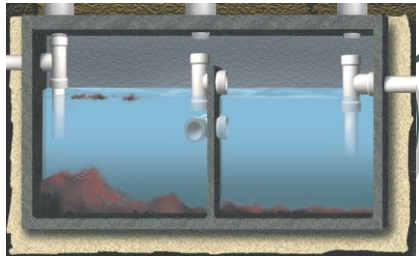


SEPTIC PUMPER

GUIDE



Montana Department of Environmental Quality
Solid Waste Section
February 2011

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PURPOSE

The information in this guidance is provided to assist the disposers of septage understand the requirements for licensure and follow the State and Federal requirements for the disposal of septage, grease trap waste, privy waste, car wash sump waste, and other similar wastes. These similar wastes include, but are not limited to, other primarily liquid wastes such as food processing wastes, septic tank pumpings that contain commercial and industrial wastewater, and snow melt sump wastewater, that can be applied to the land for a beneficial purpose. Wastes must be managed in a way that is protective of human health and the environment. To place waste on or into private or public property, the pumper/disposer must first have the permission of the landowner, facility operator, or the designated representative of the owner or operator and then obtain local and State approval prior to use.

Wastes determined to be regulated hazardous wastes are not covered under the Solid Waste rules. Guidance on the management of hazardous wastes can be found in ARM Title 17, chapter 53 and can be reviewed on the MT DEQ web site.

CHAPTER 1

(ARM 17.50.803)

1. WHO NEEDS A LICENSE AND HOW TO APPLY

Any person, who is in the business of cleaning cesspools, septic tanks, portable toilets, privies, grease traps, car wash sumps, or similar treatment works, or disposal of septage and other wastes from these devices, **can not** do business in the State of Montana without a current license from Montana Department of Environmental Quality (MT DEQ).

A license is valid for **one year**, running from January 1 through December 31. This requires the business to renew the license at the end of each year prior to conducting business the next year.

To obtain a license, whether a new license or a license renewal, you must submit the appropriate application forms provided by MT DEQ and all fees to:

Montana Department of Environmental Quality
Financial Services Division
PO Box 200901
Helena MT 59620-0901

2. NEW LICENSE: A new licensee will complete a “New License Application Form”, a “New Disposal Site Application Form”, a “Site Operation and Maintenance Plan”, a “Vehicle Inspection Form”, and submit the \$300 license fee to MT DEQ. The \$300 license fee must accompany all applications before the application can be processed. You may add new disposal sites with the approval of the County and MT DEQ any time during the current license year with no additional fees assessed by the MT DEQ.

3. LICENSE RENEWALS: MT DEQ will mail an annual renewal form to each current license holder by November 15 of each calendar year. The \$300 license fee must accompany all applications in order to process the renewal application. You may add new disposal sites with the approval of the County and MT DEQ any time during the current license year with no additional fees assessed by the MT DEQ. You will need to complete and return the “License Fee Invoice Form” and the “License Renewal Form”, and include the required fee. If adding a new site, also complete and return the “New Disposal Site Form” along with any required attachments.

4. EXPIRED LICENSE/LATE FEE: If you did not do business and your license lapsed for a full year (December 31) you will not be able to submit the renewal form to obtain a license. You will be required to fill out a “New License Application Form”, a “New Disposal Site Application Form”, a “Site Operation and Maintenance Plan”, a “Vehicle Inspection Form” and submit the \$300 license fee. If a license is renewed after April 1, a \$125 late fee will be assessed and your license application will not be processed until the late fee is submitted.

Warning: By law, if you have not renewed your license by December 31 or have not licensed your new business with MT DEQ, you are not allowed to operate your business until you submit the fee and completed application forms and have received a current license. If you are found to be operating without a current license, enforcement action may be taken. This action may include, but is not limited to, judicial action and the assessment of penalties.

5. NEW DISPOSAL SITE: If you are adding a new disposal site you must complete a “New Disposal Site Application Form”. If this is a land application site or dewatering operation, you will need to complete a “Site Operation and Maintenance Plan Form”, provide the appropriate map and diagram of the site, and include the cultural resource file search results from the State Historic Preservation Office (SHPO). A “Vehicle Inspection Form” will be required if you have never land applied or it has been several years since you have land applied. You may add new disposal sites with the approval of the County and MT DEQ any time during the current license year with no additional fees from the MT DEQ, however, SHPO charges a fee for the cultural resource file search.

