



DRAFT ENVIRONMENTAL ASSESSMENT
Proposed Class II Solid Waste Management System
Lake County Landfill
Polson, Montana

Solid Waste Section
PO Box 200901
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March 15, 2024

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Acronyms

ARM – Administrative Rules of Montana

BMP's – Best Management Practices

C&D – Construction and Demolition

CQA/CQC – Construction Quality Assurance/Construction Quality Control

DEQ – Montana Department of Environmental Quality

Draft EA – Draft version of an environmental assessment

EIS – Environmental Impact Statement

EPA – Environmental Protection Agency

FWP – Montana Department of Fish, Wildlife, and Parks

GWIC – Ground Water Information Center

IWMA – Integrated Waste Management Act

MBMG – Montana Bureau of Mines and Geology

MCA – Montana Code Annotated

MEPA – Montana Environmental Policy Act

MSW – Municipal Solid Waste

NRCS – Natural Resource Conservation Service

O&M – Operation and Maintenance

RCRA – Resource Conservation and Recovery Act

SWMA – Montana Solid Waste Management Act

SWP – Montana DEQ Solid Waste Program

SWS – Montana DEQ Solid Waste Section

USDA – United States Department of Agriculture

USEPA – United States Environmental Protection Agency

USFWS – United States Fish and Wildlife Service

USGS – United States Geological Survey

1. PURPOSE AND NEED FOR ACTION

1.1 Summary

In March 2023, the Lake County Solid Waste Management District submitted a Solid Waste Management System (SWMS) license application to the Montana Department of Environmental Quality (DEQ). The application proposes to expand Lake County's existing Solid Waste Management System to include an additional 50 acres of adjacent land to be used for Class II and Class IV waste disposal activities. The proposed 50-acre site spans two legal parcels, both owned by Lake County, and would border Kerr Dam Road to the south and the existing Lake County Landfill to the north (Site, **Figures 1 and 2**). The Site is located two miles southwest of Polson and six miles northwest of Pablo, in Lake County, Montana. The Site encompasses the entirety of the legal parcel identified in **Figure 2** (40.76 acres) as well as approximately nine acres of the 55.25-acre eastern-adjacent parcel which is also owned by Lake County. Of the total 50-acre Site, only 19 acres are planned for Class II or IV waste disposal activities. The 19-acre waste management area falls entirely within the legal parcel identified in **Figure 2**. The Site, which is presently vacant grassland, would be operated by Lake County. Lake County Solid Waste Management District would coordinate the management of nearly 31,500 tons of waste per year while serving nearly 31,000 Lake County residents. The Site details include:

- Site would be an extension of the existing Lake County Landfill facility and utilize the existing entrance via Kerr Dam Road
- Site would serve approximately 31,000 Lake County residents.
- Air Space Capacity – 2.08 million cubic yards
- Solid Waste Capacity – 1.69 million cubic yards or 924,338 tons
- The estimated facility life expectancy is 29 years.
- The life estimate is based on an effective waste to soil ratio of 4.5:1 and in-place density of 1,088 LB/CY. This equates to a volume per ton ratio of 2.25 CY/Ton.
- Lake County would accept both Class II and Class IV waste in the licensed area. No special waste would be accepted at the landfill.

1.2 Background

Lake County is currently operating as an Intermediate Class II facility, as defined in ARM 17.50.403. An intermediate Class II facility is a facility with a planned capacity of more than 5,000 tons per year but not more than 25,000 tons per year. A Class II facility can accept Group II, III, and IV wastes. However, Lake County only accepts Group IV waste at the current facility. Group II waste is currently being trucked to Missoula for final disposal. The Proposed Action will allow for disposal of Group II, III, and IV waste at the Site.

The current landfill is expected to reach final capacity in January of 2026. Lake County has applied to DEQ to expand the current landfill license boundary so that its operations may continue once the current landfill reaches capacity.

Most solid wastes are fundamentally grouped by their physical and chemical characteristics affecting:

- The degree of care required during handling.
- The class of landfill required for disposal.
- The potential to cause environmental degradation or public health hazards.

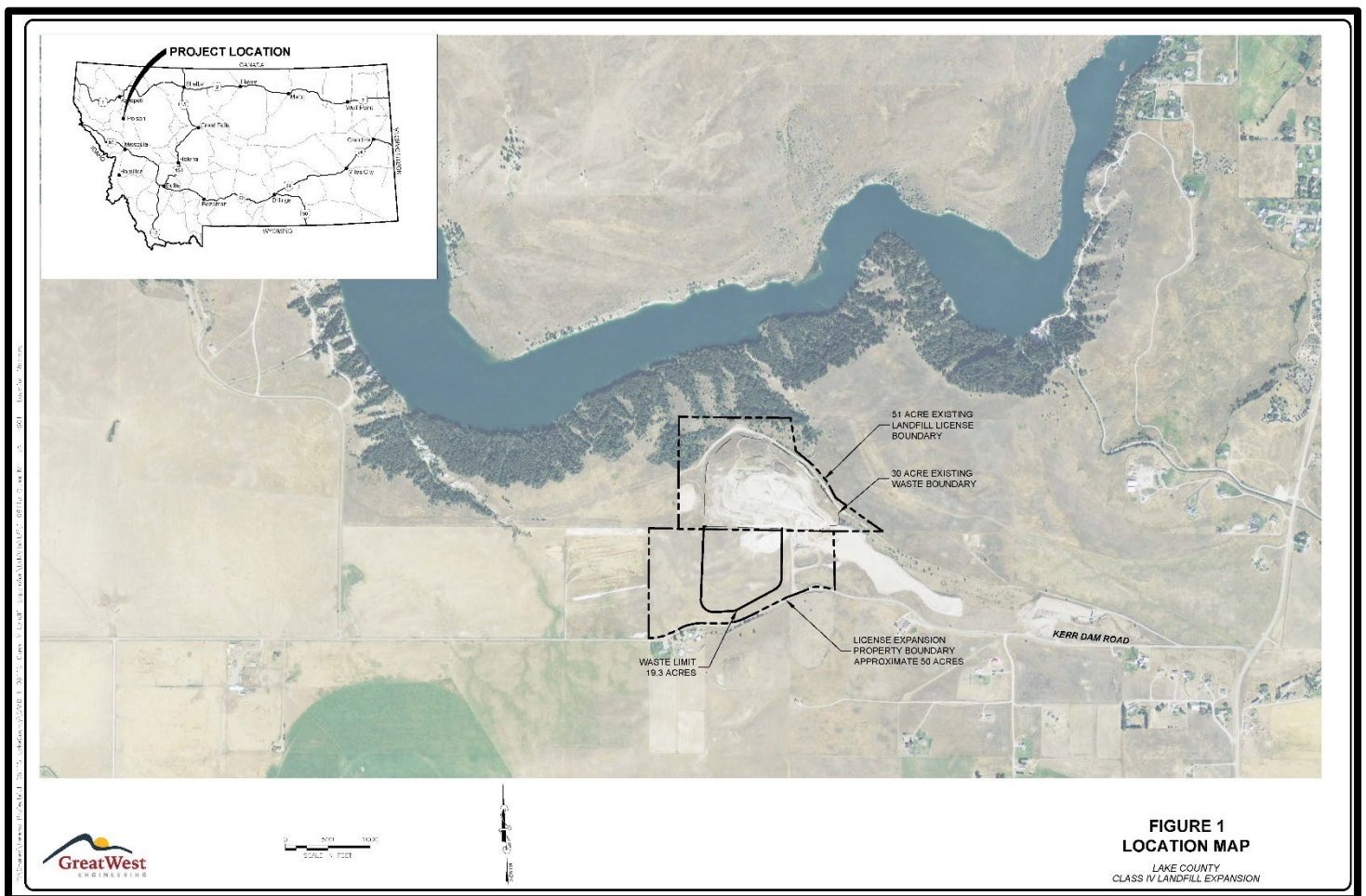
In Montana, the most common wastes are divided into three broad waste groups, including:

Group II wastes, or commonly municipal solid waste (MSW), which may include significant decomposable wastes and some mixed solid wastes of appreciably decomposable materials. It may also broadly share the common materials and characteristics of almost all other waste groups. But required exceptions include chiefly hazardous, radioactive, TSCA, mining, and a few other wastes as defined by federal EPA, NRC, etc.).

Group III wastes are limited to clean wood wastes and other clean non-water soluble or inert solids largely involving, but not limited to unpainted brick or concrete; untreated, unpainted, and unglued wood materials; and tires.

Group IV wastes may largely include construction and demolition wastes and asphalt, but not typical household wastes.

Figure 1: Location of the Site



(Source: Figure 1 of the Lake County Landfill License Application; Great West Engineering 2023)
Not to Scale

Figure 2: Aerial Photo of the Site
(Site in red)



(Source: Google Earth, 2023)
Not to Scale

1.3 Purpose, Need, and Benefits

Lake County has applied to DEQ for review and licensure of an expansion to their Class II solid waste management facility. DEQ's purpose and need is to act on Lake County's application to expand their existing facility as described in the application. DEQ's decision to approve or deny the Proposed Action depends upon compliance and consistency (i.e., "equivalence") of the SWMS application with:

1. Applicable tenants of the Montana Solid Waste Management Act (SWMA), Clean Air Act of Montana (CAA), and Montana Water Quality Act (WQA) established by Montana Code Annotated (MCA); and
2. Applicable solid waste management criteria as required in the ARM.

ARM Title 17, chapter 50, establishes the minimum requirements for the licensing of all SWMS proposals. DEQ's final decision to license a SWMS must be validated by the local health officer within 15 days of its issuance.

Lake County's purpose and need is to expand the current landfill so that its present operations may continue once the present facility reaches final capacity in January of 2026. Once the current facility reaches capacity, it would be closed, and operations would continue in the new location.

The SWMA establishes the minimum requirements for development and licensing of SWMS to protect the environment and the health and welfare of Montana citizens. The SWMA supports long-range planning efforts to ensure that adequate landfill capacity is available in Montana to meet the state's growing population needs. Administrative rules adopted by DEQ pursuant to the SWMA establish requirements for the design, operation, monitoring, corrective action financial assurance, closure, and post-closure care of all licensed SWMS based on the type of facility.

1.4 Location Description and Study Area

The 50-acre Site spans two legal parcels in Township 22 North, Range 20 West, Section 18 and is located approximately two miles southwest of Polson, Montana and six miles northwest of Pablo, Montana in Lake County (**Figure 1**). The Site encompasses the entirety of the parcel in **Figure 2** (40.76 acres) as well as approximately nine acres of the 55.25-acre eastern-adjacent parcel which is also owned by Lake County. The proposed boundary borders Kerr Dam Road to the south and the existing Class IV Lake County Landfill to the north.

Lake County owns the property planned for the Class II Solid Waste facility expansion. Currently, the Site is undeveloped grassland. The property to the east of the site is undeveloped, county-owned land while the area to the north is the existing county-owned Lake County Landfill. Privately-owned grasslands used for grazing border the site to the west and south, as well as private residences south of Dam Kerr Road. Access to and from the Site would utilize the existing landfill entrance off Dam Kerr Road.

Typically, the study area includes the extent of the Site and adjacent areas within at least one mile of the Site. The study area is defined in *Section 3.1*. The study area for each resource is unique and described in each subsection under *Section 3.3*.

1.5 Authorizing Action

MONTANA ENVIRONMENTAL POLICY ACT (MEPA)

MEPA was created as a procedural mechanism to assist the legislature in determining whether laws are adequate to address impacts to Montana's environment and to inform the public and public officials of potential impacts resulting from decisions made by state agencies. DEQ prepared this Draft EA in accordance with requirements of MEPA to disclose potential threats to human health and the

environment associated with the proposed action. All actions associated with creating this MEPA document are public record, and not a record of decision, and certainly do not provide regulatory authority beyond the authority explicitly provided in existing regulations.

