Floodplain Management Ordinance

{Community Name} Montana

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PREFACE

{Community Name} Participation in the National Flood Insurance Program (NFIP).
The {Community Name} participation in the National Flood Insurance Program (NFIP) is based upon a mutual agreement with FEMA. In return for the local adoption and enforcement of floodplain management regulations that meet the minimum criteria of the NFIP, the Federal Emergency Management Agency (FEMA) provides the availability of flood insurance coverage within {Community Name}. These floodplain management regulations must meet the minimum criteria of the NFIP and {Community Name} is responsible for administering and enforcing these local floodplain management requirements pursuant to the county's own authority and procedures. FEMA periodically evaluates the administration and enforcement of the floodplain management program in relation to the NFIP regulations and has the authority to impose the penalties of probation and/or suspension for {Community Name} if the overall floodplain management program is found to be inadequately administered or enforced.

The Montana Department of Natural Resources and Conservation (MTDNRC) supports the National Flood Insurance Program and serves as the state liaison with FEMA to coordinate activities and provide support, technical assistance, training, and outreach to City and County officials in the execution of their duties to identify, prevent, and resolve floodplain management issues.

It is the intent of these regulations to provide for the safety of the residents living or working along the rivers, streams & drainages in {Community Name} by adopting land uses and common sense building practices. Maps showing the established and/or documented floodplains in {Community Name} are available in the Floodplain Administrators Office.

CHAPTER 1 TITLE AND PURPOSE

1.1 TITLE

These regulations shall be known and cited as the **{Community Name}** Floodplain Ordinance. These regulations are in accordance with and exercising the authority of laws of the State of Montana, Chapter 5, Floodplain and Floodway Management, 76-5-101 through 76-5-406, Montana Code Annotated 2003, web address of: **http://dnrc.mt.us/wrd/water_op/floodplain** and following the guidance of the Code of Federal Regulations administered by the Federal Emergency Management Agency (FEMA) **http://www.access.gpo.gov/nara/cfr/waisidx_02/44cfrv1_02.html**. Rules and regulations for the NFIP can be found at **http://www.fema.gov/business/nfip/laws1.shtm**; general information for the NFIP can be found at **http://www.fema.gov/business/nfip/**.

1.2 FINDINGS OF FACT

(1) The flood hazard areas of **{Community Name}** are subject to periodic inundation, which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety and general welfare.

(2) These flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, flood proofed or otherwise protected from flood damage.

1.3 STATEMENT OF PURPOSE

It is the purpose of this ordinance to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

(1) Protect human life and health;

(2) Minimize expenditure of public money for costly flood control projects;

(3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(4) Minimize prolonged business interruptions;

(5) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;

(6) Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas; and

(7) Insure that potential buyers are notified that property is in a flood area.

1.4 METHODS OF REDUCING FLOOD LOSSES

In order to accomplish its purposes, this ordinance uses the following methods:

(1) Restrict or prohibit uses that are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;

(2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

(3) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters;

(4) Control filling, grading, dredging and other development which may increase flood damage;

(5) Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

1.5 INTENT

This {Resolution/Ordinance} 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 the **{Community Name}** in the National Flood Insurance Program. Land-use regulations which are hereby adopted are to be applied to all identified 100-year floodplains within the local jurisdiction.

1.6 STATUTORY AUTHORITY

Municipalities have authority to adopt ordinances as provided for in Section 7-1-4123, MCA to promote the general public health and welfare.

Other authority for municipalities and counties to adopt floodplain management regulations appears in Section 76-5-101 through 406, MCA.

CHAPTER 2 DEFINITIONS

2.1 DEFINITIONS

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

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

Alteration – Any change or addition to a structure that either increases its external dimensions or increases its potential flood hazard.

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

Area of Shallow Flooding - A designated AO, AH, AR/AO, AR/AH, or VO zone on the Flood Insurance Rate Map (FIRM) with a 1 percent or greater annual chance of flooding to an average depth of 1 to 3 feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Area of Special Flood Hazard – The land in the floodplain within a community subject to inundation by a one percent (1%) or greater chance of flooding in any given year, i.e., the 100 year floodplain.

Artificial Obstruction – Development – Any obstruction which 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 floodplain or floodway that may impede, retard, or change the direction of the 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 the water would carry the same downstream to the damage or detriment of either life or property.

Accessory Structure - A structure that is accessory to, or in addition to, any use that is permitted in these regulations (e.g. - a picnic shelter would be accessory to a campground). An Accessory Structure is secondary to the primary use that is permitted and complies with all other conditions imposed by these regulations and otherwise provided for by law.

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, and the terms are used interchangeably.

Base Flood Elevation (BFE) – The elevation above sea level of the base flood in relation to the North American Vertical Datum of 1988 (NAVD 88) unless otherwise specified in the flood

hazard study. Previous FIRMs may have been published in the National Geodetic Vertical Datum of 1929 (NGVD 29).

Basement - Any area of the building having its floor sub grade (below ground level) on all sides.

Building – Any walled and roofed enclosure.

Channel – The geographical area within either the natural or artificial banks of a watercourse or drain way.

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.

Designated Floodplain – A floodplain whose limits have been designated and established by order of the Department of Natural Resources and Conservation, State of Montana.

Designated Floodway – A floodway whose limits have been designated and established by order of the Department of Natural Resources and Conservation, State of Montana.

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, excavation or drilling operations or storage of equipment or materials.

Dwelling – A permanent building for human habitation, a place for living purposes.

Drain way – Any depression 2 feet or more below the surrounding land serving to give direction to a current of water less than 9 months of the year and having a bed and well-defined banks.

Elevated Building - for insurance purposes, a nonbasement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

Erosion - the process of the gradual wearing away of land masses. This peril is not per se covered under the Flood Insurance Program.

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

Existing Construction – for the purposes of determining rates, structures for which the “start of construction” commenced on or before the effective date of the {community regulations and/or flood study}. “Existing construction” may also be referred to as “existing structures.”

Existing Manufactured Home Park or Subdivision – A manufactured home park or subdivision where the construction of facilities for servicing the manufactured home lots is completed on or before the effective date of the {community regulations and/or flood study}. This includes, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads.

Expansion To An Existing Manufactured Home Park Or Subdivision - means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including 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) – The agency that manages compliance with the National Flood Insurance Program (NFIP) and provides flood hazard studies and maps.

FIRM – Flood Insurance Rate Map published by FEMA.

