
**Hillview Subdivision
Riparian Management Plan**

The proposed Hillview Subdivision property is in Missoula, Montana in Missoula County (SESE Section 6 and SWSW Section 5, Township 12 North, Range 19 West: **Figures 1 and 1a**; 46.821427, -114.022690). The proposed subdivision will be completed in seven phases (Exhibit X102). The first phase will be multi-family residential, and the second phase will include townhouses. Remaining phases will be residential per Zoning District R5.4 requirements. There is currently one residential home within the proposed project boundary. The property has historically been used for agricultural grazing.

One riparian resource at the base of a woody draw (Moose Can Gully) occurs in the southwest corner of the property (Missoula City Subdivision Regulations, 2022). At the base of the woody draw an unnamed perennial, 2-foot wide, rock bottom channel flows southeast to northwest. Narrow, 2-foot wide emergent wetland occurs along both sides of the channel with small inclusions of willow (*Salix* sp.) and red-osier dogwood (*Cornus sericea*) (**Exhibit A**). Where the channel enters the south property boundary, a sedge-dominated slope wetland emerges from the south slope of the draw and connects to the channel wetland fringe.

Resource Habitat Descriptions

The dominant riparian resource overstory is quaking aspen (*Populus tremuloides*) with an understory dominance of red-osier dogwood (*Cornus sericea*) (species common and scientific names according to MNHP 2023).

Upslope of the riparian resource is a dry woody draw community of ponderosa pine (*Pinus ponderosa*), occasional rocky mountain juniper (*Juniperus scopulorum*), and a dominant understory of common chokecherry (*Prunus virginiana*).

Other understory shrubs within the riparian resource woody draw include common snowberry (*Symphoricarpos albus*), willow species, and occasional Rocky Mountain maple (*Acer glabrum*) and Green's mountain ash (*Sorbus scopulina*).

Grass species within the upper dry slopes of the woody draw include smooth brome (*Bromus inermis*) and meadow timothy (*Phleum pratense*). The wetland fringe includes a dominance of creeping bentgrass (*Agrostis stolonifera*), minor areas of reed canarygrass (*Phalaris arundinacea*), and small pockets of Northwest Territory sedge (*Carex utriculata*).

Habitat types within the riparian woody draw include: Ponderosa Pine/Common Chokecherry (upper dry slopes); Quaking Aspen/Red-osier Dogwood (adjacent to the wetland fringe along the unnamed stream channel); and, Creeping Bentgrass (formerly known as “redtop”, within the wetland fringe) (**Exhibit B**; Hansen et al. 1995¹; Missoula City Subdivision Regulations, 2022¹).

¹ Habitat types are slightly modified from Hansen et al. 1995 and City of Missoula, **Exhibit 1** (Hansen et al. 1992) because of updated scientific or common names.

Migratory bird species, ungulates, and bear use the woody draw riparian resource for short-distance travel routes, nesting habitats, and refugia from close-proximity urbanized areas. It is unlikely any threatened or endangered species would utilize this habitat given the proximity of homes and city roads.

Soils within the woody draw include Berarm gravelly loam, 4 to 15 percent slopes with moderate erosional rating. Because of the steep, six to seven percent side slopes within the woody draw, a meandering pedestrian path is proposed for the northern edge of the draw where the slope decreases to less than three percent (i.e., on near-level ground upslope of the draw).

A riparian buffer will extend from the north and south outside edges of the riparian resource area to the outside edge of the woody draw (or property boundary where adjacent); buffer width will vary from 40 – 94 feet (**Ex-B**). The trail will be constructed within a 10-foot easement outside of the riparian buffer and in general will run parallel to the outer edge of the buffer. The riparian buffer will extend from Hillview Way and connect to the conservation easement near the southern of the site where the woody draw connects to the parcel boundary (**Exhibit X102**). The trail will be bounded by the woody draw on the south and a public park on the north and provide close access to the riparian woody draw without passing through the riparian habitat. No development will occur south of the south riparian resource buffer and woody draw boundaries.

Riparian Resource Maintenance and Mitigation Plan

There is no known usage of the woody draw riparian resource by humans given the area has been within private property. However, in the far west end of the woody draw and adjacent to Hillview Way there is a box culvert under the road that is used by passage by pedestrians and animals (refugia). A concrete sidewalk along the east side of Hillview Way enters the draw from the northwest end. The sidewalk enters the east end of the pedestrian/wildlife culvert. No modifications are proposed to this concrete trail or passage under Hillview Way.

No activities (roads, trails, stormwater outlets, structures, or any disturbance except for weed control) are proposed for the woody draw riparian resource. Therefore, no mitigation or restoration of the site is necessary. Hillview LLC will be responsible for weed control, until such time as individual owners purchase private lots. Public Parks will be granted to the City of Missoula and will be maintained by the city.