Among the several purposes an EA may serve, it may be used to determine the need to prepare an EIS through an initial evaluation and determination of the significance of impacts associated with the proposed action. ARM 17.4.607(2)(c). An EA may also be used to ensure the fullest appropriate opportunity for public review and comment on proposed actions, including alternative and planned mitigation, where the residual impacts do not warrant the preparation of an EIS (ARM 17.4.607(2)(d)). This document may disclose impacts over which DEQ has no regulatory authority.

DEQ has made a preliminary decision determining Lake County's application is complete and meets the minimum requirements of MCA and ARM.

GENERAL LICENSING

DEQ is responsible for issuing SWMS licenses under authority of the SWMA and associated ARM. The Class II license application must contain engineering design plans and an operations plan addressing the methods that would be used to manage the waste at the Site. It must also include a detailed closure and post-closure care plan. It may also include groundwater and methane monitoring plans. These required documents and the DEQ decision to license the proposed facility must first be approved by the local County Health Officer.

DEQ is also responsible for protecting air quality under the Montana Clean Air Act (CAA), and water quality and quantity under the Montana Water Quality Act (WQA). The options that DEQ has for decision-making upon completion of the EA are:

1. Denying the application if the Proposed Action would violate SWMA, CAA, or WQA.
2. Approving the application as submitted.
3. Approving the application with agency mitigatory measures.
4. Determining the need for further environmental review.

Table 1 provides a listing of any state, local, or federal agencies that may have overlapped or additional jurisdiction or environmental review responsibility for the Proposed Action and the permits, licenses, and other authorizations required. All necessary permits and approvals must be attained prior to onsite implementation of the proposed action after licensing by DEQ.

Table 1: Applicable Regulatory Activities

Applicable Regulatory Activities	
Agencies	Responsibilities
DEQ – Waste Management Bureau	SWMS license
DEQ – Air Quality Bureau	Air quality permitting
DEQ – Water Protection Bureau	Montana Pollutant Discharge Elimination System (MPDES) permit
Lake County Health Officer	SWMS license validation by county health officer
Lake County	County waste container sites, road construction and maintenance, land use, and weed plan approval
(List of agencies involved and their respective or licensing requirements)	

CONTINUAL FACILITY REVIEW AND LICENSE RENEWAL

All licensed SWMS facility operations must conform with applicable laws and rules pertaining to solid waste management. If rules or statutes are adjusted or changed, operations would need to adjust accordingly. When a SWMS is initially approved and licensed, it becomes subject to a series of regular licensing and operational reviews by DEQ as follows:

SWMS License Renewal Applications Review: Annual

The license renewal form includes waste volumes for the previous year. DEQ uses reported waste volumes to determine fees and the level of operational activities. A license is renewed if all renewal information is supplied, and the facility can demonstrate an ongoing ability to operate in compliance with applicable rules and statutes.

SWMS Inspections and Site Visits: Annual to Semi-Annual

DEQ staff visit licensed SWMS facilities to verify compliance with applicable rules and statutes. Prior to inspections, staff review the facility’s approved operation & maintenance (O&M) plan. During inspections, staff evaluate all landfill waste management systems and operations. Compliance assistance is emphasized, however, failure to follow the approved O&M plan or to meet the requirements of applicable rules and statutes may result in a violation requiring corrective action(s) and further compliance review with DEQ follow-up (e.g., approval of appropriate O&M Plan changes) and a repeat inspection.

O&M Plan Review: At least every five years

Facilities are required to update O&M plans at least every five years. When no updates are needed, facilities may notify DEQ that operations have not changed. Whenever significant operational changes are expected or required, facilities must notify DEQ in advance by submitting an updated plan for review and approval prior to implementation. All changes must comply with all applicable rules and statutes during the period in which the plan is reviewed.

Engineering Plans Review: Approximately every five years

As operations develop, the designs for the waste collection, sorting, or separation, including the management of liquids, may require adjustment and any necessary changes in equipment or layout may

be submitted to and approved by DEQ. Any such changes must comply with applicable rules and statutes during the period in which the engineering plan is reviewed.

1.6 Public Participation

Pursuant to ARM 17.4.610(3), DEQ is responsible for providing opportunities for public participation of EAs for review and comment.

The Site serves Lake County where development and waste production has continued to increase. DEQ determined that public participation is warranted for this action and is conducting a 30-day public comment period for this Draft EA, which began upon publication of this document.

The public comment period ends on **April 14, 2024**. Notification was sent to adjacent landowners and other interested parties that requested to be notified. A press release announcing the Draft EA's availability was published and posted at: <https://deq.mt.gov/public/publiccomment> .

Lake County's application can be found at the link above.

2. DESCRIPTION OF ALTERNATIVES

2.1 Introduction

This section describes the Proposed Action and reasonable alternatives to the Proposed Action, including the No Action alternative. MEPA requires state agencies to consider the No Action and reasonable alternatives to a proposed action that are available and prudent to consider. The alternate approach or course of action must accomplish the same objectives as the Proposed Action, and must be realistic, technologically available, and must have a logical relationship to the Proposed Action. Section 75-1-220, MCA, states that for a project that is not a state-sponsored project, an alternatives analysis does not include an alternative facility or an alternative to the proposed project itself. Therefore, DEQ only considered alternatives applicable to the proposed facility at the proposed location.

2.2 DEQ Alternative 1 – NO ACTION ALTERNATIVE

Under the No Action alternative, the Proposed Action would not be approved by DEQ. The Site could not be licensed as a Class II SWMS and would not be constructed by Lake County. Waste would continue to be accepted at the existing Class II Lake County Landfill as space allows; however, that facility is projected to reach capacity in approximately three years. Lake County would need to identify another alternative to continue serving its communities.

2.3 DEQ Alternative 2 – PROPOSED ACTION

The Proposed Action is DEQ's granting of Lake County's application to expand their existing Class II SWMS as proposed. The Proposed Action would allow for construction and operation of the proposed expansion area adjacent to the existing Class II Lake County Landfill. The proposed facility would allow the disposal of Group II, III, and IV waste. The facility would be publicly available and would serve nearly 31,000 people throughout Lake County and the Flathead Lake and Swan Valley areas.

Currently, Group IV waste goes to the existing Lake County Landfill; however, the existing landfill is projected to reach capacity in approximately three years. Lake County is pursuing the Proposed Action to continue serving the future needs of its communities and allow for municipal solid waste (e.g., household garbage) to be landfilled at the Site.

3. AFFECTED ENVIRONMENT AND IMPACT BY RESOURCE

3.1 Affected Environment and Study Area

The Site would occupy 50 acres located on property owned by Lake County approximately two miles southwest of Polson, Montana and six miles northwest of Pablo, Montana (**Figure 1**). Of the 50 acres owned, 19.3 acres are planned for Group II, III, and IV waste disposal activities.

Except where noted in specific resource sections, the study area for resource impact analysis includes all lands and resources located within the 50-acre Site footprint and all adjacent lands generally within one mile in each direction. The study area may vary based on the predicted locations of direct and secondary impacts that could result from the Proposed Action as noted for each impact analysis.

3.2 Categories of Potential Impacts from the Proposed Action

The impact analysis will identify and evaluate direct and secondary impacts, which are as follows:

- **Direct impacts:** Impacts that occur at the same time and place as the action that triggers the effect.
- **Secondary impacts:** Further impacts to the human environment that may be stimulated or induced by or otherwise result from a direct impact of the action.

Where impacts are expected to occur, the impacts analysis estimates the duration and intensity of the impact. The severity of an impact is measured using the following:

- **No impact:** There would be no change from current conditions.
- **Negligible:** An adverse or beneficial effect would occur but would be at the lowest levels of detection.
- **Minor:** The effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
- **Moderate:** The effect would be easily identifiable and would change the function or integrity of the resource.
- **Major:** The effect would alter the resource.

Tables 2 and 3 outline the impacts assessed (Note: numbers in the tables do not correspond to the heading numbers in the document).

DEQ is aware of the recent district court opinion in *Held v. State*, ruling the statutory prohibition on including greenhouse gas analyses in MEPA reviews unconstitutional.¹ DEQ continues to actively review options for a thoughtful, defensible disclosure of greenhouse gas data and analysis for the wide variety of projects the Agency reviews.

¹ *Held v. State*, No. CDV-2020-307 (Mont. 1st Jud. Dist. Ct. Aug. 14, 2023).

Table 2: Impacts to the Physical Environment

Physical Environment	Major	Moderate	Minor	None	Unknown	Attached
1. Terrestrial and Aquatic Life and Habitats			✓			✓
2. Water Quality, Quantity, and Distribution			✓			✓
3. Geology and Soil Quality, Stability, and Moisture			✓			✓
4. Vegetation Cover, Quantity, and Quality			✓			✓
5. Aesthetics			✓			✓
6. Air Quality			✓			✓
7. Unique, Endangered, Fragile, or Limited Environmental Resources				✓		
8. Historical and Archaeological Sites				✓		✓
9. Demands on Environmental Resources on Land, Water, Air, or Energy				✓		

Table 3: Impacts to the Human Environment

Human Environment	Major	Moderate	Minor	None	Unknown	Attached
1. Social Structures & Mores				✓		
2. Cultural Uniqueness & Diversity				✓		✓
3. Density & Distribution of Population & Housing				✓		
4. Human Health & Safety			✓			✓
5. Quantity & Distribution of Employment			✓			✓
6. Local & State Tax Base Revenues			✓			✓
7. Demand for Government Services			✓			✓
8. Industrial, Commercial, & Agricultural Activities & Production			✓			✓
9. Access to & Quality of Recreational & Wilderness Activities				✓		
10. Locally Adopted Environmental Plans & Goals				✓		

3.3 Terrestrial, Aquatic Life, and Habitats

The affected environment and study area include all lands and resources located within the proposed study area as defined in Section 3.1 with the exception that the Montana National Heritage Program mapped animal and plant species of concern within the entire Township 22N, Range 20 West.

The proposed 50-acre Lake County Landfill expansion area does not contain any areas that are designated as wetland habitat by the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) or the Montana National Heritage Program (MTNHP)(MTNHP, 2023). However, the NWI identifies an unnamed riverine that flows east to west across the Site before ultimately converging with the Flathead River which is situated approximately ½ mile north of the Site. NWI classifies this feature as “R4SBC” meaning it is an intermittent riverine with a defined streambed that floods seasonally (**Figure 3**). The riverine is not identified as a waterbody by MTNHP.

As stated in the Lake County License Application, water from the riverine would be collected on-site and managed as part of the landfill’s stormwater plan. Existing on-site drainage control would help further mitigate any potential water inundation from the Flathead River (Great West, 2023).

The MTNHP describes the Site, as well as surrounding land to the east, west, and southeast, as grassland systems. Other surrounding land covers include human land-use areas described as commercial/industrial land to the north where the present landfill is situated and cultivated cropland and low-intensity residential land to the south. A description of the on-site land cover is below:

Rocky Mountain Lower Montane, Foothill, and Valley Grassland: This grassland system of the northern Rocky Mountains is found at lower montane to foothill elevations in mountains and valleys throughout Montana. These grasslands are defined by shorter summers, colder winters, and young soils derived from recent glacial and alluvial material. In the lower montane zone, they range from small meadows to large open parks surrounded by conifers. This system is typified by cool-season perennial bunch grasses and forbs (>25%) cover, with a sparse shrub cover (<10%).