6. DISPOSAL RECORDS: You must submit your disposal records twice a year, regardless of how you dispose of your pumpings. Your records must be submitted by July 15 of each year for the period of January 1 through June 30. Records for the period of July 1 through December 31 must be submitted with your annual license renewal application. The MT DEQ may require your disposal records on a monthly basis if problems have been found. See Chapter 5 of this guide for a discussion of the recordkeeping requirements.

7. PUMPER LIST: MT DEQ maintains a list of currently licensed pumpers. A list of licensed pumpers is sent to each county health officer (or designated representative) by February 15 that lists those pumpers operating in that county who have renewed their licenses by January 31. After February 15, MT DEQ will notify the county health officer (or designated representative) of any new licenses or new disposal sites for each current licensee operating in their county(s). A list of currently licensed pumpers can also be found on the DEQ Septic Tank Pumper Program web page at the following link: <http://deq.mt.gov/SolidWaste/pumpers.mcp>

NEW LICENSE APPLICATION FORM

Section 1 - Application Information

“Applicant” means the person to whom the license will be issued. This person is ultimately responsible for compliance with all of the Septage Disposal and Licensure (SDL) laws and rules of the State of Montana.

Applicant full legal name - This is the legal name of the applicant who proposes to establish the business to be licensed.

Name of Business/Organization - This is the name of the business/organization as filed or registered with the Montana Secretary of State office.

Business Federal Tax Identification Number - This is the tax number used for the business when filing federal taxes.

Physical Business Address - This is the physical location of the business, state and zip code.

Mailing Address - This is where the applicant wishes to receive correspondence in relation to this application. Only fill in these blocks if the mailing and physical addresses are different.

County - This is the county where the business is located.

Phone Number - The phone number and area code of the business.

Fax Number and E-Mail Address - If available, provide these for the business.

Location of Business Records - This is the physical address where the records are maintained, if other than the business address.

Section 1			
APPLICANT INFORMATION (Please Print)			
Applicant full legal name: <i>(ARM 17.50.803(1)(a))</i> :	Name of Business/Organization as filed or registered with the Montana Secretary of State office <i>(ARM 17.50.803(1)(a))</i> :		
	Business Federal Tax ID Number:		
Physical Business Address:	City:	State:	Zip:
Mailing Address <i>(if different from physical business address)</i> :	City:	State:	Zip:
County:	Phone Number:	Fax Number:	E-Mail:
Location of Business Operation Records <i>(if the location of operation records changes during the license year, you must provide notification in writing to DEQ)</i> :			

Section 2 - Counties Where Septage Will Be Collected

You must list all counties in which business is to be conducted.

Section 2			
COUNTIES WHERE SEPTAGE WILL BE COLLECTED			

The signature certifies that you will conduct business in accordance with the SDL laws and rules of the State of Montana. *If the form is not signed, the application will not be processed.*

APPLICANT CERTIFICATION/SIGNATURE

In signing this application form, I certify that the above information is true and correct, and as the applicant named above, I shall conduct the business of cleaning septic tanks, cesspools, or privies and disposing of septage in accordance with the laws and rules of the State of Montana.

PRINTED NAME: _____

Date: _____

SIGNATURE: _____

TITLE: _____

You are also required to complete a “**New Disposal Site Application Form**” for each proposed disposal site, a “**Site Operation and Maintenance Plan Form**” for each site you plan to use for land apply or dewatering, and a “**Vehicle Inspection Form**” if you land apply wastes. These completed forms must be submitted with the License Application.

LICENSE RENEWAL FORM

The license renewal forms will be pre-populated with your business information. However, you will need to fill in the blanks in some sections. Therefore, please carefully review the form and if you find information that is not correct, please mark through the incorrect information and clearly print the correct information.

Section 1 - Application Information

Applicant full legal name - This is the legal name of the applicant who has established the business to be licensed. This person is ultimately responsible for compliance with all of the SDL laws and rules of the State of Montana.

Name of Business/Organization - This is the name of the business/organization as filed or registered with the Montana Secretary of State office.

DEQ License Number - This is the license number issue by MT DEQ.

Business Federal Tax Identification Number - This is the tax number used for the business when filing federal taxes.

Physical Business Address - This is the physical location of the business, state and zip code.

