

Lupfer Heights Subdivision

Environmental Assessment



**LAND
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Introduction

The Lupfer Heights Subdivision is a 12-lot major subdivision on approximately 142.8 acres located in Sections 2 and 3 of Township 31 North, Range 23 West in Flathead County, Montana. The property is located approximately 9 miles northwest of Whitefish as the crow flies, or about 11.5 road miles from the Whitefish city limits via US Highway 93. The property abuts and is accessed from US Highway 93 and Lupfer Road, a declared Flathead County road. Lupfer Loop Road, which leads north from the subdivision through state forest lands to the community of Olney, is available for secondary emergency access.

The property is comprised of forestlands adjacent to US Highway 93 and Burlington Northern Santa Fe (BNSF) railroad tracks. It is located in a broad valley with the Whitefish Range to the east and Stillwater River to the west. Figure 1 provides a vicinity map.



Figure 1: Vicinity Map showing the location of the proposed subdivision in relation to the City of Whitefish, Montana.

The subdivision is proposed to create 12 lots ranging in size from ± 4.1 acres to ± 32.3 acres. All lots are proposed for single-family residential purposes with three lots, 8, 9 and 10, available for
Environmental Assessment for the Lupfer Heights Subdivision, May 2018

commercial purposes as well. The future uses of those lots are not known at this time. The other 9 lots are north and east of the Burlington Northern Railroad tracks along Lupfer Road and Lupfer Loop Road.

The lots are planned to be served by individual on-site water supply wells and individual wastewater treatment systems. In addition, a water system for fire protection is proposed on the subdivider's property across Lupfer Road from the subdivision. The preliminary plat provides the lot layout, which is reduced and shown for convenient reference as Figure 2 below.

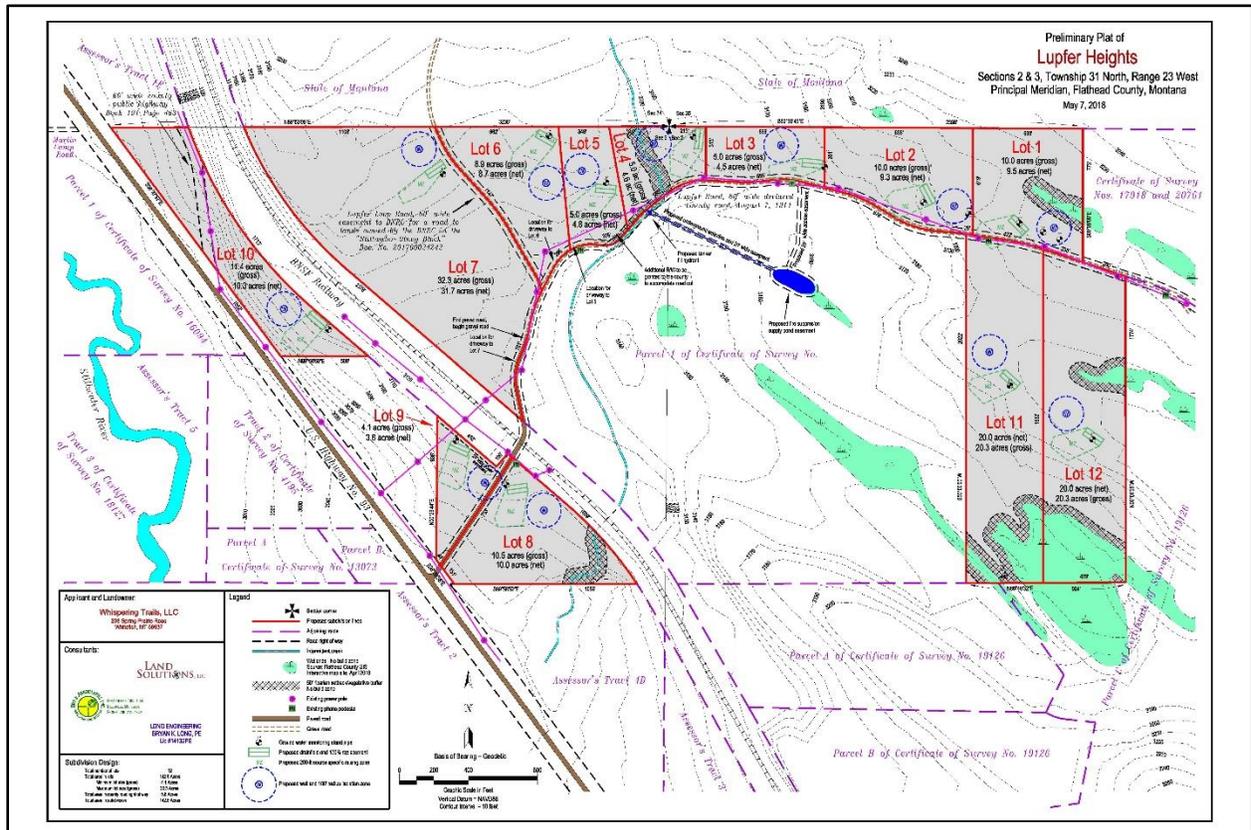


Figure 2: Preliminary plat of Lupfer Heights.

Content notes

This Environmental Assessment (EA) is prepared for compliance with the Flathead County Subdivision Regulations, Appendix C, which outlines the required contents for Environmental Assessments in accordance with the Montana Subdivision and Platting Act. This EA is formatted according to Appendix C, with the Flathead County outline and queries in normal fonts with the preparers' responses in discussion following in *italic font*.

Section 1 – Resource Assessment and Impact Criteria Report

a. Surface Water:

- i. Locate on the preliminary plat and describe all surface water and the delineated 100-year floodplain(s) which may affect or be affected by the proposed subdivision including:
 - A. All natural water systems such as perennial and intermittent streams, lakes and ponds, rivers, or marshes;
 - B. All artificial water systems such as canals, ditches, aqueducts, reservoirs, irrigation or drainage systems;

As shown on the preliminary plat, an intermittent stream occasionally flows through proposed Lot 4 from north to south, leaving the subject property as the drainage meets a culvert that crosses under county-maintained Lupfer Road. The stream then traverses the neighboring property in a southerly direction and crosses the BNSF railway right-of-way, and then crosses the southeast corner of proposed Lot 8 until it exits the property again to continue under US Highway 93 toward its confluence with the Stillwater River.

A series of ponds and other wetlands also occur on the eastern portions of the property on proposed Lots 1, 11, and 12. Please see the preliminary plat for the locations of these wetlands. A photo taken on Lot 1 showing the typical emergent wetland vegetation in the subdivision is included on the following page as Figure 3.

The nearest water body with a recognized floodplain is the Stillwater River, which is mapped with an Approximate Zone A 100-year floodplain across US Highway 93 west of the subdivision. Please see the preliminary plat for the location of the Stillwater River in relation to the property. Figure 4 also shows the Stillwater River's mapped floodplain.

The preliminary plat also depicts the intermittent stream, ponds and wetlands, with associated 'no-build zones' required by the Flathead County Subdivision Regulations around the surface water features within the subdivision.



Figure 3: *Wetland vegetation on Lot 1, December 14, 2017.*

Although wetlands and a small intermittent stream are located on portions of the subject property, these relatively small water features do not raise concerns with regard to jurisdictional floodplains or actual flooding events. No on-site features trigger the floodplain provisions of Section 4.7.9 of the Flathead County Floodplain Regulations.

The Stillwater River is a perennial stream with an approximate upstream basin area of 470.9 square miles.¹ It is located approximately 450 horizontal feet from the western boundaries of the subdivision. Using Google Earth and USGS quadrangle maps, the preparers of this EA estimate the Stillwater River at its closest point to the property is over 40 vertical feet below the lowest portions of the property. Therefore, the Floodplain Provisions, Section 4.7.9 of the Flathead County Subdivision Regulations, require no further analysis of potential area floodplains.

