimum standards adopted, insofar as possible, balance the greatest public good with the least private injury.
- B. Specifically it is the purpose of these Regulations to:
  - 1. Restrict or prohibit uses that are dangerous to health, safety, and welfare in time of flood, or that cause increased flood heights and velocities;
  - 2. Require that uses vulnerable to floods, including public facilities, be provided with flood protection at the time of initial construction;
  - 3. Utilize information that identifies lands unsuitable for certain development purposed because of flood hazards;
  - 4. Minimize the need for rescue and relief efforts associated with flooding undertaken at the expense of the general public;
  - 5. Ensure that potential buyers are notified that property is within a 100-year floodplain and subject to the provisions of these regulations; and
  - 6. Ensure that those who occupy 100-year floodplains assume responsibility for their actions.

## CHAPTER II: DEFINITIONS

### 2.01 Definitions

Unless specifically defined below, words or phrases used in these Regulations shall be interpreted so as to give them the meaning they have in common usage and to give these regulations the most reasonable application.

A Zone -- Portions of the Special Flood Hazard Area where the principle source of flooding is runoff from rainfall, snowmelt, or a combination of both. In A zones, floodwaters may move slowly or rapidly, but waves are usually not a significant threat to buildings. Area of 100-year flood, base flood elevations and flood hazard factors not determined.

Accessory Structure -- (Appurtenant structure) A structure that is located on the same parcel of property as the principle structure and the use of which is incidental to the use of the principle structure. Accessory structure should constitute a minimal initial investment, may not be used for human habitation, and be designed to have minimal flood damage potential. Examples of accessory structures are detached garages, carports, storage sheds, pole barns, and hay sheds.

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Act -- Montana Floodplain and Floodway Management Act, 76-5-101 through 406, MCA

Addition -- (to an existing building) Any walled and roofed expansion to the perimeter of a building that is connected by a common load-bearing wall other than a firewall. Any walled and roofed addition that is connected by a firewall or is separated by independent perimeter load-bearing wall, is new construction.

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Alteration -- Any change or addition to a structure or artificial obstruction that increases its external dimension or increases its potential flood hazard.

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Appeal -- A request for a review of the Floodplain Administrator's interpretation of any provisions of these Regulations or a request for a variance.

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Area of Special Flood Hazard -- The land in the floodplain within the jurisdictional area of these Regulations that is subject to a one percent (1%) or greater chance of flooding in any given year.

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Artificial Obstruction - Development -- Any obstruction that is not natural and includes any dam, diversion, wall, riprap, embankment, levee, dike, pile, abutment, projection, revetment, excavation, channel rectification, bridge, conduit, culvert, building, refuse, automobile body, fill, or other analogous structure or matter in, along, across, or projecting into any 100-year floodplain which may

impede, retard, or alter the pattern of flow of water, either in itself or by catching or collecting debris carried by the water, or that is placed where the natural flow of water would carry the same downstream to the damage or detriment of either life or property.

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Base Flood -- A flood having a one percent (1%) chance of being equaled or exceeded in any given year. A base flood is the same as a 100-year flood.

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Base Flood Evaluation (BFE) -- The elevation shown on the Flood Insurance Rate Map (FIRM) that indicates the water surface elevation resulting from a flood that has a one percent (1%) or greater chance of being equaled or exceeded in any given year.

Basement -- That portion of a building having its floor sub-grade (below ground level) on all sides.

Board -- The Big Horn County Board of County Commissioners.

Building -- See Structure.

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Channelization Project -- The excavation and/or construction of an artificial channel for the purpose of diverting the entire flow of a stream from its established course, or a placement of a stream in a culvert or artificially lined or armored channel other than for the purpose of perpendicular road crossings.

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Community -- For the purposed of these Regulations, is the Big Horn County Board of Commissioners, whereby the Board has the authority to adopt and enforce floodplain ordinances for the area under its jurisdiction.

DEQ -- Department of Environmental Quality.

DNRC -- Department of Natural Resources and Conservation.

DPHHS -- Department of Public Health and Human Services.

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Development - - Any man-made change to improved or unimproved real estate, including but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or storage of materials or equipment.

Elevated Building -- A non-basement building built to have the lowest floor elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns (posts and piers) shear walls, or breakaway walls.

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Elevation Certificate -- Certified statement that verifies a building's elevation

information.

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Encroachment -- The advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures or development into a floodplain that may impede or alter the flow capacity of a floodplain. \_

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Establish -- To construct, place, insert, or excavate.

Executive Order 11988 (Floodplain Management) Issued by President Carter in 1977, this order requires that no federally assisted activities be conducted in or have the potential to affect identified Special Flood Hazard Areas, unless there is no practicable alternative.

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Existing Construction -- Any structure that the "start of construction" commenced before the effective date of the first Flood Insurance Rate Map.

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Existing Manufactured/Mobile Home Park or Subdivision -- A manufactured/mobile home park or subdivision where the construction of facilities for servicing the lots that the manufactured/mobile homes are to be affixed (including at a minimum the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community before the effective date of the first Flood Insurance Rate Map.

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Expansion to an Existing Manufactured/Mobile Home Park or Subdivision -- The preparation of additional sites by the construction of facilities for servicing the lots that the manufactured/mobile homes are to be affixed (including at a minimum the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

FEMA -- The Federal Emergency Management Agency

Fill -- A deposit of earth material placed by artificial means.

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Flood or Flooding -- A general and temporary condition of partial or complete inundation of normally dry lands from the overflow of a stream, or the unusual and rapid accumulation of runoff of surface waters from any source.

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Flood Hazard Boundary Map (FHBM) -- An official map of a community, issued by FEMA, where the boundaries of the area of special flood hazard have been identified as Zone A.

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Flood Insurance Rate Map (FIRM) -- An official map of a community on which FEMA has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

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Flood Insurance Study (FIS) -- The official hydraulic and hydrologic report provided by FEMA. The report contains flood profiles, as well as the FIRM, FHBM (where applicable) and the water surface elevation of the base flood.