Mailing Address - This is where the applicant wishes to receive correspondence in relation to this application and any license that is issued. Only fill in these blocks if the mailing and physical addresses are different.

County - This is the county where the business is located.

Phone Number - The phone number and area code of the business.

Fax Number and E-Mail Address - If available, provide these for the business.

Location of Business Records - This is the physical address where the records will be maintained, if other than the business address.

<i>Section 1</i> APPLICANT INFORMATION (Please Print)		<i>License#:</i> _____	
Applicant full legal name: <i>(ARM 17.50.803(1)(a)):</i>	Name of Business/Organization as filed or registered with the Montana Secretary of State Office <i>(ARM 17.50.803(1)(a)):</i>		
	Business Federal Tax ID Number:		
Physical Business Address:	City:	State:	Zip:
Mailing Address <i>(If different from physical business address):</i>	City:	State:	Zip:
County:	Phone Number:	Fax Number:	E-Mail:
Location of Business Operation Records <i>(If the location of operator records change during the license year, you must provide notification in writing to DEQ):</i>			

Section 2 - Counties Where Septage Will Be Collected

This section will list all the counties in which business is to be conducted.

<i>Section 2</i> COUNTIES WHERE SEPTAGE WILL BE COLLECTED

Section 3 - **DISPOSAL SITE/DISPOSAL METHOD/WASTE TYPE INFORMATION**

If you have more than one disposal site, you must complete Section 3 for each site. Review the pre-populated information for your business. You will be required to fill in information on the property owner’s physical and mailing addresses, the property owner’s phone number, the method of disposal, the waste category, the volume taken to the site, and the estimate volume for the new year.

Disposal Site Name/Site Owner Name - This is the name under which the site is known (Example: Fallen Ranch, Helena Waste Water Treatment Plant, etc.) and the full legal name of the property owner.

Site Legal Description - The location of the property by township, range, section, and quarter section.

Site Physical Address - This will be the physical address of the site, if no physical address exists give complete directions to the site.

Property Owner Physical Address – This is the physical location of the property owner, state and zip code.

Property Owner Mailing Address – This is where the property owner wishes to receive correspondence in relation to this application.

Property Owner Phone Number – The phone number and area code of the property owner.

<p><i>Section 3</i> DISPOSAL SITE/DISPOSAL METHOD/WASTE TYPE INFORMATION <i>(Complete separate Section 3 for EACH disposal site – Incomplete forms will be returned to the applicant)</i></p>				
<p>DISPOSAL SITE NAME/SITE OWNER NAME (full legal name or business name):</p>				
<p>Site Legal Description (<i>to nearest 1/4 section</i>):</p> <p style="text-align: right;">/4</p>	<p>Section:</p>	<p>Township:</p>	<p>Range:</p>	<p>County:</p>
<p>For Department Use ONLY – Lat/Long</p>				
<p>Site Physical Address <i>or</i> Directions to the Site:</p>				
<p>Property Owner Physical Address:</p>	<p>City:</p>	<p>State:</p>	<p>Zip:</p>	
<p>Property Owner Mailing Address</p>	<p>City:</p>	<p>State:</p>	<p>Zip:</p>	
<p>Property Owner Phone Number:</p>				

Section 3 continued:

Method of Disposal - Check the box(s) indicating what the disposal site is; Wastewater Treatment Plant, Septage Processor or Composter, Licensed Class II Landfill, or Land Application Site. Check the box indicating yes or no whether the site was used for septage disposal during the previous year. If the Land Application Site box is checked, you must indicate the total acreage available for land application and total proposed acreage to be used during the license year.

Waste Category - Check all boxes that apply; Septage, Portable Toilets/Vault Toilet, Grease Trap Waste, Sump Pumpings (Specify type: Automatic Car Wash Bay Sump, Attended Car Wash Bay Sump, Unattended Car Wash Bay Sump, or Other Sump.), or graywater. You must also indicate the volume of each type of pumpings applied at the site during the previous year and then the estimated volume of each type of waste projected to be disposed of at the site during the new license year.

