

SAPPHIRE VALLEY ESTATES

ENVIRONMENTAL ASSESSMENT

January 5, 2023

Revised September 26, 2023

a. Surface Water

- (1) The nearest natural stream is Eight Mile Creek, approximately 300 feet south of the proposed subdivision at its closest point. Mapping of the Creek verifies that all of the floodplain lies south of the proposed subdivision and south of Eight Mile Creek Road. Eight Mile Creek is a perennial stream; the water carried at 100-year flood, based on the StreamStats Report included with the floodplain map would be 537 cubic feet per second. See Tab 18. (Source: FEMA Mapping)
- (2) An off-site unnamed irrigation ditch flows westward on the south side of 8-Mile Creek Road. It provides a variable amount of water to other properties throughout the irrigation season. There is no peak flow water data for this ditch. (Source: 1958 Ravalli County Water Resources Survey)
- (3) No portions of the subject property are susceptible to flooding. (Source: FEMA Mapping)
- (4) No stream bank alteration is proposed. (Per Subdivision Proposal)
- (5) The property has irrigation water rights through the Eight Mile Creek Company. In the past, water has been provided from the Williamson Ditch to feed an on-site sprinkler system that is no longer in use. That same water source will be re-distributed throughout the subdivision via pipeline to each lot. This will be administered through the Irrigation Agreement (Tab 11). Document #469637 included in the Title Guarantee under Ownership Information (Tab 14) provides the "Agreement and Grant of Irrigation Ditch

and Pipeline and Access and Maintenance Easement" with the Eight Mile Creek Company.

- (6) No construction is proposed in proximity to the water systems listed under items 1 and 2 above. Note that an 8 inch sleeve will be placed under Watson Way at the entrance to the subdivision to allow for eventual placement of the proposed 6 inch pipeline. See sheet 2 – Irrigation Plan of the Preliminary Plat.
- (7) Per our application to the Ravalli County Sanitarian and MDEQ, any potential source of pollution will be limited to required County and State standards. This means that no stormwater will leave the property in excess of pre-development quantities. Septic systems will likewise be designed to not adversely impact 8 Mile Creek.
- (8) Potential sources of pollution from this subdivision are being adequately mitigated to protect the surface water features. Septic systems are located and designed to prevent pollution from entering the surface waters. Our Storm Water Protection Plan (SWPPP) will prevent direct runoff or soil erosion from entering surface waters during construction on the site.
- (9) There are no significant adverse impacts to mitigate.
- (10) None of the listed water quality permits will be needed or required.

b. Groundwater

- (1) Soil investigations determined that groundwater was in excess of 8 feet deep across the site. The results are included in this subdivision submittal packet under the MDEQ Application.
- (2) Groundwater from the 8-Mile Creek drainage feeds into the Bitterroot River Aquifer.
- (3) There are no significant adverse impacts generated by the proposed subdivision coming from surface pollution entering the groundwater. Septic systems are designed to protect the groundwater and overland runoff from stormwater is controlled and largely retained on site.

- (4) There are no significant adverse impacts from surface pollution generated by the proposed subdivision that will affect groundwater.
- (5) Less than 10 acre-feet of water per year is proposed to be drawn from underground sources to be used for domestic purposes by this subdivision. Irrigation of the lots will be provided through surface water sources.
- (6) There are no significant adverse impacts generated by the proposed subdivision that will affect groundwater.
- (7) There are no significant adverse impacts to mitigate.