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Floodplain -- The areas subject to these regulations, generally adjoining a stream, that would be covered by floodwater of a base flood except for sheet flood areas that receive less than 1 foot water per occurrence and are considered Zone B by FEMA. The floodplain consists of a floodway and floodway fringe.

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Floodplain Administrator -- Big Horn County Environmental Health Director/Sanitarian.

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Floodway -- The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

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Floodway Fringe -- That area of the floodplain on either side of the regulatory floodway where encroachment may be permitted without additional hydraulic and/or hydrologic analysis.

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Hardship -- (As related to variances of this Regulation) The exceptional hardship that would result from a failure to grant the requested variance. The Board requires that the variance is exceptional, unusual, and peculiar to the property involved. Mere economic or financial hardship alone is NOT exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors likewise cannot, as a rule, qualify as an exceptional hardship. All of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires the property owner to build elsewhere or put the parcel to a different use than originally intended.

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Highest Adjacent Grade -- The highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a building.

Historic Structure -- Any structure that is:

- a. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- c. Individually listed on a state inventory of historic places in states with historic preservation programs that have been approved by the Secretary of the

- Interior; or
- d. Individually listed on a local inventory historic places in communities with historic preservation programs that have been certified either:
    1. By an approved state program as determined by the Secretary of the Interior, or
    2. Directly by the Secretary of the Interior in states without approved programs.

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Hydrologic and Hydraulic Engineering Analysis -- An analysis performed by a professional engineer, registered in the State of Montana, in accordance with standard engineering practices as accepted by FEMA, used to determine flood elevations and/or floodplain boundaries.

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Letter of Map Change (LOMC) -- An official FEMA determination, by letter, to amend or revise effective Flood Insurance Rate Maps and Flood Insurance Studies. LOMC's are broken down into the following categories:

Letter of Map Amendment (LOMA)

A revision based on technical data showing that a property was incorrectly included in a designated SFHA. A LOMA amends the current effective FIRM and establishes that a specific property is not located in a SFHA.

Letter of Map Revision (LOMR)

A revision based on technical data that, usually due to manmade changes, shows changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features. One common type of LORM, a LOMR-F, is a determination concerning whether a structure or parcel has been elevated by fill above the BFE and is, therefore, excluded from the SFHA.

Conditional Letter of Map Revision (CLOMR)

A formal review and comment by FEMA as to whether a proposed project complies with the minimum NFIP floodplain management criteria. A CLOMR does not amend or revise effective Flood Insurance Rate Maps or Flood Insurance Studies.

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Levee -- A man-made embankment, usually earthen, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water to provide protection from temporary flooding.

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Levee System -- A flood protection system that consists of a levee, or levees, and associated structures, such as drainage and closure devices, that are constructed and operated in accordance with sound engineering practices. For a levee system to be recognized, the following criteria must be met. All closure devices or mechanical systems for internal drainage, whether manual or automatic, must

be operated in accordance with an officially adopted operation manual (a copy of which must be provided to FEMA by the operator when levee or drainage system recognition is being sought or revised). All operations must be under the jurisdiction of a Federal or State agency, an agency created by Federal or State law, or an agency of a community participating in the NFIP.

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Lowest Floor -- The lowest floor of the lowest enclosed area, including basement. An unfinished or flood resistant enclosure used solely for parking of vehicles, building access, or storage, in an area other than a basement, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of these Regulations.

Maintenance -- Customary and historical cleaning and removal of silt, branches, trees, sticks and other debris as well as minor repair or restoration of an existing structure or artificial obstruction to the size, shape, position and height it had immediately prior to its deterioration or destruction.

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Manufactured/Mobile Home -- A structure that is transportable in one or more sections, built on a permanent chassis, and designed to be used with or without a permanent foundation when connected to the required utilities. Recreational vehicles or travel trailers are not included.

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Manufactured/Mobile Home Park or Subdivision -- A parcel or contiguous parcels of land divided into two or more manufacture home lots for rent or sale.

Map Amendment -- A change to an effective NFIP map that results in the exclusion from the SFHA or an individual structure or a legally described parcel of land that has been inadvertently included in the SFHA (i.e., no alterations of topography have occurred since the date of the first NFIP map that showed the structure or panel to be within the SFHA.)

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Map Panel Number -- The four-digit number followed by a letter suffix assigned by FEMA on a flood map. The first four digits represent the map panel, and the map suffix represents the number of times the map panel has been revised. (The letter "A" is not used by FEMA, the letter "B" is the first revision.)

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Market Value -- The building value, excluding the land (as agreed between a willing buyer and seller), as established by what the local real estate market will bear. Market value can be established by independent certified appraisal, replacement cost depreciated by age of building (Actual Cash Value) or adjusted assessed value.

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Mean Sea Level -- The National Geodetic Vertical Datum (NGVD) of 1929 or other datum to which base flood elevations are referenced.



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Mitigation -- Sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects. The purpose of mitigation is twofold; to protect and structures, and to minimize the costs of disaster response and recovery.

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National Flood Insurance Program (NFIP) -- Federal program that makes flood insurance available to owners of property in participating communities nationwide through the cooperative efforts of the Federal Government and the private insurance industry.

National Geodetic Vertical Datum (NGVD) - - As corrected in 1929, is a vertical control used as a reference for establishing varying elevations within the floodplain.

Natural Obstruction -- Any rock, tree, gravel, or analogous natural matter that is an obstruction and has been located within the floodplain by a non-human cause.

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New Construction -- Any structure that “start of construction” commenced on or after the effective date of the first floodplain management regulation adopted by the community, after the effective date of September 2, 1981. This term also includes any subsequent improvements to such a structure.

NFIP -- National Flood Insurance Program.

Non-Conforming Use -- A land use not in accordance with these Regulations.

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Obstruction -- Includes, but is not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, vegetation or other material in, along, across or projecting into any watercourse that may alter, impede, retard or change the direction and/or velocity of the flow of water, or due to its location, its propensity to snare or collect debris carried by the flow of water, or its likelihood of being carried downstream.