References

Hansen, P.L., R. D. Pfister, K. Boggs, B. J. Cook, J. Joy, and D. K. Hinckley. 1995. Classification and Management of Montana's Riparian and Wetland Sites. Montana Forest and Conservation Experiment Station, School of Forestry, The University of Montana, Missoula, Montana. May 1995. Miscellaneous Publication No. 54.

Missoula City Subdivision Regulations. 2022. Exhibit 1: City of Missoula Riparian/Wetland Habitat and Community Types.

Montana State Library. 2023. Montana Natural Heritage Program, Montana Field Guide: Plants. Site reviewed August 18, 2023: <https://fieldguide.mt.gov/displayPhyDiv.aspx?Kingdom=Plantae>.



Figure 1. Proposed Hillview Subdivision delineation investigation area (pink polygon), Missoula, Montana.

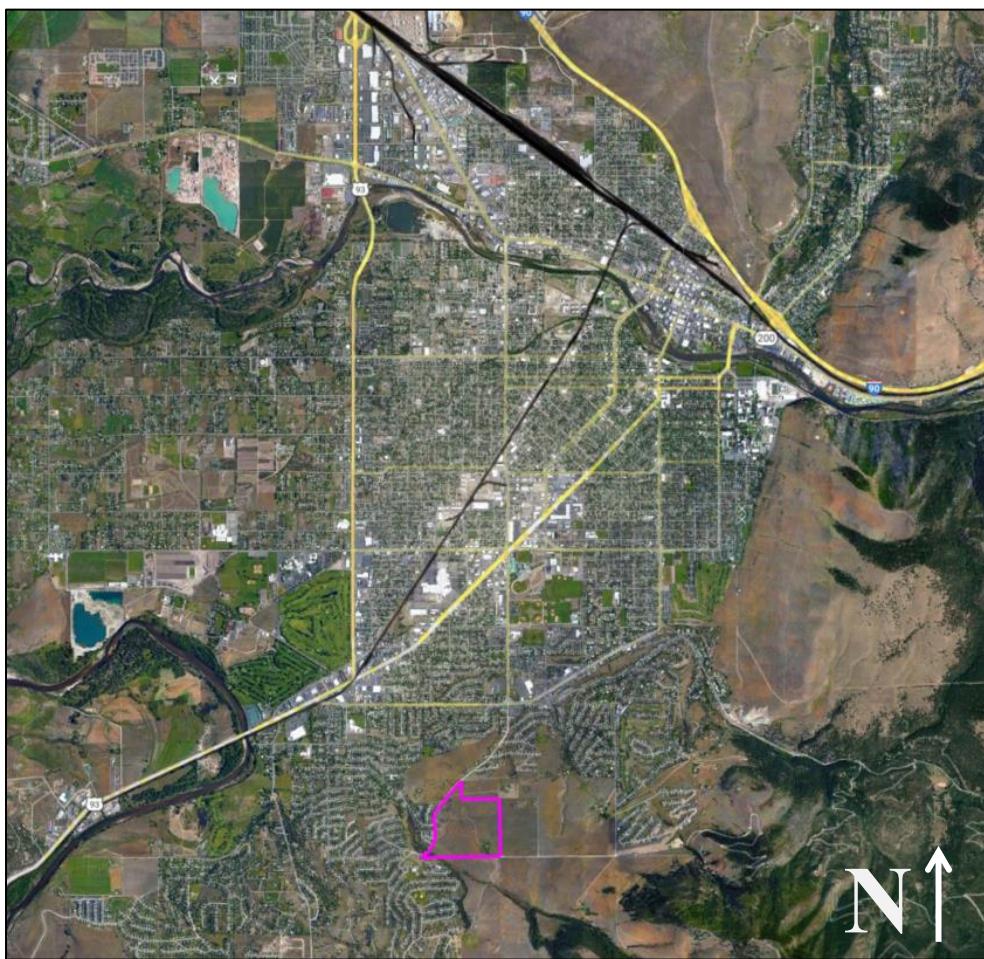


Figure 1a. Proposed Hillview Subdivision delineation investigation area (pink polygon), Missoula, Montana.

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HILLVIEW SUBDIVISION

HILLVIEW WAY, MISSOURI, MT

EX-1
1:40,000
AQUATIC RESOURCE
DELINEATION MAP
12.12.2020
JAMES E. TERRY
OWNER OF TERRY
RESOURCES

EX-B
1:40,000
RIPARIAN RESOURCE
MANAGEMENT EXHIBIT
12.12.2020
TERRAQUTIC, LLC ONE 2020
TERRAQUTIC, LLC ONE 2020

NOT FOR CONSTRUCTION - PRELIMINARY DESIGN