Method of Disposal: (Check all that apply)		Was this site used for septage disposal during the previous year?		Total acreage available for application:	Total acreage proposed for this year:	Number of acres used for disposal during the previous year:
		YES	NO			
<input type="checkbox"/>	Wastewater Treatment Facility	<input type="checkbox"/>	<input type="checkbox"/>			
<input type="checkbox"/>	Septage Processor or Composter	<input type="checkbox"/>	<input type="checkbox"/>			
<input type="checkbox"/>	Licensed Class II Landfill	<input type="checkbox"/>	<input type="checkbox"/>			
<input type="checkbox"/>	Land Application Site	<input type="checkbox"/>	<input type="checkbox"/>			
Waste Category: (Check all that apply)				Volume of pumpings applied at this site during the previous year:	Estimated total gallons during new license year:	
<input type="checkbox"/>	Septage					
<input type="checkbox"/>	Portable Toilet/Vault Toilet Type Waste					
<input type="checkbox"/>	Grease Trap Waste					
<input type="checkbox"/>	Sump Pumpings (specify type below)					
<input type="checkbox"/>	Automatic Car Wash Bay Sump					
<input type="checkbox"/>	Attended Car Wash Bay Sump					
<input type="checkbox"/>	Unattended Car Wash Bay Sump					
<input type="checkbox"/>	Other Sump (specify type) _____					
<input type="checkbox"/>	Graywater					

Section- **Applicant Certification/Signature**

The applicant must print his/her name and title to certify that the information is correct. The signature certifies that you will conduct business in accordance to the laws and rules of the State of Montana. *If the form is not signed, it will not be processed.*

<i>APPLICANT CERTIFICATION - OWNER SIGNATURE</i> <i>(applicant signature required on EACH form)</i>	
In signing this application form, I certify the above information is true and correct and, that as the applicant named above, I shall conduct the business of cleaning septic tanks, cesspools, or privies and disposing of the pumpings in accordance with the laws and rules of the State of Montana.	
PRINTED NAME:	_____
SIGNATURE:	_____
TITLE:	_____
DATE:	_____

If you have a new disposal site, you must also complete a “**New Disposal Site Application Form**” and a “**Site Operation and Maintenance Plan Form**” for each proposed disposal site. The completed and signed forms must be submitted with the License Application.

NEW DISPOSAL SITE

The “New Disposal Site” form must be filled out by new licensees who are applying for a license, current licensees adding new disposal sites, or licensees who let their license lapse for a full year. A copy of the form must be filled out for **EACH new disposal site**. Example: If you have five new sites, you will complete and submit five “New Disposal Site” forms.

Section 1 - Application Information

“Applicant” means the person to whom the license is to be issued. This person is ultimately responsible for compliance with all of the SDL laws and rules of the State of Montana.

Name of Applicant - This is the full legal name of the applicant who has established the business to be licensed.

Name of Business - This is the name of the business/organization as filed or registered with the Montana Secretary of State office.

DEQ License Number - This is the license number issue by MT DEQ or check new applicant.

New Applicant - Check this box if you’re a new applicant and do not have a DEQ license number. This includes those who have allowed their license to lapse for a full year.

Business Address - This is the physical location of the business, state and zip code.

Mailing Address - This is where the applicant wishes to receive correspondence in relation to this application and any license that is issued. Only fill in these blocks if the mailing and physical addresses are different.

County - This is the county where the business is located.

Phone Number - The phone number and area code of the business.

Fax Number - If available the area code and fax number for the business.

Location of Business Records - This is the physical address where the records will be maintained, if other than the business address.

Section 1 APPLICANT INFORMATION (Please Print)			
Name of Applicant:	Name of Business:	DEQ License Number: _____	
		<input type="checkbox"/> <i>New Applicant</i>	
Business Address:	City:	State:	Zip:
Mailing Address:	City:	State:	Zip:
County:	Phone Number:	Fax Number:	
Location of Business Operation Records:			

Section 2 - Disposal Site Information/Waste Category

Method of Disposal - Check the box indicating the disposal site and complete the corresponding section indicated.

Waste Category - Check the types of waste you will be pumping, and write in the estimated amounts of each waste you propose to pump during the license year.