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Official Floodplain Maps -- The Flood Insurance Rate Maps provided by FEMA for Big Horn County, dated September 2, 1981, and any other maps or flood information adopted by the Board of County Commissioners for this purpose as designated by the Floodplain Administrator; and includes the Flood Insurance Study for Big Horn County (Community Number 300143 dated March 2, 1981).

Owner -- Any person who has dominion over, control of, or title to an obstruction or parcel of land.

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Permit Issuing Authority -- Floodplain Administrator as designated by the Big Horn County Board of Commissioners.

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Recreational Vehicle -- A vehicle that is (1) built on a single chassis; (2) 400 square feet or less when measured at the largest horizontal projections; (3) designed to be self-propelled or permanently towable by a light duty truck; and (4) designed primarily for use as temporary living quarters for recreation, camping, travel, or seasonal use and not for use as a permanent dwelling.

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Riprap -- Stone, rocks, concrete blocks, or analogous material that is placed along the banks or bed of a stream to alleviate erosion.

Special Flood Hazard Area (SFHA) -- That portion of the floodplain subject to inundation by the base flood and/or flood-related erosion hazards as shown on a FIRM or FIRM as Zone A, AE, A1 - A30, AH, AO, AR, V, VE, or V1 - V30.

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Start of Construction -- Shall include substantial improvement and means the date the floodplain permit is issued, provided that actual start of construction, repair, reconstruction, placement, or other improvement begins within 180 days of the permit issue date. The actual start means either the first placement of permanent construction of a structure (other than a mobile home) on a site, such as clearing, pouring of slabs or footings, the installation of pipes, the construction of columns or any work beyond the state of excavation. Permanent construction does not include land preparations, such as clearing, grading, and filling; nor does it include the installation of streets, and/or walkways; nor does it include the excavation for a basement, footings, piers or foundation or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not as part of the main structure. For mobile homes being placed in an existing park or subdivision, start of construction means placement of the home on the foundation.

Stream -- See Watercourse.

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Structure -- A walled and roofed building, manufacture home, a gas or liquid storage tank, bridge, culvert, dam, diversion, wall, revetment, dike, or other projection that may impede, retard, or alter the pattern of flow of water.

Subdivision - - Any division for the purposes of sale, lease or development, either on the installment plan or upon any and all other plans, terms and conditions, of any tract or parcel of land into two (2) or more lots or parcels.

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Substantial Damage -- Damage sustained by a structure where the cost of restoring the structure to its condition before damage would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

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Substantial Improvement -- Any repair, reconstruction, or improvement of a

structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either:

- a. Before the improvement or repair is started, or
- b. If the structure has been damaged, and is being restored, before the damage occurred.

For the purposes of this definition, substantial improvement is considered to occur when the first construction to any wall, ceiling, floor, or other structural part of the building commences. The term does not include:

1. Any project for improvement of a structure to comply with existing state or local health, sanitary, safety codes or regulation specifications that are solely necessary to assure safe living conditions, or
2. Any alteration of a structure listed on the National Register of Historic Places or State Inventory of Historic Places.

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Suitable Fill -- Fill material which is stable, compacted, well graded, pervious, generally unaffected by water and frost, devoid of trash or similar foreign matter, devoid of tree stumps or other organic material, and is fitting for the purpose of supporting the intended use and/or permanent structure.

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Variance -- A grant of relief from the requirements of these regulations that would permit construction in a manner otherwise prohibited by these regulations, where specific enforcement would result in undue hardship.

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Violation -- The failure of a structure or other development to be fully compliant with these regulations. A structure or other development without elevation certificate, certification by a licensed engineer or architect of compliance with these regulations, or other evidence of compliance is presumed to be in violation until such time as documentation is provided.

Watercourse - - A lake, river, creek, stream, wash, channel or other topographic feature on or over which water flows at least periodically. Watercourse includes specifically designated areas (i.e., Zone A on NFIP maps) where substantial flood damage may occur.

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100-Year Flood -- A flood having a one percent (1%) chance of being equaled or exceeded in any given year. A 100-year flood has nearly a 23 percent chance of occurring in a 25-year period. A 100-year flood is the same as a base flood.

## CHAPTER III: GENERAL PROVISIONS

### 3.01 **Jurisdictional Area**

These Regulations shall apply to all lands within the jurisdiction of Big Horn County, State of Montana, shown on the Official Floodplain Maps as being located within a 100-year floodplain district. These Regulations do not apply to any land within the exterior boundaries of the Crow or Northern Cheyenne Indian Reservations.

### 3.02 **Floodplain District Establishment**

The floodplain districts established are defined by the base flood elevations and 100-year floodplains as delineated in the Flood Insurance Study. The basis for the Flood Insurance Study is a scientific and engineering report entitled, "Flood Insurance Study, Town of Lodge Grass and Big Horn County, Montana (Unincorporated Areas)," dated March 2, 1981, with accompanying Flood Insurance Rate Maps for NFIP-FEMA Community Number 300143. The Official Floodplain Maps, together with the Flood Insurance Study are on file in the office of the Big Horn County Floodplain Administrator.

### 3.03 **Big Horn County Floodplain Administrator**

The Big Horn County Floodplain Administrator has been designated to be the Big Horn County Environmental Health Director/Sanitarian. The responsibilities of this position are outlined in Chapter IV of these Regulations.

### 3.04 **Rules for Interpretation of Floodplain District Boundaries**

The maps may be used as a guide for determining the 100-year floodplain boundary, but the exact location of the floodplain boundary shall be determined where the base flood elevation intersects the natural ground. For unnumbered A Zones and AO Zone floodplains, where there is a conflict between a mapped floodplain boundary and actual field conditions, the Floodplain Administrator may interpret the location of the 100-year floodplain boundary based on field conditions or available historical flood information.

### 3.05 **Compliance**

No structure or land use shall be located, extended, converted, or structurally altered without full compliance with the provisions of these regulations and other applicable regulations. These regulations meet the minimum floodplain development requirements as set forth by the Montana Board of Natural Resources and Conservation and the National Flood Insurance Program.

### 3.06 **Abrogation and Greater Responsibility**

It is not intended by these regulations to repeal, abrogate, or impair any existing easements, covenants, deed restrictions, or underlying zoning. However, where these regulations impose greater restrictions, the provisions of these regulations

shall prevail.