Flood – The water of any watercourse or drain way that is above the bank or outside the channel and banks of the watercourse or drain way.

Flood of 100 Year Frequency –A flood magnitude that has a 1% chance of occurring in any given year commonly referred to as the base flood.

Flood Insurance Rate Map – The map on which FEMA has delineated the 100-year floodplain, the Base Flood Elevations (BFE) and the risk premium zones.

Flood Insurance Study – The report in which FEMA has provided flood profiles, as well as the Flood Boundary/Floodway Map and the water surface profiles.

Floodplain – The areas subject to these regulations, generally the channel of a river or stream and the area adjoining a river or stream, which would be covered by floodwater of a base flood except for designated shallow flooding areas that receive less than one foot of water per occurrence. The floodplain consists of a floodway and a floodway fringe.

Floodplain Management - the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and flood plain management regulations.

Flood Prone Area – the area of special flood hazard as identified on the United States Geological Survey maps.

Flood Proofing – any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, HVAC systems, structures and their contents. (e.g. elevating a furnace and/or electrical outlets within a structure two feet or more above the BFE).

Floodway – The channel of a stream and the adjacent overbank areas that must be reserved in order to discharge a base flood without cumulatively increasing the water surface elevation more than one-half (1/2) foot.

Floodway Fringe – The portion of the floodplain outside the limits of the floodway.

Freeboard - a factor of safety usually expressed in feet above a flood level for purposes of flood plain management. ``Freeboard'' tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

HAG – Highest Adjacent Grade. This is required on the Elevation Certificate showing the elevation of the highest grade adjacent to a proposed development for flood insurance purposes.

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

HVAC – Heating, Ventilating and Air Conditioning.

Hydraulics – The depth of water (elevation) in a drainage way, watercourse, river or stream channel.

Hydrology – The discharge in cubic feet per second (CFS) of water in a drainage way, watercourse, river or stream channel.

Levee – A man-made embankment, usually earthen, designed and constructed in accordance with the sound engineering practices to contain, control, or divert the flow of water to provide protection from temporary flooding. For a levee structure to be reflected on the FEMA FIRMs as providing flood protection, the levee structure must meet the requirements set forth in 44 CFR 65.10.

Levee System – A flood protection system that consists of a levee, or levees, and associated structures, such as drainage and closure devices, which are constructed and operated in accordance with sound engineering practices.

LAG – Lowest Adjacent Grade. This is required on the Elevation Certificate showing the elevation of the lowest grade adjacent to a proposed development for flood insurance purposes.

Lowest Floor –the lowest floor of the lowest enclosed area (including basement). Any floor used for living purposes which includes working, storage, sleeping, cooking and eating, or recreation or any combination thereof. This includes any floor that could be converted to such a use such as a basement or crawl space. (An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is <u>not</u> considered a building's lowest floor). The lowest floor is a determinate for the flood insurance premium for a building, home or business.

Manufactured Home – A structure, also referred to as a mobile home, 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. This does not include “recreational vehicles”.

Manufactured Home Park or Subdivision – A parcel or contiguous parcels of land divided into two or more manufactured home lots for rent or sale.

Mean Sea Level – The North American Vertical Datum of 1988 (NAVD 88) or other datum to which base flood elevations are referenced.

MTDEQ - Montana Department of Environmental Quality.

MTDNRC - (Montana Department of Natural Resources and Conservation) – The department responsible for the comprehensive program for the delineation of designated floodplains and designated floodways for each water course and drain way in the state.

NAVD 88 – North American Vertical Datum of 1988. The official vertical datum for the United States.

New Construction – Structures, which include, new "stick built" or "moved" on structures, for which construction, substantial improvement, or alteration commences on or after the effective date of the {community regulations and/or flood study}.

New Manufactured Home Park Or Subdivision - means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured 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 on or after the effective date of floodplain management regulations adopted by a community.

NFIP – National Flood Insurance Program; 44 CFR Chapter I Parts 59-79.

Official Floodplain Maps – The Flood Insurance Rate Maps (FIRMs) and Flood Boundary/Floodway Maps adopted and provided by the FEMA and/or MTDNRC for the **{Community Name}**.

One Hundred (100) -Year Flood – A flood having a one percent (1%) chance of occurring 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.

Recreational Vehicle – A vehicle which 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, not for use as a permanent dwelling.

Riverine - relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

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

Sheet flow area-- see “Area of Shallow Flooding”.

Set Back – The amount of distance between the stream bank of the river or stream and the proposed use, where the stream bank is the 100 year flood boundary.

Start of Construction – Commencement of clearing, grading, filling, or excavating to prepare a site for construction. It includes substantial improvement, and means the date the building permit was issued provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations 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 part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure – a walled and roofed building, manufactured 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.

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

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:

(i) Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or
(ii) Any alteration of a structure listed on the national register of historic places or state inventory of historic places.

Suitable Fill – Fill material which is stable, compacted, well graded, pervious and 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.

USGS – United States Geological Survey – the agency which developed the maps of the "Flood Prone Areas".

Variance – A grant of relief from the requirements of these regulations that would permit construction in a manner otherwise prohibited by these regulations.

Violation – The failure of a structure or other development to be fully compliant with these regulations or the floodplain permit issued. A structure or other development without a floodplain permit, an 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.

Water Surface Elevation - the height, in relation to the North American Vertical Datum of 1988 (NAVD 88), (or other datum, where specified) of floods of various magnitudes and frequencies in the floodplains of riverine areas.

CHAPTER 3 GENERAL PROVISIONS

3.1 JURISDICTIONAL AREA

The ordinance shall apply to all areas of special flood hazard with the jurisdiction of the **{Community Name}**, State of Montana.

3.2 BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD

The areas of special flood hazard identified by the Federal Emergency Management Agency in the current scientific and engineering report entitled, "The Flood Insurance Study for **{Community Name}**," dated {date of effective map} with the most effective Flood Insurance Rate Maps and/or Flood Boundary-Floodway Maps (FIRM and/or FBFM) dated {date of effective map}. Permits are required for all proposed construction and other development within Special Flood Hazard Areas.