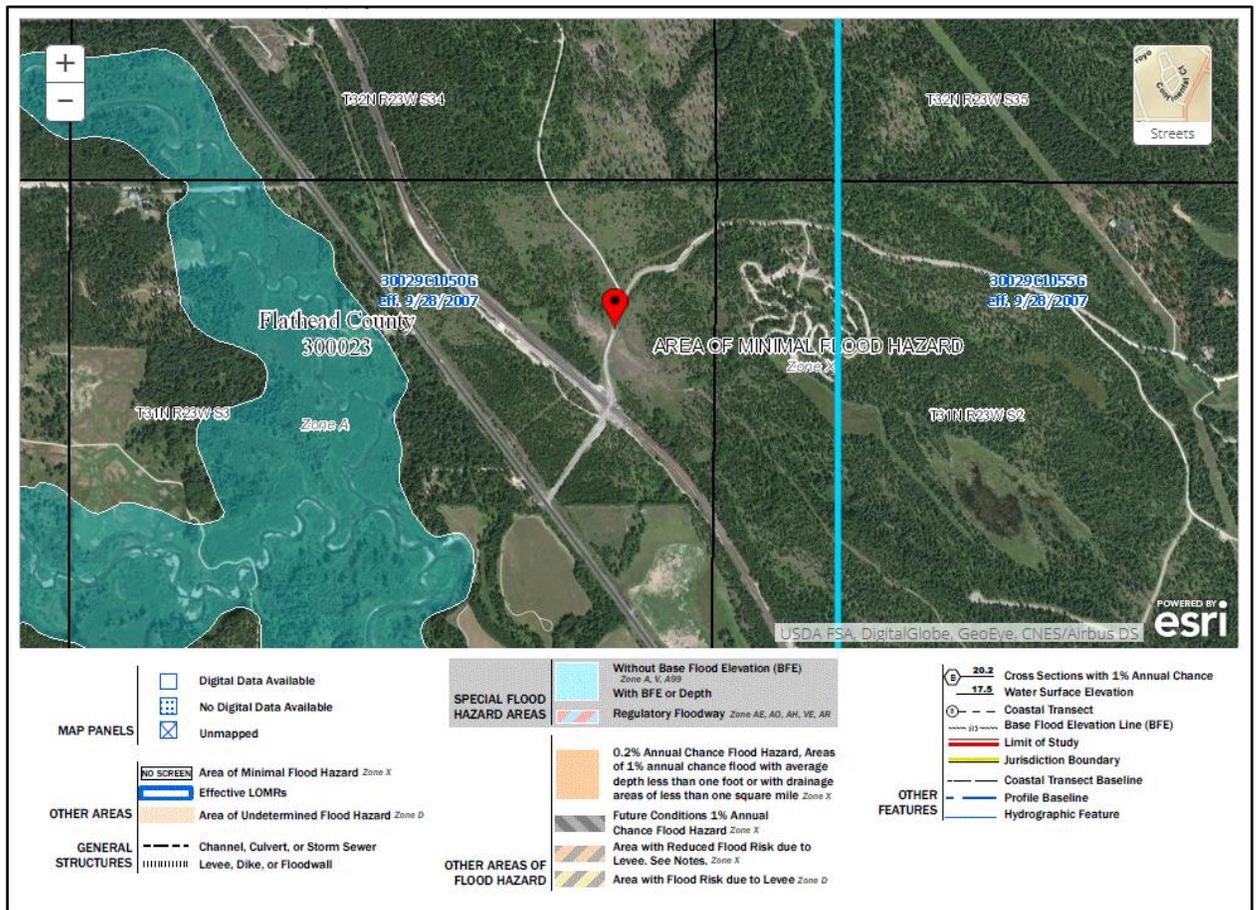


Figure 4: FEMA FIRMette for the area, showing the area of the subdivision outside the Approximate Zone A for the Stillwater River.

¹ StreamStats Report dated 4-2-2018; data obtained from USGS StreamStats website: <https://water.usgs.gov/osw/streamstats/>

No irrigation structures such as turnouts or ditches are known to exist on the property, which is not irrigated and is not under the jurisdiction of any irrigation district or similar entity.

- ii. Describe all probable impacts to surface waters which may affect or be affected by the proposed subdivision including name, approximate size, present use, and time of year when water is present and proximity of proposed construction (e.g. buildings, sewer systems, roads) to surface waters;

The surface waters that could be impacted by the subdivision include a small intermittent stream that traverses Lots 4 and 8, the small wetland area on Lot 1, the ponds and associated wetlands in the southern portions of proposed Lots 11 and 12, the off-site pond/wetland that will be developed for emergency water supply use, and the Stillwater River, which is approximately 450-feet offsite to the west.

The land use is proposed to change from timber production to single-family residential use and possibly some limited commercial uses in addition to ongoing timber management. Previous impacts may have resulted from timber management practices such as ground and vegetation disturbance and herbicide and pesticide applications.

An off-site pond is proposed to be developed and used for a fire suppression water supply system, which will include expanding a small wetland into a pond on the subdivider's neighboring land south of Lupfer Road, and installation of a buried water line that would extend to a proposed fire hydrant on the south side of Lupfer Road across from Lot 4. This pond is to be created regardless of the subdivision, as the subdivider wishes to create the pond for recreational purposes on his property. This water supply system is proposed to be maintained by the landowners within this subdivision and available for use by the Olney and Flathead County Fire Service Areas and other emergency service providers who may need water for fire suppression efforts.

The impacts on the surface water that may result from expanding the pond and utilizing the water during infrequent future emergencies is expected to be minimal. All permits associated with development of the system will be obtained, which will require appropriate best management practices to minimize impacts to water quality. A jurisdictional determination has already been submitted to the US Army Corps of Engineers. Once the water supply system is established, it is expected that use and water drawdown will be very rare (emergencies only) and impacts from water drawdowns will be isolated to this one small pond.

Single family residential development can have impacts as well, such as fertilizer and pesticide application, wastewater treatment effluent, storm water runoff and stream bank erosion. If lawns surrounding the homes are developed, occasional lawn fertilizer application can be expected. Excess fertilizer application that is

carried by stormwater into streams, for example, can increase algal growth.² However, several sources of information regarding responsible fertilizer practices for lawns are available³ and the subdivider would be willing to place appropriate references on the face of the final plat or place into private covenants, conditions and restrictions (CC&Rs) to make lot purchasers aware of appropriate fertilizing practices.

All wastewater treatment systems are required to be located a minimum of 100 feet from surface water and meet the State of Montana's non-degradation requirements that are designed to protect water quality. Please see the sanitation portion of the subdivision application for an analysis of the suitability of the wastewater systems in accordance with Montana's water quality standards. The proposed drainfield locations are shown on the preliminary plat.

The project engineer has dug approximately 15 soils test pits and is currently conducting groundwater monitoring using monitoring pipes in at least one location on a representative drainfield site on each proposed lot, which will continue throughout the wettest season until the end of June. According to the engineer's soils profiles, none of the 12 representative soils test pits have shown signs of mottling (which can indicate soil saturation), high ground water⁴ or an impervious layer such as bedrock.

- iii. Describe any existing or proposed stream bank or shoreline alterations or any proposed construction or modification of lake beds or stream channels. Provide information on location, extent, and purpose of alteration. If any construction or changes are proposed which require a 310 Permit from the Flathead County Conservation District the subdivider shall acknowledge that the permit is required and will be obtained prior to final plat;

The only existing stream bank alteration found during recent site visits is a culvert under Lupfer Road and associated improvements, which appears to have been carried out within the past 10 years. The only potential stream alteration from this subdivision is installation of the proposed fire suppression system's waterline and fill hydrant next to Lupfer Road across from Lot 4. The purpose of routing the water line as shown on the plat is to take advantage of existing topography, which would allow water to flow from the pond to the proposed fill site without installing a pump system that would have to be maintained over time. If this plan is carried out, the water line would be excavated and lain during the summer when the

² http://www.lakesuperiorstreams.org/understanding/impact_fertilizer.html

³ See <http://www.extension.umn.edu/garden/yard-garden/lawns/responsible-fertilizer-practices/index.html> and <http://turf.msu.edu/maintaining-waterfront-turf-to-preserve-water-quality>

⁴ Surface water from snowmelt has been encountered in the test holes, but the engineer does not suspect a ground water source.

stream is not flowing, and the streambed would be reclaimed. The subdivider acknowledges a 310 permit for this work may be required from the Flathead County Conservation District to ensure water quality is protected. Emergency water supply plans are being developed and will be finalized pending review from the Flathead County Fire Service Area and Board of County Commissioners.

Fuels reduction will require that the subdivider adhere to DNRC requirements for the streamside management zone. Thinning within 50 feet of the intermittent stream on Lot 8 will be limited only to hazardous fuels such as dead, diseased, and deformed trees and vegetation (only if needed due to hazards). Care will be taken with use of equipment in the streamside management zone.

An existing off-site wetland on the subdivider's neighboring property is proposed to be dredged and expanded to develop a water supply pond for fire suppression and recreational purposes. It is anticipated that approximately 6,000 to 8,000 cubic yards of material will be excavated from the area in and adjacent to the wetland to create a pond, which will in turn be fed by groundwater more than capable of recharging the pond at sufficient rates and volumes to serve the fire fighting equipment likely to utilize it. To install the water line and hydrant will require a minimal amount of trenching and/or excavation to bury the waterline to a 6-foot depth.

- iv. If wetlands are present, the subdivider shall identify and provide a map showing wetland areas. A wetlands investigation completed by a qualified consultant, using the most current U.S. Army Corps of Engineers' Wetlands Delineation Manual may be required. If any construction or changes are proposed which require a 404 Permit, the subdivider shall acknowledge that the permit is required and will be obtained.

According to the Montana Wetland and Riparian Framework⁵, there are three identified wetland areas on the subject property (see Figure 6), and an off-site wetland that is of interest due to plans to alter the wetland for fire suppression water supply purposes (discussed under 1.a.v below). A small emergent wetland occurs in the meadow on the east edge of Lot 1, and a similar emergent wetland is located on the east edge of Lot 12. On Lots 11 and 12, there is a more significant freshwater pond surrounded by emergent wetlands. The onsite wetlands are shown on the preliminary plat as 'no build zones' with 50-foot vegetative buffers also depicted as 'no build zones'.

A request for jurisdictional determination has been submitted to the US Army Corps of Engineers because of work proposed to develop the water supply pond. It

⁵ Montana Wetland and Riparian Framework data is published by the Montana State Library, originated by Montana Natural Heritage Program (MTNHP), and obtained through the Flathead County Interactive Map Site.

is acknowledged that the subdivider will be required to obtain 404 permit coverage from the US Army Corps of Engineers prior to conducting the work.