3.07 **Regulation Interpretation**

The interpretation and application of the provisions of these regulations shall be considered minimum requirements and liberally construed in favor of the governing body and not deemed a limitation or repeal of any other powers granted by State statute.

3.08 **Warning and Disclaimer of Liability**

These Regulations do not imply that areas outside the delineated floodplain boundaries or permitted land uses will always be totally free from flooding or flood damages. These regulations shall not create a liability or cause of action against Big Horn County, or any officer or employee thereof for flood damages that may result from reliance upon these Regulations.

3.09 **Severability**

If any section, clause, provision, or portion of these Regulations is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of these regulations shall not be affected thereby.

3.10 **Disclosure Provision**

All owners of property in an identified 100-year floodplain as indicated on the Official Floodplain Maps must notify potential buyers or their agents that such property is subject to the provisions of these Regulations.

## CHAPTER IV: ADMINISTRATION

### 4.01 Administration

- A. As provided in Section 3.03 of these Regulations, the Floodplain Administrator has been designated by the Board of County Commissioners, and has the responsibility of such position as outlined in these Regulations.
- B. Activities or uses that require the issuance of a permit, including the expansion or alteration of existing uses, shall not be initiated, established or undertaken until a permit has been issued by the Floodplain Administrator.
- C. The Floodplain Administrator is hereby appointed with the authority to review floodplain development permit applications, proposed uses, and construction to determine compliance with these regulations. The Floodplain Administrator shall notify all applicants that other permits may be necessary from governmental agencies from which approval may be required by federal and state law and local codes, including Section 404 of the Federal Water Pollution Control Act of 1972, 33 USC 2334, and under the provisions of the Montana Natural Streambed and Land Preservation Act.
- D. Additional Factors -- Floodplain development permits shall be granted or denied by the Floodplain Administrator on the basis of whether the proposed establishment, alteration, or substantial improvement of an artificial obstruction or non-conforming use meets the requirements of these regulations. Additional factors shall be considered for every permit application are:
  - 1. The danger to life and property due to increased flood heights, increased flood water velocities, or alterations in the pattern of flood flow caused by encroachments;
  - 2. The danger that materials may be swept onto other lands or downstream to the injury of others;
  - 3. The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination, and unsanitary conditions;
  - 4. The susceptibility of the proposed facility and its content to flood damage and the effects of such damage on the individual owner;
  - 5. The effect of the project on other properties;
  - 6. The likelihood that the structure or building will be threatened due to its proximity to the stream or potential lateral movement of the stream;

7. The effect of the project on streamwide vegetation and the stability of the stream bank;
  8. The importance of the services provided by the facility to the community;
  9. The requirement of the facility for a waterfront location;
  10. The availability of alternative locations not subject to flooding for the proposed use;
  11. The compatibility of the proposed use with existing development and anticipated development in the foreseeable future;
  12. The relationship of the proposed use to the comprehensive plan and floodplain management for the area. As provided in A.R.M. 36.15.701, the proposed use must be compatible with the comprehensive plan. In assessing compatibility, the following factors should be considered: the goals and objectives expressed by the plan, the more specific land uses recommended in the plan, the availability of services to support additional development in the project area, and whether or not the current development pattern in the project area - if different from the plan's recommended land use pattern for that area - is consistent with the plans' goals and objectives;
  13. The safety of access to property in times of flooding for ordinary and emergency services;
  14. The safety of access to property in times of flooding for ordinary and emergency services;
  15. The cumulative effect of the proposed project along with other existing projects;
  16. The project is in harmony with the purposes of these Regulations, the Montana Floodplain and Floodway Management Act, and the National Flood Insurance Program.
- E. Floodplain development permit application is considered to have been automatically granted 60 days after the date of receipt of the application by the Floodplain Administrator unless the applicant has been notified that the permit is denied, conditionally approved, or additional information pertinent to the permit review process is required.
1. Permits shall be valid for a period of one year unless a longer or shorter period is specified when the permit is issued or an extension is granted by

the Floodplain Administrator.

2. An extension must be requested before expiration of the permit.
- F. The Floodplain Administrator shall adopt such administrative procedures as may be necessary to efficiently administer the provision of these regulations.
  - G. The Floodplain Administrator shall maintain such files and records as may be necessary to document nonconforming uses, base flood evaluations, floodproofing and elevation certifications, fee receipts, the issuance of permits, agenda, minutes, records of public meetings, and any other matters related to floodplain management in Big Horn County. Such files and records shall be open for public inspection. In matters of litigation, the Big Horn County attorney may restrict access to specific records.
  - H. The Floodplain Administrator may require whatever additional information is necessary to determine whether the proposed activity meets the requirements of these regulations. Additional information may include hydraulic calculations assessing the impact on base flood elevations or velocities; level survey; or certification by a registered land surveyor, professional engineer, or licensed architect that the requirements of these regulations are satisfied.
  - I. Upon receipt of an application for a permit or variance, the Floodplain Administrator shall prepare a notice containing the facts pertinent to the application and shall publish the notice at least once in a newspaper of general circulation in the area. Notice shall also be served by first-class mail upon adjacent property owners and the DNRC Floodplain Management Section. The notice shall provide a reasonable period of time, not less than 15 days, for interested parties to submit comments on the proposed activity.
  - J. Copies of all permits granted must be sent to the Department of Natural Resources and Conservation in Helena, Montana.
  - K. Notification by the Floodplain Administrator must be made to adjacent communities, the Floodplain Management Section (DNRC), and FEMA prior to any alteration or relocation of a stream, having a designated floodplain to assure that the flood-carrying capacity within the altered or relocated portion of any stream must be maintained. Erosion control measures shall be incorporated to ensure stability of altered channels and stream banks.