In accordance with Montana state law, the Site would be revegetated with native species within one year of the final closure of the landfill. This would return the Site to suitable habitat for wildlife and livestock grazing.

The MTNHP was queried for animal and plant species of concern. The focus area of the query was Township 22N, Range 20 West, which is larger than the study area, but the smallest defined area allowed in the search. Species of concern are summarized in **Table 4** below. The search was provided by the MTNHP on September 1, 2023, and summarized within the Lake County application (Great West, 2023).

Table 4: Species of Concern

Common Name (<i>Scientific Name</i>)	Family	Global Rank	State Rank	Habitat
Mammals				
Townsend's Big-eared Bat (<i>C. townsendii</i>)	Bats	G4	S3	Caves, Mines, and Rock Outcrops
Little Brown Myotis (<i>M. lucifugus</i>)	Bats	G3G4	S3	Caves, Mines, Snags, and Man-made Structures
Hoary Bat (<i>L. cinereus</i>)	Bats	G3G4	S3B	Coniferous and Hardwood Forests
Grizzly Bear (<i>U. arctos</i>)	Bears	G4	S2S3	Meadows, Riparian Zones, Mixed Shrub Fields, Open and Closed Timber, and Alpine Slabrock
Fish				
Bull Trout (<i>C. townsendii</i>)	Trout	G5	S2	Adults – streams and rivers Adolescents – lakes and tributaries
Birds				
Yellow-billed Cuckoo (<i>C. americanus</i>)	Cuckoos	G5	S3B	Open and Deciduous Riparian Woodlands
Black Tern (<i>C. niger</i>)	Gulls/Terns	G4G5	S3B	Wetlands, Marshlands, and Ponds
Long-billed Curlew (<i>N. americanus</i>)	Sandpipers	G5	S3B	Meadows and Mixed-grass Prairie
Caspian Tern (<i>H. caspia</i>)	Gulls/Terns	G5	S2B	Rocky Islands within Lakes and Reservoirs
Bald Eagle (<i>H. leucocephalus</i>)	Hawks/Kites/Eagles	G5	S4	Riparian Zones and Lacustrine Habitats
Lewis's Woodpecker (<i>M. lewis</i>)	Woodpeckers	G4	S2B	Open Forest and Woodland
Bobolink (<i>D. oryzivorus</i>)	Blackbirds	G5	S3B	Tall Grass and Mixed-grass Prairie
Great Blue Heron (<i>A. herodias</i>)	Bitterns/Egrets/Herons/Night-Herons	G5	S3	Riparian Zones and Open Coniferous Forests
Evening Grosbeak (<i>C. vespertinus</i>)	Finches	G5	S3	Mixed Coniferous Forest
Forster's Tern (<i>S. forsteri</i>)	Gulls/Terns	G5	S3B	Large Marshes, Lakes, and Reservoirs
Reptiles and Amphibians				
None Found				
Insects				
None Found				
Vegetation				
None Found				

MTNHP Rank Definition

G1 S1 At high risk because of **extremely limited** and/or **rapidly declining** population numbers, range and/or habitat, making it highly vulnerable to global extinction or extirpation in the state.

G2 S2 At risk because of **very limited** and/or **potentially declining** population numbers, range and/or habitat, making it vulnerable to global extinction or extirpation in the state.

G3 S3 Potentially at risk because of **limited** and/or **declining** numbers, range and/or habitat, even though it may be abundant in some areas.

G4 S4 Apparently secure, though it may be quite rare in parts of its range, and/or suspected to be declining.

G5 S5 Common, widespread, and abundant (although it may be rare in parts of its range). Not vulnerable in most of its range.

GX SX Presumed Extinct or Extirpated - Species is believed to be extinct throughout its range or extirpated in Montana. Not located despite intensive searches of historical sites and other appropriate habitat, and small likelihood that it will ever be rediscovered.

GH SH Historical, known only from records usually 40 or more years old; may be rediscovered.

GNR SNR Not Ranked as of yet.

Four of these identified species, the grizzly bear, bull trout, Caspian tern, and Lewis's woodpecker, rank as an S2 species of concern meaning they are at risk because of a very limited and/or potentially declining population numbers, range and/or habitat, making them vulnerable to global extinction or extirpation in the state. The Site consists of predominantly undeveloped grasslands which are not suitable habitat for any of these S2 species of concern. It is unlikely that waste management activities at the Site would negatively impact these species of concern.

In addition to the identified species of concern, MTNHP also lists the area as an important animal habitat for non-cave bat roosts. This is determined by the documented presence of adults and/or juveniles of any bat species at non-cave roost sites such as rock outcrops, trees, mines, bridges, and buildings. Since the Site is predominantly undeveloped grasslands, it does not provide optimal habitat for bat roosts. No further mitigation is needed to protect this important animal habitat from activities associated with the proposed action.

Transient wildlife populations, including whitetail deer, mule deer, many bird species, and more occupy the habitat within and surrounding the Site boundary. Transient, by definition, means "lasting only for a short time", or "impermanent". Such species exhibit transient behavior, relocating regularly and rarely remaining in one area for long periods of time. The development of the Site may require relocation of local and transient animals, but much of the surrounding areas offer similar habitats. Additionally, none of the species of concern listed in the area have been found in this habitat upon previous inspection of the Site. If such animals are found, the proper state agencies would be contacted immediately.

Under the No Action alternative, the Site would not be licensed as a Class IISWMS, and there would be no potential impacts to terrestrial and aquatic life and habitats.

Under the Proposed Action alternative, there would be minor impacts to terrestrial habitats on the Site. There would not be any impact to aquatic life habitat since there are not any designated wetlands on the Site, and the intermittent riverine would be managed appropriately.

Figure 3: Wetlands Map*(Site boundary in red)**(Source: <https://nepassisttool.epa.gov/nepassist/nepamap.aspx>)***Not to Scale**

3.4 Water Quality, Quantity, and Distribution

The affected environment and study area include all lands and resources located within the 50-acre Site footprint and all adjacent lands within one mile in each direction.

3.4.1 Surface Water

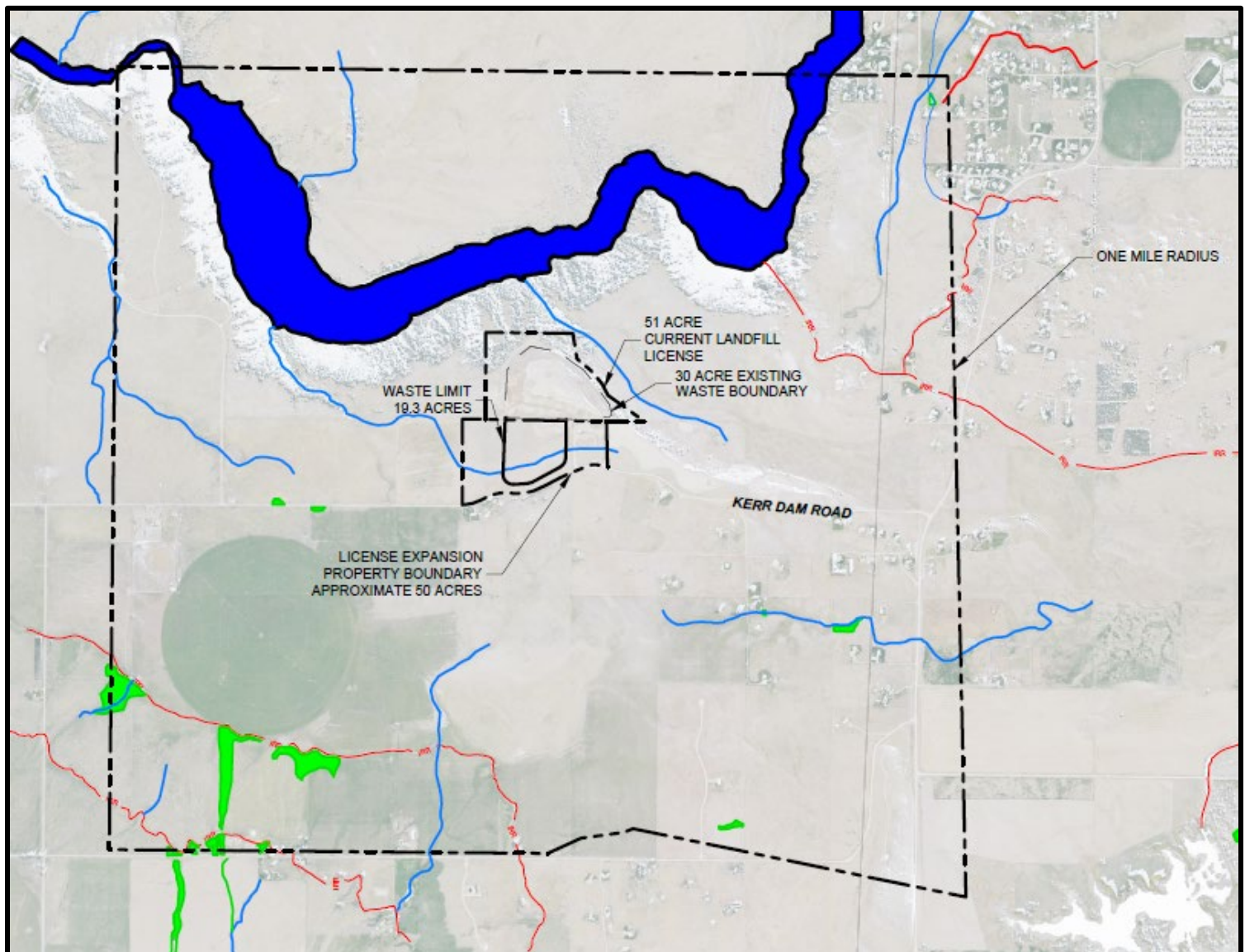
The study area lies within the boundaries of the Lower Flathead Watershed (HUC 17010212). This watershed is situated south and west of Flathead Lake and drains an area of approximately 2,130 square miles in northwestern Montana.

Figure 4 shows the primary surface water features within a one-mile radius of the property boundary. The stream flowing east to west across the Site is an intermittent riverine with a typical streambed that may flood seasonally. Stormwater from this drainage would be collected onsite and managed as part of the stormwater plan. The additional drainage north of the existing landfill will not be impacted by the Proposed Action.

The Flathead River, located approximately ½ mile north of the Site, is the closest perennial waterbody to the Site. This waterbody generally flows to the southwest and is classified as an impounded upper perennial river with an unconsolidated bottom that is permanently flooded. The stretch of the Flathead

River immediately north of the Site, as well as all of Flathead Lake, is considered critical habitat for bull trout.