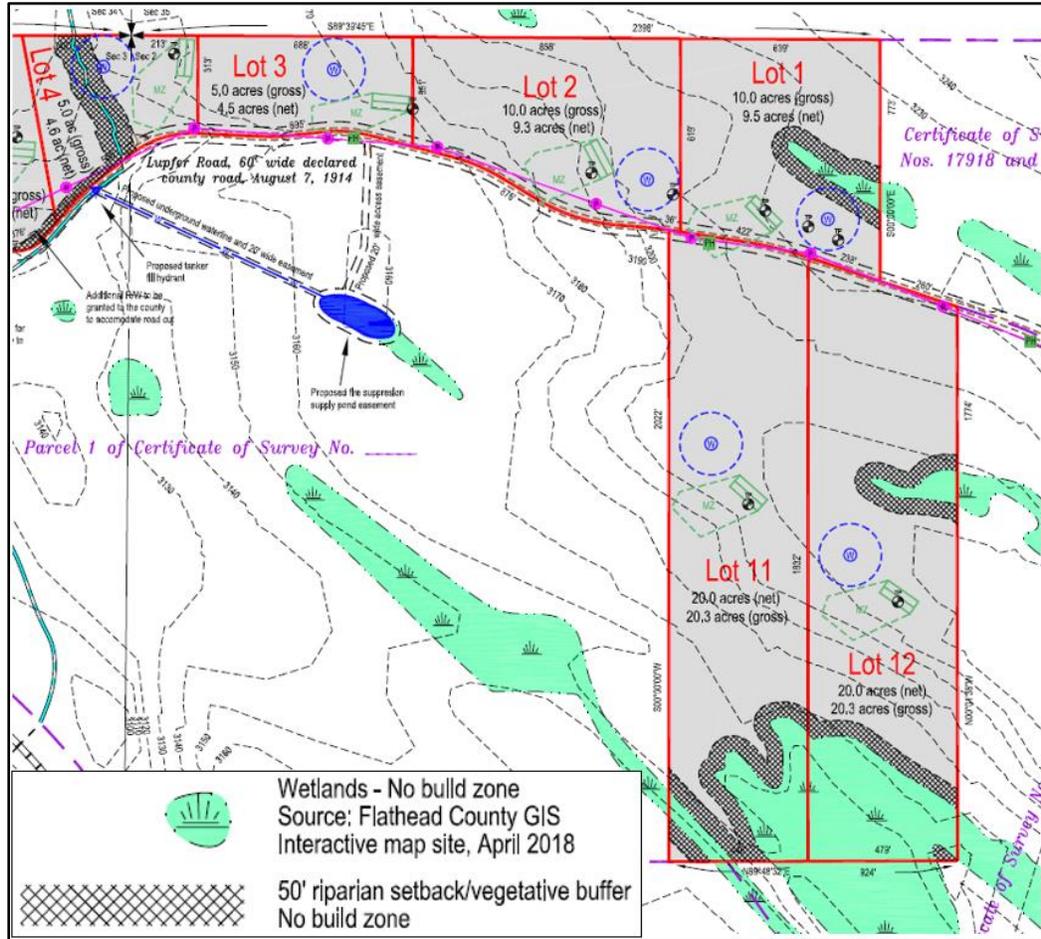


Figure 5: Wetlands as shown on the preliminary plat.

b. Ground Water:

- i. Establish the seasonal minimum and maximum depth to water table, dates on which these depths were determined, and the location and depth of all known aquifers which may be affected by the proposed subdivision. Monitoring may be waived if evidence of minimum and maximum ground water elevations can be documented;

There are no wells on the property at this time. The sanitation portion of the application includes five well log reports from nearby wells. The logs indicate static water levels ranging in depth from 20 to 80 feet below ground surface and total well depths of 152 to 412 feet.

In preparation for the subdivision, 15 soils test pits were excavated on the property to a depth of eight feet as per the specifications of Flathead County and the

Montana Department of Environmental Quality.⁶ The preliminary plat, which is included with the subdivision application, shows the locations of the soils test pits. The sanitation portion of the application includes soils descriptions and soils logs. No test pit showed evidence of groundwater or a limiting layer, however, monitoring wells have been installed and are planned to be monitored during the 2018 runoff season to confirm whether high groundwater is present and may be impacted by the proposed development. At this time there is no indication of high groundwater or unusually high aquifer that could be impacted by the development.

- ii. If determined from subsection (b)(i) above that any area within the proposed subdivision is within four feet of the surface, the high water table shall be measured from tests taken during the period of the highest groundwater elevations, generally from March 15 through June 30, during average precipitation years and reported in the environmental assessment;

Groundwater monitoring is being conducted and is planned to continue through June 30, 2018.

- iii. Describe any steps necessary to avoid probable impacts and the degradation of ground water and ground water recharge areas as result of the subdivision.

Groundwater is planned to be protected in the same manner as surface water as described in Section 1.a. of this Environmental Assessment, including proper storm water collection, erosion controls and proper wastewater treatment design and construction. Additionally, the stream and wetlands are to be given additional protection with the subdivision's riparian resource and wetland resource management plan, which is being submitted along with the preliminary plat application and is incorporated into this EA by reference.

c. **Geology/Soils:**

- i. Locate on the preliminary plat any known geologic hazards affecting the subdivision which could result in property damage or personal injury due to rock falls or slides, mud, snow; surface subsidence (e.g., settling or sinking); and seismic activity;

No geologic hazards are known on the property and no prohibitive or dangerous slopes exist in the area. The site shows no signs of subsidence. According to Map 2.7 of the Flathead County Growth Policy, a geologic fault line runs along the base of the Whitefish Range. However, there has been no abnormal seismic activity in the vicinity of the subdivision beyond what is common for this area of Montana.

⁶ MDEQ Circular 4: *Montana Standards for Subsurface Wastewater Treatment Systems and Flathead County Regulations for Sewage Treatment Systems.*

- ii. Explain what measures will be taken to prevent or materially lessen the danger and probable impacts of future property damage or personal injury due to any of the hazards referred to above;

Due to the absence of geologic hazards, no measures are proposed.

- iii. Explain any unusual soil, topographic or geologic conditions on the property which limit the capability for building or excavation using ordinary and reasonable construction techniques. The explanation should address conditions such as shallow bedrock, high water table, unstable or expansive soil conditions, and slope. On the preliminary plat identify any slopes in excess of 40 percent;

No unusual soil, topographic or geologic conditions exist on the property that would limit the capability for building or excavation using ordinary or reasonable construction techniques. No shallow bedrock or evidence of high groundwater has been encountered in any of the 15 test pits excavated on the property. No slopes in excess of 40 percent exist on the property, with the possible exception of some localized slopes along Lupfer Road. No unstable or expansive soil conditions are present at the site.

- iv. Identify any soils constraints, including probable impacts due to expansive soils, hydric soils, or any soils which limit sanitary facilities. Explain special design considerations and methods needed to overcome the soil limitations;

No soil constraints are known. The proposed individual wastewater treatment systems are planned to be reviewed and approved by DEQ in accordance with state and local requirements.

- v. Describe the location and amount of any cut or fill three or more feet in depth. These cuts and fills should be indicated on a plat overlay or sketch map. Where cuts or fills are necessary, describe any plans to prevent erosion and to promote re-vegetation such as replacement of topsoil and grading.

A six-foot trench is planned to provide for the emergency water supply line on neighboring property to the south, which will be backfilled and re-seeded. No other cuts or filling of three feet or more in depth are anticipated.

d. **Vegetation:**

- i. On a sketch map or aerial photo indicate the distribution of the major vegetation types such as marsh, grassland, shrub, coniferous forest, deciduous forest, mixed forest, including critical plant communities such as stream bank or shore line vegetation; vegetation on steep, unstable slopes; vegetation on soils highly susceptible to wind or water erosion;

Please see Figures 6 and 7.