Section 2 DISPOSAL SITE INFORMATION (Complete as applicable – use one form for EACH site)		
Method of Disposal: (Check all that apply)		
<input type="checkbox"/>	Land Application Site	Complete Sections 3 & 5 of the application
<input type="checkbox"/>	Wastewater Treatment Facility	Complete Sections 4 & 5 of the application
<input type="checkbox"/>	Septage Processor or Composter	Complete Sections 4 & 5 of the application
<input type="checkbox"/>	Licensed Class II Landfill	Complete Sections 4 & 5 of the application
Waste Category: (Check all that apply)		Estimated total gallons during license year:
<input type="checkbox"/>	Septage	
<input type="checkbox"/>	Portable toilet/Vault toilet type waste	
<input type="checkbox"/>	Grease Trap Waste	
<input type="checkbox"/>	Sump Pumpings (specify type below)	
	<input type="checkbox"/> Automatic Car Wash Bay Sump	
	<input type="checkbox"/> Attended Car Wash Bay Sump	
	<input type="checkbox"/> Unattended Car Wash Bay Sump	
	<input type="checkbox"/> Other Sump (specify type) _____	
<input type="checkbox"/>	Graywater	

Section 3 - Land Application Site Information

Property Owner Full Legal Name - This is the legal name of the individual who owns the property where the pumping will be land applied.

Property Owner Business/Organization Name If the property is owned by a business or organization, this is the name of the business or organization as registered with the Montana Secretary of State office. (Example: Fallen Ranch, etc.)

Property Owner Phone Number - The phone number and area code of the property owner of the land application site.

Property Owner Federal Tax Identification Number - This is the tax number used for the owner of the land application site.

Property Owner Mailing Address - This is where the land application site owner can receive correspondence in relation to this application.

Site Physical Address - This is the physical location of the land application site.

Direction to Site - This is the driving instruction to the land application site.

Site Legal Description - The location of the property by township, range, section, and quarter section.

Number of Acres available for land application - This is the total amount of acres available for land application at the site.

Type of Crop - This is the type of vegetation to be grown on the land application area (i.e., fallow land, wheat(crop type), pasture, range, forest).

Estimated Depth to Ground Water - This is the depth to ground water from the land surface.

Number of acres proposed for land application during license year - This is the total number of acres that are proposed to be used for land application during the license year.

Crop Nitrogen Requirement - This is the annual nitrogen requirement, in pounds per acre per year, for the crop, grass, etc., grown at the land application site. Use Montana Extension Service Fertilizer Guidelines for Montana Crops or check with DEQ.

Source of Ground Water Information - This is where you obtain the information you provided on the depth to ground water. Information may be from local wells and may be available at the Montana Bureau of Mines and Geology website (<http://mbmgwic.mtech.edu/>).

Soil Type - This is the general type of soil (clay, gravel, sandy loam, etc.) within the land application site.

Present use of adjacent Lands - This is the land that borders the land application site. What is it being used for?

Approximate Slope - This is the range of the slope of the terrain within the land application site.

Distance to nearest building - This is the distance of any buildings to the land application site.

Distance to closest surface water - This is the distance of the nearest pond, river, etc., to the land application site.

Is site Zoned - This is what type of zoning has been applied to the land if any. Commercial, etc.

Boxes - Check the box(s) indicating yes or no to the questions. Is the site located outside the 100-year floodplain?; Is public access to the site restricted?; Is animal grazing on the site restricted?; Is crop harvesting from the site restricted?; Are public roads located further than 100 feet of the property boundary?; and, Are water wells located further than 100 feet of the property boundary?

Site Criteria - Check the box indicating yes or no whether the site meets the listed criteria, and if not, indicate why. Add any restrictions required by the local Health Department.

Land Application Operation and Maintenance Plan - A plan for each site must be written and included with the application covering each of the following areas: site access controls (is the area fenced, is there a gate, etc.); types and sources of wastes (septic tanks, portable toilets, etc.); vector attraction and pathogen reduction measures (injection, liming or tillage - which will be used); applicable animal grazing and crop harvesting restrictions; and list of equipment available for managing each type of waste (harrowing, plow with disk, screening device, etc.). MT DEQ will provide a copy of the Operation and Maintenance Plan to the local health officer (or designated representative) in the county of the land application site. The "Land Application Operation and Maintenance Form" can be used.

Map - You must provide a map of the property. This can be a map or a sketch, but it MUST INCLUDE the following: property lines and boundary lines of acreage available for land application, the acreage proposed for use during the license year; and all roads, homes, buildings, water wells, surface waters, canyons, ravines, and floodplains within 500 feet of the property boundary. (See Appendix A and B)

State Historic Preservation Office (SHPO) – You must provide a copy of the “File Search Request Form” results on the proposed land application site.

