Montana Department of
ENVIRONMENTAL QUALITY

Brian Schweitzer, Governor
Richard H. Opper, Director

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June 15, 2012

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Ladies and Gentlemen:

To comply with the Administrative Rules of Montana, 17.4.607(2) and 17.4.609(2), the Department of Environmental Quality (Department), prepared the enclosed Environmental Assessment (EA). The attached EA is for the land application of septage and greywater in Lewis and Clark County, Montana.

The purpose of the EA is to inform the public of the proposed action and to seek public participation in the decision-making process. Persons wishing to comment have until the close of business on July 13, 2012, to submit written comments concerning the proposal. The Department will not make a final decision until after the comment period has ended.

If you wish to comment on this proposed action within the 30-day period, please do so in writing by mailing your comments to the Waste and Underground Tank Management Bureau, Solid Waste Program, P.O. Box 200901, Helena, MT 59620-0901, or by E-mail to mailbox *wutbcomments@mt.gov*.

Sincerely,

Robert McWilliams

Robert McWilliams
Environmental Science Specialist
Waste & Underground Tank Management Bureau

Enclosure: EA – Rocky Mountain Septic

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY**
Permitting and Compliance Division
Waste and Underground Tank Management Bureau
Solid Waste Section
PO Box 200901
Helena, MT 59620-0901

## ENVIRONMENTAL ASSESSMENT (EA)

### SECTION 1.0 – PROJECT DESCRIPTION:

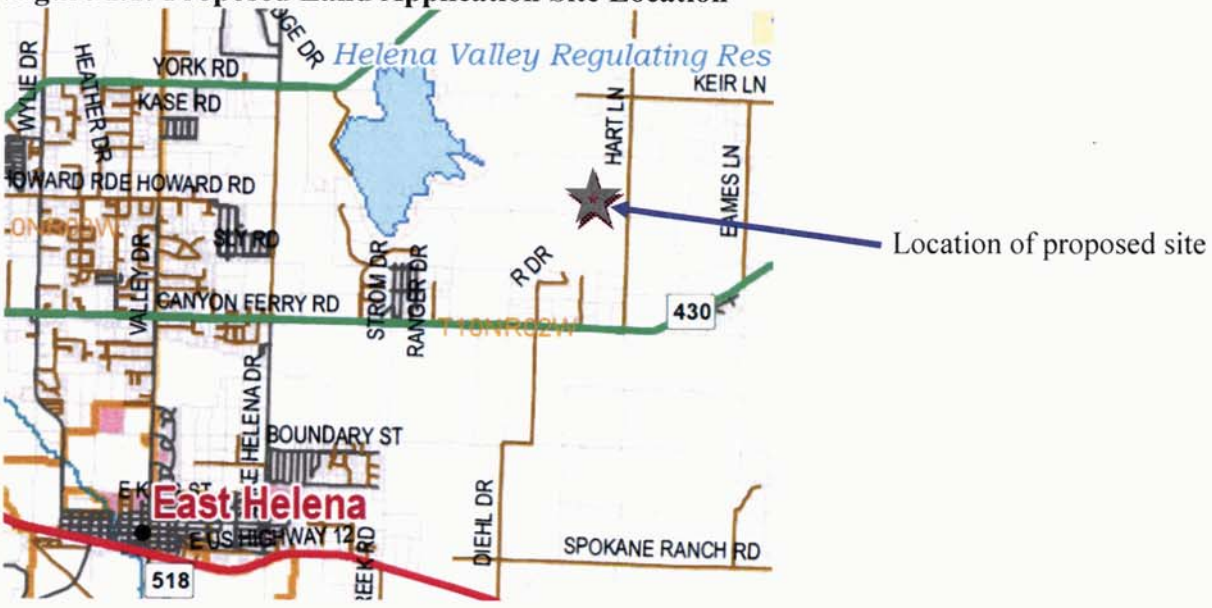
Mr. Kris Bakke (applicant) of Rocky Mountain Septic, has submitted an application for the land application of septage and gray water on 160 acres of Diehl Ranch Company property in Lewis and Clark County. At the present time, the property proposed for land application is being used for the production of agricultural crops. Land application will occur at this site on an as-needed basis.

The purpose of this EA is to document environmental issues related to the land application of septage and greywater on the above-noted property.

Benefits and Purpose of Project:
The land application of domestic septage is an economical and environmentally sound practice. A properly managed land application program provides benefits to agricultural land by the addition of organic matter and nutrients to the soil without adversely affecting public health. The land application of septage and greywater at this site will add nutrients, moisture, and improve the soil tilth for the continued production of the pasture and hay grasses.

