

CHAPTER

7



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7.1 HILLSIDE AND RIDGELINE DEVELOPMENT

A) Purpose. Hillside areas in Missoula County are characterized by ridgelines, slope, vegetation, drainage, rock outcroppings, geologic hazards, and other physical and aesthetic factors which, if disturbed for development, can cause negative physical and economic impact to the County, the land, the wildlife, and citizens. The purpose of these regulations is to accomplish all the following objectives.

1. The protection of the public from personal injury and property damage resulting from natural hazards due to seismic activity, soil characteristics which are limiting, slope failure, sedimentation, increased stormwater runoff, sheet flooding on frozen surfaces, soil erosion, and surface water contamination resulting from unmitigated site preparation and construction on steep slopes.
2. The protection of hillside land and resources within the legitimate expectations of property owners and the County's overall goals, including:
 - a. The preservation of vegetation, especially native vegetation, fish and wildlife habitat, and open space lands;
 - b. The retention of natural topographic features, such as drainage channels, streams, ridgelines, and rock outcroppings; and,
 - c. The preservation and enhancement of ridgeline views and other vistas that are important to the character of Missoula County, particularly by use of native vegetation and

minimal excavation, terracing and other visible scars.

3. The establishment and maintenance of on-site and off-site transportation systems, including non-motorized transportation, that ensure ingress and egress for vehicles, including emergency vehicles, into all developed areas at all times.
4. The encouragement of innovative planning, design, and construction techniques for development on steep slopes.
5. The mitigation of adverse environmental impacts, including, but not limited to, erosion, slope failure, the degradation of air and water quality, and adverse impacts on adjoining properties.

B) Applicability.

1. The standards in this section apply to the following:
 - a. all land within 100 feet of any ridgeline associated with a natural feature, whose elevation is 3,700 or more feet above sea level as established by the most current topographic data available; and
 - b. to all property or developments located on slopes over ten percent.
2. These standards are intended to supplement other standards within these regulations and other local, state, and federal regulations.

C) Permitted and Prohibited Uses and Activities.

1. The following uses and activities are subject to the limitations and requirements outlined below and

are authorized either through a Zoning Compliance Permit (ZC), Special Exception Permit (SE), or they are prohibited (-) according to hillside slope categories expressed in Table 1 below.

Table 1 Permitted and Prohibited Uses and Activities

USES & ACTIVITIES	10%-19.99%	20%-24.99%	>25%
Permanent removal of topsoil not associated with construction activities listed in this table	-	-	-
New roads, driveways, and parking areas	ZC	ZC	SE
Building construction	ZC	ZC	SE
Clearing of vegetation or grading, including the addition of fill	ZC	ZC	-
Resource extraction	ZC	SE	SE

2. Special Exceptions on slopes over 25% shall provide a complete geotechnical analysis prepared by a professional engineer licensed to practice in Montana with the application materials, demonstrating that:
 - a. The activity will not result in accelerated erosion or create hazardous conditions on the site or on adjacent property, as demonstrated by an erosion and sediment control plan and supporting evidence.
 - b. The applicant considered and evaluated alternative locations for all development (including structures, buildings, retaining walls, roads, driveways, parking areas, and other infrastructure) on non-steep slopes (those less than ten percent) and can demonstrate these locations are either inappropriate or infeasible.
 - c. Surface runoff will not create unstable conditions, and appropriate stormwater management facilities will be constructed as necessary.

D) General Standards.

1. **Measurements.** When a use or activity per Table 1 above is proposed on slopes greater than ten percent, the following shall apply:
 - a. All measurements shall be made from existing, pre-project grade.
 - b. A slope map shall be submitted showing contours according to the identifying following:
 - i. All areas on the parcel between ten percent and less 25% slope measured with at minimum with five-foot contours.
 - ii. All areas on the parcel of 25% slope or greater measured with at minimum with ten-foot contours.



2. **Siting.** Siting, design, and grading of development must weigh the need to protect public health, safety, and conservation resources such as natural slope, areas of riparian resources, and habitat for species of concern against the need to protect the view from the valley floor.

3. **Buildable area.**

a. All lots shall have a minimum buildable area of 2,000 contiguous square feet of land with a slope of less than 25 percent. Lots created prior to the adoption of Resolution #2001-011, on January 30, 2001, are exempt from this requirement.

b. For the purposes of implementing these slope standards, the building envelope shall be a rectangle with a predominant up-slope boundary 40 feet or less from the building, side boundaries 40 feet or less from each side of the building, and a predominant down-slope boundary 25 feet or less from the building. Both primary and accessory structures shall be built within the building envelope.

4. **Access roads and driveways.**

a. The construction of access roads and driveways must be accompanied by landscaped berms or other landscaping and erosion control measures,

or both, so that visual impacts resulting from cut and fill, runoff, and erosion potential associated with their construction are promptly mitigated.

- b. Access roads and driveways must be designed to minimize cut and fill and site disturbance, provide year-round access, and accommodate emergency response equipment.
- c. Access roads and driveways shall substantially follow the natural slope contour and shall not exceed a maximum grade of ten percent.
- d. Shared driveways are encouraged where the objectives of this section can be met.
- e. Access road and driveway plans shall be approved by the appropriate fire jurisdiction prior to issuance of a Final Zoning Compliance Permit.

5. **Grading.**

- a. Grading shall be limited to the minimum amount necessary and shall be designed to retain the shape of the natural landform.
- b. Site design and architectural techniques (such as custom foundations, split level designs, stacking, and clustering) shall be used to mitigate the need for cut and fill.