Figure 4: Surface Water Map



(Source: from Figure 3 of the Lake County Landfill Hydrogeologic and Soils Report, Great West, 2023)

Not to Scale

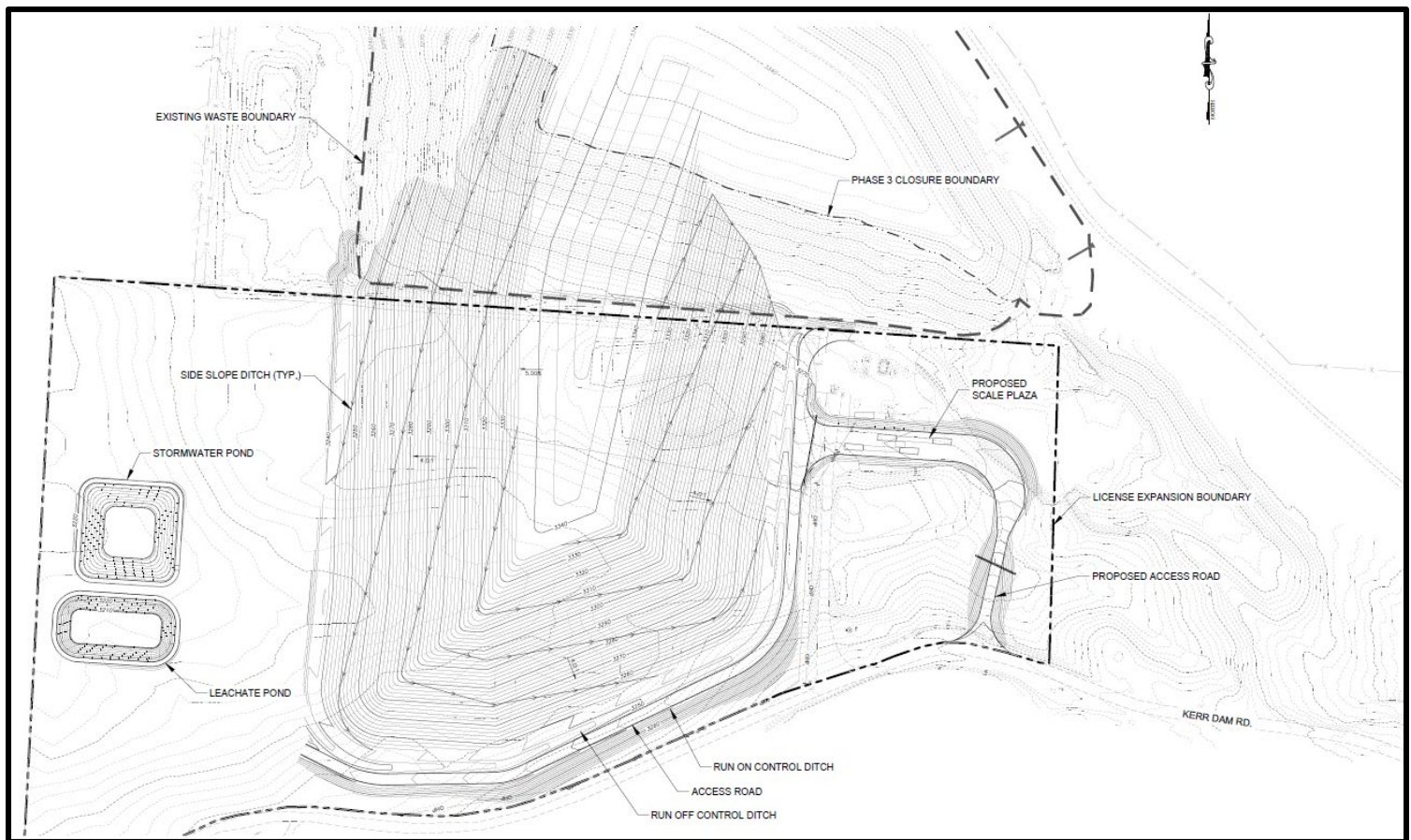
The Federal Emergency Management Agency (FEMA) National Flood Insurance Program identifies the Site as an area of minimal flood hazard. Given the nearest perennial waterbody is the Flathead River, over ½ miles north of the Site and further away than the current landfill, there is minimal to no flood potential hazard for the Site. However, should a concern of flooding arise, on-site drainage and stormwater controls would be used to mitigate any potential water quality pollution from the landfill to this waterbody.

Stormwater is water that originates during precipitation events and snow or ice melt. Stormwater can soak into the ground, be held on the surface to evaporate, or run off towards downstream surface water

bodies. Surface water flow may occur at the proposed site when water generated by rain, snowfall, or melting of accumulated snow, flows freely over the land surface into nearby drainages. Surface water flow may occur when the soil is saturated and its holding capacity is exceeded, when precipitation falls more quickly than the soil can absorb it, or more typically, when a combination of these conditions exists.

To manage on-site water, the Site would incorporate perimeter ditches and berms to divert any run-on from entering any waste area. These perimeter ditches would provide effective run-on and run-off control for the active area. All run-off collected from the landfill area would be directed to stormwater detention ponds. The detention ponds detain greater than the total volume of water from the 25-year, 24-hour storm event. The location of the detention ponds and run-on and run-off ditches are shown in **Figure 5**. Landfill staff would be responsible for the maintenance of all on-site drainage structures and ditches. Maintenance includes erosion control measures for the ditches, as necessary. The landfill would operate and maintain the detention ponds and ditches in accordance with the Surface Water Pollution Prevention Plan (SWPPP) and General Industrial Discharge Permit, which would be obtained prior to beginning operations.

Figure 5: Drainage Map



(Source: from Figure 3 of the Lake County Landfill Expansion Operation and Maintenance Plan, 2023)

Not to Scale

3.4.2 Ground Water

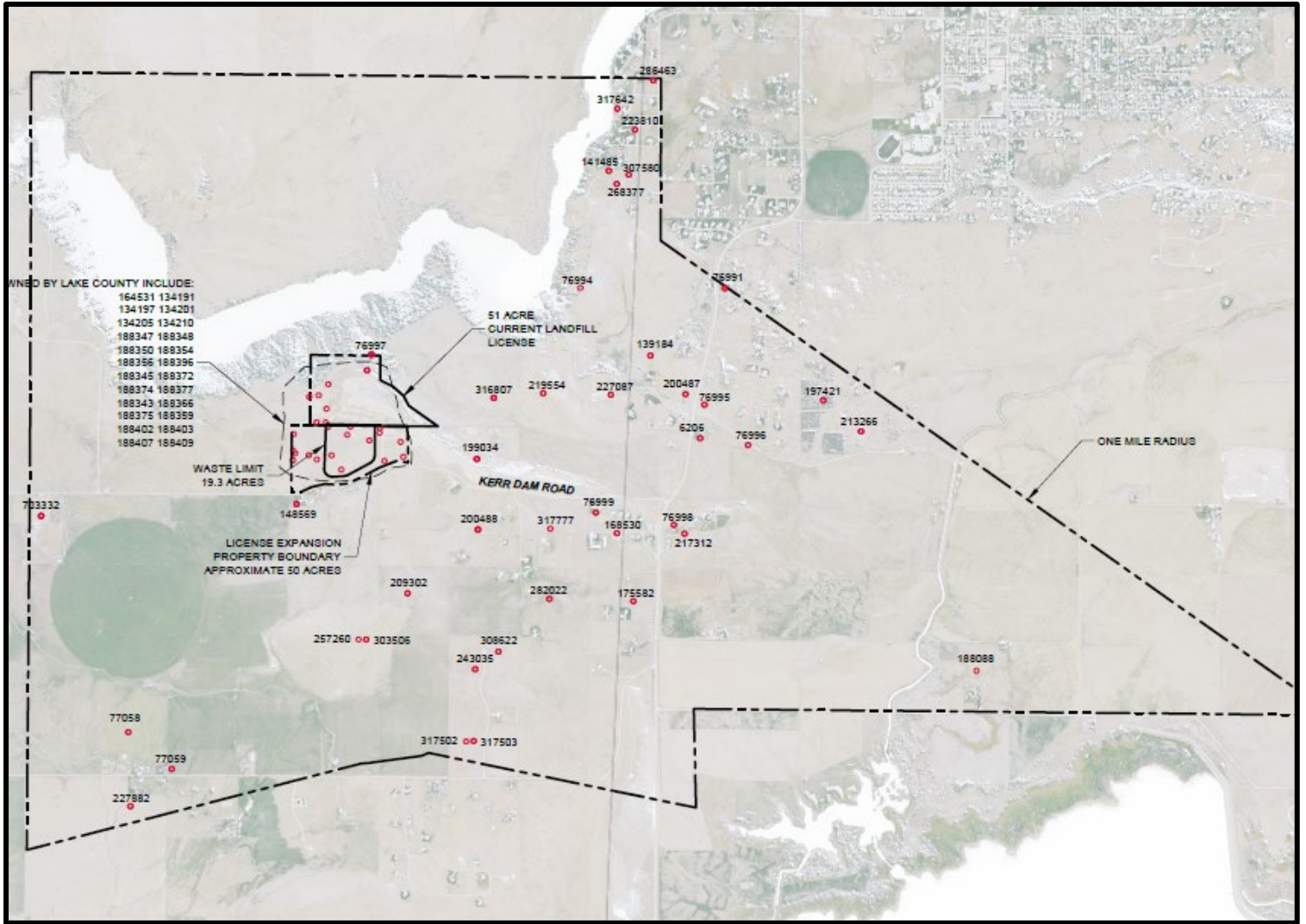
According to the Lake County Application, the generalized stratigraphic sequence for the south expansion area is approximately 10 to 30 ft of sand, overlying an effective low-permeability aquitard unit which promotes the development of two perched groundwater units in the vicinity of the landfill. The aquitard unit is glacially derived silt or glacial till (interchangeably called “diamict” in previous reports or logs) and

promotes the development of two shallow perched groundwater units at the site, which flow to the west/northwest. The delineation of the two perched units is based on the isocontour map for the top of the aquitard unit, as developed by Damschen (1999) in the original hydrogeologic report for the existing landfill. The south expansion area represents a total of 50 acres applicable for this expansion permit application. Of the 50 acres, roughly up to 19 acres (combined area for Cells 1, 2, and 3) are currently designed via preliminary engineering design for use as waste disposal cells, which will include a bottom liner system and leachate collection system. Within the 50-acre boundary, there are at least 46 identified existing investigation locations, consisting of at least 26 borings (or wells) and 20 test pits. Of the 26 borings, at least 12 were completed as piezometers or groundwater monitoring wells, which yield hydrogeologic data to characterize the uppermost groundwater in the area of interest.

Leachate would be managed in accordance with a leachate management/discharge plan. The liner system would mitigate potential vertical migration of leachate into the vadose zone and/or into the uppermost groundwater. The detection monitoring program would be initiated before the project's construction to characterize background groundwater quality conditions. It would be administered annually to ensure groundwater resource protection is maintained at background conditions during the landfill's active life and post-closure care period.

As stated in the Hydrogeologic and Soils Report (Great West, 2023) for the Lake County Landfill Expansion, there are 64 public and private water supply wells within a one-mile radius of the Site (**Figure 6**).

Figure 6: Groundwater Well Map



(Source: from Figure 4 of the Lake County Landfill Hydrogeologic and Soils Report, Great West, 2023)
Not to Scale

A search of the Montana Groundwater Information Center (GWIC) database for Township 22N, Range 20W, Section 18 found 30 wells with data. As shown in **Table 5**, total well averages in this section show an average well depth of 90 feet, an average static water level (SWL) of 93 feet below ground surface (bgs), and an average yield of 49 gallons per minute. If only monitoring wells are considered, the average well depth is 36 feet and the average SWL is 21 feet bgs.