#### 4.02 **PERMIT APPLICATIONS**

- A. Permit applicants shall be required to furnish the following information as deemed necessary by the Floodplain Administrator for determining the suitability of the particular site for the proposed use:



1. Plans in duplicate drawn to scale (including dimensions) showing the nature, location, and elevation of the lot; existing and proposed structure locations; fill, storage, or materials site; flood-proofing measures; means sea level elevation of the first floor of proposed structures; and location of the channel.
  2. A plan view of the proposed development indicating external dimensions of structures, street or road finished grade elevations, well locations, individual sewage treatment and disposal sites, excavation and/or fill quantity estimates, and site plan and/or construction plans.
  3. Specifications for flood-proofing, fillings, excavating, grading, riprapping, storage of materials, and location of utilities.
  4. A professional engineer's or registered architect's design calculations and certification that the proposed activity has been designed to be in compliance with these regulations.
  5. Certification of flood-proofing and/or elevation shall be provided on a standard form available from the floodplain administrator.
  6. Additional information specifically requested by the Floodplain Administrator that is necessary to ensure compliance with these Regulations.
- B. An applicant that has been granted a permit is required to furnish the following at the time of an on-site conformance inspection to determine compliance with permit specifications, conditions, and these Regulations.
1. Certification by a registered professional engineer or licensed land surveyor of the actual mean sea level elevation of the lowest floor (including basement) of all new, altered, or substantially improved buildings.
  2. If flood-proofing techniques were utilized for the above described structure then, the mean sea level elevation to which the flood-proofing was accomplished must be similarly certified.
  3. In the case of flood control works, certification from a registered professional engineer or licensed land surveyor is required, stating that the structure meets the requirements of the floodplain regulations. Certification must be made where anchoring is required.
  4. Certification shall also be required, for artificial obstructions other than buildings, verifying that the activity was accomplished in accordance with these Regulations and the design plans submitted with the application for the permit activity. This certification may be waived by the Floodplain Administrator if it can be clearly ascertained by a site inspection that the

activity was accomplished in accordance with these Regulations.

5. Certification of flood-proofing and/or elevation shall be provided on a standard form available from the Floodplain Administrator.
- C. If the Floodplain Administrator determines, in the course of reviewing the permit application submittal, that a technical review is needed to insure compliance with these Regulations, the cost shall be borne by the applicant.

#### 4.03 **Emergency Waiver**

- A. Emergency repair and replacement of severely damaged public transportation facilities, public water and sewer facilities, and flood control works may be authorized. Floodplain development permit requirements may be waived if:
1. Upon written notification and prior to the emergency repair and/or replacement, the Floodplain Administrator determines that an emergency condition exists warranting immediate action; and
  2. The Floodplain Administrator agrees upon the nature and type of proposed emergency repair and/or replacement.
- B. Authorization to undertake emergency repair and replacement work may be given verbally if the Floodplain Administrator feels that such a written authorization would unduly delay the emergency work. Such verbal authorization must be followed by a written authorization describing the emergency condition, and the type of emergency work agreed upon, and stating that a verbal authorization had been previously given.

#### 4.04 **Review-Variations-Appeals**

- A. The Big Horn County Board of Commissioners shall serve as the Big Horn County Floodplain Regulation Board of Appeals.
- B. Appeals from any decision made by the Floodplain Administrator may be made to the Big Horn County Floodplain Regulation Board of Appeals within 30 days of such decision by an aggrieved person or persons, jointly or separately aggrieved. Requests for variances from these Regulations may be brought to the Big Horn County Floodplain Regulation Board of Appeals at any time.
- C. After receiving a request for a variance or an appeal, but before acting on the same, the Big Horn County Floodplain Regulation Board of Appeals shall hold a public hearing on the application. Notice of the time and date of the hearing shall be given by publication in a newspaper of general circulation in the County not less than fifteen (15) days prior to the date of the hearing.

- D. The Big Horn County Floodplain Regulation Board of Appeals may, by variance, grant a permit that is not in compliance with the minimum standards contained in these Regulations according to the following procedures:
1. Variances shall not be issued for any activity that will cause more than a one-half ( $\frac{1}{2}$ ) foot increase in the base flood elevation. The Floodplain Administrator may establish an increase of more than one-half foot if there will not be an increase flood hazard to existing or foreseeable development.
  2. Variances shall only be issued upon:
    - a. A showing of good and sufficient cause;
    - b. A determination that refusal of a permit due to exceptional circumstances would cause a unique or undue hardship on the applicant or community involved;
    - c. A determination that the granting of a variance will not result in increased flood hazards, present additional threats to public safety, be an extraordinary public expense, create nuisances, cause fraud, victimize the public, or conflict with existing state and local laws;
    - d. A determination that the proposed use would be adequately flood-proofed;
    - e. A determination that a responsible alternate location outside the floodplain is not available;
    - f. A determination that the variance requested is the minimum necessary to afford relief, considering the flood hazard; and
    - g. Approval by the Montana Department of Natural Resources and Conservation is required prior to the Big Horn County Floodplain Regulation Board of Appeals approval of the permit application that is in variance to these Regulations.
  3. Approved variances shall be issued in writing from the Big Horn County Floodplain Regulation Board of Appeals and shall notify the applicant that:
    - a. A specific variance is granted, along with any conditions attached therein;
    - b. The issuance of a variance to construct a structure below the 100-year floodplain elevation will result in increased premium rates for flood insurance; and

- c. Such construction below the 100-year flood elevation increases risks to life and property.
  - d. The Floodplain Administrator shall maintain records of the variance notification, variance actions, jurisdiction for their issuance, and forward copies of all variances, including actions to the Montana Department of Natural Resources and Conservation and the Federal Emergency Management Agency.
- E. Appeal of any decision of the Permit Issuing Authority, its officers, or agencies may be taken by a aggrieved person or persons, jointly or separately, to a court of record.

#### 4.05 **Fees**

Processing review fees are set by the Board of County Commissioners. A non-refundable processing fee is required for processing each permit and/or variance applications to defray the cost of providing public notice, processing/reviewing permits, variances, and performing sufficient field inspections to insure compliance with these Regulations. The review fees must be made payable to the Big Horn County Treasurer.

A consultant fee may be assessed for a professional engineer, land surveyor or other professional consultant that the County may need to utilize during the review process. The consultant's fee will only be assessed when it is necessary to ascertain the adequacy or accuracy of the technical information submitted that is beyond the capabilities of the Floodplain Administrator.