6. **Artificial slopes.** Artificial slopes

COMMENT: Refer to the Missoula County Public Works Manual for details on driveway and approach specifications.

shall be designed and landscaped to create natural-appearing slopes and hillsides. The replacement of trees and other significant vegetation with native or low-impact non-native species is imperative for maintaining the natural appearance and function of artificial slopes.

- a. Artificial slopes shall not exceed a 2:1 slope or 15 feet in height.
- b. Revegetation of artificial slopes other than those where stable rock is exposed shall consist of a combination of native vegetative groundcover, xeriscaping or the placement of trees and/or shrubs, provided not more than 20 percent of any one species is used. Revegetated areas shall be identified in the landscaping plan submitted with the application materials, and such plan shall include provisions for the removal and replacement of dead vegetation, when required.

7. **Drainage.**

- a. Drainage systems must be preserved and incorporated as an integral part of the project design and should appear and function as an essential part of the environment to the greatest extent possible to meet the objectives of this section.
- b. Drainage channels and ditches must follow the existing drainage patterns to the extent

possible or be otherwise placed in inconspicuous locations and receive a naturalizing treatment to avoid excessive erosion resulting from the runoff of pollutants into waterways. Such treatments may include native rock, colored concrete, and landscaping so that they appear as an integral part of the environment.

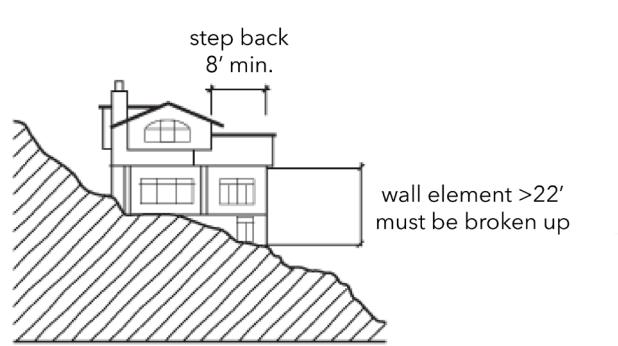
8. **Designing for context.** Structures shall be designed to fit into the hillside, rather than altering the hillside to fit the structure. The design may require the use of one or more methods to fit into the hillside. Examples of methods for incorporating structures into hillsides include the following:
 - a. Reduced footprint design, where the building footprint does not exceed 900 square feet of ground floor living area;
 - b. "Step up" or "step down" structures which follow the natural hillside slope on any buildable portion of the site;
 - c. Orientation of buildings to slopes so that the greatest horizontal dimension is parallel with, not perpendicular to, the natural contour of the land; and,
 - d. Use of landscaping and screening of exposed foundations, retaining walls, and wall elements.

COMMENT: Refer to the Missoula County Public Works Manual Section 9 for more information about grading and drainage.



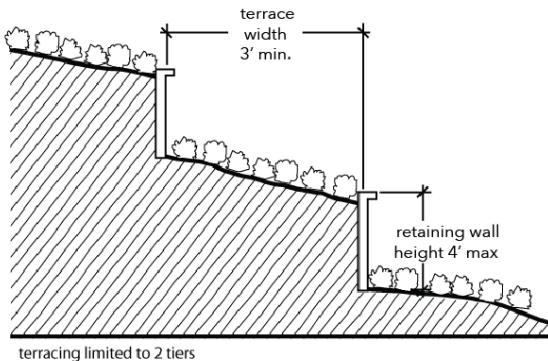
9. Building wall elements.

- a. Where a building wall element which is visible from road rights-of-way, not including alleys, and from public trails and parks, is located on a hillside over 10%, and is taller than 22 feet, it shall be offset to better fit the natural topography of the site.
- b. Stacked vertical building wall elements shall not exceed 125 percent of the maximum allowable height by district when measured from the highest point of the building or structure to the lowest point of finished grade adjacent to the structure (Figure 1).
- c. Wall elements, as measured from the lowest part of finished grade adjacent to the building wall to the underside of the eave, will be considered offset for the purpose of these hillside regulations only if they are:
 - i. Separated by at least 8 feet in horizontal distance; and,
 - ii. The offset occurs by stepping the building back towards the slope.

FIG. 1 Building Wall Step-Back**10. Retaining walls.**

- a. Where retaining walls are used, the walls shall step up or down from the building structure following the natural hillside contours.
- b. Maximum permitted height of a retaining wall is four feet measured from finished grade.
- c. Terracing of retaining walls is limited to two tiers. The width of the terrace between vertical retaining walls is a minimum of three feet deep. Terraces created between retaining walls must be permanently landscaped or revegetated (see Figure 2).

COMMENT: Retaining walls over 4' tall require a building permit and engineering plans certified by a licensed professional.