Table 5: GWIC Well Data

GWIC ID	Site Name	Type	Total Depth	Static Water Level	Yield	Date	Use
188345	LAKE COUNTY LANDFILL * LE-010	WELL	62	--	--	7/29/1997	MONITORING
188354	LAKE COUNTY LANDFILL * LE-105	WELL	15	14.5	--	2/25/1998	MONITORING
188347	LAKE COUNTY LANDFILL * LE-101	WELL	20	5	--	2/25/1998	MONITORING
164531	LAKE COUNTY LANDFILL	WELL	440	353	20	8/1/1997	DOMESTIC
188356	LAKE COUNTY LANDFILL * LE-106	WELL	6	--	--	2/25/1998	MONITORING
188350	LAKE COUNTY LANDFILL * LE-103	WELL	16	9	--	2/25/1998	MONITORING
134210	LAKE COUNTY LANDFILL * L-08	WELL	58	33.5	--	12/3/1992	MONITORING
188403	LAKE COUNTY LANDFILL * L-10	WELL	30	22	--	4/14/1994	MONITORING
188359	LAKE COUNTY LANDFILL * LE-120	WELL	29	25.75	--	2/27/1998	MONITORING
134191	LAKE COUNTY LANDFILL * L-04	WELL	62	--	--	11/30/1992	MONITORING
134201	LAKE COUNTY LANDFILL * L-06	WELL	33	20	--	12/2/1992	MONITORING
188348	LAKE COUNTY LANDFILL * LE-102	WELL	16	8	--	2/25/1998	MONITORING
316807	SALISH & KOOTENAI HOUSING AUTHORITY	WELL	345	165	150	9/14/2021	PUBLIC WATER SUPPLY
188343	LAKE COUNTY LANDFILL * LE-118	WELL	17	8.35	--	2/25/1998	MONITORING
134205	LAKE COUNTY LANDFILL *L-07	WELL	79	63	--	12/2/1992	MONITORING
188412	LAKE COUNTY LANDFILL * LM-01	WELL	65	--	--	4/15/1994	MONITORING
188409	LAKE COUNTY LANDFILL * LWS-01	WELL	85	--	--	7/29/1997	MONITORING
188407	LAKE COUNTY LANDFILL * L-11	WELL	35	22	--	4/15/1994	MONITORING
134197	LAKE COUNTY LANDFILL * L-05	WELL	43	--	--	12/1/1992	MONITORING
76997	HARRIS CARL/ELMA	WELL	525	400	10	1/1/1913	DOMESTIC
199034	VAN VLEET JERRY AND SHARI	WELL	540	391	17	8/5/2002	DOMESTIC
188375	LAKE COUNTY LANDFILL * LE-124	WELL	14	--	--	12/1/1998	MONITORING
201030	LAKE COUNTY LANDFILL * LM-06 - DEEP COMPLETION	WELL	34	--	--	7/28/1997	MONITORING
188372	LAKE COUNTY LANDFILL * LE-113	WELL	34	--	--	2/26/1998	MONITORING
188402	LAKE COUNTY LANDFILL * L-09	WELL	30	8.5	--	4/13/1994	MONITORING
188366	LAKE COUNTY LANDFILL * LE-122	WELL	9	--	--	11/30/1998	MONITORING
188374	LAKE COUNTY LANDFILL * LE-114	WELL	40	38	--	2/26/1998	MONITORING
188396	LAKE COUNTY LANDFILL * LE-009	WELL	63	--	--	7/23/1997	MONITORING
188377	LAKE COUNTY LANDFILL * LE-115	WELL	40	--	--	2/26/1998	MONITORING
188415	LAKE COUNTY LANDFILL * LM-06 - SHALLOW COMPLETION	WELL	8	--	--	7/8/1997	MONITORING
Averages			90	93	49		
*Wells removed from average calculations							
Depth in feet, Static Water Level in feet below ground surface, Yield in gallons per minute							

Under the No Action alternative, there would be no potential impacts to surface water or groundwater beyond current activities on the Site.

The Proposed Action would involve substantial earthwork disturbances and landfilling activities which would have a minor potential to impact surface water and/or the uppermost groundwater at the Site. Lake County has indicated that run-on and run-off ditches would route on-site water to stormwater or leachate holding ponds, as necessary. The stormwater pond is designed to handle the 25-year 24-hour storm event. A SWPPP and Stormwater Discharge Permit would be required to be submitted prior to the commencement of construction activities in the expansion area.

Additionally, the proposed liner system would be designed and installed to protect groundwater to the maximum extent required by state and federal regulations. The cells in the proposed area would be constructed with a DEQ-approved alternative composite liner system consisting of six inches of recompacted clay overlain by a 60 mil HDPE liner. The liner systems are designed to sustain minimal damage in the event of a significant seismic event.

A leachate collection system (LCS) would also be implemented at the facility and would consist of gravel-covered drainage piping. The collection laterals ultimately convey water to the leachate collection and

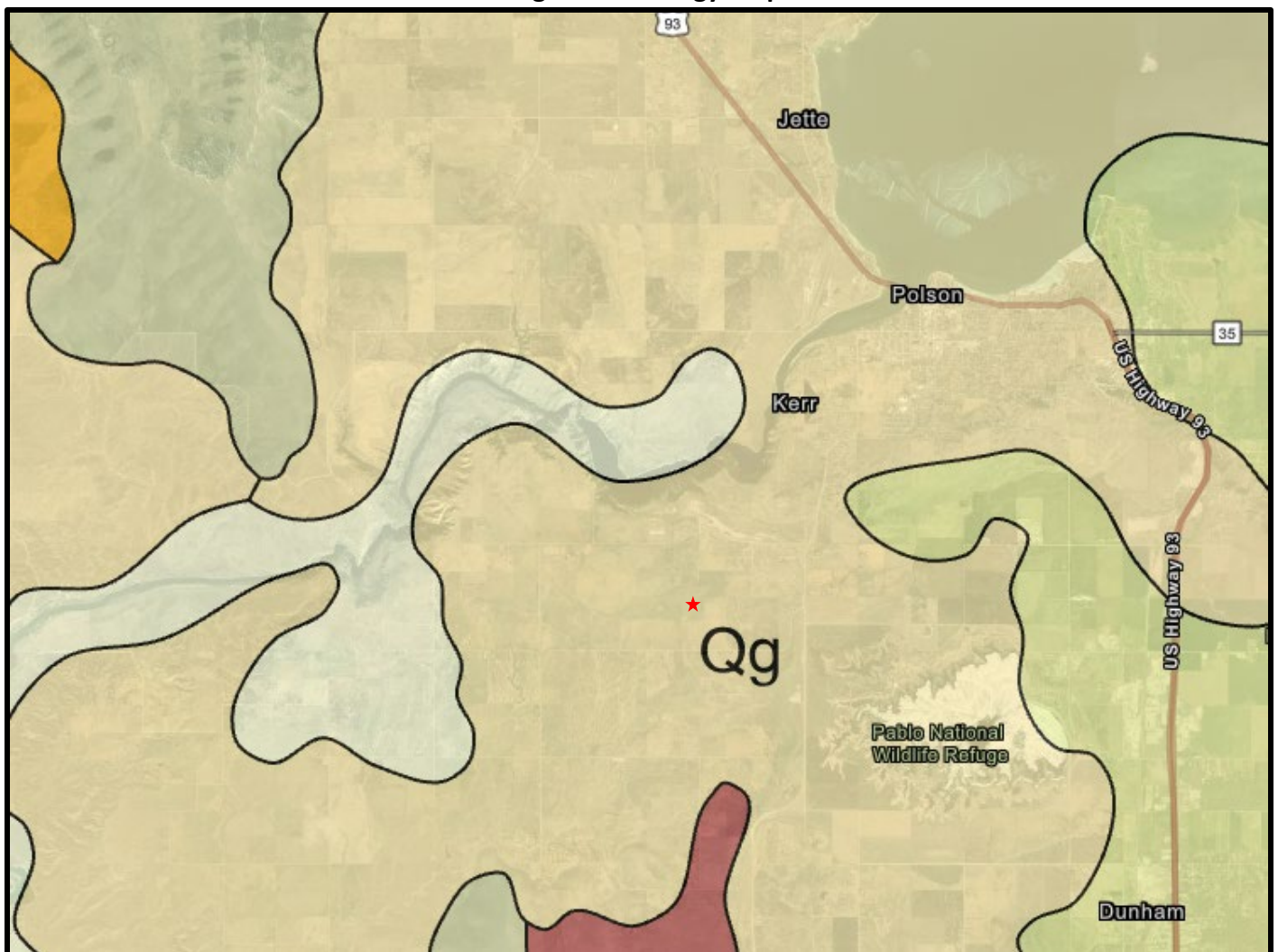
evaporation pond. The leachate collection system would be protected by 15-inch-thick layers of gravel materials. Details of the liner and leachate collection systems are depicted in the Lake County Landfill Expansion Master Plan, which is attached to the SWMS application.

While the appropriate measures are proposed to take place, there could be minimal adverse impacts to the current surface water and groundwater system due to the Proposed Action.

3.5 Geology and Soil Quality, Stability, and Moisture

The affected environment and study area include all lands and resources located generally within one mile of the Site. As shown in **Figure 7** (below), The Montana Bureau of Mines and Geology (MBMG) virtual Montana Geologic Maps viewer shows the Site and surrounding region as sitting in a large area of glacial deposit (Qg). This quaternary geologic unit consists of dominantly till, outwash, and local glacial lake deposits and is found throughout western and south-central Montana.

Figure 7: Geology Map



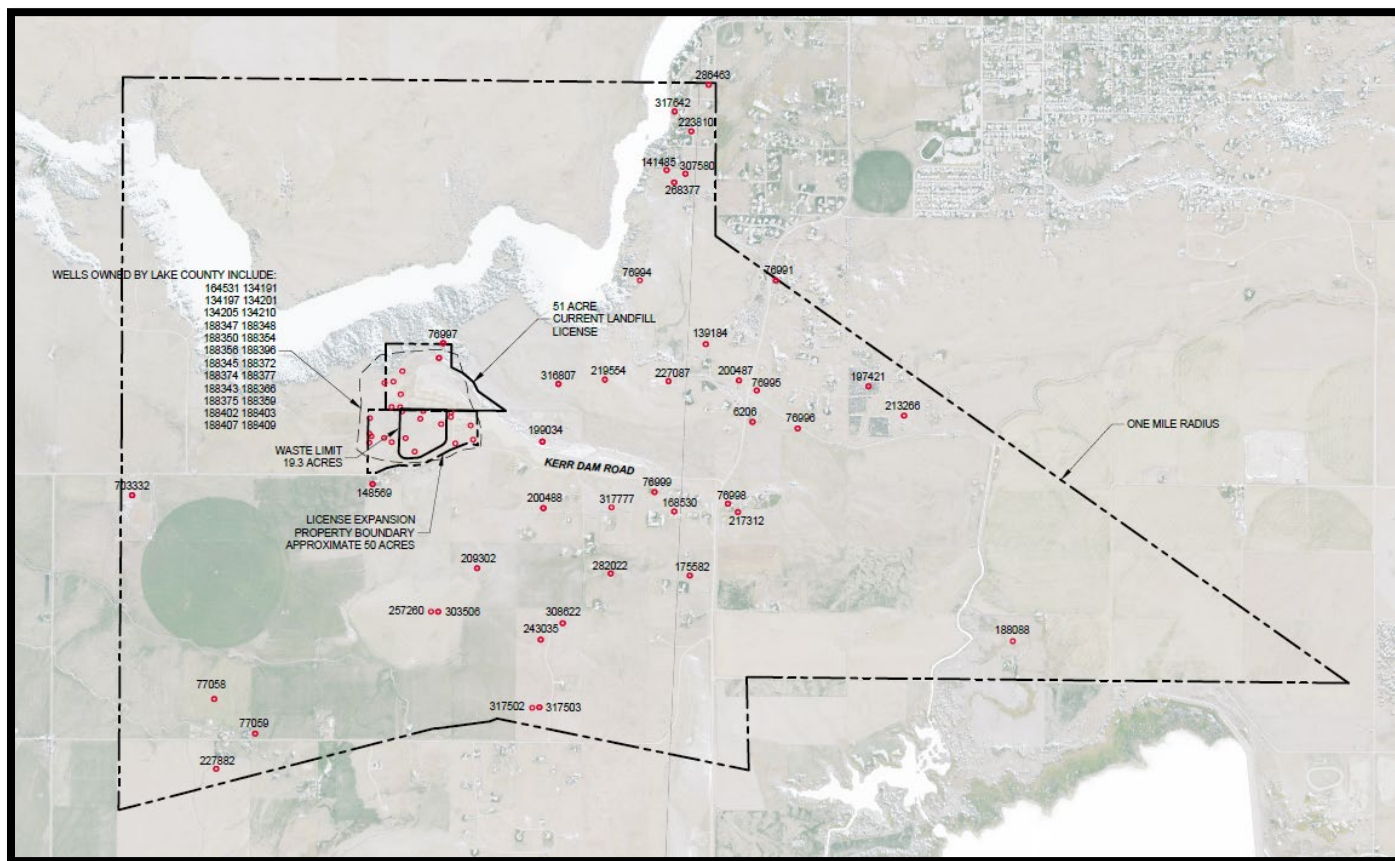
(Site in red, Source: Montana Bureau of Mines and Geology, 2023)

Regional geology can be generalized as a relatively complex sequence of valley fill deposits originating from or associated with deposition from Glacial Lake Missoula. Prominent mountain ranges bounding either side of the valley to the east and west of the Flathead Valley consist of the Mission Range (Mountains) to the east, and the Salish Mountains to the west. Near the study area, the valley fill

sequence consists of upwards of 800 ft of interlayered and/or discontinuous layers of coarse-grained lake deposits (typically sand and gravel), interlayered with or between fine-grained lake deposits (silt or effective fine-grained units).