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#### 4.06 **Violation Notice**

\_\_\_\_\_The Floodplain Administrator shall bring any violation of these Regulations to the attention of the local governing body; its legal council; and the Montana Department of Natural Resources and Conservation.

#### 4.07 **Compliance**

\_\_\_\_\_An applicant is required to submit certification by a registered professional engineer, architect, land surveyor or other qualified person designated by the Floodplain Administrator, that finished fill and lowest floor elevations, flood-proofing, hydraulic design, or other flood protection measures were accomplished in compliance with these Regulations. Any use, arrangement, or construction not in compliance with that authorized by permit shall be deemed a violation of these Regulations and punishable as provided in Section 4.08 or enforced as provided in MCA 76-5-109.

#### 4.08 **Penalties**

Violation of the provisions of these Regulations or failure to comply with any of the requirements, including failure to obtain permit approval prior to development of flood prone lands and conditions and safeguards established shall constitute a misdemeanor. Any person who violates these regulations or fails to comply with any of its requirements shall, upon conviction, be fined not more than \$100 or imprisoned in jail for not more than 10 days or both. Each day's continuance of a violation shall be deemed a separate and distinct offense. Nothing herein contained shall prevent Big Horn County from taking such other lawful action as is necessary to prevent or remedy any violation of these Regulations or to mitigate true damages caused by any violation.

#### 4.09 **Public Notice**

After receiving a floodplain request but before acting on the same, the Floodplain Administrator shall provide notice as required that will include publishing notice in a legal newspaper with a period of not less than fifteen (15) days to receive comment regarding the proposed activity. At the end of the public comment period, the Floodplain Administrator shall either issue or deny the floodplain permit.

#### 4.10 **Emergency Preparedness Planning**

In formulating community development goals, the community shall consider the development of a plan for evacuating residents of all manufactured home parks or subdivision located within flood prone areas. This plan should be developed, filed with, and approved by appropriate community emergency management authorities.

## CHAPTER V: SPECIFIC STANDARDS

### 5.01 Application

\_\_\_\_\_ The minimum floodplain development standards listed in this chapter apply to the 100-year floodplain that correspond to the numbered A or AE zones depicted on the Flood Insurance Rate Maps.

### 5.02 100-Year Floodplain

- A. **Uses Allowed Without Permits.** The following open-space uses shall be allowed without a permit within the 100-year floodplain provided that such uses conform to the provisions of Chapter VII of these regulations; are not prohibited by any other ordinances, resolution, or statute; and do not require fill, excavation, permanent storage of materials, or equipment or structures other than portable structures;
1. Agricultural uses;
  2. Accessory uses such as loading and parking areas, or emergency landing strips associated with industrial and commercial facilities;
  3. Private and public recreational uses such as golf courses, driving ranges, archery ranges, picnic grounds, boat-launching ramps, parks, wildlife management and natural areas, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, and hiking or horseback riding trails.
  4. Forestry, including processing of forest products with portable equipment;
  5. Residential uses such as lawns, gardens, parking areas, and play areas;
  6. Irrigation and livestock supply wells, provided that they are located at least 500 feet from domestic water supply wells;
  7. Fences, except permanent fences crossing channels; and
  8. Recreational vehicles provided that they be on the site for fewer than 180 consecutive days or be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system with wheels intact, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

9. 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 Public Health and Human Services, the Department of Environmental Quality, or the local Health Board.

B. **Uses Requiring Permits.** The following artificial obstructions and structures may be permitted in the 100-year floodplain subject to the issuance of a permit by the Floodplain Administrator:

1. Excavation of material from pits and pools provided that:
  - a. A buffer strip of undisturbed land is left between the edge of the channel and the edge of the excavation. This buffer strip must be of sufficient width to prevent flood flows from channeling into the excavation;
  - b. The excavation meets all applicable laws and regulations of other local and state agencies; and
  - c. Excavated material is disposed of or stockpiled outside the floodplain.
2. Railroad, highways, and street stream crossings provided the crossings are designed to offer minimal obstruction to flood flow. Stream crossings shall not increase the elevation of the 100-year flood more than one-half foot nor cause a significant increase in flood velocities.
3. Limited filling for highway, street, and railroad embankments not associated with stream crossings, provided that:
  - a. Reasonable alternate transportation routes outside the designated floodplain are not available; and
  - b. Such floodplain encroachment is located as far from the stream channel as possible and shall not result in a cumulative increase in base flood elevations, after allowable encroachments into the floodplain, exceeding one-half foot.
4. Buried or suspended utility transmission lines, provided that:
  - a. Suspended utility transmission lines are designed so the lowest point of the suspended line is at least 6 feet higher than the base flood elevation;
  - b. Towers and other appurtenant structures are designed and placed to withstand and minimally obstruct flood flows; and
  - c. Utility transmission lines carrying toxic or flammable materials are buried

to a depth of at least twice the calculated maximum depth of at least twice the calculated maximum depth of scour for a 100-year flood. The maximum depth of scour shall be determined by hydraulic engineering methods acceptable to the Floodplain Administrator.

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 floatation or downstream movement; or;
  - b. The material or equipment is readily movable within the limited time available after flood warning. Storage of flammable, toxic, hazardous, 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 the surrounding ground to assure positive drainage from the well;
  - b. Well casings are water tight to a distance of at least 35 feet below the ground surface;
  - c. Water supply and electrical lines have a watertight seal where the lines enter the casing;
  - d. All pumps, electrical lines, and equipment are either submersible or adequately flood-proofed; 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 they meet applicable laws and standards administered by the Montana Department of Public Health and Human Services and the Montana Department of Environmental Quality.
8. Public or private campgrounds, provided that:
  - a. Access roads require only limited fill and do not obstruct or divert flood waters; and
  - b. Recreational vehicles and travel trailers are licensed and ready for highway use. They are ready for highway use if on wheels or jacking system with wheels intact, are attached to the site with only quick



disconnect type utilities and securing devices, and have no permanently attached additions.