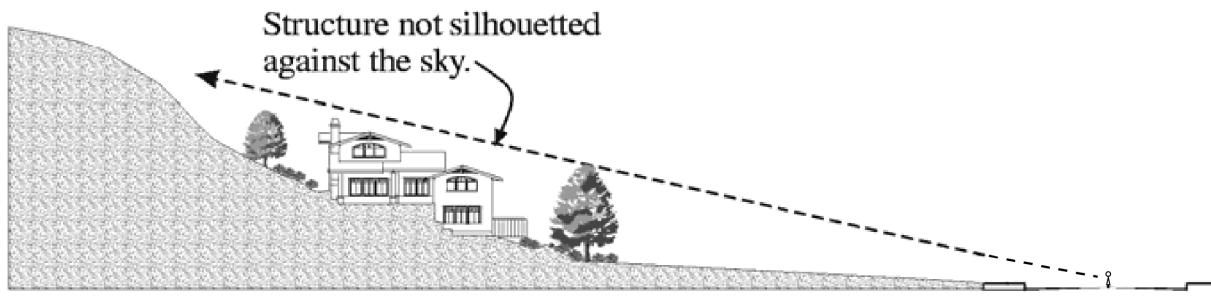
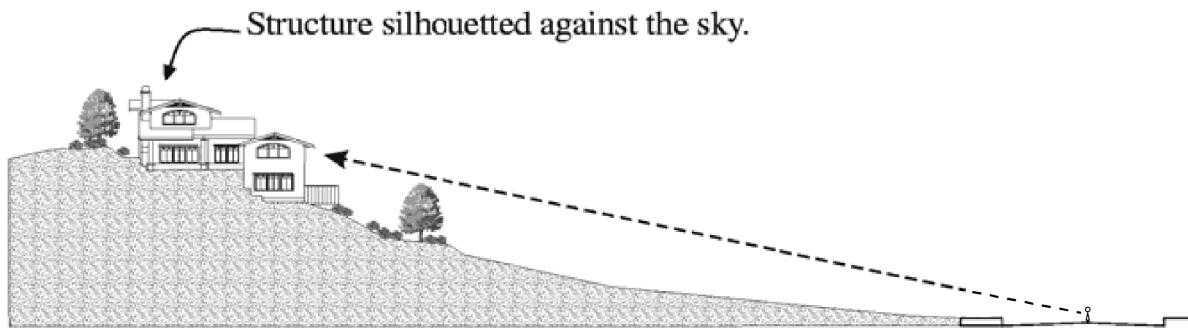
FIG. 2 Terracing of Retaining Walls**11. Vegetation preservation and screening.**

- a. All trees and other natural vegetation shall be preserved except in areas approved for grading or within the area required to be cleared according to the WUI standards. The removal of non-native and invasive plant species and their replacement with native species or low-impact non-native species that are unlikely to spread beyond the planted area is encouraged.
- b. During construction, vegetation preservation areas shall be clearly designated on-site using fencing to protect these areas from disturbance.
- c. Natural landforms and vegetation shall be used to screen buildings and structures from public view to the extent practicable.
- d. Planting of species listed in Section 6.4.E.3. is prohibited.

12. Ridgeline standards.

- a. The highest part of any structure shall be a minimum of 25 vertical feet below the closest high point on the nearest prominent hilltop or ridgeline (see Figure 3).
- b. The ridgeline's natural contour and native vegetation must remain intact.
- c. A suitable building location on vacant lots existing at the time of adoption of these regulations which either meet the minimum lot size of the zoning district or are legally non-conforming, that would be deemed unbuildable due to the application of ridgeline standards in this section may be identified according to the following requirements:
 - i. The suitable building location must minimizes the protrusion of the home above the established ridgeline and maximizes the distance of the building location from the ridgeline.
 - ii. The Zoning Officer may also consider the existing conditions (e.g., highways, railroads, steep slopes, sensitive lands, and similar physical constraints), when evaluating the suitable building location.
 - iii. The suitable building location is in conformance with all other applicable standards in these regulations.



FIG. 3 Ridgeline Viewsheds**THIS****NOT THIS**

13. **Alternative design.** When an alternative to the design standards in this section is proposed as part of a variance application, the applicant shall document how the proposed design meets the intent of these regulations and adopted County policy. On approving alternative designs through a variance, the Board of Adjustment may require more restrictive hillside design standards than those in other portions of this section.

7.2 GRADING, DRAINAGE, AND EROSION CONTROL

A) Purpose. The purpose of this section is to ensure that site grading and the control of stormwater runoff, both quantity and quality, comply with [Missoula County Public Works Manual](#) and [Subdivision Regulations](#).

The standards herein are intended to protect public health and safety, preserve natural drainage systems, minimize impacts to waterbodies and riparian areas and associated fish and wildlife communities, and mitigate the effects on property from erosion, sedimentation, flooding, and site grading.

B) Area Limited. Clearing of trees and vegetation and grading in conjunction with an approved Zoning Compliance Permit, building permit or preliminary plat shall be limited to that portion of a parcel for which a valid building permit has been issued or for which a preliminary plat has been approved. Unless otherwise defined, the start of construction is when grading begins.

C) Stabilization Required. All areas cleared of trees and vegetation or graded shall be stabilized with manmade or vegetative cover as required by Section 6.4.C.4. "Replacement of Planting Materials."

D) Activities Exempted. When a Zoning Compliance Permit is not required for activities related to commercial tree harvesting, bona fide agricultural operations, and the creation or extension of public infrastructure occurring within a public or private right-of-way the grading and clearing requirements of this section shall not apply.

E) Low Impact Stormwater Design.
Natural and vegetated stormwater

management systems such as swales, constructed wetlands, and bioretention cells are encouraged to manage stormwater in compliance with federal, state, and local stormwater regulations.

F) Additional Standards.

1. Grading, drainage, and erosion control shall be reviewed by County Public Works to ensure compliance with the [County Public Works Manual](#), as amended, which is adopted and incorporated herein by reference.
2. In residential developments with parcel sizes one acre or smaller, if the total percentage of the impervious surface exceeds 35 percent of the parcel size, additional drainage and erosion control considerations may be required. Conservation Design Developments are exempt from this standard.