c. Geology, Soils, Slope

- (1) There are no known geologic conditions affecting the proposed subdivision that would result in property damage or personal injury due to rock slides, shallow bedrock, unstable or expansive soils; there are no slopes over 25%. (See NRCS Soil Survey.)
- (2) According to the NRCS Soil Survey, Lolo Gravelly Loam across the site has no limitations for dwellings with basements. That soil is "somewhat limited" for road construction due to frost action. Our road plans will assure that the design addresses the slight limitation.
- (3) A Soil Suitability Map and narrative is included with this Subdivision Submittal.
- (4) Please refer to the Road Plans (Tab 21) for all proposed cuts and fills. Note that the site does not include steep slopes so any cuts or fills will be minimal.
- (5) Erosion control and prevention will be accomplished through the best available methods, including straw bales, silt fencing and other appropriate means. Construction will be coordinated under a Storm Water Protection Plan (SWPPP).
- (6) Based on the NRCS Soil Survey and on-site soil analysis, there are no significant adverse impacts anticipated from this development.

- (7) The soils, topography and geology do not present any significant impediments to development of the site. Nevertheless, we will be employing the best available methods for construction on the site to further prevent any adverse impacts. (NRCS Soil Survey, topography map and Road Plans)

d. Vegetation

- (1) (a) Vegetation across the site is grassland and hay.
(b) No special plant communities have been identified on the site. 8-Mile Creek lies to the south across the county road, but no wind or water erosion should impact those riparian soils.
- (2) We are not aware of any "species of concern" on the site, based on our review of information provided by the Montana Natural Heritage Program.
- (3) A Weed Plan, approved by the Ravalli County Weed District, is included with this submittal. It identifies noxious weeds found on the property and proposes methods for their control.
- (4) We are aware of no potentially significant adverse impacts to vegetation that would result from this subdivision.
- (5) The site vegetation does not present any significant impediment to development of the site. Nevertheless, we will be employing the best available methods for construction on the site to further prevent any adverse impacts.

e. Wildlife

- (1) Whitetail and Mule deer frequent the site. Based on past experience, we expect this to continue after development of the subdivision, since hunting is not allowed this close to residences. While we have not observed any of the Montana Natural Heritage Program's listed Species of Concern, we believe that smaller mammals and birds will continue to inhabit the grassland on the site.

- (2) There is no known big game winter range on this property. Nor are there migration routes, waterfowl nesting areas, or habitat for species of special concern.
- (3) Among the Species of Concern identified in the general area by the Montana Natural Heritage Program are the Great Blue Heron, Bald Eagle, Lewis's Woodpecker, Clark's Nutcracker, Long-billed Curlew, Golden Eagle, Preble's Shrew, Hoary Bat, Grizzly Bear, Sage Thrasher, Burrowing Owl, Non-cave Bat Roost, Suckley Cuckoo Bumble Bee, Westslope Cuthroat Trout, Little Brown Myotis, and Townsend's Big-eared Bat. The listing of species is broadened by the fact that the Program extends its analysis to include lands within one mile of the site. While we believe that none of these species will be significantly impacted by this subdivision, nevertheless, we believe that the proposed protection that the covenants will provide through "Living with Wildlife" provisions will provide adequate safeguard for the lands likeliest to offer habitat to any of the listed species. Please refer to the letter by the Natural Heritage Program within this submittal.
- (4) The Covenants require pets to be kept under the control of the owner, and not allowed to run free.
- (5) Potential impacts to wildlife from subdivision activity typically include loss of habitat and pets interfering with wildlife.
- (6) Our proposal will mitigate the above listed impacts by provisions within the Covenants for "Living with Wildlife" and by further control of pets through the Covenants.

f. Air and Light

- (1) Paved roadways are proposed for this development, so the roads should not be a source of air pollution. Wood stoves are prohibited through the Covenants.
- (2) We are not proposing street lights within this subdivision, so there should be minimal night sky visual impact.

- (3) There are no significant adverse impacts to air and light resulting from this subdivision.

g. Historical Features

- (1) There are no known historic, paleontological, archeological, or cultural sites, structures, or objects identified by the Montana State Historic Preservation Office.
- (2) We are aware of no known sites needing protection or mitigation as a result of this subdivision.

This report was prepared by John Kellogg with assistance from staff of Professional Consultants, Incorporated.