3.3 RULES FOR INTERPRETATION OF FLOODPLAIN BOUNDARIES

The boundaries of the 100-year floodway shall be determined by scaling distances on the Official Floodplain Maps and using the floodway data table contained in the flood insurance study report. 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 Zone 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. Where the surveyed elevation provides greater elevation information than the floodplain map and indicates that the land/structure may be determined to be out of the floodplain, the homeowner/landowner needs to advise the Floodplain Administrator and may submit a Letter of Map Change (LOMC) to FEMA. Information is available at http://www.fema.gov/plan/prevent/fhm/fq_gen27.shtm; http://www.fema.gov/plan/prevent/fhm/ot_lmreq.shtm, and http://www.fema.gov/plan/prevent/fhm/ot_lmreq.shtm .

3.4 COMPLIANCE

No land use shall be developed, and no structure shall be located, extended, converted, or structurally altered within the 100 year floodplain without full compliance with the provisions of these regulations and other applicable regulations. These regulations meet the minimum requirements as set forth by the Montana Department of Natural Resources and Conservation, and the National Flood Insurance Program.

3.5 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 provision of these regulations shall prevail.

3.6 REGULATION INTERPRETATION

In the interpretation and application of this ordinance, all provisions shall be; (1) considered as minimum requirements; (2) liberally construed in favor of the governing body; and (3) deemed neither to limit nor repeal any other powers granted under State statutes.

3.7 WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. On rare occasions greater floods can and will occur and flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of the community or any official or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

3.8 SEVERABILITY

If any section, clause, sentence, or phrase of this Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way affect the validity of the remaining portions of this Ordinance.

3.9 DISCLOSURE PROVISION

All property owners or realtors and developers representing property owners in a 100-year floodplain or floodway must notify potential buyers or their agents that such property is located within the floodplain or floodway and is subject to regulation. Information regarding floodplain areas or the repository for floodplain maps is available in the Floodplain Administrators Office.

3.10 AUTHORITY TO ENTER AND INVESTIGATE LANDS OR WATERS

The Floodplain Administrator may make reasonable entry upon any lands and waters in **{Community Name}** for the purpose of making an investigation, inspection or survey to verify compliance with these regulations. The Floodplain Administrator shall provide notice of entry by mail, electronic mail, phone call, personal delivery to the owner, owner's agent, lessee, or lessee's agent whose lands will be entered. If none of these persons can be found, the Floodplain Administrator shall affix a copy of the notice to one or more conspicuous places on the property for five (5) days. If the owners do not respond, cannot be located or refuse entry to the Floodplain Administrator, the Floodplain Administrator may only enter the property through a Search Warrant.

An investigation of a natural or artificial obstruction or nonconforming use shall be made by the Floodplain Administrator, either on his own initiative, or at the request of titleholders of land abutting the watercourse or drain way involved, or on the written request of a governing body or permitting agency.

CHAPTER 4 ADMINISTRATION

4.1 FLOODPLAIN ADMINISTRATOR

The Floodplain Administrator is appointed by the {community administration} as the Floodplain Administrator to administer and implement the provisions of this ordinance and other appropriate sections of 44 CFR (Emergency Management and Assistance - National Flood Insurance Program Regulations) pertaining to floodplain management.

4.2 DUTIES & RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR

Duties and responsibilities of the Floodplain Administrator shall include, but not be limited to, the following:

A. Maintain and hold open for public inspection all records pertaining to the provisions of this ordinance. Where BFE data are utilized in Zone A, obtain and maintain records of the lowest floor and floodproofing elevations for new and substantially improved construction.

B. Review permit application to ensure that the proposed building site project, including the placement of manufactured homes, will be reasonably safe from flooding.

C. Review floodplain permits for proposed development to assure that the applicant has acquired all necessary permits have been obtained from those Federal, State or local governmental agencies (including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334) from which prior approval is required. It is the responsibility of the applicant to determine the other necessary permits.

D. Where interpretation is needed as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Floodplain Administrator shall make the necessary interpretation.

E. Notify, in riverine situations, adjacent communities and the State Coordinating Agency, which is Montana Department of Natural Resources and Conservation prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.

F. Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.

G. When base flood elevation data has not been provided in accordance with Chapter 3, Section 3.2, the Floodplain Administrator shall obtain, review and reasonably utilize any base flood elevation data and floodway data available from a Federal, State or other source, in order to administer the provisions of Chapter 5. Where BFE data are utilized in Zone A, obtain and maintain records of the lowest floor and floodproofing elevations for new and substantially improved construction.

H. When a regulatory floodway has not been designated, the Floodplain Administrator must require that no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one-half (0.5) foot at any point, or significantly increases the base flood velocity, within the community.

I. Under the provisions of 44 CFR Chapter 1, Part 65.12, of the National Flood Insurance Program regulations, a community may approve certain development in Zones A1-30, AE, AH, on the community's FIRM which increases the water surface elevation of the base flood by more than one half (1/2) foot, provided that the community **first** completes all of the provisions required by Section 65.12.

J. Additional Factors – Floodplain development permits shall be granted or denied by the Floodplain Administrator on the basis of whether the proposed establishment, development, alteration, or substantial improvement of an artificial obstruction meets the requirements of these regulations. Additional factors that shall be considered for every permit application are:

1. The danger to life and property due to increased flood heights, increased floodwater velocities, backwater or alterations in the pattern of flood flow caused by the obstruction or encroachment;
2. The danger that the obstruction or encroachment may be swept onto other lands or downstream to the injury of others;
3. The ability of the proposed water supply and/or sanitation system to prevent disease, contamination, and unsanitary conditions;
4. The susceptibility of the proposed facility and its contents to flood damage and the effects of such damage on the individual owner;
5. The construction or alteration of the obstruction or encroachment in such manner as to lessen the flooding danger;
6. The importance of the services provided by the facility to the community;
7. The requirement of the facility for a waterfront location;
8. The availability of alternative locations not subject to flooding for the proposed use;
9. The compatibility of the proposed use with existing development and anticipated development in the foreseeable future;
10. The relationship of the proposed use to the comprehensive plan and floodplain management program for the area;
11. The safety of access to property in times of flooding for ordinary and emergency services;
12. The request for fill for a residential or commercial building is not followed by a request for a basement for the same residential or commercial building, which would put the finished floor of the building below the BFE, which would negate the purpose of the fill.
13. The proposed use shall comply with the existing zoning designation;

14. For projects involving bank stabilization, channelization, levees, floodwalls and/or diversions, off property impacts including increased flood peaks, flood stage, flood velocity, erosion and sedimentation, should be considered and found to be non-existent, neutral or able to be mitigated; and
15. Such other factors as are in harmony with the purposes of these regulations, the Montana Floodplain and Floodway Management Act, and the National Flood Insurance Program.