7.3 FLOODPLAIN DEVELOPMENT

A) Purpose. It is in the County's best interests to restrict or prohibit uses and activities that may elevate the risk of water quality contamination or result in increased flood hazards in those areas prone to flooding. Such restrictions or prohibitions shall be in addition to any other requirements or permissions stated within these regulations. Where a provision may be in conflict with other requirements or permissions in these regulations, the most restrictive standards shall take precedence.

B) Floodplain Regulations. All requirements of the most current version of the adopted [Missoula County Floodplain Regulations](#) apply.



C) Uses Prohibited. The following uses are prohibited within the designated floodplain identified by the County.

1. High-intensity agricultural, including agricultural lagoons
2. Airport maintenance or fueling areas
3. Automotive or vehicle repair shops, including farm equipment repair shops
4. Boat services including repair and refinishing
5. Fleet, trucking, or bus terminals
6. Funeral and interment services, including crematorium and cemeteries, mausoleums, and other burial grounds, and excluding funeral homes and mortuaries.
7. Gasoline and fuel sales
8. Injection wells, dry wells, or sumps
9. Junk and salvage yards, including auto wrecking
10. Land application of sewage residuals (biosolids)
11. Buildings on non-permanent foundations
12. Manufacturing and production, except for artisan
13. Parking lots or garages parking structures containing more than fifty spaces
14. Planting of species listed in Section 6.4.E.4.
15. Railroad yards, maintenance, or fueling areas
16. Research cooperative learning and training facilities

17. Underground storage tanks for fossil fuels and other chemicals
18. Utility services, major
19. Vehicle sales and storage
20. Waste and recycling facilities

7.4 **RIPARIAN RESOURCE PROTECTION**

A) Purpose. The purpose of these regulations is to protect public health, safety, and general welfare by protecting the integrity of riparian resources and their natural and recreational functions. Riparian resource areas perform important social, biological, and physical functions such as improving and maintaining water quality, storing and conveying stormwater and floodwater, recharging groundwater, and providing important fish and wildlife habitat and associated outdoor recreational opportunities.

B) Applicability.

1. The standards in this section applies to structures, uses and associated activity that trigger a Zoning Compliance Permit along rivers, streams and creeks and to wetland areas identified as Palustrine, Lacustrine, Riverine and Riparian in the [Montana Natural Heritage Program's Wetland and Riparian Framework Map](#).
2. The following are exempt from the standards in this section:
 - a. Ephemeral and intermittent streams not identified in the [Montana Natural Heritage Wetland and Riparian Framework Map](#).
 - b. Manmade ponds and lakes and other manmade water

bodies, including irrigation ditches, even if identified in the [Montana Natural Heritage Program's Wetland and Riparian Framework Map](#).

C) Riparian Resource Protection Area Required.

1. A minimum 50-foot setback whose measurement is described in Section 7.4.E. is required to protect all riparian resources as defined by these regulations.
2. Those areas within the 50-foot Riparian Resource Protection Area (RRPA) absent of riparian and/or hydrophilic vegetation, including canopy cover of said vegetation, as mapped by a qualified professional specializing in riparian resource systems and species, may be excluded from the Riparian Resource Protection Area and designated within the Riparian Resource Buffer described in Section 7.4.D. below.
3. Riparian or hydrophilic vegetation shall not be removed or altered so as to eliminate it from inclusion in the Riparian Resource Protection Area. Where riparian or hydrophilic vegetation has been removed or altered within the 50-foot protection area, that area shall be designated as included within the Riparian Resource Protection Area and subject to all standards for the Riparian Resource Protection Area.
4. Riparian Resource Protection Areas are not required adjacent to wetlands areas identified as Palustrine, Lacustrine, Riverine, and Riparian as identified in the Montana Natural Heritage Program's Wetland and Riparian Framework Map.

D) Riparian Resource Buffers Required. The buffers shown in Table 2 below are established to keep development sufficiently distanced from riparian resources. The Riparian Resource Buffer is applied in addition to the minimum required Riparian Resource Protection Area established in Section 7.4.C. above.

1. The 50-foot Riparian Resource Buffer required for applicable wetlands as designated in the Montana Natural Heritage Program's Wetland and Riparian Framework Map, is not required when a qualified professional specializing in riparian resource systems determines a mapped wetland is not present or is absent of riparian and/or hydrophilic vegetation. Riparian or hydrophilic vegetation shall not be removed or altered so as to eliminate it from inclusion in the Riparian Resource Buffer. Where riparian or hydrophilic vegetation has been removed or altered within the Riparian Resource Buffer, that area shall be designated as included within the Riparian Resource Buffer and subject to all standards for the Riparian Resource Buffer.

COMMENT: The Montana Natural Heritage Program's MapViewer is intended to provide a simple way to identify, locate, and visualize the mapped rivers, streams, creeks, and wetland areas referenced in this code. Geospatial data related to resource buffers or protection areas is available from the Montana State Library's Geographic Information Clearinghouse as both downloadable datasets and web services. The specific source data used were the [Montana Hydrography Framework \(National Hydrography Dataset\)](#) for rivers, streams and creeks and the [Montana Wetland and Riparian Framework](#) for wetland areas. Information about the [Missoula Channel Migration Zone](#), including an interactive map, is available from the Missoula City-County Health Department.