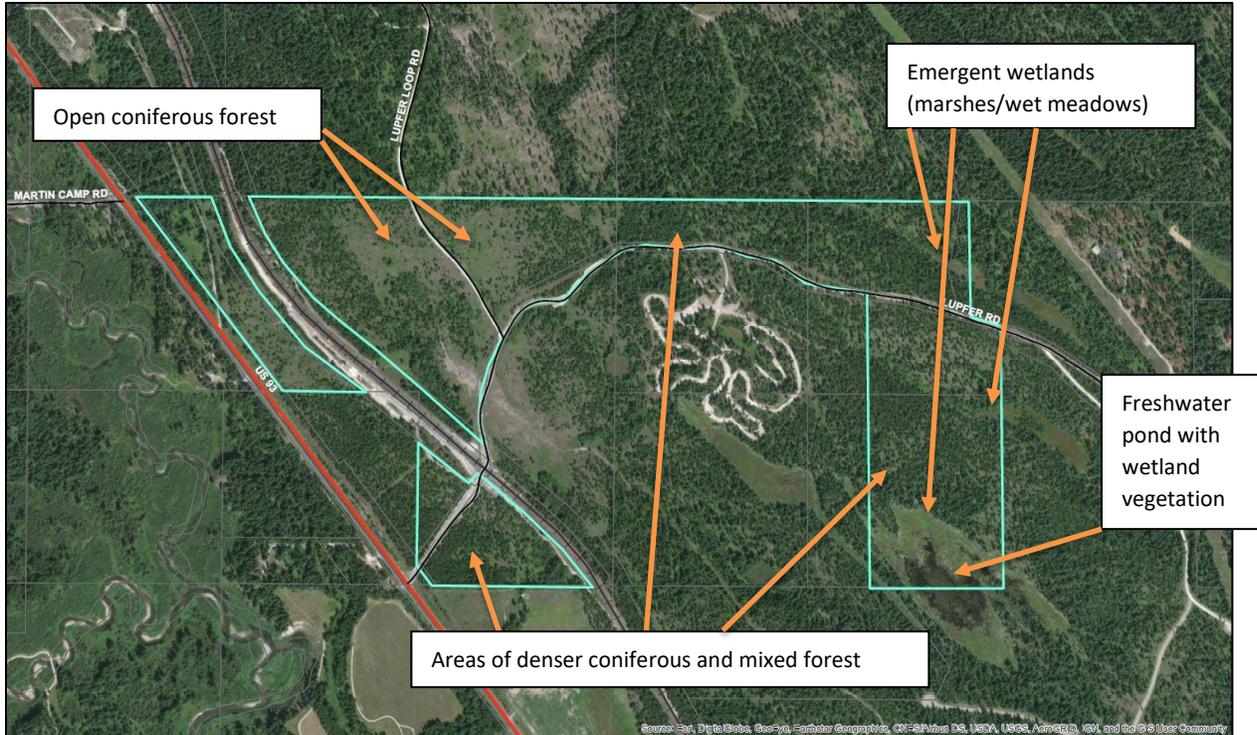


Figure 6: Major vegetation types.

The aerial photograph in Figure 6 shows the major vegetation types on the property, which include coniferous forest of various vegetation densities, denser mixed coniferous and deciduous forest, and emergent wetland/marsh areas. No critical plant communities are known to exist, and unstable or highly erosive slopes are not present on-site.



Figure 7: This photo taken December 14, 2017 of the stream corridor on Lot 4 shows the typical slopes and vegetation types on the property.

- ii. Identify any locations of noxious weeds and identify the species of weeds and explain measures to control weed invasion;

In previously logged areas on Lots 6 and 7, spotted knapweed has been identified. However, no widespread areas of noxious weeds have been allowed to propagate. The Flathead County Weed Control District is aware of the proposed subdivision and anticipates doing a site visit after the preliminary plat application is submitted, and when weather and field conditions are conducive to a site inspection intended to find weed conditions. After the noxious weeds on site are identified by county staff, a comprehensive weed management plan will be developed and implemented to control noxious weeds.

- ii. Describe any probable impacts and any protective measures to preserve trees and critical plant communities (e.g., design and location of roads, lots and open spaces).

Fuels reduction (thinning) in the denser forest stands on Lots 8 and 9 is proposed for safety purposes, which will be continued on other lots in the future to create defensible space around homesites. Vegetation along the stream corridor and wetland areas is intended to be left in a natural state, with treatment only as necessary to address noxious weeds and to prevent the wildfire safety hazards.

The preliminary plat and riparian and wetland resource management plan stipulate no-build zones and 50-foot setbacks along these water bodies. Other than clearing for rural homesites and driveways, no substantial impacts to vegetation type and extent are expected.

e. **Wildlife:**

- i. Describe species of fish and wildlife which use the area affected by the proposed subdivision;

Various species of fish and wildlife use the area and have the potential to be affected by the subdivision. The Montana Natural Heritage Program (MTNHP) provided an Environmental Summary Report and Custom Field Guide⁷ for the very broad area of the subdivision and its surroundings using the program's databases. These documents provide information on fish and wildlife inhabiting the area. As is usual for rural timberlands in northwest Montana, a wide variety of fish and wildlife use the area and may frequent the property proposed for subdivision. Based on the MTNHP information, any of the dozens of species of concern listed are presumed to use the area. Species of concern include several reptiles and amphibians, small to large mammals, songbirds, owls, raptors, wading birds, waterfowl, and butterflies and other insects. The Custom Field Guide is available upon request.

- ii. Identify on the preliminary plat any known critical or "key" wildlife areas, such as big game winter range, waterfowl nesting areas, habitat for rare or endangered species, or wetlands;

The stream corridor and wetland areas provide high quality habitat and the area in general provides big game winter range, waterfowl nesting areas, wetlands, and other habitat for wildlife typical of the area.

As noted by the U.S. Fish and Wildlife Service, this is bear habitat. Upon review of the Grizzly Bear Final Management Plan for Western Montana (2006)⁸, including a map of Grizzly Bear Recovery Zones (Figure 2 on page 9 of the plan), the subject property is located just outside of the plan's Northern Continental Divide Ecosystem grizzly bear recovery zone. Nevertheless, black and grizzly bears inhabit and migrate through the area, and of utmost concern is minimizing bear-human conflicts that can result from development of a residential subdivision in bear habitat. Recommendations for minimizing those conflicts and impacts on black and grizzly bear are elaborated on below.

⁷ Custom Field Guide from <http://mtnhp.org/MapView> for Latitude 48.43882 to 48.52027 and Longitude -114.44250 to -114.56554. Retrieved on 4/18/2018

⁸ <http://fwp.mt.gov/fishAndWildlife/management/grizzlyBear/managementPlan.html>

- iii. Identify rare and endangered species on-site. Describe the impact(s) and measures to mitigate the impact(s), or submit a statement explaining why no impact is anticipated, providing documentation to support that statement;

The subdivision is comprised of 142.8 acres of vacant timberland, with grizzly bears presumed to migrate through the site. No other rare or endangered species have been specifically encountered on-site. The subdivision's proposed low density of 11.9 acres per home, limited commercial usage along the highway, and proposed riparian resource and wetland resource management plan comprise the specific measures proposed to limit and mitigate impacts on the subdivision. As suggested by the Montana Department of Fish, Wildlife and Parks (MT FWP), by following some fairly simple practices, landowners can usually coexist with wildlife without conflict, including not feeding wildlife or making attractants available to them. This typically must occur through education of lot owners. The subdivider is willing to take appropriate measures as determined by Flathead County to ensure prospective purchasers are made aware of educational materials and important measures to eliminate human-wildlife conflict. In addition, owners should be encouraged to contact MT FWP for stewardship practices as they relate to interactions with wildlife.

- iv. Describe any probable impacts and proposed measures to protect or enhance wildlife habitat or to minimize degradation (i.e. keeping buildings and roads back from shorelines; setting aside marshland as undeveloped open space);

Impacts from a rural subdivision of this nature on this particular property could result from displacement of habitat, construction activities in and near the stream or wetland areas, and human/wildlife conflict. To protect the wildlife habitat provided by the riparian and wetlands areas, the proposed riparian and wetland resource management plan requires buildings to be set back at least 50 feet from the stream and wetlands, limit vegetation removal in these areas, and fences must be of appropriate design as recommended by FWP. These measures will maintain the property and stream/wetland areas as viable wildlife corridors for habitat.

- iv. It is recommended that the subdivider discuss the impact of the proposed development on fish and wildlife with the Department of Fish, Wildlife and Parks (FWP) and incorporate any recommendations from the agency to mitigate wildlife impacts.

FWP and the US Fish and Wildlife Service have been contacted, and the subdivider plans to incorporate their recommendations into the final subdivision plat in accordance with the subdivision approval as determined by Flathead County. See Appendix A for wildlife agency comments.

f. **Wildlife Habitat:**

- i. Proposed subdivisions that are contiguous to urbanized areas are presumed to have a minimal impact on wildlife habitat;

The proposed subdivision is not contiguous to any urbanized areas.

- ii. Proposed subdivisions in locations with riparian areas, wetlands, rivers, streams, lakes, or other natural surface waters are presumed to have an impact on wildlife habitat. Describe the impact(s) and measures to mitigate the impact(s), or submit a statement explaining why no impact is anticipated, providing documentation to support that statement;

The proposed subdivision is within 500 feet of the Stillwater River and contains a stream and wetlands. These features create desirable wildlife habitat as components of the larger ecosystem. Impacts on wildlife habitat can occur through wildlife displacement and removal of certain footprints of habitat as homes and commercial development replace it. As noted by FWP, human-wildlife conflict can be an impact that can also be minimized. Impacts on the wildlife habitat provided by the riparian and wetland features is proposed to be mitigated by implementation of the riparian and wetland resource management plan, which limits disturbing activities and construction within 50 feet of the stream and wetlands. This, along with following the suggestion of FWP to provide information to prospective lot purchasers as may be determined appropriate by Flathead County, will limit but not eliminate impacts on wildlife habitat.