K. A floodplain development permit application shall be approved or denied by the Floodplain Administrator. If the application is deemed incomplete, the Floodplain Administrator will notify the applicant of deficiencies with in 60 days. Under no circumstances should it be assumed that the permit is automatically granted. All approved applications will be signed by the Floodplain Administrator. Denied applications may be resubmitted if additional information is provided to support a change in development.

L. The Floodplain Administrator may deem a application incomplete based on, but not limited to, the following criteria: elevation or flood proofing certificates, a level survey and/or hydraulic and hydrology calculations by a registered land surveyor, engineer, or licensed architect to assess the impact of the volume of water, determine the base flood elevation, water velocities, and ground elevations.

M. Upon receipt of a complete application for a permit, 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. The State Floodplain NFIP Coordinator located in DNRC and other permitting agencies shall also receive notice by the most efficient method. The notice shall provide a reasonable period of time, not less than 15 days, for interested parties to submit comments on the proposed activity.

4.3 PERMIT PROCEEDURES

A. Application for a Floodplain Development Permit shall be presented to the Floodplain Administrator on forms furnished by him/her and may include, but not be limited to, plans in duplicate drawn to scale showing the location, dimensions, and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes, and the location of the foregoing in relation to areas of special flood hazard. Additionally, the following information is required:

1. Elevation (in relation to mean sea level), of the lowest floor (including basement) of all new and substantially improved structures;

2. Elevation in relation to mean sea level to which any nonresidential structure shall be flood proofed;

3. A certificate from a registered professional engineer or architect that the nonresidential flood proofed structure shall meet the floodproofing criteria of Chapter 5; Section 5.4 (B) (4).;

4. Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development;

5. Maintain a record of all such information in accordance with Chapter 4; Section 4.2 (A).

B. Approval or denial of a Floodplain Development Permit by the Floodplain Administrator shall be based on all of the provisions of this ordinance and the following relevant factors:

1. The danger to life and property due to flooding or erosion damage;

2. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

3. The danger that materials may be swept onto other lands to the injury of others;

4. The compatibility of the proposed use with existing and anticipated development;

5. The safety of access to the property in times of flood for ordinary and emergency vehicles;

6. The costs of providing governmental services during and after flood conditions including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;

7. The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site;

8. The necessity to the facility of a waterfront location, where applicable;

9. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use.

4.4 EMERGENCY WAIVER

Emergency repair and replacement of severely damaged public transportation facilities, public water and sewer facilities, and flood control works may be authorized by the Floodplain Administrator if:

A. Upon notification and prior to the emergency repair and/or replacement, the Floodplain Administrator determines that an emergency condition exists warranting immediate action; and

B. The Floodplain Administrator agrees upon the nature and type of proposed emergency repair and/or replacement.

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 permit describing the emergency condition, the type of emergency work agreed upon, and stating that a verbal authorization had been previously given.

4.5 APPEALS &VARIANCES

A. There is hereby created a local Floodplain Management {Board of Adjustment, County Commission, or other panel}, the membership, administration, and rules of procedure of which are identical to a zoning board of adjustment.

B. The {Board of Adjustment, County Commission, or other panel} shall hear and render judgment on an appeal only when it is alleged there is an error in any requirement, decision, or determination made by the Floodplain Administrator in the enforcement or administration of this ordinance.

C. Any person or persons aggrieved by the decision of the {Board of Adjustment, County Commission, or other panel}may appeal such decision in the courts of competent jurisdiction.

D. The Floodplain Administrator shall maintain a record of all actions involving an appeal and shall report variances to the Federal Emergency Management Agency upon request.

E. Variances may be issued for new construction and substantial improvements to be erected on a lot of 1/2 acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing the relevant factors in Section 4.3 (B) of this Chapter have been fully considered. As the lot size increases beyond the 1/2 acre, the technical justification required for issuing the variance increases.

F. Upon consideration of the factors noted above and the intent of this ordinance, the {Board of Adjustment, County Commission, or other panel}may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of this ordinance (Chapter 1, Section 1.3).

G. Variances shall not be issued within any designated floodway if any increase in flood levels or velocities, during the base flood discharge, would result.

H. Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

I. Prerequisites for granting variances:

1. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

2. Variances shall only be issued upon:

   a. Showing a good and sufficient cause;
   b. A determination that failure to grant the variance would result in exceptional hardship to the applicant;
   c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances;
   d. The proposed use is adequately flood proofed; and
   e. Reasonable alternative locations outside the designated floodplain are not available.

3. Any application to which a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. It should be noted that variances of this type places the community in violation of the NFIP, and therefore will be carefully considered.

J. Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that (i) the criteria outlined in this chapter are met, and (ii) the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

K. Appeals of any decision (s) of the Floodplain Administrator or the {community governing body} may be taken by an aggrieved person or persons, jointly or separately, to a court of record.

4.6 FEES

A non-refundable processing fee of {insert dollar amount} shall be submitted with each permit and/or variance application. This fee will cover the administrative cost of processing the permit and/or variance, providing public notice and performing sufficient field inspections to ensure compliance with these regulations.

4.7 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.

4.8 COMPLIANCE

Any use, alteration, or construction not in compliance with that authorized shall be deemed a violation of these regulations and punishable as provided in Section 4.9 or enforced as provided in 76-5-109 MCA. An applicant may be required to submit certification by a registered professional engineer, architect, or other qualified person designated by the Floodplain Administrator, that finished fill, building floor elevations, flood proofing, hydraulic design, or other flood protection measures be accomplished in compliance with these regulations.

4.9 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 on the floodplain shall constitute a misdemeanor. Any person who violates these regulations or fails to comply with any of its requirements (including the conditions and safeguards established in variances) shall, upon conviction thereof, be fined not more than one hundred ($100) or imprisoned for not more than 10 days or both. Each day's continuance of a violation shall be deemed a separate and distinct offense.

CHAPTER 5 SPECIFIC STANDARDS

5.1 APPLICATION

The minimum floodplain development standards listed in this chapter and Title 76, Chapter 5, MCA, apply to all the floodplains referenced on the Flood Insurance Rate Maps.