Table 2 Riparian Resource Buffers

RIPARIAN RESOURCE	GEOGRAPHIC SECTION	MIN. BUFFER REQUIRED
Creeks south and west of Clark Fork River (Hayes Creek, Gilman Creek, O'Brien Creek, and Deep Creek)	Entire length	75 ft.
Bitterroot River	Entire length	450 ft.
Blackfoot River	Entire length	125 ft.
Butler Creek	Upstream of airport property line	75 ft.
	Airport property line to Clark Fork floodplain	125 ft.
	Portion within Clark Fork floodplain	75 ft.
Clark Fork River	East of confluence with Blackfoot River	450 ft.
	Confluence with Blackfoot River to I-90 bridge at East Missoula	125 ft.
	West of Reserve St. Bridge	450 ft.
Deer Creek	Entire length	75 ft.
Grant Creek	Entire length	75 ft.
La Valle Creek	Upstream of airport property line	75 ft.
	Airport property line to Clark Fork floodplain	125 ft.
	Portion within Clark Fork floodplain	75 ft.
Marshall Creek	Entire length	75 ft.
Miller Creek	Entire length	75 ft.
Milltower Gulch	Entire length	75 ft.
O'Keefe Creek	Entire length	75 ft.
Pattee Creek	Entire length	75 ft.
Rattlesnake Creek	North of Mountain View Dr.	75 ft
Applicable wetlands, as defined in 7.4.B.1 and designated in the Montana Natural Heritage Map		50 ft.

E) Measurement.

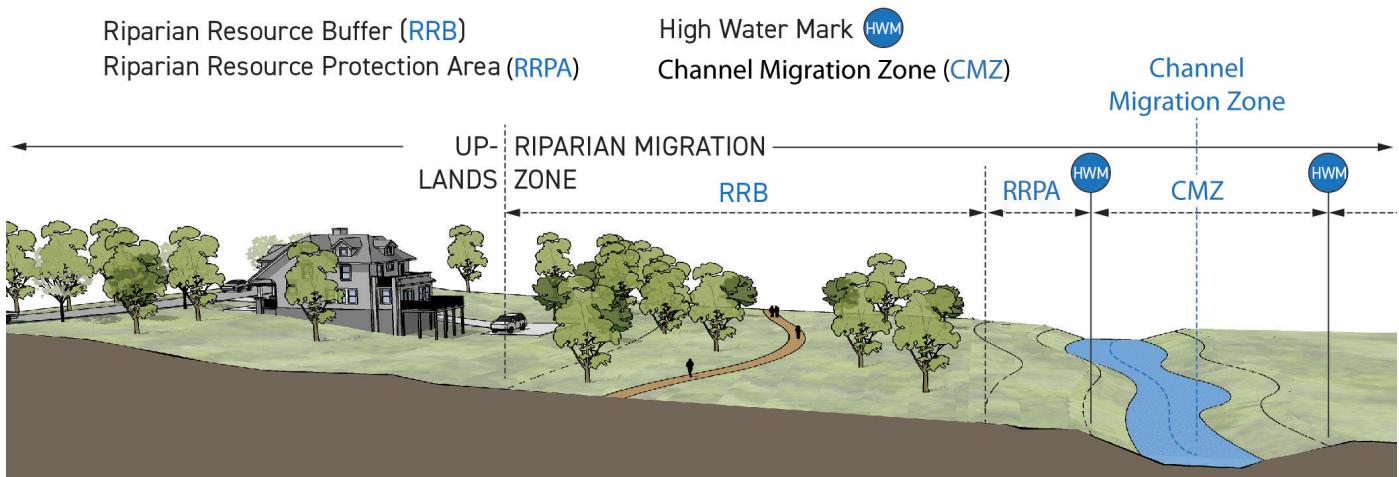
1. The Riparian Resource Protection Area shall be measured landward from one of the following:
 - a. Where the Channel Migration Zone (CMZ) is mapped, the edge of the 2018/2019 channel, or

- b. Where the Channel Migration Zone is not mapped, the mean high-water mark of rivers, streams, and creeks.
- c. There is no requirement for a Riparian Resource Protection Area adjacent to wetlands areas identified as Palustrine, Lacustrine, Riverine, and Riparian in the Montana Natural Heritage Program's Wetland and Riparian Framework Map.

2. The Riparian Resource Buffer shall be measured landward as an additional area from the established edge of the Riparian Resource Protection Area in accordance with Table 2 above, subject to the following:

- a. Where the Channel Migration Zone is mapped and the Historic Migration Zone (HMZ) extends beyond the Riparian Resource Buffer listed in Table 2, the boundary of the Riparian Resource Buffer shall be extended to include the Historic Migration Zone plus an additional 50-feet from the boundary of the Historic Migration Zone.
- b. Riparian Resource Buffers measuring 50 feet in width shall be established around wetlands, measured from the upland edge of the wetland, in accordance with Table 2.

FIG. 4 Riparian Resource Measurements



F) Uses and Activities.

1. **Riparian Resource Protection Area.** The following activities are regulated in the Riparian Resource Protection Area.
 - a. Non-motorized trail construction is permitted, subject to the following:
 - i. Trail surfaces are made with natural or pervious materials;
 - ii. Trails are located no closer than 25 feet to the waterside edge of the Riparian Resource Protection Area; and,
 - iii. A natural or pervious footpath no more than four feet in width is permitted to provide direct (generally perpendicular) access to a water body, with minimal disturbance to the stream bank and riparian vegetation.