Site Location and Setback Requirements:
The proposed land application site is located on private property just off Hart Lane in the S ½ of the SE ¼ of Section 10 and the N ½ of the N ½ of Section 15, T10N, R2W, Lewis and Clark County, East Helena, Montana (Figure 1.1). Of the 480 acres of the landowner's private property available, only 160-acres of the property will be used for the land application of septage and graywater.

**Figure 1.1: Proposed Land Application Site Location**



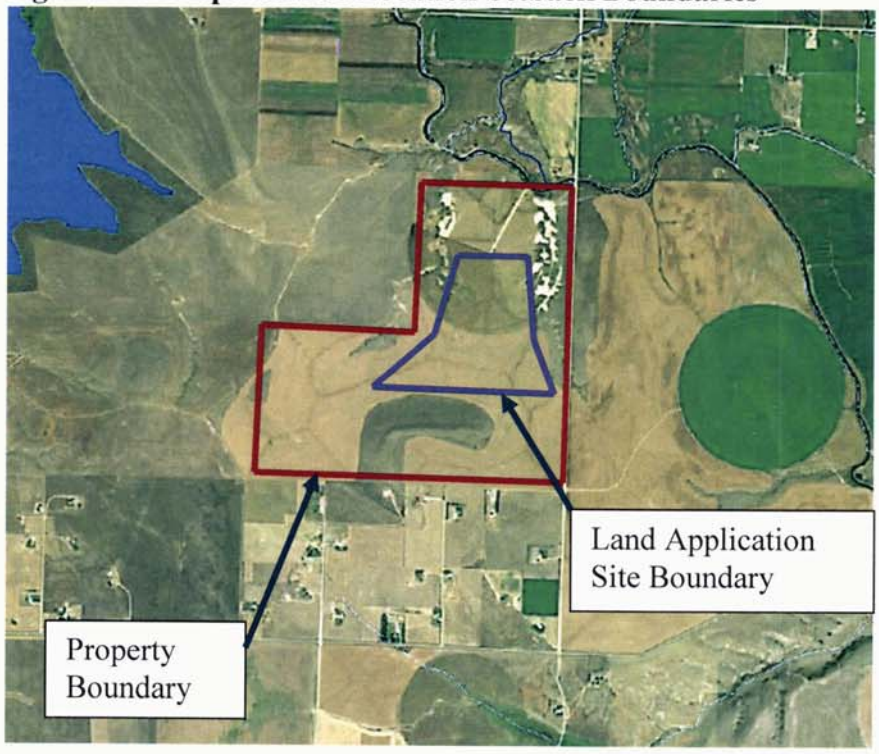
In accordance with the Administrative Rules of Montana (ARM), the setbacks noted in Table 1.1 must be maintained by the applicant during land application activities.

**Table 1.1: Land Application Site Setback Requirements**

| ARM Reference | Setback Requirements |
|---|---|
| 17.50.809(1) | Pumpings may not be applied to land within 500-feet of any occupied or inhabitable building. |
| 17.50.809(2) | Pumpings may not be applied to land within 150-feet of any state surface water, including ephemeral or intermittent drainages and wetlands. |
| 17.50.809(3) | Pumpings may not be applied to land within 100-feet of any state, federal, county, or city-maintained highway or road. |
| 17.50.809(4) | Pumpings may not be applied to land within 100-feet of a drinking water supply source. |
| 17.50.809(6) | Pumpings may not be applied to land with slopes greater than 6%. |
| 17.50.809(8) | Pumpings may not be applied to land where seasonally high ground water is 6-feet or less below ground surface. |

Figure 1.2 shows the proposed site location in reference to the locational features. The acreage proposed for land application is located greater than 500-feet from any occupied or inhabitable building, greater than 150-feet from a state surface water, greater than 100-feet from any state, federal, county, or city-maintained road, and greater than 100-feet from any drinking water supply.

**Figure 1.2: Proposed Site Location Setback Boundaries**



Site Climate:

The climate in the area proposed for land application is typical of the semi-arid regime in the Helena valley. Table 1.2 provides a summary of monthly climate information. The winters in the Helena area are long and moderately snowy; the summers are hot and dry. The majority of precipitation falls during the months of May and June, while February is the driest month. The average annual precipitation is approximately 11.9 inches.