5.2 GENERAL STANDARDS

In all areas of special flood hazards the following provisions are required for all new construction and substantial improvements:

A. All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

B. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;

C. All new construction or substantial improvements shall be constructed with materials resistant to flood damage;

D. All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;

E. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;

F. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from the systems into flood waters; and,

G. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

5.3 FLOODWAY

A. **USES ALLOWED WITHOUT PERMIT** – The following open space uses shall be allowed without a permit anywhere within the floodway, provided that such uses are not prohibited by any other resolution or statute, do not require structures other than portable structures, do not require alteration of the floodplain such as fill, excavation or permanent storage of materials or equipment, do not require large scale cleaning of the riparian vegetation within fifty (50) feet of the mean high water mark, will not cause flood losses on other land or to the public:

1. Agricultural uses such as tilling, farming, irrigation, harvesting, grazing, etc;
2. Accessory uses such as loading and parking areas, or emergency landing strips associated with industrial or commercial facilities;

3. Private and public recreational uses such as picnic grounds, swimming areas, parks, trap, skeet, target, shooting, and archery ranges, wildlife management and natural areas, hunting and fishing areas, or hiking and 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;

8. Recreational vehicle use 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.

B. **USES REQUIRING PERMITS** – The following nonconforming uses and artificial obstructions may be permitted within the designated floodway, provided that such uses conform to the provisions of Chapter 4, Section 4.2 (J)(1) and are approved for permit issuance by the Floodplain Administrator:

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. (However, for <u>short</u> <u>term</u> gravel mining operations, the Floodplain Administrator may allow stockpiling in the floodway fringe if there is no other alternative and there is no significant (1/2 foot) rise in the BFE. A “No Rise Certification” signed by a licensed engineer shall be required).

2. Railroad, highway, street and stream crossings, provided that:
   a. The crossings are designed to offer minimal obstructions to the flood flow;
   b. The bottom of bridge spans shall have a freeboard of at least two (2) feet above the BFE to pass ice flows, the 100 year flood discharge and any debris associated with the discharge;
   c. If possible, normal overflow channels are preserved to allow passage of sediments to prevent aggradations;

d. Mid stream supports for bridges, if necessary, must have footings buried below the maximum scour depth; and
e. 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. The applicant shall provide a “No-Rise” certification signed by a registered professional engineer.

3. Limited filling for highway, street, and railroad embankments not associated with stream crossings and bridges provided that:
   a. Reasonable alternate transportation routes outside the designated floodway are not available;
   b. The encroachment is located as far from the stream channel as possible;
   c. measures are provided to mitigate the impact to property owners and the natural stream function; and
   d. The encroachment shall not result in a cumulative increase exceeding one-half foot in base flood elevation, after the allowable encroachment into the floodway. A “No-Rise” certification signed by a registered professional engineer shall be provided by the applicant.

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 six (6) feet higher than the elevation of the flood of one-hundred (100) year frequency;
   b. Towers and other appurtenant structures are designed and placed to withstand and offer minimal obstruction to flood flows;
   c. When technically feasible, the crossing will not disturb the bed and banks of the stream and alternatives such as alternative routes, directional drilling, and aerial crossings are considered; and
   d. Utility transmission lines carrying toxic or flammable materials are buried to a depth of at least twice the calculated maximum depth of scour for a flood of one hundred (100) year frequency. The maximum depth of scour may be determined from any of the accepted hydraulic engineering methods, but the final calculated figures shall be subject to approval by 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 flotation or downstream movement; and,
   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. Irrigation, livestock and 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. They require no other structures (e.g. a well house);
   c. Well casings are water tight to a distance of at least twenty-five (25) feet below the ground surface;
   d. Water supply and electrical lines have a watertight seal where the lines enter the casing;

e. All pumps and electrical lines and equipment are either of the submersible type or are adequately flood proofed;
f. Check valves are installed on main water lines at wells and at all building entry locations; and
g. Irrigation and livestock supply wells are located at least 500 feet from domestic water supply wells.

7. Only those wastewater disposal systems that meet the requirements and separation distances under ARM 17.36.101-116 and ARM 17.36.301-345 are allowed.

8. Fences crossing channels;

9. Residential uses not requiring buildings such as lawns, gardens, parking areas and play areas;

10. Public or private recreational uses not requiring structures such as campgrounds, golf courses, driving ranges, archery ranges, wildlife management and natural areas, alternative livestock ranches (game farms), fish hatcheries and shooting preserves provided that:
    a. Access roads require only limited fill and do not obstruct or divert flood waters;
    b. There are no dwellings or permanent mobile homes;
    c. There is no rise in the BFE;
    d. Off property impacts have been considered and found to be non-existent, neutral or can be mitigated.
    e. There is no large-scale clearing of riparian vegetation within 50 feet of the mean annual high water mark; and
    f. 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.

11. Structures accessory to the uses permitted in this section, such as boat docks, loading and parking areas, marinas, emergency airstrips, permanent fences crossing channels, picnic shelters and tables, provided that:
    a. The structures are not intended for human habitation or supportive of human habitation;
    b. The structures will have low flood damage potential as certified by a registered professional engineer on a “No-Rise” certificate;
    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. Only those wastewater disposal systems that meet the requirements and separation distances under ARM 17.36.101-116 and ARM 17.36.301-345 are allowed.
    e. Service facilities within these structures such as electrical, heating and plumbing are flood proofed in accordance with Chapter 6;
    f. The structure will be constructed and placed so as to offer a minimal obstruction to flood flows and is firmly anchored to prevent flotation;
    g. The use does not require fill and/or substantial excavation; and

h. The use does not require the large scale clearing of riparian vegetation within fifty (50) feet of the mean annual high water mark.

12. Replacement of manufactured homes in an existing manufactured home Park, sites outside of a Park or subdivision, or subdivision on a developed site of the same dimensions with servicing utilities. (Previous home could have been destroyed by fire, flood, etc.) The replacement home must be elevated on a permanent foundation so the lowest floor is 2 feet above the base flood elevation. The foundation must be reinforced concrete, reinforced-mortared block, reinforced piers, or other foundation elements of equal strength. The mobile home chassis must be securely anchored to the foundation system so that it will resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to:
    a. over-the-top ties to ground anchors be provided at each of the four (4) corners of the mobile home, with two additional ties per side at intermediate locations for mobile homes less than fifty (50) feet long;
    b. frame ties to ground anchors be provided at each corner of the home with five (5) additional ties per side at intermediate points, for mobile homes more than fifty (50) feet long;
    c. all components of the anchoring system be capable of carrying a force of 4,800 pounds;
    d. any additions to the mobile home must be similarly anchored; and
    e. adequate surface drainage and access for a hauler are provided.