Property Owner Signature/Certification - The property owner must print their name, date, and sign the form to certify that the pumper has their permission to use the site. The signature also states that you have provided the following information on the proper use of the site:

- the site or crops from the site may be restricted;
- the land application rate is limited by the rate at which septage may be land-applied,
- operational practices for pathogen and vector attraction reduction must be followed, and,
- the landowner is required to allow MT DEQ, local health officer, or designated representative to conduct inspections of the site.

Section 3				
LAND APPLICATION SITE INFORMATION (Complete ALL of Section 3 for Land Application sites)				
Property Owner Full Legal Name: (ARM 17.50.803(5)a))		Property Owner Business/Organization Name as filed or registered with the Montana Secretary of State office: (ARM 17.50.803(5)(a))		
Property Owner Phone Number:		Property Owner FEDERAL TAX ID #: (Required if property owner is a business)		
Property Owner Mailing Address:		City:	State:	Zip:
Site Physical Address:		City:	State:	Zip:
Directions to Site:				
Legal Description of Site: (to nearest 1/4 section) /4		Section:	Township:	Range:
Number of acres available for land application:		Type of Crop:		Estimated Depth to Ground Water:
Number of acres proposed for land application during license year:		Crop Nitrogen Requirement: (pounds per acre per year --- lbs N/acre/yr)		Source of Ground Water Information:
Soil Type:		Present use of adjacent lands:		Approximate Slope:
Distance to nearest building:	Distance to closest surface water:	Is site zoned: <i>(If yes, list Zone. Zoning/Planning Officer signature required for zoned areas)</i>		
SITE CRITERIA				
The site must be located outside the 100-year floodplain.				
Pumpings must not be applied within 150-ft of any state surface waters.				
Pumpings must not be applied within 100-ft of any state, federal, county or city highway or road.				
Pumpings must not be applied within 100-ft of a drinking water supply source.				
Pumpings must not be applied to lands with a slope greater than 6%.				
Pumpings being injected in to the soil must not be applied to lands with a slope greater than 12%.				
The site must be capable of handling the projected pumpings without exceeding the annual application rate (AAR).				
Pumpings must not be applied to lands that are likely to adversely affect threatened/endangered species or their habitat.				
Public access to the site must be restricted.				
Crop harvesting must be restricted at the site.				
Animal grazing must be restricted at the site.				
Litter will be controlled at the site. Litter must be removed within 6-hours of application.				
Local Health Department restrictions:				
Have all site criteria been complied with? <input type="checkbox"/> Yes <input type="checkbox"/> No If not explain:				

PROVIDE THE FOLLOWING DOCUMENTS WITH THE APPLICATION	
	<p>LAND APPLICATION OPERATION AND MAINTENANCE PLAN - <i>An operation and maintenance plan MUST BE INCLUDED and provides provisions for EACH of the following items:</i></p> <ul style="list-style-type: none"> (a) Site access controls; (b) Types and sources of wastes; (c) Vector attraction, pathogen reduction measures; (d) Applicable animal grazing and crop harvesting restrictions; and (e) List of equipment available for managing each type of waste.
	<p>MAP - <i>A sketch or map MUST BE INCLUDED that provides the following:</i></p> <ul style="list-style-type: none"> (a) Property lines and boundary lines of : <ul style="list-style-type: none"> (i) acreage available for land application, and (ii) the acreage proposed for use during the license year; and (b) All roads, homes, buildings, water wells, surface waters, canyons, ravines, and floodplains within 500 feet of the property boundary
	<p>State Historic Preservation Office (SHPO) – A cultural resource file search must be requested on the proposed land application site. SHPO charges a fee for this search. A copy of the “File Search Request Form” is attached or you may go on-line to SHPO’s web page at: http://mhs.mt.gov/shpo/forms.asp Provide the following:</p> <ul style="list-style-type: none"> (a) A copy of the SHPO file search results.
PROPERTY OWNER SIGNATURE/CERTIFICATION	
<p>I, _____, hereby certify that I am the Property Owner or Designated Representative of the Property Owner (CIRCLE ONE) of the proposed disposal location and the applicant has my permission to use the site. By signing this form, I further certify that the applicant has provided me notification of the restrictions for crop harvesting and animal grazing following the land application of septage on the property.</p> <p>SIGNATURE: _____ DATE: _____</p> <p>TITLE: _____</p>	

Section 4 - Information for Disposal at Wastewater Treatment Plant, Septage Processor, Composter, or Class II Landfill

If you plan to use more than one wastewater treatment plant, septage processor, composter, or Class II landfill disposal site, you will need to submit a separate form for each disposal site that you use.