**Table 1.2: Monthly Climate Summary**

**HELENA WSO, MONTANA (244055)**
**Period of Record Monthly Climate Summary**
**Period of Record : 1/ 1/1893 to 12/31/2005**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Max. Temperature (F) | 29.7 | 34.9 | 43.3 | 55.2 | 64.3 | 72.6 | 82.8 | 81.2 | 69.2 | 57.3 | 42.0 | 32.6 | 55.4 |
| Average Min. Temperature (F) | 11.3 | 15.4 | 22.4 | 31.8 | 40.3 | 47.7 | 53.5 | 51.8 | 42.5 | 33.4 | 22.5 | 14.7 | 32.3 |
| Average Total Precipitation (in.) | 0.60 | 0.46 | 0.71 | 0.97 | 1.91 | 2.12 | 1.11 | 1.00 | 1.11 | 0.72 | 0.59 | 0.59 | 11.90 |
| Average Total SnowFall (in.) | 8.8 | 7.1 | 8.5 | 5.2 | 1.7 | 0.1 | 0.0 | 0.1 | 1.2 | 3.1 | 6.6 | 8.2 | 50.5 |
| Average Snow Depth (in.) | 13 | 12 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 10 | 4 |

Percent of possible observations for period of record.
Max. Temp.: 99.9% Min. Temp.: 99.9% Precipitation: 99.5% Snowfall: 95.1% Snow Depth: 95.3%

Site Operation and Maintenance:

The land application of septage and gray water is considered the beneficial use of a waste product when the material is applied in accordance with the laws and rules governing land application. The operational requirements for land application are outlined in Table 1.3.

**Table 1.3: Land Application Site Operational Requirements**

| ARM Reference | Site Restrictions/Requirements |
|---|---|
| 17.50.809(10) | All non-putrescible litter must be removed from the land application site within 6-hours of application. |
| 17.50.809(12) | Pumpings may not be applied at a rate greater than the agronomic rate of the site for crop nitrogen requirement on an annual basis. |
| 17.50.810(1) | Pumpings may not be applied to flooded, frozen, or snow covered ground if the pumpings may enter state waters. |
| 17.50.811(3) | Pumpings may be applied only if the person first performs one of the following vector attraction and pathogen reduction methods:<br>• injection below the land surface so no significant amount remains on the land surface within one-hour of injection;<br>• incorporation into the soil surface plow layer within 6-hours of application;<br>• addition of alkali material so that the pH is raised to and remains at 12 or higher for a period of at least 30-minutes; or,<br>• management as required by 17.50.810 when the ground is frozen |

The acreage available for land application will be divided into separate land application sites – Site 1 and Site 2 as reflected on Figure 1.3. Site 1 will be used for winter application and Site 2 will be used for summer application. These sites will be further divided in half and will be rotated on an annual basis, so that parcels used one year will be inactive the next year. This rotation allows the vegetation or crop of choice to utilize the nitrogen and other nutrients added from the land application process.

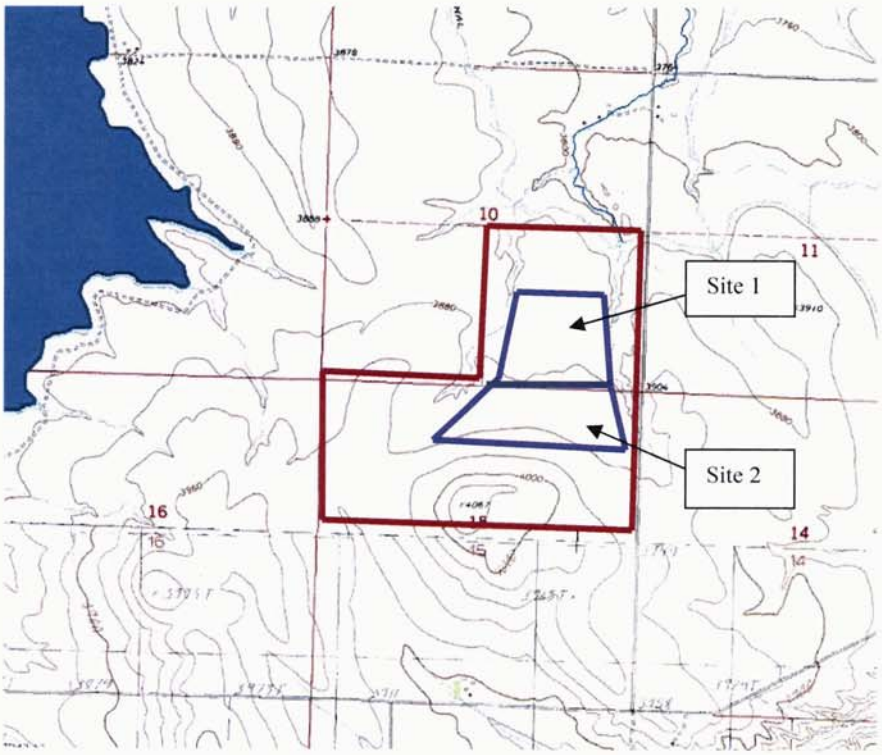
Pumpings will be land applied using a dispersive mechanism, consisting of either a spreader bar or a splash plate, and will be incorporated into the soil surface plow layer within six-hours of application. The dispersive mechanism causes wastes to be applied in a wide pattern at a thin, even layer at a beneficial rate.