13. Agricultural structures (except buildings, dwellings and fuel storage) that will have low flood damage potential, or be located on higher ground and as far from the channel as possible, and meet the flood proofing requirements of Chapter 5.

14. New surface water diversions and changes in place of diversion for agricultural uses and other uses, with certification by a registered engineer if:
    a. The proper permits or documentation have been obtained from DNRC Water Rights Bureau for new surface water diversions and changes in place of diversion;
    b. The proposed diversion or change in place of diversion will not increase the upstream elevation of the base flood one-half foot (1/2 foot) or more or to the detriment of a neighboring property;
    c. The proposed diversion is designed and constructed to minimize potential erosion from a base flood;
    d. For a permanent diversion structure crossing the full width of the stream channel:
        i. All other options should be studied and considered first;
        ii. The structure is designed and constructed to withstand up to a base flood; and,
        iii. The diversion is not an obstruction to the passage of water craft or fish.

15. The following flood control measures certified by a registered professional engineer to comply with the conditions set forth (structural flood control works often significantly obstruct and affect floodway flow capacity):
    a. Levees and floodwalls (new, reconstruction and/or maintenance) if:

i. The proposed levee or floodwall is designed and constructed to safely convey a 100 year flood; and
ii. The cumulative effect of the levee or floodwall combined with allowable floodway fringe encroachments does not increase the unobstructed base flood elevation more than one half foot (1/2 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:
   - The estimated cumulative effect of any anticipated future permissible uses; and
   - The type and amount of existing development in the effected area.
iii. The proposed levee or floodwall, except those to protect agricultural land, is constructed at least 3 feet higher than the base flood elevation.
iv. For levee structures to be recognized on a FEMA map as providing flood protection, the structure must meet the criteria outlined in 44 CFR 65.10. Without the criteria being met, the area behind the uncertified structure will be shown to be in the floodplain of the flood source (River).

b. Bank stabilization projects, such as hand placed rip rap, native revetments, weirs, barbs, etc, if:
   i. It is designed to withstand a 100-year flood;
   ii. It does not increase the base flood elevation;
   iii. It will not increase erosion upstream, downstream, or adjacent to the site;
   iv. Consideration will be given to accommodate the safe passage of water craft in low flows; and/or
   v. It is preventive maintenance for bridge abutments, roads, industrial uses and public infrastructure.

c. Channelization projects if they do not significantly increase the magnitude, velocity, or base flood elevation in the proximity of the project.

d. Dams provided that:
   i. They are designed and constructed in accordance with the Montana Dam Safety Act and applicable safety standards; and
   ii. They will not increase flood hazards downstream either through operational procedures or improper hydrologic/hydraulic design.

16. All other artificial obstructions, substantial improvements, or non-conforming uses not specifically listed in or prohibited by these regulations.

C. **PROHIBITED USES** - The following artificial obstructions and non-conforming uses are prohibited within the floodway:

1. A building, dwelling or structure for living purposes, place of assembly or permanent use by human beings;

2. New construction of any residential dwelling, commercial or industrial building;

3. Encroachments, including fill, new construction, buildings, substantial improvements, excavations and other development that would cause water to be diverted from the established floodway, erosion of embankment, obstruction of the natural flow of waters, reduce the carrying capacity of the floodway or increase flood levels within the community during the occurrence of the 100 year flood;

4. The construction or permanent storage of an object subject to flotation or movement during the 100 year flood;

5. Mobile homes and manufactured homes;

6. Storage and disposal of solid waste, hazardous waste, toxic, flammable, or explosive materials;

7. Only those wastewater disposal systems that meet the requirements and separation distances under ARM 17.36.101-116 and ARM 17.36.301-345 are allowed.

8. Cemeteries, mausoleums, or any other places of burial of human remains.

5.4 FLOODWAY FRINGE

A. **USES ALLOWED WITHOUT PERMITS** – All uses allowed in the floodway without permit according to the provisions of these regulations, shall also be allowed without a permit in the floodway fringe.

B. **USES REQUIRING PERMITS** – All uses allowed in the floodway subject to the issuance of a permit according to the provisions of these regulations shall also be allowed by permit within the designated floodway fringe. In addition, new construction, substantial improvements, alterations to structures (including, but not limited to residential, commercial, agricultural and industrial), and suitable fill shall be allowed subject to the following conditions:

1. Such structures or fill must not be prohibited by any other statute, regulation, ordinance, or resolution;

2. Such structures or fill must be compatible with local comprehensive plans, if any;

3. Residential. The new construction, alterations, and substantial improvements of residential dwellings including manufactured homes must be constructed on suitable fill with a permanent foundation such that the lowest floor elevation (including basement) is two (2) feet or more above the BFE (Base Flood Elevation). The suitable fill shall be at an elevation no lower than the elevation of the 100-year flood and shall extend for at least fifteen (15) feet, at that elevation, beyond the dwelling(s) in all directions. 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.

4. Non-Residential. The new construction, alteration, and substantial improvement of commercial and industrial buildings must be constructed on suitable fill with a permanent foundation such that the lowest floor elevation (including basement) is two (2) or more feet above the BFE (Base Flood Elevation), **OR** the building must be adequately flood proofed to an elevation no lower than two (2) feet above the elevation of the 100-year flood. Certification is required by registered professional engineer, architect, or other qualified person that 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 (Chapter 5).
   a. If the building is designed to allow internal flooding of the lowest floor, use of the lowest floor must be limited to parking, loading areas, and storage of equipment or materials not appreciably affected by floodwaters. The floors and walls shall be designed and constructed of materials resistant to flooding to an elevation no lower than two (2) feet above the BFE. Walls shall be designed to equalize hydrostatic forces by allowing for entry and exit of floodwaters. Openings may be equipped with screens, louvers, valves, and other coverings or devices which permit the automatic entry and exit of floodwaters.
   b. Buildings whose lowest floors are used for a purpose other than parking, loading, or storage of materials resistant to flooding shall be waterproofed to an elevation no lower than two (2) feet above the BFE. Flood proofing shall include impermeable membranes or materials for floors and walls and watertight enclosures for all windows, doors and other openings. These buildings shall be designed to withstand the hydrostatic pressures and hydrodynamic forces resulting from the base flood.
   c. Flood proofing of electrical, heating and plumbing systems shall be accomplished in accordance with Chapter 6.