Facility Name - This is the legal name of the wastewater treatment plant (WWTP), processor, composter, or landfill.

Facility Contact - This is the Facility Manager of the WWTP, processor, composter, or landfill.

Phone Number - This is the phone number where the facility contact can be reached.

Facility Mailing Address/Location - This is where the facility contact can receive correspondence in relation to this application and the physical address of the disposal site.

Waste Treatment Plant Manager Signature - The Facility Manager must print their name and sign the form to certify that the pumper has their permission to use the site.

Section 4 INFORMATION FOR DISPOSAL AT: WASTEWATER TREATMENT FACILITY, SEPTAGE PROCESSOR, COMPOSTER, OR CLASS II LANDFILL	
Facility Name:	
Facility Contact:	Phone Number:
Facility Mailing Address/Location:	
WASTE TREATMENT FACILITY MANAGER SIGNATURE	
I, _____, hereby certify that I am the Facility Operator, or Designated Representative of the Facility Owner or Operator (CIRCLE ONE) of the proposed disposal location and the applicant has my permission to use the site.	
SIGNATURE: _____ DATE: _____	
TITLE: _____	

Section 5 - Certification

Applicant Certification - This is the license applicants printed and signed name certifying that the information on the application is correct.

Health Officer Certification - This is the health officer's or designated representative (often the county sanitarian) printed and signed name certifying that the disposal site meets the physical requirements in accordance with the SDL laws and rules governing septage disposal and any local health requirements.

Zoning Certification - This is the printed and signed name of the zoning representative certifying that the use of the site is in conformance with local zoning regulations. Not required if site is not zoned.

Section 5 CERTIFICATIONS
APPLICANT CERTIFICATION
I _____, have completed this application for a specific disposal site. I hereby declare that the information provided is true and correct to the best of my knowledge, and that I have made reasonable inquiries where necessary to confirm such information.
SIGNATURE OF APPLICANT: _____ DATE: _____
HEALTH OFFICER CERTIFICATION
I, _____ am the Health Officer or Designated Representative of the _____ county. I certify that this disposal site meets the physical requirements of Montana laws and rules governing septage disposal, and any applicable local health requirements.
SIGNATURE: _____ DATE: _____
TITLE: _____
ZONING CERTIFICATION (if required)
I, _____, an official with knowledge of the zoning district covering the proposed disposal location, certify that the use of the site is in conformance with local zoning regulations.
SIGNATURE: _____ DATE: _____
TITLE: _____

SEPTIC TANK, CESSPOOL, AND PRIVY CLEANER LAND APPLICATION – OPERATION AND MAINTENANCE PLAN

An operation and maintenance plan must be filled out for each land application site and dewatering operation.

Company Name: - This is the name of the business as filled out on the renewal/new application form.

License Number - This is the septic pumper license number issued by the MT DEQ.

Location of Disposal Records - This is the physical address where the disposal records are being stored.

Section - SITE INFORMATION

Land Application Site Name - This is the name under which the site is known. (Example: Fallen Ranch, etc.)

Site Address - This is the physical address of the property.

Direction to Site - This is the driving instruction to the land application site.

Legal Description of Site - This is the location of the property by township, range, section, and quarter section.

Number of acres for land application - This is the total amount of acres available for land application at the site.

Type of Crop - This is the type of vegetation to be grown on the land application area (i.e., fallow land (wheat), pasture (native grass), range, forest).

Crop Nitrogen Requirement - This is the annual crop nitrogen requirement, in pounds per acre per year, for the crop, grass, etc., grown at the land application site. Use the Montana Extension Service Fertilizer Guidelines for Montana Crops or check with DEQ.