As noted within the Lake County Landfill Expansion application, extensive field investigations have been completed in the area near the existing landfill and the proposed expansion area. Test pit, boreholes, and monitoring well locations in the area are shown in **Figure 8**. The Hydrogeologic and Soils Report (Great West, 2023), included as Attachment 7 in Lake County’s application, reviewed all investigations in the area through 2022. Geology and topography are diverse throughout the project area. Based on all data, Great West summarized the expansion Site based on key locations at the Site.

Figure 8: Test Pit, Boring, and Monitoring Well Locations



(Source: from Figure 3 of the Lake County Hydrogeologic and Soils Report, Great West, 2023)
Not to Scale

3.5.1 Geology

The analysis methods for geology included review of geologic history of the Mission Valley, map information from publications of the Montana Bureau of Mines and Geology and the U.S. Geological Survey, and review of online soil maps and reports from the U.S. Department of Agriculture’s Natural Resource Conservation Service.

Under the No Action alternative, there would be no impacts to the site geology beyond current activities on the property.

No impacts to geology are anticipated because of the Proposed Action. The geology of the area remains the same and is not altered or affected by agricultural or construction activities, including the construction or operation of a landfill.

3.5.2 Soils

Figure 9 shows a soils map of the Site and approximate study area obtained from the United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS) web soil survey.

As shown in **Figure 9** and described within **Table 6**, much of the 19 acres proposed for active use lies within McCollum fine sandy loams. This soil is well drained with a moderate available water supply that is not frequent to flooding or ponding.

Under the No Action alternative, there would be no impact to the existing soil on the property. The Site would continue to be vacant grassland and no disturbance would occur.

Under the Proposed Action, soil would be disturbed during construction and disposal activities. The current land use will change from generally unused grassland to a landfill. Within one year of facility closure, the Site would be capped with soil and revegetated, which would return the Site to suitable habitat for wildlife and livestock grazing. Although the Site could be used for grazing again after closure, it is unlikely this Site will ever be used as farmland given the capped waste that will remain on-site indefinitely. This change in use will result in a minor impact to surface and subsurface soils during the life of the facility.

Figure 9: Soils Map

Top: Site (green) Bottom: Approximate Study Area (red)



(Source: U.S. Department of Agriculture, Natural Resource Conservation Service)

Table 6: On-Site Soils Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
66	Gird-Vincom silt loams, 4 to 8 percent slopes	8.4	17.3%
67	Gird-Vincom silt loams, 8 to 15 percent slopes	9.2	18.9%
102	McCollum fine sandy loam, 2 to 4 percent slopes	19.7	40.4%
103	McCollum fine sandy loam, 4 to 8 percent slopes	10.7	21.9%
124	Niarada gravelly loam, cool, 30 to 60 percent slopes	0.0	0.0%
125	Niarada-Kerl complex, 8 to 15 percent slopes	0.0	0.1%
129	Pits, gravel	0.2	0.3%
167	Truscreek-Polson silt loams, 2 to 4 percent slopes	0.5	1.0%
Totals for Area of Interest		48.8	100.0%

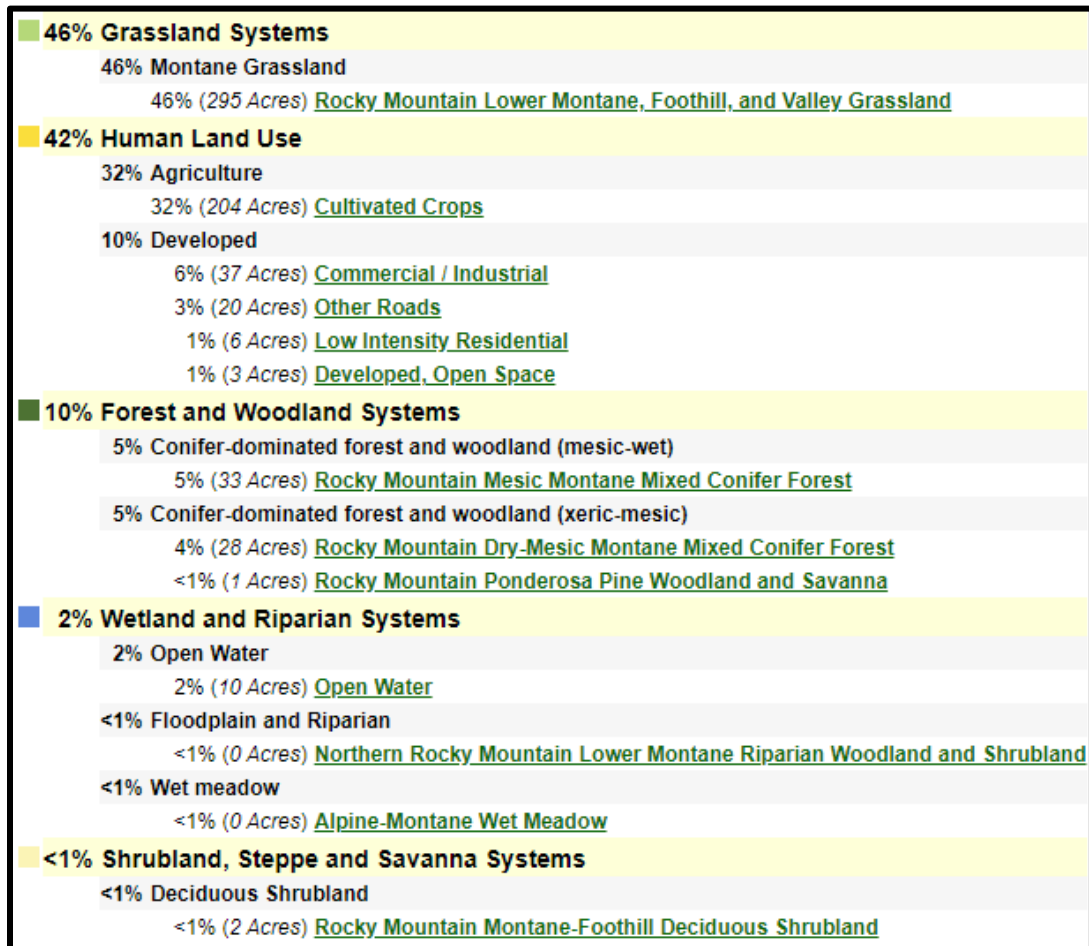
(Source: U.S. Department of Agriculture, Natural Resource Conservation Service)

3.6 Vegetation Cover, Quantity, and Quality

The affected environment and study area include all lands and resources located within one mile of the project Site. The site and study are shown in **Figure 10** below.

Land cover in the study area is described by the following types and quantities. Descriptions of the predominant vegetative covers are as follows.

Figure 10: Land Cover



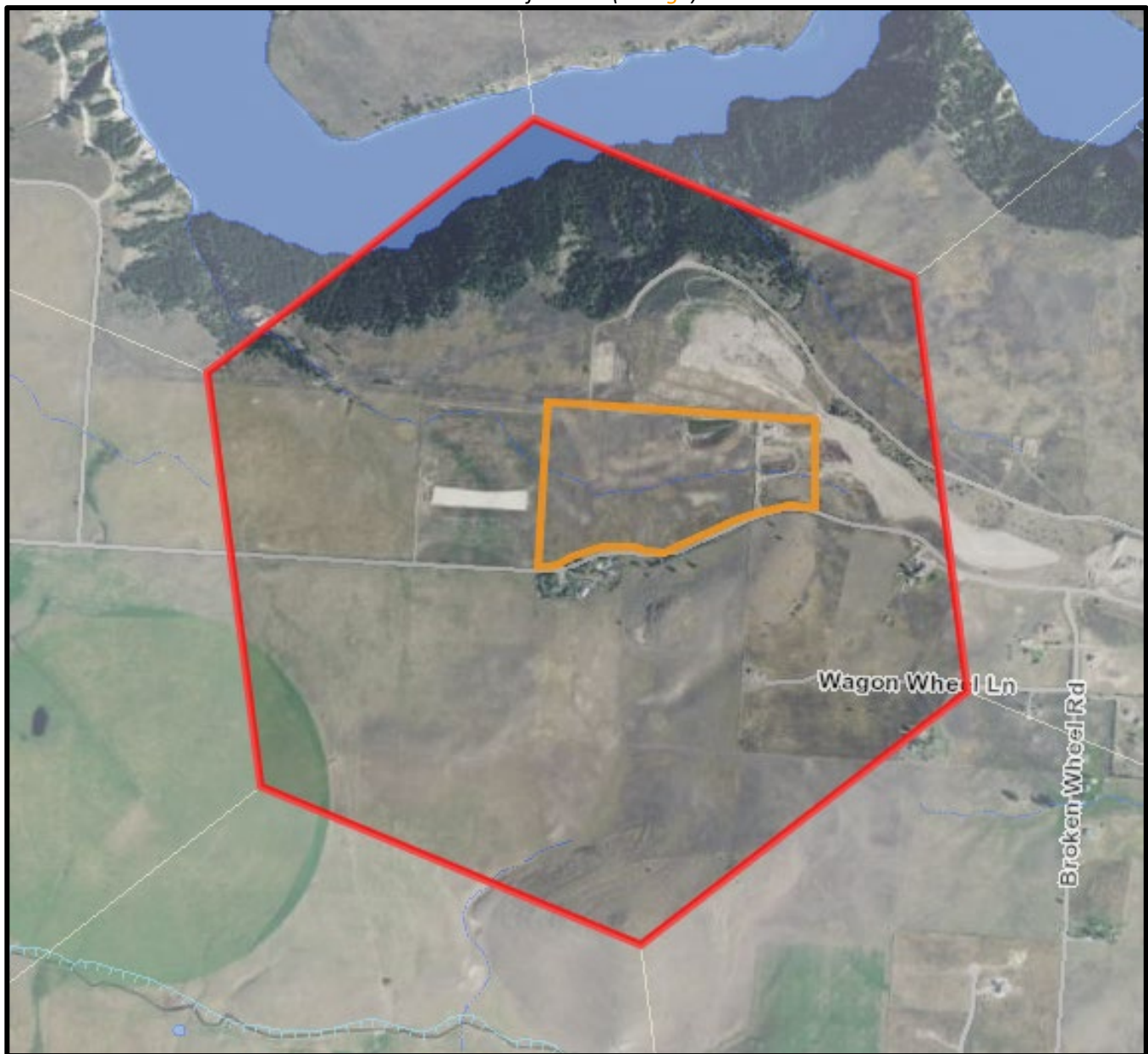
Most the study Area is either grassland systems or for used by humans for agriculture, commercial/industrial facilities, or residences. The MTNHP descriptions of Vegetative Cover for the predominant natural land as follows:

Montane Grassland: This grassland system of the northern Rocky Mountains is found at lower montane to foothill elevations in mountains and valleys throughout Montana. These grasslands are defined by shorter summers, colder winters, and young soils derived from recent glacial and alluvial material. Soils are relatively deep, fine-textured, often with coarse fragments, and non-saline. This system is typified by cool-season perennial bunch grasses and forbs (>25%) cover, with a sparse shrub cover (<10%).