5. All manufactured homes placed in the floodway fringe shall be installed using methods and practices which minimize flood damage and must have the chassis securely anchored to a foundation system that will resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces. The following conditions also apply;
   a. When a manufactured home is 1) altered, 2) replaced because of substantial damage as a result of a flood or 3) replaced on an individual site, the lowest floor must be elevated two (2) feet above the base flood elevation. The home can be elevated on fill or raised on a permanent foundation of reinforced concrete, reinforced mortared block, reinforced piers, or other foundation elements of at least equivalent strength.
   b. Replacement or substantial improvement of manufactured homes in an existing manufactured home Park, site outside a manufactured home Park or subdivision, or subdivision must be raised on a permanent foundation. The lowest floor must be two 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 homes proposed for use as commercial or industrial buildings must be elevated and anchored, rather than flood proofed.

6. Fill material placed in the floodway fringe must be 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 appropriate for the purpose of supporting the intended use and/or permanent structure;

7. Roads, streets, highways and rail lines shall be designed to minimize any 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 two (2) feet above the elevation of the 100-year flood;

8. Agricultural buildings that have a low damage potential, such as sheds, barns, shelters, and hay or grain storage structures must be adequately anchored to prevent flotation or collapse and all electrical facilities shall be placed two (2) feet above the base flood elevation;

9. **Recreational Vehicles.** Must meet the following requirements:
   a. Be on the site for fewer than 180 consecutive days, or
   b. Be fully licensed and ready for highway use, or
   c. Meet the permit requirements of Section 5.4.B.5.b, and the elevation and anchoring requirements for "manufactured homes" in paragraph (5) of this section. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

10. Off property impacts are considered and found to be non-existent or neutral; and

11. **Enclosures -** new construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
    a. A minimum of two openings on separate walls having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
    b. The bottom of all openings shall be no higher than 1 foot above grade.
    c. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

12. Proposed development shall not have a large scale clearing of riparian vegetation within 50 feet of the mean annual high water mark.

C. **PROHIBITED USES** – The following artificial obstructions and non-conforming uses are prohibited within the floodway fringe:

1. Only those wastewater disposal systems that meet the requirements and separation distances under ARM 17.36.101-116 and ARM 17.36.301-345 are allowed.

2. Storage and disposal of solid waste, hazardous waste, toxic, flammable, or explosive materials; and

3. Cemeteries, mausoleums, or any other places of burial of human remains.

5.5 STANDARDS FOR SUBDIVISION PROPOSALS

A. Review subdivision proposals and other development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding. If a subdivision or other development proposal is in a flood-prone area, assure that such proposals minimize flood damage.

B. Base flood elevation data shall be generated for subdivision proposals and other proposed development including the placement of manufactured home parks and subdivisions which is greater than 50 lots or 5 acres, whichever is lesser, if not otherwise provided pursuant to Chapter 3, Section 3.2 or Chapter 4, Section 4.2 (G) of this ordinance.

C. All subdivision proposals including the placement of manufactured home parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards.

D. All subdivision proposals including the placement of manufactured home parks and subdivisions shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.

CHAPTER 6 FLOOD PROOFING REQUIREMENTS

6.1 CERTIFICATION

If the following flood proofing requirements are to be utilized for a particular structure in accordance with these regulations, the methods used must be certified as adequate by a registered professional engineer, architect, or other qualified person.

6.2 CONFORMANCE

Permitted flood proofing systems shall conform to the conditions listed below and the flood proofing standards listed in Section 5.3.B.4 of these regulations for commercial and industrial buildings:

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 two (2) feet above the elevation of the 100 year flood.
2. Portable and movable electrical equipment may be placed below the elevation of the 100-year flood, provided that the equipment can be disconnected by a single plug and socket assembly of the submersible type.
3. The main power service lines shall automatically operate electrical disconnect equipment of manually operated electrical disconnect equipment located at an accessible remote location outside the designated floodplain and above the elevation of the 100 year flood.
4. All electrical wiring systems installed below the elevation of the 100-year flood shall be suitable for continuous submergence and may not contain fibrous components.

B. Heating Systems

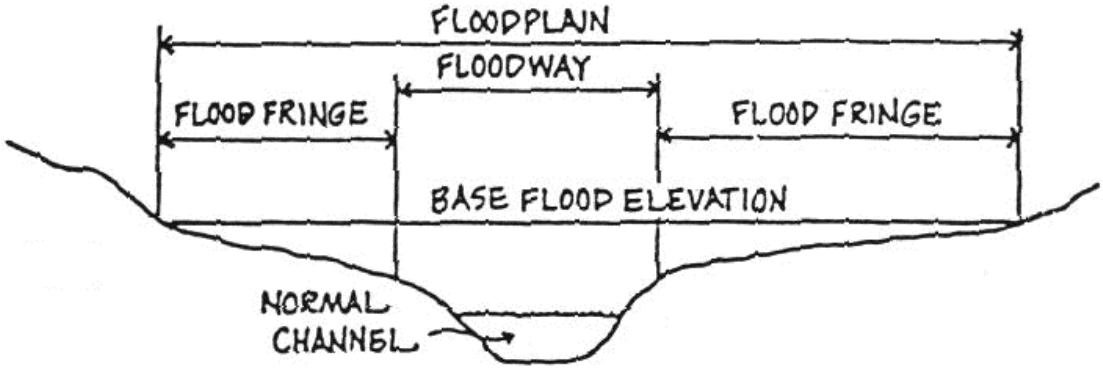
1. Float operated automatic control valves must be installed in gas furnace supply lines so that fuel supply is automatically shut off when flood waters reach the floor level where the furnace is located.
2. Manually operated gate valves must be installed in gas supply lines. The gate valves must be 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 6.2.A.