Land application will occur as-needed at a rate not exceeding the Annual Application Rate (AAR) in gallons per acre. For septage, the AAR is calculated based upon the production of a specific crop or grass, as follows:

AAR = Crop Nitrogen Requirement/0.0026.

In this case, the landowner currently uses the property for the production of pasture grass. The grass has a nitrogen requirement of 75 pounds/acre. The resulting AAR of 28,846 gallons per acre, is equal to approximately 1.06-inches of liquid per acre. For comparison, the average annual precipitation received during the month of September is approximately what would be land applied per acre per year at the proposed site (see Table 1.2). Most septic tanks are between 1,000 and 1,500-gallons each. Depending upon the individual volume of tanks pumped by the applicant, waste from 19-28 septic tanks could be land applied on a per acre per year basis. Using a conservative approach that waste from 24 septic tanks could potentially be land applied per acre, each individual septic tank would contribute approximately 0.044-inches of liquid per acre per year.

**Figure 1.3: Land Application Site**



## SECTION 2.0 – ALTERNATIVES CONSIDERED:

**Solid Waste Section Roles and Responsibilities:**
The Department's Solid Waste Section is responsible for ensuring activities proposed under the Solid Waste Management Act, the Septic Disposal & Licensing Act, and the Motor Vehicle Disposal & Recycling Act are in compliance with current regulations. A land application site must first be approved by the county in which the site is located before the request for licensure is submitted to the Solid Waste Section for review and approval. Each licensee is responsible for following the Administrative Rules of Montana for Cesspool, Septic Tank and Privy Cleaners and other restrictions and requirements put in place by the county in which the land application site is located.

**The following provides a description of reasonable alternatives whenever alternatives are reasonably available and prudent to consider:**
A decision by the Department is triggered when the applicant upholds the request for licensure of the proposed activity at the proposed location. The applicants however, may at any time choose to withdraw the application by exercising the "no action" alternative. If the 'no-action' alternative is chosen, the applicant could seek to locate a land application site elsewhere.

Alternative A: The "no action alternative". Under this alternative, a final decision by the Department is not required because the applicant will have chosen to withdraw the application for licensure of the land application site. By deciding to withdraw the application from consideration by the Department, the applicant could seek an alternative site for the proposal. Although it is plausible, the applicant's selection of this alternative is unlikely. Rather, the applicant will likely continue the request for licensure of the proposed activity at the proposed site.

In the absence of the applicant's selection of the 'no-action' alternative, and prior to the Department's final decision, two other possible alternatives were considered during the preparation of this EA.

Alternative B: The Department denies the new disposal site application because the applicant failed to provide information needed to address any deficiencies identified during the review of the application and/or the public comment phase. The decision to deny the application is unlikely because the Department has found the application complete for public consideration. Deficiencies could be due to an unforeseen shortfall in meeting site setback or locational requirements, licensing criteria, regulatory criteria or legal issues, or the ability of the applicant to mitigate a potentially substantial impact to human health or the environment. As a result of denial, the applicant could locate, investigate, and apply for a license at another site suitable for the proposed activity.

Alternative C: Approve the use of the land application site as proposed by the applicant. Several factors support the viability of this option:

1. This site meets all of the requirements of the Septic Disposal & Licensing Act. The site soils, slope, depth to ground water, approvals, and setback requirements have been met;
2. The site is fenced, rural private property; and,
3. All activities will be performed in accordance with an approved Operation and Maintenance Plan (O&M) and verified by periodic inspections by the Department and/or Lewis & Clark County personnel, so the effects on human health and the environment are minimized.

In consideration of these alternatives, the potential environmental impacts of Alternative C were evaluated for the proposed project based on the information provided and Department research on the area surrounding the proposed site. The results of the Department's evaluation of potential environmental impacts related to the proposed facility are summarized in Section 3.0.

**Evaluation of mitigation, stipulations, and other controls enforceable by the agency or another government agency:**
The proposed land application site and O&M plan must meet the requirements of the Montana Septage Disposal – Licensure Law, Air and Water Quality Acts and other Montana environmental laws and regulations as well as County ordinances. Obtaining a license from the Department and remaining in compliance with the regulations should minimize any adverse environmental effects. The licensee must also operate the site under the guidelines of the approved O&M Plan. The licensee's failure to operate within the constraints of the approved O&M Plan will result in citations by the Department. Continued or persistent failure to abide by the regulations and the O&M Plan will result in Enforcement action, which may include penalties and revocation of the site.

**Recommendation:**
The Montana Department of Environmental Quality is requesting input from the public regarding this proposal to identify environmental problems or significant impacts that have not been addressed in the EA.

**Findings:**
The Department finds that there would be little or no impacts to the physical and human environment if the septage and greywater are treated in a manner consistent with the rules and regulations. Therefore, an EA is the appropriate level of analysis and an Environmental Impact Statement is not needed. This treatment option is a beneficial reuse of a waste product.