9. Structures accessory to the uses permitted in this section such as boat docks, marinas, sheds, picnic shelters, 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 flood-proofing standards of Chapter VII are met; and
  - e. The structures will be constructed and placed so as to offer minimal obstruction to flood flows and are anchored to prevent floatation.
10. The new construction, alterations, and substantial improvements of residential structures including manufactured homes must be constructed on suitable fill such that the lowest floor elevation (including basement) is 2 feet or more above the base flood elevation. The suitable fill shall be at an elevation no lower than the base flood elevation and shall extend for at least 15 feet, at that elevation, beyond the structure(s) in all directions;
11. The new construction, alteration, and substantial improvement of commercial and industrial structures can be constructed on suitable fill as specified in Section 5.02-B.10 of these regulations. If not constructed on fill, commercial and industrial structures must be adequately flood-proofed to an elevation no lower than 2 feet above the base flood elevation. Flood-proofing must be certified by a registered professional engineer or architect that the flood-proofing methods are adequate to withstand the flood depths, hydrodynamic and hydrostatic pressures, velocities, impact, buoyancy, and uplift forces associated with the 100-year flood.
  - a. If the structure is designed to allow internal flooding of areas below the lowest floor, use of this space shall be limited to parking, loading areas, building access, and storage of equipment or materials not appreciably affected by flood waters. The floors and walls shall be designed and constructed of materials resistant to flooding to an elevation no lower than 2 feet above the base flood elevation. Walls shall be designed to automatically equalize hydrostatic forces by allowing for entry and exit of floodwaters. Openings may be equipped with screens, louvers, valves, other coverings, or devices which permit the automatic entry and exit of floodwaters.

- b. Structures whose lowest floors are used for a purpose other than parking, loading, or storage of materials resistant to flooding shall be flood-proofed to an elevation no lower than 2 feet above the base flood elevation. 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 also be designed to withstand the hydrostatic, hydrodynamic, and buoyancy effects of a 100-year flood.
  - c. Flood-proofing of electrical, heating, and plumbing systems shall be accomplished in accordance with Chapter VII of these regulations.
12. All manufactured/mobile homes placed in the 100-year floodplain must have the chassis securely anchored to a foundation system that will resist floatation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, over-the-top or frame ties to ground anchors. The following conditions also apply:
- a. When a manufactured/mobile home is 1) altered, 2) replaced because of substantial damage as a result of a flood, 3) replaced on an individual site, the lowest floor must be elevated 2 feet above the base flood elevation. The home can be elevated on fill or raised on a permanent foundation or reinforced concrete, reinforced mortared block, reinforced piers, or other foundation elements of at least equivalent strength.
  - b. Replacement or substantial improvement of manufactured/mobile homes in an existing manufactured/mobile home park or subdivision must be raised on a permanent foundation. The lowest floor must be 2 feet above the base flood elevation. The foundation must consist of reinforced concrete, reinforced mortared block, reinforced piers, or other foundation elements of at least equivalent strength.
  - c. Manufactured/mobile homes proposed for use as commercial or industrial structures must be elevated and anchored, rather than flood-proofed, and be approved by Montana Building Codes for commercial or industrial use.
13. Structures or fill must not be prohibited by any other statute, regulation, ordinance, or resolution.
14. Structures or fill must be compatible with local comprehensive plans;
15. Roads, streets, highways, and rail lines shall be designed to minimize increase in flood heights. Where failure or interruption of transportation facilities would result in danger to the public health or safety, the facility shall be located 2 feet above the base flood elevation;

16. Agricultural structures that have a low damage potential, such as sheds, barns, shelters, and hay or grain storage structures must be adequately anchored to prevent floatation or collapse and all electrical facilities shall be placed above the base flood elevation; and
17. Recreational vehicles, if they are on the site for more than 180 consecutive days or are not ready for highway use, must meet the elevating requirements of Section 5.02-B.12.

C. **Permits for Flood Control Works.** Flood control works shall be allowed subject to the issuance of a permit by the Floodplain Administrator with the following conditions:

1. Levees and floodwalls are permitted if:
  - a. The proposed levee or floodwall is designed and constructed to safely convey a 100-year floodplain; and
  - b. The cumulative effect of the levee or floodwall combined with allowable floodplain encroachments does not increase the unobstructed base flood elevation more than one-half foot. The Floodplain Administrator may establish either a lower or higher permissible increase in the base flood elevation for individual levee projects only with concurrence from the Montana Department of Natural Resources and Conservation and the Federal Emergency Management Agency based upon consideration of the following criteria:
    1. The estimated cumulative effect of any anticipated future permissible uses; and
    2. The type and amount of existing flood-prone development in the affected area.
  - c. The proposed levee or floodwall, except those to protect agricultural land, are constructed at least 3 feet higher than the base flood elevation.
2. Riprap, except that which is hand-placed, if:
  - a. The riprap is designed to withstand a 100-year flood;
  - b. The riprap does not increase the base flood elevation;
  - c. The riprap will not increase erosion upstream, downstream, or adjacent to the riprap site; and

- d. The riprap does not consist of asphalt, other petroleum based material, concrete containing excessive amounts of iron rebar, or other material prohibited by the Montana Department of Environmental Quality.
  - 3. Channelization projects if they do not significantly increase the magnitude, velocity, or base flood elevation of the 100-year flood in the proximity of the project.
  - 4. Dams, provided that:
    - a. They are designed and constructed in accordance with the Montana Dam Safety Act and applicable safety standards; and
    - b. They will not increase flood hazards downstream, either through operational procedures or improper hydrologic/hydraulic design.
- D. **Permits for Water Diversions.** Permits for the establishment of a water diversion or change in place of diversion shall not be issued if, in the judgment of the Floodplain Administrator:
  - 1. The proposed diversion will significantly increase the upstream base flood elevation to the detriment of neighboring property;
  - 2. The proposed diversion is not designed and constructed to minimize potential erosion from a 100-year flood; and
  - 3. Any permanent diversion structure crossing the full width of the stream channel is not designed and constructed to safely withstand up to a 100-year flood.
- E. **Prohibited Uses.** The following artificial obstructions and non-conforming uses are prohibited within the 100-year floodplain:
  - 1. Solid and hazardous waste disposal; and
  - 2. Storage of highly 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 base flood elevation and anchored to a permanent foundation to prevent downstream movement.