Under the No Action alternative, the Site would not be approved by DEQ. There would be no impacts to the vegetation on the property, and the Site would continue to be vacant grassland with no disturbance.

Under the Proposed Action, vegetation would be moderately impacted during construction and operation of the landfill facility. Lake County is proposing to re-establish native grasses and vegetation to match existing conditions during the closure process which will result in a minor long-term impact.

Figure 11: Vegetative Cover Map
Project Site (orange)



(Source: Montana National Heritage Program, Land Cover Map Viewer)

3.7 Aesthetics

Under the No Action alternative, there would be no impacts to the existing aesthetic impacts on the property. The Site would continue to be vacant grassland and no odors would be produced. The following aesthetic categories are discussed below in accordance with their impact due to the Proposed Action.

3.7.1 Odors

Class II solid wastes do produce gases, primarily hydrogen sulfide and ammonia, from the bacterial breakdown of waste material, resulting in odors. The amount of gas produced depends on the type of waste present, the age of the waste, oxygen content, the amount of moisture, and temperature, and the amount of time and conditions under which the waste stockpiled or disposed. Gas formation increases as the temperature and moisture content increase.

Furthermore, landfill odors occur from various stages of decomposition of refuse. This may start prior to the delivery of the waste and continue for some time after placement. Delivered wastes, particularly in hot weather, often will have objectionable odors. The daily, intermediate, and final covers will provide the most effective odor control.

Additional odors could occur from the landfilling activities on the site such as construction contractors, machinery, and associated equipment and materials. Heavy equipment would be necessary to run the facility and would likely produce small amounts of exhaust odor.

Implementing the Proposed Action would have a minor impact regarding odors. Odors from the Proposed Action are not expected to differ in any significant way from the odors produced at the existing Lake County Landfill; however, the expansion will be closer to nearby residences to the south. The closer proximity of the Site and the change in the waste type accepted at the facility could increase the intensity of odors to surrounding residences.

3.7.2 Vectors

Vectors include flies, mosquitoes, rodents, and birds. Vectors would be best controlled by proper spreading, compaction, and covering of incoming waste.

Implementation of the Proposed Action would likely have minor impacts due to the potential increase of vectors in the area. The change from acceptance of only Group IV wastes to both Group II, III, and IV wastes would potentially bring vectors which may have not been present with only Class IV inert wastes. Facility staff would mitigate vectors regularly by implementing best management practices throughout the facility.

3.7.3 Traffic

According to the Lake County Landfill Application, traffic would continue to access the landfill facility via Kerr Dam Road and will utilize gravel access roads to enter the expansion area. Existing public traffic patterns, bridges, and/or culverts would not be impacted.

It is anticipated that there would be temporary, minor impacts to traffic from the Proposed Action. Traffic to/from the landfill would minimally increase during construction activities and operation due to additional waste being brought to the Site.

3.7.4 Noise

As provided within the Lake County Landfill Application, noise control at the Site is needed for comfort and safety of on-site personnel and to avoid nuisance to the surrounding community (Great West, 2023). The nearest residences are as close as 100 feet from the edge of the 50-acre site.

Noise limitations imposed by the Department of Labor and Industries must be observed to protect employees from hearing damage. The Lake County Landfill Operation & Maintenance Plan provided the following procedures which would be implemented at the site to minimize noise:

- Maintain proper mufflers on vehicles and operating equipment
- Periodically monitor equipment decibel levels of each machine
- Provide ear protection devices for operators
- Provide annual hearing tests and training per the Hearing Conservation Program
- Maintain perimeter buffer zones
- Limit operating hours

Since the operational portion of the landfill would be closer to neighboring residences to the south, minor impacts from noise are anticipated because of the Proposed Action.

3.8 Air Quality

Under the No Action alternative, there would be no additional impacts to the existing air quality beyond current activities on the Site.

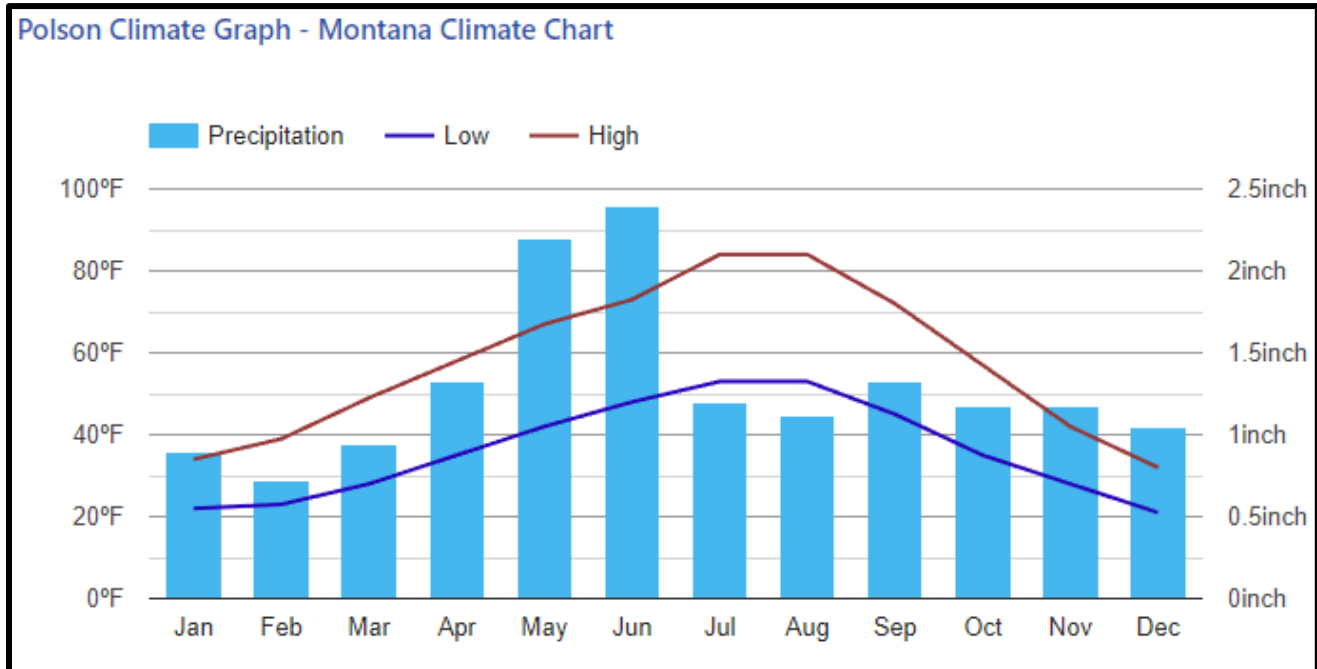
Under the Proposed Action, air quality may be impacted due to the following types of activities and/or sources: (1) increased levels of airborne dust particulates potentially generated from landfill construction, earthwork, maintenance, and traffic to/from the landfill during ongoing waste disposal activities; (2) landfill gas emissions. The Lake County Landfill Expansion Application describes the air quality impacts and mitigation below.

Airborne Dust:

Air quality impacts due to airborne dust and particulate matter may occur as related to earthwork/moving activities during landfill construction/excavation and related traffic to/from the landfill via increased traffic related to construction activities. Air quality impacts due to general operations are not anticipated to be significant. During construction activities and periods of dry conditions, industry-established best management practices such as dust suppression (i.e., watering the haul roads) would effectively reduce air quality impacts related to construction and routine waste hauling. Considering the construction of the proposed landfill would be temporary and short-term, the overall effects to air quality are anticipated to be minor.

According to U.S. Climate Data, Polson, Montana averages 15.53 inches of rainfall a year, significantly under the United States average of 38.1 inches. **Figure 12** (below) shows the average rainfall and high/low temperatures per month for Polson, Montana. Typical seasons show a rainy late spring with June having, on average, 15.6 days of rainfall averaging 2.4 cumulative inches. The warmest and driest month of the year is August, experiencing 84-degree Fahrenheit temperatures, 7 days of rain per month, and totaling an average 1.12 inches.

Figure 12: Climate Graph



(Source: www.usclimatedata.com/climate/polson/montana/united-states/usmt0263)

The warm dry summers are likely to be the time when fugitive dust is highest. Windy conditions during dry periods can generate the most fugitive dust if dust suppression methods are not applied. Water or chemical dust suppressants can be used to control fugitive road dust if necessary. Water or a chemical dust suppressant can be applied at a rate that would not cause runoff or erosion. Applications of water and chemical dust suppressants could reduce fugitive dust emissions by up to 50 to 80 percent if correctly applied.

DEQ administrative rules require all facilities to comply with applicable air quality requirements. These include restrictions on particulate matter emissions to not exceed an opacity of 20 percent or more averaged over 6 consecutive minutes, whether from fugitive dust sources or from combustion sources, per ARM 17.8.304 and ARM 17.8.308. In addition, ARM 17.8.308 also requires that facilities take reasonable precautions to control emissions of airborne particulate matter from the production, handling, and storage of any material and to apply reasonable precautions to any street, road, or parking lot. As described above, Lake County can control fugitive dust at the facility by watering roads as an effective method for reducing fugitive dust emissions.

Landfill Gas Emissions:

Landfill gas is generally an equal mixture of methane and carbon dioxide by volume with trace amounts of many other compounds. It is created through the microbial decomposition of degradable carbon compounds (such as municipal solid waste) under anaerobic conditions and has the potential to cause or contribute to several health, environmental, and aesthetic problems if not captured and treated before escaping the atmosphere. These include odors, potential explosion hazards, ground-level ozone formation, and global warming. Landfill gas generation at municipal solid waste facilities is a well-documented phenomenon. As such, there are design considerations and federal and state regulatory requirements to mitigate potential health-based impacts from landfill gases. The typical best available control technology for handling landfill gas is to install a landfill gas collection system and route the landfill gases to a centralized flare for thermal destruction with 98 percent (or better) destruction efficiency. The

design, handling, and mitigation of landfill gases at the Site would comply with ARM 17.50.1106. The current design capacity of the entire landfill facility does not exceed the trip into air emission rules. Therefore, Federal and State air emission rules do not require landfill gas testing and collection.

Minor impacts to air quality are anticipated because of the Proposed Action.

3.9 Cultural Uniqueness and Diversity

Under the No Action alternative, there would be no additional impacts to the existing cultural resources and archaeological sites on the property. The Site would continue to be vacant grassland and no impacts would be made.

Within the Lake County Landfill Expansion Application, a Class III Cultural Resource Survey and Report was completed in November 2022. The Report was completed by Rabbitbrush Archaeological Services, LLC and can be found as Attachment 14 in the Application (Great West, 2023). No cultural resources were discovered that would be impacted by the proposed project.