- iii. Proposed subdivisions in an area with rare or endangered species, as identified by state or federal agencies, are presumed to have an impact on the habitat of those species. Describe the impact(s) and measures to mitigate the impact(s), or submit a statement explaining why no impact is anticipated, providing documentation to support that statement;

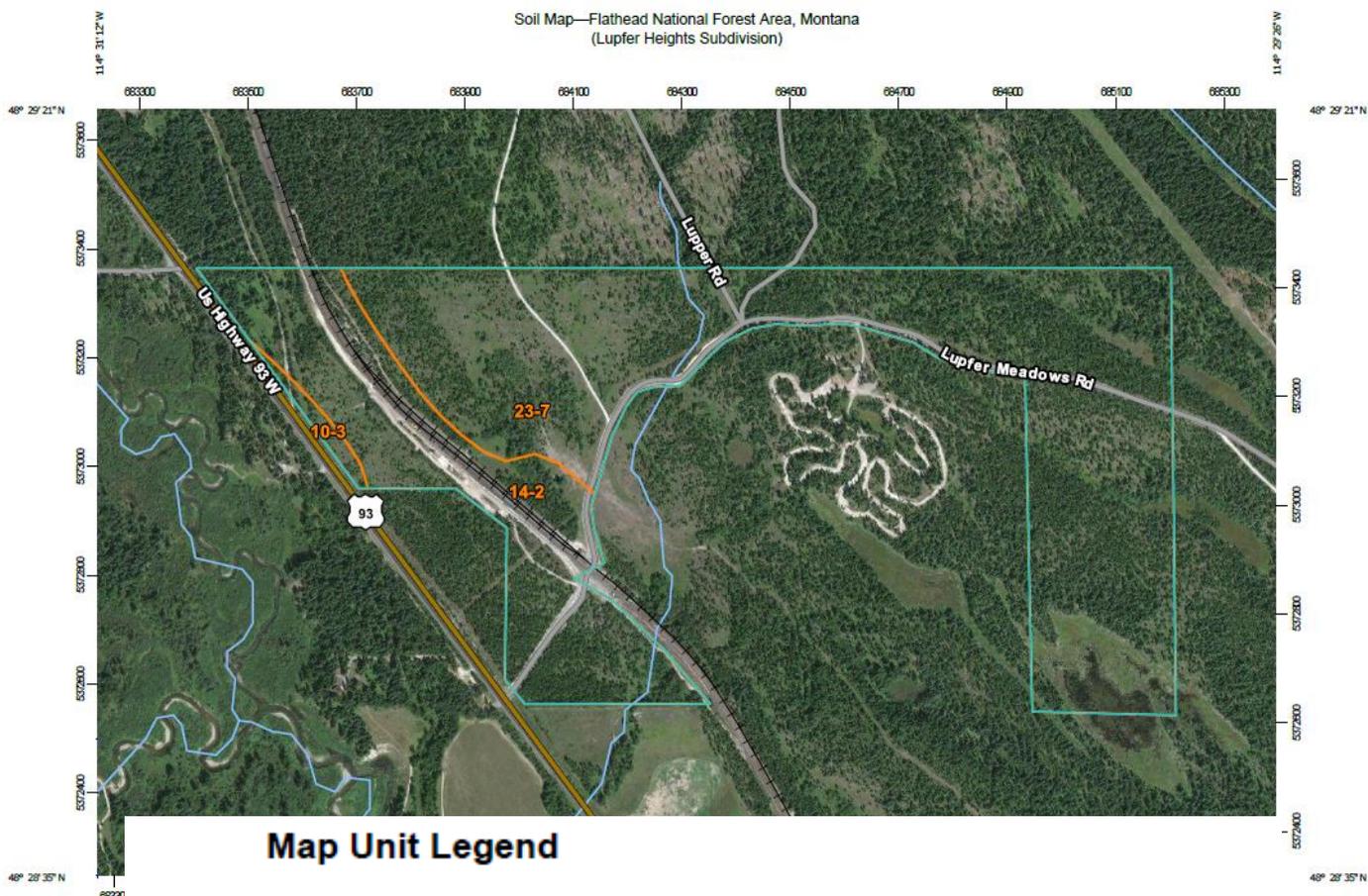
By implementing the riparian resource management plan and wetland resource management plan and following the suggestion of FWP to provide information to prospective lot purchasers to minimize human-wildlife conflict, especially with bears, the impacts on wildlife habitat will be mitigated.

- iv. Proposed subdivisions on and or adjacent to land identified by state or federal agencies as critical habitat are presumed to have an impact on wildlife habitat. Describe the impact(s) and measures to mitigate the impact(s), or submit a statement explaining why no impact is anticipated, providing documentation to support that statement.

No land on or adjacent to the proposed subdivision have been identified by state or federal agencies as critical habitat⁹. Therefore, no impact on critical wildlife habitat is expected to result from the subdivision.

g. Agriculture and Timber Production:

- i. On a sketch map locate the acreage, type and agricultural classifications of soils; Figure 8 below provides a custom soil survey map for the subject property.



⁹ Per MT FWP’s Crucial Areas Assessment Mapper: <http://fwp.mt.gov/fishAndWildlife/conservationInAction/crucialAreas.html> and US Fish and Wildlife Service’s Critical Habitat Mapper: <http://ecos.fws.gov/crithab/>

As shown by the NRCS soil survey map, most of the property, specifically the area proposed as Lots 1 – 7 and Lots 11 & 12 are comprised of map unit 23-7, which are soils classified as “Andeptic Cryoboralfs-Andic Cryochrepts complex, rolling”, while Lots 8 – 10 are comprised of map unit 14-2, “Glossic Cryoboralfs, lacustrine substratum”. The agricultural/farmland classification for both soils is “not prime farmland”.

- iii. Identify and explain the history of any agricultural production of the by crop type and yield;

There has been no history of agricultural production on the subject property.

- iv. Describe the historical and current agricultural uses which occur adjacent to the proposed subdivision and explain any probable impacts and measures which will be taken to avoid or limit development conflicts with adjacent agricultural uses;

Based on aerial photos of the area dating back to the 1990s available on Google Earth, no historical or current agricultural uses occur adjacent to the proposed subdivision.

- v. If timbered, identify and describe any timber management recommendations which may have been suggested or implemented by a professional forester.

The property is currently under consideration for fuels reduction funding through a cost-share program with the Flathead Economic Policy Center. Through participation with the program, it’s expected that the Community Forester will provide recommendations for future management. Historically the property was owned by Plum Creek and Weyerhaeuser, both of which likely implemented their professional foresters’ management recommendations. The main result of this is that the property’s hazard fuels will be reduced through the subdivision process, and the fuels reduction performed on Lots 8 and 9 will provide a model to be implemented by other lot owners in the future.

h. Agricultural Water User Facilities:

- i. On a sketch map or aerial photo locate the location of any agricultural water user facility, including but not limited to agricultural water works, wells, canals, irrigation ditches and pump houses on-site or adjacent to the proposed subdivision;

No agricultural water user facilities are located on or adjacent to the property.

- ii. Describe any agricultural water user facility on the site or in proximity that might be affected and explain any probable impact(s) and measures which will be taken to avoid or mitigate probable impacts;

There is no evidence of other irrigation facilities located in the immediate vicinity so

no impacts are expected or mitigation measures proposed.

- iii. It is recommended that the subdivider discuss any impact of the proposed development on agricultural water users facilities with the irrigation company or organization controlling the facility and incorporate any recommendations from the agency to mitigate agricultural water users impacts.

No irrigation facilities are present on the property.

i. **Historical Features:**

- i. Describe and locate on a plat overlay or sketch map any known or possible historic, paleontological, archeological or cultural sites, structures, or objects which may be affected by the proposed subdivision;

There are no known or suspected historic, paleontological, archeological or cultural sites, structures, or objects which may be affected by the proposed subdivision.

- ii. Describe any plans to protect such sites or properties;

Because no sites or resources are known, no specific plans to protect such sites or properties are proposed. However, if Flathead County finds it appropriate, the final plat could be conditioned to include a statement informing prospective purchasers of appropriate actions to take (immediately contacting the State Historic Preservation Office (SHPO)) in the event a suspected historic, paleontological, archeological or cultural site, structure, or object is discovered.

- iii. Describe the impact of the proposed subdivision on any historic features, and the need for inventory, study and/or preservation and consultation with the State Historic Preservation Office (SHPO).

The proposed subdivision is not expected to impact any historic features. Typically when the State Historic Preservation Office reviews such subdivision, they have indicated that as long as there will be no disturbance or alteration to structures over fifty years of age, there is a low likelihood cultural properties will be impacted. Recommendations for cultural resource inventories are usually found to be unwarranted under such circumstances. The preparers of this Environmental Assessment recommend that during future construction and ground disturbance activities, if any possible historic or cultural resources are discovered, the State Historic Preservation Office should be contacted immediately so that appropriate steps be taken to document and preserve the resources.

j. **Visual Impact:**

- i. Describe any efforts to visually blend development activities with the existing environment.

No specific steps are proposed to visually blend development activities with the existing environment. The addition of 12 homes and the possibility of some commercial structures near the highway are not expected to result in any discordant visual impacts.

k. **Air Quality:**

- i. Describe any anticipated impact to air quality caused from dust or other air pollutants, including dust created from roads, and any means to mitigate the impact to air quality.

The primary impact to air quality could occur through use of gravel roads and exposed soils resulting from construction activities. Through implementation of the subdivision's Dust Control Plan and Flathead County's paving requirements, air quality is not expected to be impacted by the subdivision.

l. **Area Hazards:**

- i. Describe and locate on a plat overlay or sketch map any hazardous concerns or circumstances associated with the proposed subdivision site, including, but not limited to:
- A. Any part of the proposed subdivision that is located within the Wildland Urban Interface priority area. If located in the Wildland Urban Interface or high fire hazard area identified by a local fire district or fire protection authority describe probable impact(s) and measures to mitigate the impact(s), or submit a statement explaining why no impact is anticipated, providing documentation to support the statement;
 - B. Any potential hazardous materials contained on site, including high pressure gas lines, high voltage transmission lines, super fund sites, abandoned landfills, mines or sewer treatment plants, etc. In some cases an Environmental Site Assessment may be required;
 - C. Describe measures to mitigate any adverse impacts associated with area hazards.