- b. Maintenance and reconstruction of existing driveways, roads, railroads, public levees, utilities, infrastructure necessary to support agriculture, and associated structures is permitted pursuant to engineering best practices and construction standards described in Section 7.4.H., provided such maintenance or reconstruction shall not increase the impervious area within the Riparian Resource Protection Area, and disturbed natural areas are restored to their original or natural condition.
- c. Construction or expansion of driveways, roads, railroads, public levees, utilities, and associated structures by a public agency or public service provider is allowed when no other feasible location or practical route exists.
 - i. Such construction or improvement must be done using methods that would minimize disturbance of the riparian resource.
 - ii. Construction shall comply with the standards in Section 7.4.H.
 - iii. To the maximum extent possible, improvements should locate in areas outside of the Riparian Resource Protection Area.
- d. Construction or expansion of driveways and utilities necessary to provide access to or support an allowable structure or use on a property is allowed when no other feasible location or practical route exists.
 - i. Such construction or improvement must be done using methods that would minimize disturbance of the riparian resource.
 - ii. Construction shall comply with the standards in Section 7.4.H.
 - iii. To the maximum extent possible, improvements should locate in areas outside of the Riparian Resource Protection Area.
- e. Maintenance, repair, or reconstruction of an existing structure or element existing on the effective date of these regulations is permitted.
- f. Expansion or relocation of a legal nonconforming structure or element is permitted according to 7.4.G.2.
- g. All new construction, including new driveways, roads, utilities, structures and elements is prohibited except as otherwise noted in this section.
- h. Only wildlife-friendly fencing is permitted, in accordance with Section 7.4.J.
 - i. Outdoor storage as defined in Chapter 13 is prohibited.
 - j. Signage is prohibited, with the exception of wayfinding signs. Existing legal nonconforming signs are subject to the provisions of Chapter 10.
 - k. Agriculture which minimizes disturbance of riparian

resources is permitted; high-intensity agriculture and resource extraction is prohibited.

I. Removal, displacement, or alteration of native riparian vegetation (i.e. hazard trees) not associated with an allowable action per this section is permitted only when real property is at risk of damage, or the health and safety of the general public is in danger. Any removal of vegetation may still require a 310 Permit from the Missoula County Conservation District.

i. Damage to existing native riparian vegetation must be minimized.

ii. Native vegetative groundcover and other riparian vegetation that is removed to allow other permitted activities must be replaced prior to the issuance of a Final Zoning Compliance Permit.

iii. Dumping or long-term storing of personal property is considered to displace or alter riparian vegetation and shall not be permitted in the Riparian Resource Protection Area.

m. Grading, excavation, and other site-altering activities are prohibited, including installation of new wells and waterlines, wastewater treatment systems, and drainage systems, including stormwater retention and detention areas.

i. Emergency activities approved by the county that require grading, excavation, and other site-altering activities to ameliorate acts of nature or to execute necessary utility repairs to prevent an immediate threat to property or public health and safety are permitted. Riparian impacts must be mitigated when emergency situation is resolved, (e.g., riparian vegetation that is removed for emergency activities must be replaced when the emergency is over).

2. **Riparian Resource Buffer.** The following activities are regulated in the Riparian Resource Buffer.

a. Non-motorized trail construction is permitted if surfaces are made with natural or pervious materials.

b. Maintenance and reconstruction of existing driveways, roads, railroads, public levees, utilities, infrastructure necessary to support agriculture, and associated structures is permitted pursuant to engineering best practices and construction standards described in Section 7.4.H., provided such maintenance or reconstruction shall not increase the impervious area within the Riparian Resource Buffer by more than five percent and disturbed natural areas are restored to their original or natural condition



- c. Construction or expansion of driveways, roads, railroads, public levees, utilities, and associated structures by a public agency or public service provider is allowed when there is no other feasible location or practical route.
 - i. Such construction or improvement must be done using methods that would minimize disturbance of the riparian resource.
 - ii. Construction shall comply with the standards in Section 7.4.H.
 - iii. To the maximum extent possible, utilities should locate in areas outside of the Riparian Resource Buffer.
- d. Construction or expansion of driveways and utilities necessary to provide access to or support an allowable structure or use on a property is allowed when no other feasible location or practical route exists.
 - i. Such construction or improvement must be done using methods that would minimize disturbance of the riparian resource.
 - ii. Construction shall comply with the standards in Section 7.4.H.
 - iii. To the maximum extent possible, improvements should locate in areas outside of the Riparian Resource Buffer.
- e. Maintenance, repair, or reconstruction of an existing structure or element existing on the effective date of these regulations is permitted.
- f. Expansion or relocation of a legal nonconforming structure or element is permitted according to 7.4.G.2.
- g. Construction of new structures and elements is prohibited within the Riparian Resource Buffer.
- h. Signage is prohibited, with the exception of wayfinding signs. Existing legal nonconforming signs are subject to the provisions of Chapter 10.
- i. Agriculture which minimizes disturbance of riparian resources is permitted; high-intensity agriculture is prohibited.
- j. Resource extraction is allowed subject to these and other applicable regulations.
- k. Installation of new wells or waterlines, wastewater treatment systems, and drainage systems, including stormwater retention and detention areas is permitted if allowed by Missoula City-County Health Department.
- l. Grading, excavation, and other site-altering activities are prohibited unless part of an approved activity per this section.
 - i. Emergency activities approved by the county that require grading, excavation, and other site-altering activities to