**Other groups or agencies contacted or which may have over-lapping jurisdiction:**
Lewis and Clark County Sanitarian

**Individuals or groups contributing to this EA:**
Mr. Kris Bakke/Rocky Mountain Septic
Montana Natural Heritage Program
Montana Historical Society State Historic Preservation Office
Natural Resource Information System

References:
Climate Zone, 2012, www.climate-zone.com/climate/united-states/montana/helena

Western Regional Climate Center, 2215 Raggio Parkway, Reno NV 89512-1095

Reynolds, M.W., and Brandt, T.R., 2005, Geologic map of the Canyon Ferry Dam 30' x 60' quadrangle, west-central Montana: U.S. Geological Survey Scientific Investigations Map 2860, 32-p. pamphlet, 3 plates, scale 1:100,000.

Montana Tech of the University of Montana, 2012, Montana Bureau of Mines and Geology, Groundwater Information Center, http://mbmggwic.mtech.edu/

United States Department of Agriculture, 2012, Natural Resources Conservation Service, Web Soil Survey, http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm

**EA prepared by:**
Robert McWilliams and Martin Van Oort - DEQ Permitting and Compliance Division, Waste and Underground Tank Management Bureau, Solid Waste Section

**Date:** June 15, 2012

## SECTION 3.0: EVALUATION OF POTENTIAL EFFECTS

This section evaluates the potential environmental effects that may occur on the physical and human environment if the land application site is approved. Tables 3.1 and 3.2 identify the physical and human elements that may be affected by licensure of the proposed site. Each table is followed by a discussion of the potential impacts to the resources that might be affected by the proposal. Generally, only those resources potentially affected by the proposal are discussed. If there is no effect on a resource, it may not be mentioned in the appendix.

Direct and indirect impacts are those effects that occur in or near the proposed project area and might extend over time. Often, the distinction between direct and indirect effects is difficult to define, thus in the following discussion, impact or effect means both types of effects.

Cumulative impacts are restricted to the net effects of the proposed project because no other known projects are proposed in this area. Secondary impacts are induced by a direct impact and occur at a later time or distance from the triggering action. No secondary impacts are expected.

## TABLE 3.1 - IMPACTS TO THE PHYSICAL ENVIRONMENT

| PHYSICAL ENVIRONMENT | Major | Moderate | Minor | None | Unknown | Attached |
|---|---|---|---|---|---|---|
| 1. SITE TOPOGRAPHY, GEOLOGY & SOIL QUALITY, STABILITY & MOISTURE: | | | | ✔ | | ✔ |
| 2. WATER QUALITY, QUANTITY & DISTRIBUTION: | | | | ✔ | | ✔ |
| 3. AIR QUALITY: | | | | ✔ | | |
| 4. DEMANDS ON ENVIRONMENTAL RESOURCES OR LAND, WATER, AIR OR ENERGY: | | | | ✔ | | |
| 5. TERRESTRIAL, AVIAN, AND AQUATIC LIFE AND HABITATS: | | | | ✔ | | ✔ |
| 6. VEGETATION COVER, QUANTITY & QUALITY: | | | | ✔ | | |
| 7. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: | | | ✔ | | | ✔ |
| 8. HISTORICAL AND ARCHAEOLOGICAL SITE: | | | | ✔ | | ✔ |
| 9. AESTHETICS: | | | | ✔ | | ✔ |
| 10. AGRICULTURE: | | | ✔ | | | ✔ |

CUMULATIVE AND SECONDARY IMPACTS — The cumulative impacts from the proposed approval and licensure of the land application site are minor. The land application activities will add nutrients and other organic matter to the soils that will help to increase production rates of pasture and hay grasses currently grown at the site. There are no recognized secondary impacts.

## TABLE 3.2 - IMPACTS TO THE HUMAN ENVIRONMENT

| HUMAN ENVIRONMENT | Major | Moderate | Minor | No | Unknown | Attached |
|---|---|---|---|---|---|---|
| 1. SOCIAL STRUCTURES & MORES: | | | | ✔ | | |
| 2. CULTURAL UNIQUENESS & DIVERSITY: | | | | ✔ | | |
| 3. DENSITY & DISTRIBUTION OR POPULATION & HOUSING: | | | | ✔ | | |
| 4. HUMAN HEALTH & SAFETY: | | | | ✔ | | ✔ |
| 5. COMMUNITY & PERSONAL INCOME: | | | | ✔ | | |
| 6. QUANTITY & DISTRIBUTION OF EMPLOYMENT: | | | | ✔ | | |
| 7. LOCAL & STATE TAX BASE REVENUES: | | | | ✔ | | |
| 8. DEMAND FOR GOVERNMENT SERVICES: | | | | ✔ | | ✔ |
| 9. INDUSTRIAL, COMMERCIAL, & AGRICULTURAL ACTIVITIES & PRODUCTION: | | | | ✔ | | |
| 10. ACCESS TO & QUALITY OF RECREATIONAL & WILDERNESS ACTIVITIES: | | | | ✔ | | |
| 11. LOCALLY ADOPTED ENVIRONMENTAL PLANS & GOALS: | | | | ✔ | | |
| 12. TRANSPORTATION: | | | | ✔ | | ✔ |

CUMULATIVE AND SECONDARY IMPACTS — There are no cumulative impacts recognized from the applicant's use of the proposed land application site. There are no recognized secondary impacts.