Per Section 4.7.4 ("Lands Unsuitable for Subdivision") of the Flathead County Subdivision Regulations, "Lands on which there is evidence of hazards such as flooding, snow avalanches, rock falls, land slides, steep slopes in excess of 40 percent grade, subsidence, high hazard fire areas, high water table, polluted or non-potable water supply, high voltage lines, high pressure gas lines, air or vehicular traffic hazards or congestion, or other features which may be detrimental to the health, safety or general welfare of existing or future residents, or where development would place unreasonable burdens on the general public including the requirements of excessive expenditure of public funds or environmental degradation shall not be subdivided for building or residential purposes unless the

hazards are mitigated or will be overcome by approved design and construction plans.” This Environmental Assessment addresses all potential hazards listed under Section 4.7.4 of the subdivision regulations as follows:

Flood Hazards:

The adopted flood hazard area is identified on the FEMA FIRM panel shown as Figure 4, which shows no floodplains on the subject property or that may be impacted by the subdivision. All development is proposed outside of the 100-year flood hazard area.

Ground/Terrain Hazards:

Given the lack of sustained slopes on the property, there is no potential for snow avalanches, rock falls, or landslides. There is no evidence of subsidence on the property. The stream bank shows no evidence of active erosion, and given the proposed setbacks from the stream and wetlands, as well as the requirement to obtain DEQ approval of stormwater management plans, any potential erosion events will not impact future development of the subdivision.

Fire Hazards:

According to GIS data on the Flathead County Interactive Map Site, the property is within the recognized Wildland Urban Interface (WUI). As such, a Fire Prevention, Control and Fuels Reduction Plan has been developed for the proposed subdivision to address Section 4.7.27 of the Flathead County Subdivision Regulations. Some fuels reduction on Lots 8 and 9, which will also provide a model for future lot owners to provide defensible spaces around homesites, will improve the fire hazard situation. The close proximity of the subdivision to US Highway 93 from Lupfer Road will provide for prompt vehicular escape from fire by residents. The BNSF railway provides a fuel break in the event a fire starts on the highway and migrates toward the subdivision. A water supply system is proposed to assist the Flathead County Fire Service Area with quick and adequate access to water for fire suppression purposes for the subdivision. Furthermore, the final plat will be subject to the requirements of Sections 4.7.26 and 4.7.27 of the Flathead County Subdivision Regulations, which address provisions for fire protection and subdivisions within the WUI.

Ground Water:

The soils and sanitation work performed on the property to date show no evidence of a high water table or polluted or non-potable water supply. Ground water monitoring will continue through June 2018 and if high ground water is encountered, the subdivision will be designed to demonstrate compliance with vertical separation requirements for on-site wastewater treatment systems through the DEQ review process. Homes should also be located away from areas of high ground water unless the hazard can be overcome with construction

techniques. Given the large lot sizes and lack of evidence of high ground water to date, it is anticipated that each lot will have adequate building sites in areas where high ground water will not be a concern.

High Voltage Power Lines:

No high voltage power lines exist on or adjacent to the property.

High Pressure Gas Lines:

No known high pressure gas lines exist on or adjacent to the property, although there could be natural gas lines in the highway right-of-way. If so, the gas lines would be typical of those serving residential areas and therefore they would not pose an unusual or significant hazard.

Air Hazards:

The property is not within close vicinity of any major airports, the closest of which is located ±15-miles southeast of the property (Glacier Park International Airport); therefore, no air hazards or congestion threats apply to the subdivision.

Traffic Hazards:

A request for comment was sent to the Montana Department of Transportation. Jim Freyholtz responded and indicated no concerns. Flathead County Public Works Director David Prunty has indicated the stretch of Lupfer Road between US Highway 93 and the BNSF rail line is steeper than county standards currently allow and could present a safety hazard. Based on this concern the authors researched crash data on the Montana Department of Transportation website.¹⁰ According to the website, from 2012 – 2016 seven crashes were noted along Highway 93 in the general vicinity of the subdivision. One of the crashes was noted as being near an intersection, but it is not clear whether this crash occurred near the Lupfer Road intersection or another nearby one. The majority of crashes are indicated as animal – vehicle crashes. With regard to the steepness of slope, this is an existing condition on a county road that serves dozens of homes and resource parcels. It is noteworthy that a Stillwater State Forest timber harvest that is planned to extract 1 million board feet of timber is also planned to use this stretch of road starting in the fall of 2018. Any road improvements required by Flathead County must be proportional to the impacts posed by the subdivision.

¹⁰ <http://www.mdt.mt.gov/publications/datastats/crashdata.shtml>. This site contains data from 2012 – 2016. Using the site, Highway 93 is considered north corridor 5N (far left column). The intersection is located at approximately mile marker 139.6

Other Hazards/Summary:

No other hazards, such as super fund sites, abandoned landfills, mines, sewer treatment plants or other features which may be detrimental to the health, safety or general welfare of existing or future residents are known to exist in the immediate vicinity of the subdivision, and the subdivision will not result in any such features. The development will not place unreasonable burdens or hazards on the general public.

Section 2 - Community Impact Report

a. Water Supply:

- i. Describe the proposed water system and how water will be provided for household use and fire protection and the number of gallons needed to meet the needs of the anticipated final population;

Water for household uses and any commercial uses will be provided by individual wells drilled on-site. For fire protection, a pond is proposed to be developed on the adjacent land owned by the subdivider, which will serve a fill hydrant along Lupfer Road for use by emergency service providers.

Homes

According to the US Census Bureau, the estimated average household size in Flathead County is 2.45 persons.¹¹ Montana DEQ uses 100 gallons of water per person per day as a benchmark¹², which means the water systems for each residence will need to be designed to produce a minimum of 245 gallons per day.

Commercial Uses, Lots 8, 9, and 10

Lots 8, 9, and 10 are proposed to be allowed commercial uses. Without knowing what commercial uses may occupy these lots, the amount of water needed to supply them is unknown at this time. However, it is anticipated that each lot will be limited by water rights to a maximum of 1.67 acre/feet of water per year.

Fire suppression system

The water system for fire suppression is proposed to include development of a pond that will supply water to a fill hydrant along Lupfer Road. The proposed pond will be designed and constructed to provide a minimum continuous storage capacity of 11,000 gallons in accordance with the subdivision regulations for a 12-lot subdivision. However, use of this water for emergency purposes is expected to be very occasional. In the event the water levels of the pond are significantly

¹¹ <http://quickfacts.census.gov/qfd/states/30/30029.html>

¹² Montana Department of Environmental Quality Circular DEQ-2, October 2012.

lowered as a result of emergency use, the water will be recharged naturally. Another design parameter for the pond is minimum depths to accommodate freeze protection. An 18-foot deep monitoring pipe, extending into the shallowest groundwater, has been installed in the proposed pond location, and is being monitored for seasonal fluctuations in groundwater.

- ii. Indicate whether the plans for water supply meet state standards for quality, quantity and construction criteria.

The emergency water supply is not subject to the state standards for water quality; quantity of the water provided by the system, and the construction standards are subject to the engineered designs, which will be done in accordance with the needs of the Flathead County Fire Service Area. The domestic water supply plans will be designed to meet all state requirements for quality, quantity and construction criteria. DEQ review and approval is expected to occur following preliminary plat approval.

- iii. If the subdivider proposes to connect to an existing water system:

- A. Identify and describe that system;
- B. Provide written evidence that permission to connect to that system has been obtained;
- C. State the approximate distance to the nearest main or connection point;
- D. State the cost of extending or improving the existing water system to service the proposed development;
- E. Show that the existing water system is adequate to serve the proposed subdivision.

The subdivision is not proposed to be connected to any existing water systems.

- iv. If a public water system is to be installed, discuss:

- A. Who is to install that system and when it will be completed;

No public water system is proposed. The fire suppression system is expected to be installed within one year of preliminary plat approval..

- B. Who will administer and maintain the system at the beginning of subdivision development and when subdivision is completed;

The developer, Whispering Trails, LLC, in conjunction with Long Engineering, will administer and maintain the system initially. A lot owners association will eventually take over the responsibility for management and maintenance as lots are sold and developed to use the system, unless the Fire Service Area will accept maintenance of the system.

- C. Provision of evidence that the water supply is adequate in quantity, quality, and dependability (75-6-101 MCA).

Not applicable: no public system is proposed.

- iv. If individual water systems are to be provided, describe the adequacy of supply of the ground water for individual wells or cisterns and how this was determined.

Individual water systems are proposed to supply domestic and lawn irrigation water for the subdivision. According to project engineer Bryan Long, the maximum anticipated yearly flows to accommodate domestic and irrigation demands are 1.5 acre feet per lot, or 18 acre feet total at full build out. An analysis of nearby well logs was conducted and suitable groundwater is present at depths ranging from 200 – 500 feet. Proposed individual well locations are shown on the preliminary plat.

b. Sewage Disposal:

- i. Describe the proposed method of sewage disposal and system;

Individual wastewater treatment systems are proposed on each lot.