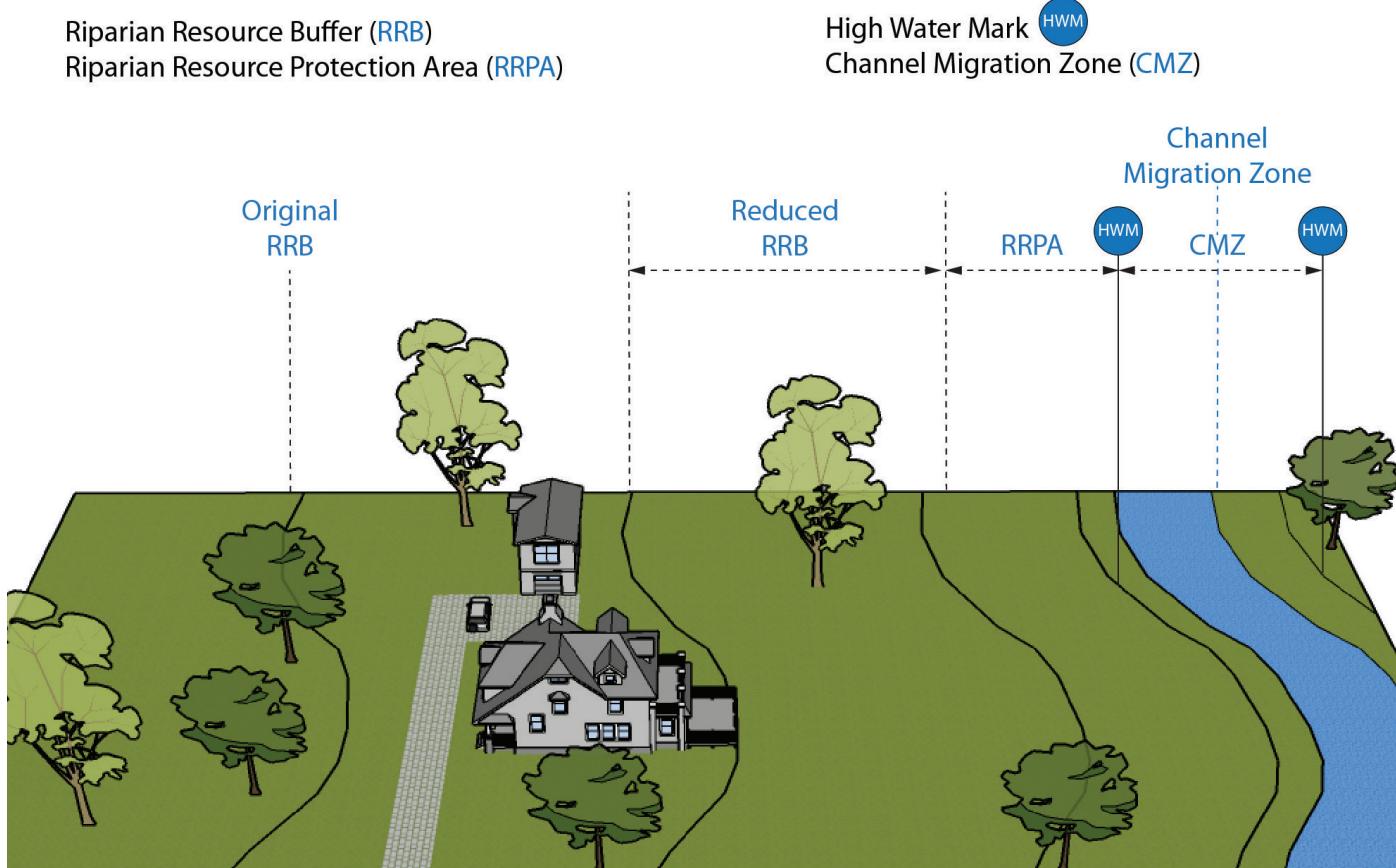
ameliorate acts of nature or to execute necessary utility repairs to prevent an immediate threat to property or public health and safety are permitted. Riparian vegetation that is removed for emergency activities must be replaced when the emergency is over.

G) Exceptions.

1. A suitable building location on vacant lots existing at the time of adoption of these regulations which meet the minimum lot size of the zoning district and legal nonconforming vacant lots that would be deemed unbuildable due to the application of the requirements in Section 7.4.C. or Section 7.4.D. may be identified according to the following requirements:
 - a. The suitable building location should maximize the distance from the riparian resource and minimize disturbance of riparian vegetation.
 - b. The Zoning Officer may consider the existing conditions (e.g. highways, railroads, steep slopes, sensitive lands, and similar physical constraints) when evaluating the suitable building location.
 - c. The suitable building location must be in conformance with all other applicable standards of these regulations.
2. Buildings legally existing at the time of adoption of these regulations and otherwise in conformance with all other aspects of these regulations that are located all or partially within the Riparian Resource Protection Area or Riparian Resource Buffer may be expanded or relocated according to the following requirements:
 - a. Principal Buildings and Uses:
 - i. The applicant must establish the distance between the river, stream, wetland, or riparian resource and the existing building line or built area of the principal building or principal use on the parcel, whichever is closer, following the process identified in Section 7.4.E. This distance must be shown on the site plan across the entire parcel or project area.
 - ii. The distance established in 7.4.G.2.a.i. reduces the effective Riparian Resource Buffer on the subject parcel (Figure 5).
 - iii. The distance established does not reduce the Riparian Resource Protection Area unless the newly established distance is less than 50- feet.
 - iv. The expansion of the built area or of a building, or the relocation of a building, into the reduced Riparian Resource Buffer or Riparian Resource Protection Area is not permitted.
 - v. Any expansion of the built area or of a building, or the relocation of a building outside of the area identified in 7.4.G.2.a.i. is permitted when in conformance with all other applicable standards in these regulations.