No impacts on historical and archaeological sites are anticipated because of the Proposed Action.

3.10 Human Health & Safety

Under the No Action alternative, the Site would not be approved by DEQ and there would be no impact to human health and safety.

Under the Proposed Action, mitigation for impacted environmental resources would alleviate any potential impact to human health and safety.

Working near vehicles, haul trucks, and heavy machinery will always present a level of danger to site workers. However, Lake County has proposed a safety program within their O&M Plan that would be implemented. In accordance with their safety program, the following information was provided:

The implementation of a safety program is necessary for protecting life and property from injury and damage. Thorough knowledge of this plan by the landfill employees will be required to facilitate immediate action if any situation should arise. All employees should read and be familiar with [the] Lake County Landfill Safety Manual.

Safety at the site is the responsibility of all personnel active at the site. The manager and safety coordinator shall be in charge of implementing the landfill safety program. Records will need to be kept verifying training, accidents, and situations that may lead to unsafe working conditions.

Additionally, the expansion of the landfill would bring heavy machinery and haul trucks closer to nearby residents. Appropriate fencing and signage would be implemented to make the public aware of the operations occurring near Kerr Dam Road. Minor impacts to human health and safety are anticipated because of the Proposed Action.

Lake County would implement their safety program and fire protection program. Their safety program outlines fire protection, lifting injuries, reporting requirements, necessary first aid/AED trainings, and available numbers for local authorities. Their fire protection program

3.11 Quantity & Distribution of Employment

Under the No Action alternative, the Site would not be approved by DEQ. The existing Lake County Landfill would continue to operate normally with the same number of employees until it reaches maximum occupancy, expected in 2026. Upon the landfill reaching its licensed capacity, the current landfill would need to cease taking refuse and start its closure process. Upon completion of closure, the current employees would need to look for other work, thus a negative impact under the No Action alternative.

Under the Proposed Action, the landfill would be expanded and would maintain jobs for up to 29 additional years. Additionally, there would be a short-term influx in local employment during the construction phases of the expansion. The job security of current facility staff and addition of temporary construction workers would have a minor beneficial impact on the quantity of employment in the region.

3.12 Local & State Tax Base Revenues and Property Values

The analysis area is one mile around the Site. There are approximately 20 homes within a mile of the Site. Because the Site is simply an expansion of the current landfill, no impacts to property values are expected.

In the past 30 years, various research has been done on the effects of landfills on property values. These studies have yielded inconsistent results. Typically, hedonic regression models have been used to try to isolate the effects of landfills on property values holding all other variables constant. Surveys have also been used in studies. Some studies show statistically significant adverse effects of landfills on property values. Generally, larger effects on property values are seen from larger landfills, less modern landfills, landfills that accept hazardous waste or pose health risks, areas with negative perceptions of landfills, landfills that are more visible, and higher end properties. However, even these effects are not robust across all studies and not all these effects were studied in every study. A study by Bouvier, RA., et al. entitled, "The Effect of Landfills on Rural Residential Property Values: Some Empirical Evidence," does not provide grounds for broad generalization about the effect of rural landfills on property values (2000, *The Journal of Regional Analysis & Policy*). It finds that in five of the landfills studied (in rural to semi-rural areas), no statistically significant evidence of an effect from landfills was found. In the remaining case, evidence of an effect was found, indicating that houses near this landfill suffered an average loss of about six percent in value. This significant case was a landfill that was unlined and uncapped and is on EPA's "potential health risk" list. Bouvier suggests that each landfill be studied on a case-by-case basis. A study by C.P. Cartee, entitled "A Review of Sanitary Landfill Impacts on Property Values," found that while it generally is believed that landfills negatively impact property values, in some cases, the development of a sanitary landfill may enhance a property's value (1989, *Real Estate Appraiser and Analyst*). It finds that the introduction of new roads, utilities, and drainage may stimulate development and lead to increases in land values.

No impacts to local and state tax base revenues are anticipated because of the No Action alternative. Under the Proposed Action, the short-term influx in local employment during construction phases of the project and the added benefit of job security for current facility employees would result in a minor beneficial impact to the local tax base assuming local laborers were utilized in construction. Based on the lack of conclusive data, the effect of the Proposed Action on property values is unknown. However, it is reasonable to assume there would be a minor, long-term beneficial impact on the overall tax base and property values within the communities served by the landfill given the Proposed Action would provide local property owners with access to waste disposal services for the next 29 years.

3.13 Demand for Government Services

Under the No Action alternative, there would be no impacts to the demand for government services in conjunction with oversight of the property. Lake County would continue to operate the adjacent, existing landfill normally, in conjunction with DEQ, and the Site would continue to be vacant grassland.

Under the Proposed Action, the Site would be approved as a Class IISWMS. Operation of this facility would still require DEQ regulation, oversight, and compliance. The Lake County sanitarian would conduct periodic inspections as needed. Existing Lake County Landfill staff would oversee operations and maintenance. No additional DEQ staff will be acquired because of the Proposed Action.

No impacts to the demand for government services are expected because of the Proposed Action.

3.14 Industrial, Commercial, and Agricultural Activities

Under the No Action alternative, there would be no additional impacts to industrial, commercial, and agricultural activities on the property. The Site would continue to be vacant grassland.

Under the Proposed Action, the Site would no longer be usable for cattle grazing; however, the impacted 50-acres are small in comparison to the large swaths of nearby agricultural land. The ranchers using the Site for grazing likely have many other nearby options.

Construction of the proposed landfill expansion project would result in a minor increase in industrial activity due to the need for construction contractors and associated equipment and materials. Due to the relocation of cattle intermittently grazing the property and the increase of industrial activity from the Proposed Action, minor impacts to industrial, commercial, and agricultural operations are anticipated.

3.15 Cumulative Impacts

Cumulative impacts are the collective impacts of the Proposed Action on the human environment within the borders of Montana when considered in conjunction with other past, present, and future actions related to the Proposed Action by location or generic type. Cumulative impact analyses help to determine whether an action would result in significant impacts when added to other activities.

At this time there are no negative cumulative impacts associated with the licensing of the Class II facility under the Proposed Action. No nearby past, present, or future actions are anticipated to pair with the Proposed Action and exacerbate impacts. Because the currently operating landfill will close, the active disposal area would not increase. The current landfill would be revegetated to resemble the surrounding area as would the expansion area once it reaches capacity.

A positive cumulative impact of the Proposed Action is the diversion of Class II waste from the Missoula Regional Landfill. Since 2005, all municipal solid waste from Lake County has been hauled approximately 70 miles to the Missoula Regional Landfill. The construction of the proposed landfill expansion would divert large amounts of waste from the Missoula Landfill, lengthen the life of their current facility, and decrease air emissions associated with hauling waste.

3.16 Unavoidable Impacts

Under the No Action alternative, there would be no unavoidable impacts to the proposed Site or surrounding study area. The site would remain vacant grassland.

Residual impacts from the Proposed Action would include the loss of developed soil and vegetation from approximately 19.3 acres of the 50-acre site for waste management use. However, topsoil would be placed as part of the cap construction during final closure of the facility. The topsoil would be reseeded with native vegetation. Some sediment control structures would remain, and the capped units would appear as manmade features across the landscape. Post-closure land use would be restricted to animal grazing. No structures that require the placement of footings or foundations are allowed over closed landfill units. DEQ must approve any disturbance of the closed landfill final cover for construction of any structure.

Plant communities dominated by native plants would be replaced by reclaimed plant communities on the property. Noxious weeds would be treated to ensure revegetation by native grasses occurs as required by the county weed control program. The disturbed areas would be reclaimed, reseeded, revegetated, and a program implemented to inventory and treat noxious weeds would be implemented.

Additional unavoidable impacts would be the visual development of the proposed site and all necessary machinery and buildings. Local citizens, workers, and passersby will see the operation of a Class II facility

closer to Kerr Dam Road instead of a more receded landfill operation behind native grassland. The visual aspect of the Site would change, but closure procedures at the end of the facility's life would allow the Site to return to grassland which would generally mimic the present-day range appearance. Following waste disposal activities, the Site would be covered in accordance with their Closure Plan and revegetated to match native vegetation to allow for wildlife habitat and livestock grazing. While this is the appropriate closure procedure, a capped landfill would exist on this property indefinitely. Development and reuse would be limited. Overall public perception of the property would not be significantly impacted considering there is currently an active landfill just north of the Site.

4. CONCLUSIONS AND FINDINGS

4.1 A listing and appropriate evaluation of mitigation, stipulations, and other controls enforceable by the agency or another government agency

The Proposed Action would meet the minimum requirements of the SWMA and associated administrative rules regulating solid waste disposal. Adherence to the solid waste, water quality, and air quality regulations and the DEQ-approved facility O&M plan would mitigate the potential for harmful releases and impacts to human health and the environment by the Proposed Action.

4.2 Findings

To determine whether preparation of an environmental impact statement is necessary, DEQ is required to determine the significance of the impacts associated with the proposed action. The criteria that DEQ is required to consider in making this determination are set forth in ARM 17.4.608 as follows:

1. The severity, duration, geographic extent, and frequency of the occurrence of the impact.
2. The probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur.
3. Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts.
4. The importance to the state and to society of each environmental resource or value that would be affected.
5. Any precedent that would be set because of an impact of the proposed action that would commit the department to future actions with significant impacts or a decision in principle about such future actions; and
6. Potential conflict with local, state, or federal laws, requirements, or formal plans.

The Site would encompass approximately 50 acres and accept Group II, III, and IV solid wastes, generally including putrescible municipal solid waste, bulky waste, wood waste, non-water-soluble solids (e.g., brick, dirt, rock, rebar-free concrete, brush, lumber, and vehicle tires), general construction and demolition (C&D) waste and asphalt.

The analysis area for vegetation is all lands and resources located within one mile of the Site. Montane Grassland: This grassland system of the northern Rocky Mountains is found at lower montane to foothill elevations in mountains and valleys throughout Montana. These grasslands are defined by shorter summers, colder winters, and young soils derived from recent glacial and alluvial material. The Site is not located within Sage Grouse core habitat, general habitat, or connectivity area. The Proposed Action would not adversely affect any threatened or endangered species.

The Proposed Action is not expected to impact surface water resources. To manage on-site water, the Site would incorporate perimeter ditches and berms to divert any run-on from entering any waste area. These perimeter ditches would provide effective run-on and run-off control for the active area.

The Proposed Action is not expected to impact ground water. Run-on and run-off ditches would route on-site water to stormwater or leachate holding ponds. The proposed liner system would be designed and installed to protect groundwater to the maximum extent required by state and federal regulations. An LCS would also be implemented at the facility.

DEQ has not identified any growth-inducing or growth-inhibiting aspects of the facility. DEQ's approval of the expansion would not set any precedent and would not commit the DEQ to any future action with significant impacts, nor is it a decision in principle about any future actions that DEQ may act on. Finally, operation of the facility would not conflict with any local, state, or federal laws, requirements, or formal plans.

Based on consideration of all the criteria set forth in ARM 17.4.608, DEQ has determined that the Proposed Action would not significantly affect the human environment. Therefore, an environmental assessment is the appropriate level of environmental review and preparation of an environmental impact statement is not required.

4.3 Other groups or agencies contacted or contributing to this EA.

Great West Engineering
Montana Bureau of Mines and Geology
Montana Department of Environmental Quality
Montana Natural Heritage Program
State of Montana Historic Preservation Office
U.S. Department of Agriculture - Natural Resource Conservation Service
U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service

4.4 Authors

Draft EA prepared by:
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Granite Peak Environmental, LLC

Date: March 15, 2024

5. REFERENCES

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