- ii. Indicate the number of gallons of effluent per day which will be generated by the proposed subdivision at its full occupancy, whether the proposed method of sewage disposal is sufficient to meet the anticipated final needs of the subdivision and whether it meets state standards;

Projected wastewater flows for each lot are 350 gallons per day based on four bedroom residential structures as per Circular MDEQ-4, Section 3.1.2.A. For any future commercial uses, the flow will depend on the proposed use. The requirements for DEQ review and approval will ensure sewage disposal can be accommodated appropriately on site.

- iii. If the development will be connected to an existing public sewer system, include:

- A. A description of that system and approximate distance from the nearest main or connection point to the proposed subdivision;
- B. Written evidence that permission to connect to that system has been obtained.

The development will not be connected to an existing public sewer system.

- iv. If a new public sewage disposal system, as defined under 75-6-102 MCA, is to be installed, discuss:

- A. When the system will be completed, and how it will be financed;
- B. Who is to administer and maintain the proposed system at the beginning of subdivision development and when development is completed?

No new public sewage systems are proposed.

c. **Storm Water Drainage:**

- i. Describe the proposed methods of storm water drainage for roads and other anticipated impervious surfaces, including storm water calculations;
- ii. Describe the proposed methods of storm water drainage for other areas of the subdivision, including storm water calculations;

Per Long Engineering's Bryan Long, who prepared the sanitation part of the subdivision plans, sediment control barriers will be utilized during construction to prevent water degradation. Following construction revegetation practices will be incorporated to prevent water degradation. In accordance with DEQ requirements, stormwater detention swales will be provided on each lot to adequately accommodate the increase in run-off from new impervious surfaces.

- ii. Identify the mechanism and who is responsible for the maintenance of the storm water drainage system.

Individual lot owners will be responsible for the maintenance of stormwater systems on their lots.

d. **Solid Waste Disposal:**

- i. Describe the proposed system of solid waste collection and disposal for the subdivision including:
 - A. Evidence that existing systems for collection and facilities for disposal are available and can handle the anticipated additional volume;
 - B. A description of the proposed alternative where no existing system is available.

Based on a discussion with Jim Chilton at the Flathead County Public Works/Solid Waste Department, the preferred method of solid waste collection and disposal for subdivisions is to use a private hauler to collect solid waste. Currently, it appears the proposed subdivision is located outside the service areas of the private haulers (preparer's research through contacting Jim Chilton at Flathead County Public Works, Republic Services and North Valley Refuse). The subdivider would therefore prefer to work with a private hauler to expand a service area to include contract services along Lupfer Road. In the event garbage collection services cannot be established prior to final plat approval, the lot owners can utilize a county green box site that is within 5 miles to the north, or haul waste to the county landfill. It is understood that the green box site is not an appropriate place to haul construction debris.

e. Roads:

- i. Describe any proposed new public or private access roads or substantial improvements of existing public or private access roads;

No new roads are proposed to serve the subdivision. All lots will utilize existing public roads for access. As a result of the 'standard improvement formula' provided in the Flathead County Subdivision Regulations there will be some required paving to Lupfer Road which will be explained in more detail below.

- ii. Discuss whether any of the individual lots or tracts have access directly to arterial or collector roads; and if so, the reason access was not provided by means of a road within the subdivision;

The only lot with direct access to an arterial or collector road is Lot 10, which is proposed to use an existing approach to US Highway 93. The reasons access to Lot 10 was not provided by other means are because 1) the approach currently exists and with minor improvements, will serve the likely uses of the lot well, 2) no other roads abut proposed Lot 10, and 3) the area of Lot 10 is already isolated from the rest of the property by the BNSF railway right-of-way and other private land outside the subject property.

- iii. Explain any proposed closure or modification of existing roads.

Lupfer Road, a county-maintained road, is likely to be modified eventually as a result of this subdivision. The Flathead County Subdivision Regulations' 'standard improvement formula' and its application will result in approximately 485 feet of Lupfer Road being paved to address and mitigate the impacts resulting from the subdivision. However, in this circumstance there are currently plans for timber harvest activities on state lands that will use Lupfer Road for commercial access over the next 3 to 4 years. The timber hauling activities are likely to degrade the conditions of Lupfer Road. It is expected that the final plat of Lupfer Heights will be recorded prior to completion of the timber harvest activities and associated hauling. For this reason, the subdivider is making the logical request that the 'standard improvement formula' be applied to determine the cost of county road improvements required by the subdivision regulations; then the subdivider can submit those funds to Flathead County to utilize on this segment of Lupfer Road after completion of the timber harvest and hauling activities. At that time, it will be determined whether Lupfer Road will be modified or closed, and the county will administer any closure and modifications and mitigate those impacts.

- iii. Identify existing primary road Average Vehicle Traffic and subdivision daily vehicle traffic assigned to that primary road.

The focus of these estimates are on the initial segment of Lupfer Road off of US Highway 93. First, it must be noted that much of the use of Lupfer Road is access

to natural resources and recreational lands, and the Institute of Transportation Engineers Trip Generation Manual does not include ADT figures for resource and 'natural' recreation lands. For the resource tracts, the preparers are estimating five ADT per day. This estimate is based on discussions with representatives of Weyerhaeuser, Stillwater State Forest and Whitefish Legacy Partners, who noted the following:

- Public use of the resource tracts is primarily for wood gathering, hunting, trapping, and recreation. The tracts are used regularly in the summer and fall, far less during the winter. The Lupfer Overlook and Lupfer Loop trails, managed by Whitefish Legacy Partners, provide hiking and mountain biking and include a trailhead with parking. A private dog sled company also uses Lupfer Loop Road for client vehicle and trail rides during the winter with a permit from Stillwater State Forest.
- Weyerhaeuser primarily uses the road for administrative purposes such as maintenance, environmental and forest management, and real estate sales.
- Periodic timber harvests occur on the resource tracts on Weyerhaeuser and Stillwater State Forest lands. A logging operation can generate 20 vehicle trips per day, and multiple operations can occur in a year. Approximately 1 million board feet of timber is expected to be extracted just north of the subdivision over the next few years. Traffic from the logging operation is planned to be routed down Lupfer Loop Road and Lupfer Road toward Highway 93.
- In the event of a wildfire event on the resource tracts, several hundred vehicle trips per day are possible.

According to the Flathead County Subdivision Regulations, a residential parcel is estimated to generate 10 average daily trips per day (ADT), which is in line with the Institute of Transportation engineers Trip Generation Manual (9th Edition), which indicates detached single family residential homes are estimated to generate an average of 9.52 vehicle trip ends on an average working day. For existing and new residences, this analysis will assume 10 ADTs. ADT from resource tracts is estimated to average 5 vehicle trips per day.

The existing ADT for the first stretch of Lupfer Road is estimated at 655 ADT, including 335 from resource tracts and 320 from residential tracts.

Buildout of the subdivision could result in an estimated 110 additional vehicle trips per workday resulting from the residential uses of the 11-lots of the subdivision along Lupfer Road. The other 10 trips per day resulting from Lot 10 would be only on US Highway 93; all 12 lots may add 120 trips per day to US Highway 93, which is relatively low. Potential commercial uses of Lots 8 and 9 could add additional traffic on the first ±753 feet of Lupfer Road, while any commercial use of Lot 10 would result in traffic only on US Highway 93. For purposes of this Environmental

Assessment, it is anticipated that no more than 100 trips per day per commercial use could be expected. Therefore, the subdivision may add 310 ADTs to Lupfer Road (110 from residences on 11 lots; 200 for the two commercial Lots 8 & 9 on Lupfer Road) and 420 ADTs to this stretch of US Highway 93 (120 from residences on all 12 lots; 300 for all three commercial Lots 8, 9 & 10).

- iv. Describe provisions considered for dust control on roads;

Please see the Dust Control Plan for the proposed subdivision. The plan considers the various sources of dust resulting from this subdivision, which include: 1) roads leading to the subdivision, 2) onsite soil disturbance, 4) driveways, and 5) onsite storage piles. The Dust Control Plan provides methods for short- and long-term dust control, including ensuring trucks and equipment tires are relatively clean before entering the public road network, minimizing soil disturbances, watering, covering or seeding exposed soils, encouraging hard-surfaced driveways, and mitigating impacts on the gravel portions of Lupfer Road through county requirements and cooperation.

- v. Indicate who will pay the cost of installing and maintaining dedicated and/or private roadways;

No new roads are proposed; maintenance of existing public roads will continue to be paid for by the state, county and the taxpayers; the additional lots created by the subdivision will include additional tax revenues to offset additional maintenance costs.

- vi. Discuss how much daily traffic will be generated on existing local and neighborhood roads and main arterial, when the subdivision is fully developed;

According to the Institute of Transportation engineers Trip Generation Manual (9th Edition), detached single family residential homes are estimated to generate an average of 9.52 vehicle trip ends on an average working day, while Flathead County generally uses 10 ADT per home. This would result in an estimated 114.24 to 120 additional vehicle trips per workday resulting from this subdivision along US Highway 93. 105 to 110 of those average daily vehicle trips may be expected on Lupfer Road. As discussed previously, additional traffic is expected to result from possible commercial uses on Lots 8, 9, and 10, which is not anticipated to exceed 300 additional ADT on US Highway 93, 200 of which may impact the initial, paved stretch of Lupfer Road.