FIG. 5 Riparian Resource Measurement Reduction



b. Accessory Buildings and Uses

- i. Accessory buildings located within the Riparian Resource Buffer may be expanded by up to 50% of the square footage of the existing building footprint as it existed at the time of the adoption of these regulations when in conformance with all other applicable standards in these regulations.
- ii. Accessory buildings located within the Riparian Resource Protection Area may be expanded by up to 25% of the square footage of the existing building footprint as it existed at the time of the adoption of these regulations when in conformance with all other applicable standards in these regulations.
- 3. Habitat restoration and stream stabilization projects proposed or approved by public agencies including, but not limited to, the Missoula Conservation District (310 permit), Montana FWP (SPA-124 permit), Army Corps of Engineers, Missoula County Floodplain Administration, or the Missoula County Water Quality District are exempt from all requirements of Section 7.4.

H) Protection of Riparian Resources During Development Construction. Within the Riparian Resource Protection Area and Buffer, any development activity, including but not limited to new construction, reconstruction and maintenance, shall comply with the following standards:

- 1. Existing riparian resources and vegetation shall be protected to minimize removal and damage during all development and construction activities unless expressly permitted

by the County for removal or disturbance. The drip lines of trees that are located within the Riparian Resource Buffer shall be protected even when the drip lines lay outside the Riparian Resource Buffer by being included in the demarcated area.

2. Utility placement and road alignment shall minimize impacts to scenic vistas by avoiding areas adjacent to open water and locating below ridge crests and high points, where applicable.
3. Approved development shall be constructed on soils that are not susceptible to erosion and will avoid sedimentation and pollution runoff into water bodies.
4. To the extent possible, road shall be designed to follow natural contours and minimize cut and fill. Fill material shall not be placed in the Riparian Resource Protection Area or Buffer, unless expressly approved by the County.
5. Water body road crossings must occur at perpendicular angles to the orientation of the stream channel to minimize disturbance of riparian resources and vegetation.
6. The sidecasting of material into the water body during construction is prohibited.
7. Effective erosion and sedimentation control best practices shall be conducted during development construction and maintenance activities.
8. Only natural streambank and shoreline stabilization as defined in Chapter 13 may be used along any water body to protect public health and safety, in compliance

with all other applicable regulations. Bank stabilization shall not be used as a preventative measure to stop bank erosion unless expressly authorized by the Missoula Conservation District, Missoula County Floodplain Administrator, and/or Fish, Wildlife and Parks, nor shall it be used to make land suitable for development, whether new or an expansion.

I) Review Process and Procedures.

1. Zoning Compliance Permit applications for properties that contain areas of riparian resource (Riparian Resource Protection Areas or Buffers) must address how the requirements of this Section 7.4 will be met.
2. The Zoning Officer may require that Riparian Resource Protection Areas and Buffers be demarcated in the field prior to issuance of a Zoning Compliance Permit to clearly identify areas intended to remain undisturbed and prevent encroachment into the protected buffer areas. The method of demarcation shall be approved by the County and must, at minimum, be consistent with generally accepted best management practices.



3. Prior to issuance of a Zoning Compliance Permit, the applicant must provide documentation that other agencies have been consulted and necessary license applications submitted. These agencies include, but may not be limited to, the Montana Conservation District (310 Permit), Army Corps of Engineers (404 Permit), and County Floodplain Administration (Floodplain and Shoreline Permits). Prior to issuance of a Final Certificate of Zoning Compliance, the applicant shall provide evidence confirming that all conditions and requirements of these permits have been satisfied. The Zoning Officer may withhold issuance of a Final Certificate of Zoning Compliance if the requirements of the other licenses and permits have not been met.

J) Fencing. Fencing in the Riparian Resource Protection Area is prohibited, except for wildlife-friendly fencing meeting the following standards to allow for safe and convenient wildlife movement.

1. The top rail may either be of solid material or smooth wire, separated by a minimum of 12 inches from the rail or wire below.
2. The top rail or wire shall be no taller than 42 inches above grade.
3. The bottom rail may either be of solid material or smooth wire and must be at least 18 inches above the ground.
4. The spacing of fence posts shall be on 16.5-foot centers unless topography prevents this spacing.
5. The top level of a newly

constructed fence shall be flagged with white flagging immediately after construction which shall remain in place for at least one year.

6. Gates, drop-downs, or other passages are encouraged where wildlife concentrate and cross.
7. Where fencing does not meet the specifications above, wildlife-friendly fencing prescribed by Montana Fish, Wildlife & Parks, including temporary fencing to exclude wildlife for habitat restoration projects, may be approved by the Zoning Officer for installation in the Riparian Resource Protection Area. Alternatively, rotational grazing fencing prescribed by NRCS and/or the Missoula Conservation District may be approved by the Zoning Officer for installation in the Riparian Resource Protection Area.
8. Where 50 percent of the linear feet of an existing fence not meeting these requirements is replaced in the Riparian Resource Protection Area, the entire fence shall be considered "new" and shall abide by the standards of this section.

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