## 3.1 POTENTIAL IMPACTS OF THE PROPOSED LAND APPLICATION SITE ON THE PHYSICAL ENVIRONMENTS (See Table 3.1)

1.0 Site Topography, Geology, and Soil Quality – Stability & Moisture

The soil types at the proposed land application site are classified as the Sappington-Amesha loams, Geohrock-Crago very cobbly loams, and Crago-Musselshell gravelly loams (Figure 3.1). The Sappington-Amesha loams, with 1 to 4 percent slopes, cover the area of the site proposed for land application. The Sappington-Amesha loams consist primarily of loam with some clay loam and gravelly sandy loam and are well drained. These soils have a moderate to high available water capacity and moderately high to high permeability. The typical depth to water table for all of the soils in the area is greater than 80 inches below the surface.

**Figure 3.1: Site Soils**

**Legend**

| | |
|---|---|
| 33B | Sappington-Amesha loams, 1-4% slopes |
| 33C | Sappington-Amesha loams, 4-8% slopes |
| 233C | Geohrock-Crago very cobbly loams, 2-8% slopes |
| 433E | Crago-Musselshell gravelly loams, 4-35% slopes |

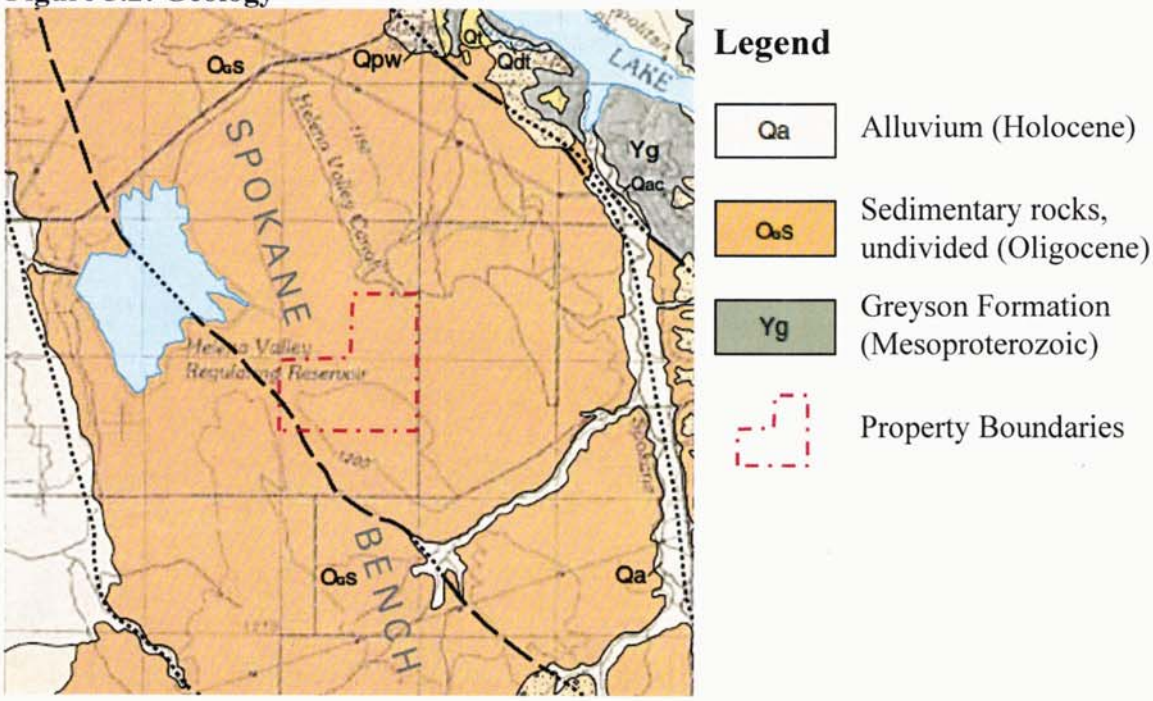
Site Boundaries

Proposed Land Application Area

The site is located on the Spokane Bench in the east Helena Valley over Oligocene sedimentary rocks (Figure 3.2). These Oligocene sedimentary rocks consist of sandstone, volcanic tuff, pebble and cobble conglomerate, and clayey siltstone. These deposits are typically 250-750 feet thick. Underlying the Oligocene sedimentary rocks are Proterozoic metasedimentary rocks of the Belt Supergroup from the Spokane and Greyson Formations.