- vii. Indicate the capacity of existing and proposed roads to safely handle any increased traffic. Describe any anticipated increased maintenance that will be necessary due to increased traffic and who will pay the cost of maintenance;

Lupfer Road is a two-lane county road paved for the first 1,500' and gravel beyond the end of pavement that serves state land, forest producers, and recreational and residential uses in the vicinity of the subdivision and to the north. US Highway 93

is capable of accommodating the increased traffic. Lupfer Road is also capable of handling the increased traffic, but the uses of the gravel portions will be reasonably mitigated as discussed previously. Maintenance of existing public roads will continue to be paid for by the state, county and the taxpayers; the additional lots created by the subdivision will include additional tax revenues to offset additional maintenance costs.

- viii. Explain whether year round access by conventional automobile will be available over legal rights of way to the subdivision and to all lots and common facilities within the subdivision.

Lupfer Road is a paved and gravel county road within an existing 60-foot right-of-way. US Highway 93 is a paved, federally-funded highway maintained by the Montana Department of Transportation. Year-round access by conventional automobiles will be available to all lots within the subdivision. No common transportation facilities are expected within the subdivision.

f. **Utilities:**

- i. Include a description of:
 - A. The method of furnishing electric, natural gas or telephone service, where provided;
 - B. The extent to which these utilities will be placed underground;
 - C. Estimated completion of each utility installation.

Electrical and telephone lines currently exist in the Lupfer Road and US Highway 93 rights-of-ways. The subdivider's agent has been in contact with each of the service providers (Lincoln Electric Cooperative aka LEC and CenturyLink). The Lincoln Electric Cooperative has indicated they have the ability to serve the subdivision, and it is anticipated that CenturyLink can provide telephone service (no response has been received from CenturyLink to date). Based on communication with LEC, Lot 8 will likely need an extension of power utilities across Lot 9 from existing power lines that cut across the northern tip of Lot 9, which is the preferred means of extending power to Lot 8. The alternative would be to obtain access to utilities that are in the BNSF railway right-of-way (not preferred). For telephone service, wireless telephone service has become the norm and will be utilized initially. Any necessary extensions of utilities to the edges of individual lots will be installed underground by the subdivider, with an estimated completion date ranging between summer 2018 and summer 2021 for any such extensions (such as those for Lot 8).

g. **Emergency Services:**

- i. Describe the emergency services available to the subdivision such as:

- A. Is the proposed subdivision in an urban or rural fire district? If not, will one be formed or extended? In absence of a fire district, what fire protection procedures are planned?;

The subdivision is located in the Flathead County Fire Service Area. An Olney Fire Service Area station is located less than five miles from the subdivision where a tender re-filling station is located. A water supply fill hydrant will be developed by the subdivider adjacent to the subdivision where the FSA can fill tanker trucks.

- B. Police protection;

Police protection will be provided by the Flathead County Sheriff's Office, which is located in Kalispell approximately 20-25 minutes from the subdivision.

- C. Ambulance service/Medical services;

Although solicited, no comments have been received from medical service providers. The North Valley Hospital is located in Whitefish, approximately 15 minutes from the subdivision. Olney Emergency Medical Services is stationed out of Olney fire hall, approximately five miles to the north.

- D. Give the estimated response time of the above services;

The estimated response will be typical for this location, usually 30 minutes or less for all public safety agencies.

- D. Can the needs of the proposed subdivision for each of the above services be met by present personnel and facilities.

Although responses haven't been received from the public safety personnel, it seems that the addition of 12 homes and some light commercial usage that will result from the proposed subdivision should be able to be served adequately by present personnel and facilities. In the event this subdivision contributes an incremental increase in demand for the above services, taxes and assessments are the appropriate mechanism to meet the demand.

h. Schools:

- i. Identify the School Districts and describe the available educational facilities which would service this subdivision;

The subdivision is located within Whitefish School District #44, which provides K-12 education and also school bus transportation for students residing in the district.

- ii. Estimate the number of school children that will be generated from the proposed subdivision;

Being that this subdivision is located in a somewhat remote, forested area, some of the lots are likely to be used as seasonal or second homes as opposed to year-round residences housing families with school-aged children. These 12 lots are likely to be in line with the Flathead County average numbers for students per housing unit. A reasonable average for Flathead County is 0.31 school-aged student per residence. This is based on 14,753 students on record with the Flathead County Superintendent of Schools Office at the beginning of the 2011 school year. According to the 2010 US Census, Flathead County had 46,963 housing units; 14,753 students divided by 46,963 housing units equates to ± 0.31 student per housing unit. Based on these estimates, the subdivision could generate ± 3.77 school children at a given time, rounded to 4.

- iii. The subdivider shall discuss the impact of the proposed development on the provision of educational services with the administrator(s) of the appropriate school system(s). The subdivider shall provide a written statement outlining whether the increased enrollment can be accommodated by the present personnel and facilities and by the existing school bus system, any recommendations of the administrator(s), and any mitigation planned to overcome any adverse impacts of the proposed development on the provision of educational services.

Based on an assumption that each lot could be used for a typical year-round residence with school-aged children, the addition of four school-aged children at any given time spread out over the schools in the district will be of minimal impact on the overall Whitefish school system. Of particular importance to the subdivision is the provision of school bus services. Based on conversation with the local school district, because the school busses do not currently travel down Lupfer Road, bus pick up is likely to occur along the highway. The school district may request a pull-out area for school buses to stop and children to wait. The subdivider expects to work with the school district and Montana Department of Transportation to ensure reasonable accommodations are made for the school district's transportation needs.

- i. **Land Use:**

- i. Describe comprehensive planning and/or land use regulations covering the proposed subdivision or adjacent land and if located near the jurisdictional area of an incorporated city or town, whether annexation is propose;

The applicable growth policy is the Flathead County Growth Policy and the area is not covered by a neighborhood plan. The zoning regulations designate the western portions of the subdivision along the highway as Scenic Corridor, which only

regulates off-premise advertising signs; no other land use restricts apply to the Scenic Corridor (although cellular towers are subject to performance standards).

- ii. Describe how the subdivision will affect access to any public lands. Where public lands are adjacent to or near the proposed development, describe present and anticipated uses for those lands; (e.g., grazing, logging, recreation, etc.);

State lands are located adjacent to the subdivision to the north, east and south, where timber harvest and recreational uses occur. An easement across Lupfer Loop Road to state lands for public motorized recreation is included with the subdivision application. Those uses are expected to continue, and this subdivision will not impact access to any public lands.

- iii. Describe the effect of the subdivision on adjacent land use;

The subdivision is located within an area dominated by timberlands. Other uses in the vicinity include the BNSF railway, recreational, rural residential, and occasional small-scale commercial. The addition of 12 residences and possibly three small-scale commercial uses will not be out of the ordinary for the area and should have little impact on adjacent land uses.

- iv. Describe any health or safety hazards on or near the subdivision, such as mining activity or potential subsidence, high pressure gas lines, dilapidated structures or high voltage power lines. Any such conditions should be accurately described and their origin and location identified. List any provisions that will be made to mitigate these hazards.

As discussed in detail above, no health or safety hazards are known in the vicinity of the subdivision with the exception of the area being designated as the Wildland-Urban Interface. This issue is detailed in the Fire Prevention, Control and Fuels Reduction Plan, which includes plans for fuels reduction, establishment of a fire department water supply, and future formation of a land owner committee to regulate fire-wise construction.

j. Housing:

- i. Indicate the proposed use(s) and number of lots or spaces in each:

- A. For residential indicate the type of dwelling unit;

12 lots are proposed with the subdivision, with each lot proposed to be developed with one single-family residence, most likely being conventional housing.

- B. For all other uses the type and intensity of use (e.g. industrial, commercial, etc.).

Three lots in the subdivision, Lots 8, 9, and 10, which each abut US Highway 93, are also proposed for small-scale commercial uses. These commercial

uses would be relatively low intensity, being limited by the land, access, water rights, and future DEQ approvals of sanitation facilities. Examples of the types of uses envisioned include a storage facility, a community-oriented store, or a construction or manufacturing enterprise that could benefit from the BNSF railway adjacent to the property.

k. **Parks and Recreation Facilities:**

- i. Describe park and recreation facilities to be provided within the proposed subdivision and other recreational facilities which will serve the subdivision.

Lot 9, at 4.1-acres, being the only lot less than 5-acres in size, triggers the parkland dedication provisions of the subdivision regulations. Cash in-lieu of parkland is proposed, so no parks or recreational facilities are proposed within the subdivision. There are many outdoor recreational facilities in the vicinity including lake access, hiking and bicycling trails and other resources. The City of Whitefish is within 12 miles, which has substantial recreational facilities including swimming, skiing, skating and stake boarding, among others.

l. **Public Health and Safety:**

- i. Describe any probable impacts and any measures to mitigate the impacts, or submit a statement explaining why no impact is anticipated, providing documentation to support that statement that might affect public health and safety that aren't specifically addressed in other sub-section of the environmental assessment;

As discussed in detail in this assessment, no threats to public health and safety are expected to be generated by the subdivision and no threats to health and safety in the community are expected to impact new residents. Therefore, no mitigation measures are proposed.