5.03 **Requirement for Additional Hydraulic Data**

- A. A development proposed for a 100-year floodplain, where water surface elevations are available, may not significantly increase flood velocities or depths

or generally alter patterns of flood flow. The Floodplain Administrator may require a permit applicant to furnish additional hydraulic data before acting on a permit application. The data may include, but are not limited to, any of the following:

1. A hydraulic study documenting probable effect on upstream, downstream, or adjacent property owners caused by the proposed development; or
  2. The calculated increase in the 100-year flood water surface profile caused by the proposed development.
- B. Permits for such proposed development may be modified or denied if the additional information shows that the proposed use would cause an additional flood hazard to adjacent property or significantly increase flood heights. A significant increase in flood heights is one-half foot unless existing or anticipated development in the area dictates a lesser amount of allowable increase.

#### 5.04 **Shallow Flooding (AO Zones)**

- A. Shallow flooding areas are delineated as AO Zone floodplains on the Flood Insurance Rate Maps. The provisions of Section 5.02, of these regulations shall apply to any AO Zone floodplains. The depth of the 100-year flood is indicated as the depth number on the Flood Insurance Rate Maps. The 100-year flood depth shall be referenced to the highest adjacent grade or stream flow line in determining which fill or flood-proofing heights to use in applying the provisions of Section 5.02-B.10 and Section 5.02-B.11 of these regulations. In the absence of depth or elevation information, a minimum 2 foot flood depth shall be used.
- B. Floodplain Boundary Interpretation. The Floodplain Administrator shall make interpretations where needed as to the exact location of an AO Zone floodplain boundary when there is a conflict between a mapped boundary and actual field conditions. When necessary to make such an interpretation, the Floodplain Administrator may require information prepared by a certified engineer or registered land surveyor.

## CHAPTER VI: GENERAL STANDARDS

### 6.01 **Applications**

The minimum floodplain development standards listed in this chapter apply to the 100-year floodplains delineated by approximate methods and identified as unnumbered A Zones on the Flood Insurance Rate Maps.

- A. **Uses Allowed Without Permits.** All uses allowed in a 100-year floodplain, according to the provisions of Section 5.02-A of these Regulations, shall also be allowed without a permit in unnumbered A-Zone floodplains.
- B. **Uses Requiring Permits.** All uses allowed in the 100-year floodplain subject to the issuance of a permit, according to the provisions of Section 5.02-B, shall require a permit from the Floodplain Administrator for unnumbered A-Zone floodplain. Since there are no 100-year flood water surface profiles computed for A-Zone floodplains, the following conditions also apply:
1. Elevation data on the 100-year flood shall be provided for subdivision proposals according to the definitions and rules of the Montana Sanitation in Subdivisions Act, MCA 76-4 Part 1 and the rules adopted by DPHHS under this Act. These data shall be used in applying Section 5.02-B of these Regulations. Subdivision proposals shall also provide for adequate drainage to minimize potential flood hazards.
  2. Obtain, review, and reasonably utilize any 100-year flood elevation and floodway data available from federal, state, or other sources, until such data have been provided by FEMA, to enforce Section 5.02-B.10 and 5.02-B.11 of these Regulations; and
  3. The Floodplain Administrator may use historical flood elevations to determine suitable fill or flood-proofing elevations as required by Sections 5.02-B.10 and 5.02-B.11 of these Regulations;
  4. If historical flood evidence is not available, then the Floodplain Administrator shall determine, from a field review at the proposed development site, an appropriate fill or flood-proofing elevation to use in applying Sections 5.02-B.10 and 5.02-B.11 of these regulations. In the absence of depth or elevation information, a minimum two-foot flood depth shall be used; and
  5. Proposed structures must be anchored to prevent floatation or collapse and must be located as far from stream channels as practicable.
- C. **Prohibited Uses.** Those uses prohibited in the 100-year floodplain, in accordance with Section 5.02-E of these Regulations, shall also be prohibited

within the A-Zone floodplain boundaries.

- D. **Floodplain Boundary Interpretation.** The Floodplain Administrator shall make interpretations where needed as to the exact location of the unnumbered A-Zone floodplain boundary when there is a conflict between a mapped boundary and actual field conditions.

## CHAPTER VII: FLOOD-PROOFING REQUIREMENTS

### 7.01 **Certification**

If the following flood-proofing requirements are to be applied to a proposed structure, as stipulated by the Floodplain Administrator in accordance with these regulations, the methods used must be certified as adequate by a registered professional engineer or architect.

### 7.02 **Conformance**

Permitted flood-proof systems shall conform to the conditions listed below and the flood-proofing standards listed in Section 5.02-B.11 of these Regulations for commercial and industrial structures.

#### A. **Electrical Systems**

1. 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 base flood elevation;
2. Portable or moveable electrical equipment may be placed below the base flood elevation, if the equipment can be disconnected by a single submersible plug-and-socket assembly;
3. The main power service line shall have automatic or manually operated electrical disconnect equipment located at an accessible location outside the 100-year floodplain and above the base flood elevation; and
4. All electrical wiring systems installed at or below the elevation of the 100-year flood shall be suitable for continuous submergence and may not contain fibrous components.

#### B. **Heating Systems**

1. Float operated automatic control valves must be installed in gas furnace supply lines so that the fuel supply is automatically shut off when flood waters reach the floor level where the furnace is located;
2. Manually operated gate valves must be installed in gas supply lines. The gate valves must be operable from a location above the elevation of the 100-year flood.
3. Electric heating systems must be installed in accordance with the provisions of Section 7.02-A.



C. Plumbing Systems

1. Sewer lines, except those to be buried and sealed in vaults, must have check valves installed to prevent sewage backup into permitted structures; and
2. All toilet stools, sinks, urinals, and drains must be located so the lowest point of possible water entry is at least 2 feet above the elevation of the 100-year flood.

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