The site soils and geology are well suited for land application of septage because the soils at the site allow for storage of the septage until the nutrients can be used by the crop at the site.

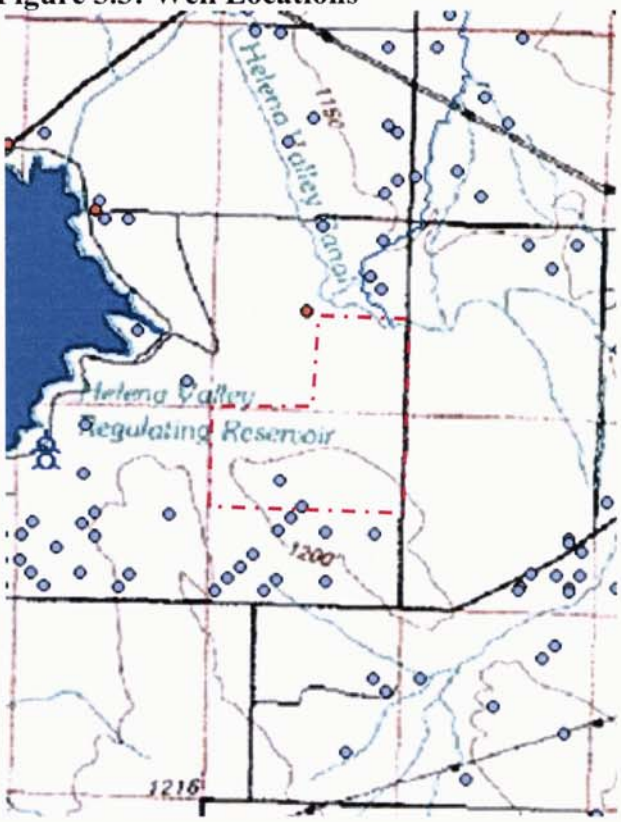
**Figure 3.2: Geology**




## 2.0 Water Quality, Quantity, and Distribution

Based on the information in the Montana Bureau of Mines and Geology, Groundwater Information Center (GWIC) database, there are approximately 131 water wells located within one-mile of the site. Because the GWIC database locates wells by section, all wells in the sections containing the sites (sections 10 and 15) and those surrounding the sites (sections 2, 3, 4, 9, 11, 14, 16, 21, 22, and 23) were included in this analysis. Some of these wells may be located greater than one mile from the disposal site. The locations of these wells are shown in Figure 3.3. Table 3.3 summarizes the well information by section. The data used to create this table are collected by the Montana Bureau of Mines and Geology from well drillers' records and are not verified for accuracy. Wells in the area around the land application site are typically completed in the Oligocene sedimentary rocks. To ensure that the depth to groundwater is greater than six feet at the proposed site, the completion information from wells nearest the proposed site were used to determine the average depth to groundwater. The wells nearest to the proposed site are typically 100 or more feet deep with static water levels greater than 50 feet. These wells yield 15 to 30 gallons per minute. The depth to groundwater at the site exceeds six feet as required.

**Figure 3.3: Well Locations**




**Legend**

Groundwater Wells

Property Boundaries

**Table 3.3: Summary of Nearby Wells**

| Section | Number of Wells | Total Depth (ft bgs) | | | Depth Water Enters (ft bgs) | | | Static Water Level (ft bgs) | | | Yield (gpm) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Min | Max | Ave | Min | Max | Ave | Min | Max | Ave | Min | Max | Ave |
| 2 | 9 | 50 | 150 | 76.1 | 43 | 140 | 68.2 | 1 | 75 | 29.4 | 12 | 30 | 19.7 |
| 3 | 12 | 36 | 120 | 83.1 | 36 | 108 | 81.3 | 15 | 76 | 37.7 | 15 | 80 | 32.7 |
| 4 | 3 | 127 | 260 | 179.3 | 27 | 220 | 122.3 | 45 | 64 | 54.7 | 15 | 30 | 23.3 |
| 9 | 4 | 108 | 220 | 171.5 | 80 | 200 | 153.3 | 10 | 140 | 83 | 17 | 30 | 21.8 |
| 10 | 5 | 100 | 160 | 121.8 | 40 | 137 | 90.6 | 33 | 71 | 55 | 15 | 30 | 23 |
| 11 | 8 | 76 | 138 | 103.4 | 87 | 138 | 114.7 | 20 | 56 | 39.6 | 19 | 50 | 27.4 |
| 14 | 32 | 89 | 250 | 181.3 | 69 | 237 | 155.1 | 42 | 125 | 71.4 | 15 | 500 | 59.6 |
| 15 | 23 | 60 | 359 | 158.9 | 28 | 310 | 129.5 | 20 | 196 | 76.6 | 8 | 300 | 41.7 |
| 16 | 21 | 99 | 360 | 222.9 | 79 | 299 | 186.6 | 40 | 172 | 103.1 | 10 | 455 | 92 |
| 21 | 3 | 140 | 261 | 212.3 | 120 | 220 | 185.3 | 62 | 176 | 132 | 8 | 30 | 15.3 |
| 22 | 5 | 88 | 300 | 171 | 45 | 180 | 93.2 | 3 | 38 | 14.3 | 100 | 250 | 206.3 |
| 23 | 6 | 38 | 175 | 108.5 | 36 | 155 | 101 | 10 | 101 | 51.2 | 15 | 25 | 21.8 |
| All | 131 | 36 | 360 | 157.4 | 27 | 310 | 129.8 | 1 | 196 | 67.3 | 8 | 500 | 53 |