C. Plumbing Systems

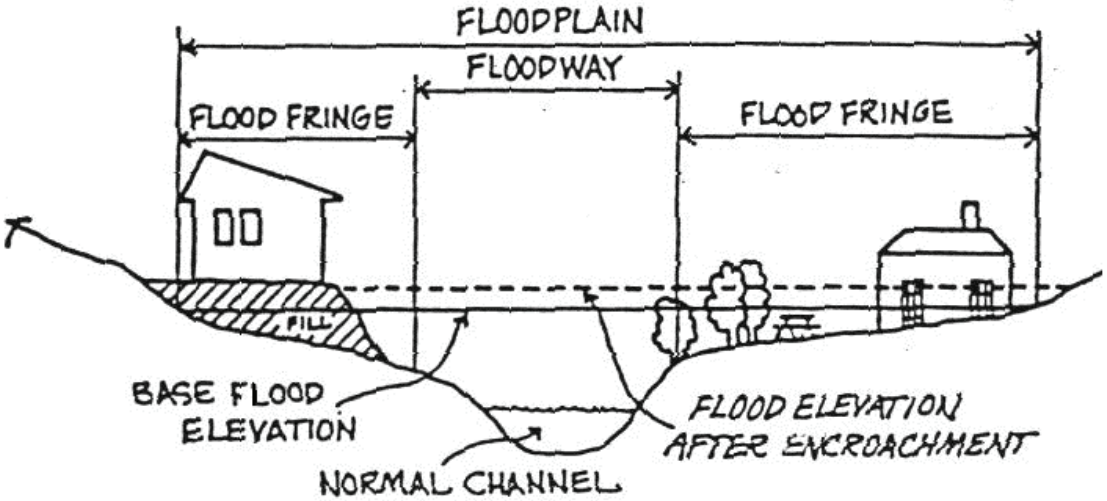
1. Sewer lines, except those to be buried and in sealed vaults, must have check valves installed to prevent sewage backup into permitted structures.
2. All toilets, stools, sinks, urinals, and drains must be located so the lowest point of possible entry is at least two (2) feet above the 100 year flood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

APPENDIX A SKETCHES OF FLOODPLAIN ZONES

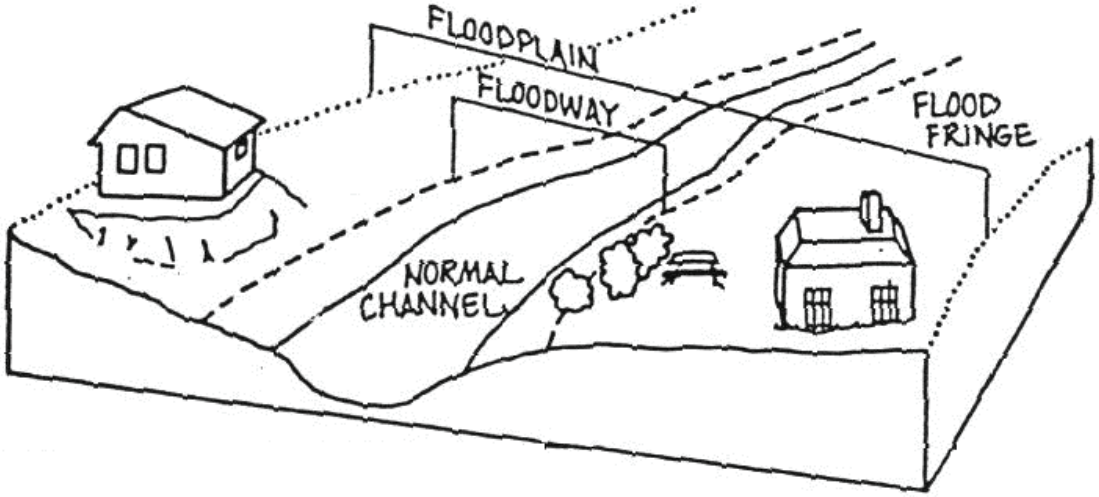
CROSS-SECTIONAL VIEW
NO DEVELOPMENT

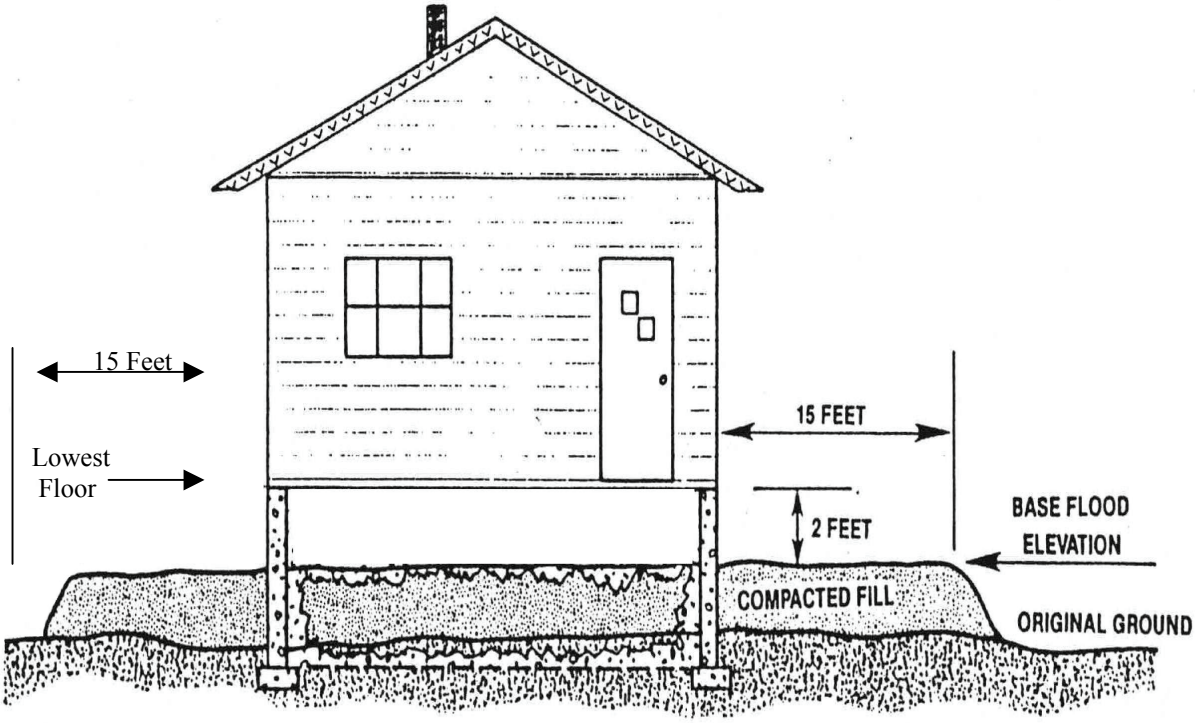


CROSS-SECTIONAL VIEW
WITH EXISTING & NEW DEVELOPMENT



PERSPECTIVE VIEW




15 Feet
Lowest
Floor
15 FEET
2 FEET
BASE FLOOD
ELEVATION
COMPACTED FILL
ORIGINAL GROUND