The total depth column is the depth drilled, which may be deeper than the bottom of the well as completed. Depth water enters is shallowest depth at which water enters the well bore. Static water level is the level of water measured in the well at the time of installation. Yield is the amount of water the well is expected to be capable of producing as reported by the well driller. Total depth, depth water enters, and static water level are reported in feet below ground surface. Yield is reported in gallons per minute.

5.0 Terrestrial, Avian, and Aquatic Life and Habitats

There are no wetlands or permanent surface water bodies located on the proposed site. Because no continuously active aquatic systems exist within the boundary of the proposed site, it is unlikely that there is any significant aquatic life or habitat anywhere on the site. Therefore, the impact to aquatic species is negligible. An intensive survey was not performed to verify the presence of, or impact to, terrestrial or avian species within the land application site, because the site is actively used for the production of hay grasses. However, there is adequate acreage of similar habitat available in the vicinity of the site to accommodate any species that may be forced to relocate. Consequently, any terrestrial or avian species will likely relocate to the adjacent locations.

7.0 Unique, Endangered, Fragile, Or Limited Environmental Resources

A search of the Montana Natural Heritage Program indicated the Golden Eagle, Great Blue Heron, Veery, Bobolink, and Westslope Cutthroat Trout are listed as species of concern. There are no wetlands or permanent surface water bodies located on the proposed site. An intensive site survey was not conducted to verify the presence of, or impact to, sensitive, unique, endangered, or fragile species within or adjacent to the proposed land application site because the site is currently used for the active production of grass and hay crops. Therefore, due to the limited development and human population adjacent to the proposed site, there is adequate acreage of similar habitat available in the vicinity to accommodate any species that may be forced to relocate.

8.0 Historical and Archaeological Site

A cultural resource file search was conducted for the site. Records indicate there have been no previously recorded sites within Sections 10 & 15, T10N, R2W. The State Historic Preservation Office feels that there is a low likelihood cultural properties will be impacted and therefore a cultural resource inventory is unwarranted at this time. However, should cultural materials be inadvertently discovered during operations at this proposed site, the State Historic Preservation Office will be notified immediately.

9.0 Aesthetics

This site is on farming and grazing land and not located on a prominent topographical feature. It is not visible from a highly populated or scenic area. The application of septage is similar to the day to day activities of farming and will not cause a change in the aesthetics of the area.

10.0 Agriculture

Agricultural activities in the area consist primarily of farming and grazing lands. Septage will be land applied at a rate not to exceed 28,846 gallons per acre per year. This will ensure that over application does not occur and that the native grass grown on the site can use the nitrogen being land applied. Land application sites are rotated on an annual basis to facilitate the production of crops/grasses that will utilize the nitrogen and other nutrients contained in the waste. The impacts on agricultural production due to the proposed land application of septage and grease trap at this site will be minor.

## 3.2 POTENTIAL IMPACTS OF THE PROPOSED LAND APPLICATION SITE ON THE HUMAN ENVIRONMENTS (See Table 3.2)

4.0 Human Health & Safety

The septage and gray water will be land applied at the site on an as needed basis. The septage will be tilled within 6 hours of application. There are no additional health or safety concerns when the site is operated in accordance with the Septage Disposal – Licensure laws.

8.0 Demand for Government Services

The Lewis & Clark County Health Department and Department's Solid Waste Section will conduct periodic inspections at the site. No additional government services will be required.

12.0 Transportation

The land application site will be accessed off of Hart Lane. Hart Lane currently supports traffic to rural homes, farms and ranches, including heavy equipment associated with the current agricultural activities in the area. The site will be used on an as needed basis by one pumper business and will not cause a significant increase in traffic on Hart Lane.