SEPTIC TANK, CESSPOOL, AND PRIVY CLEANER LAND APPLICATION - OPERATION AND MAINTENANCE PLAN				
Company Name: _____		DEQ License Number: _____		
Location of Disposal Records:				
SITE INFORMATION				
Land Application Site Name:				
Site Address:			City:	
Directions to Site:				
Legal Description of Site: <i>(to nearest 1/4 section)</i> /4	Section:	Township:	Range:	County:
Number of acres for land application:	Type of Crop:		Crop Nitrogen Requirement: (pounds per acre per year --- lbs N/acre/yr)	

Section - **WASTE INFORMATION**

Waste Category - Check the types of waste you will be pumping and disposing at this site. Provide an estimate of the amounts of waste you propose to land apply at the site.

Section - **SITE OPERATION AND MAINTENANCE**

List Measures to Control Access to the Site - Is the area fenced, is there a gate, sign, etc.

List Vector Attraction and Pathogen Reduction Methods Used - Injection, liming or tillage that will be used.

List Animal Grazing and Crop Harvesting Restrictions for the Site – e.g. Cattle will graze 30 days after application and/or wheat will not be harvested until 14 months after application.

List Equipment Available to Manage Each Type of Waste - Harrowing, plow with disk, screening device, etc.

WASTE INFORMATION		
<i>Check all that apply at this site:</i>		<i>Estimated total gallons during license year:</i>
<input type="checkbox"/>	Septage	
<input type="checkbox"/>	Portable toilet/Vault toilet type waste	
<input type="checkbox"/>	Grease Trap Waste	
<input type="checkbox"/>	Sump Pumpings (specify type below)	
<input type="checkbox"/>	<input type="checkbox"/> Automatic Car Wash Bay Sump	
<input type="checkbox"/>	<input type="checkbox"/> Attended Car Wash Bay Sump	
<input type="checkbox"/>	<input type="checkbox"/> Unattended Car Wash Bay Sump	
<input type="checkbox"/>	<input type="checkbox"/> Other Sump (specify type) _____	
<input type="checkbox"/>	Graywater	
SITE OPERATION AND MAINTENANCE		
LIST MEASURES TO CONTROL ACCESS TO THE SITE:		
LIST VECTOR ATTRACTION AND PATHOGEN REDUCTION METHODS USED:		
LIST ANIMAL GRAZING AND CROP HARVESTING RESTRICTIONS FOR THE SITE:		
LIST EQUIPMENT AVAILABLE TO MANAGE EACH TYPE OF WASTE:		

VEHICLE INSPECTION FORM

The “Vehicle Inspection” form must be completed by the County Health Officer (or designated representative) for all pumper vehicles that will be used for land application. A form must be filled out for EACH vehicle. Keep a copy of the form with the vehicle.

Each vehicle used for the surface application of septage must be equipped with a spreader bar, splash plate, or other dispersive mechanism approved by MT DEQ. If the business uses a screening device, or if MT DEQ has required the licensee or applicant to screen septage before applying it to land, the screening equipment or screening facility must also be available for inspection.

Before you can place a new vehicle in service, you must have the vehicle inspected by the local health officer (or their designated representative), either in person or, if the vehicle is readily identifiable in a photograph, by submission of a photograph. The form must be signed by the local health officer (or their designated representative).

Only one certification per vehicle is required to be submitted to MT DEQ during the service life of a vehicle, screening equipment, or device. However, if you are applying for a contract with the U.S. Forest Service, a vehicle inspection will be required every year you submit your contract.

To obtain the certification of screening equipment or a device that is at a fixed location, a licensee may either: request the local health officer or designated representative, or MT DEQ, to inspect it at the fixed location; or if the location or device is readily identifiable in a photograph, submit a photograph of the equipment or device to the local health officer or designated representative.

Section - Septic Tank Pumper Vehicle Inspection

Applicant full legal name - This is the legal name of the applicant who has established the business to be licensed.

DEQ License Number - This is the license number issued by MT DEQ. If new license, check new applicant.

New Applicant - Check the box if you’re a new applicant and do not have a DEQ license number. This includes those who have allowed their license to lapse for a full year.

Name of Business - This is the name of the business as filed or registered with the Montana Secretary of State office.

Business Address - This is the physical location of the business, state and zip code.

Mailing Address - This is where the applicant wishes to receive correspondence in relation to this application. Only fill in these blocks if the mailing and physical addresses are different.

County - This is the county where the business is located.

Phone Number - The phone number and area code of the business.

Fax Number - If available, provide the fax number for the business.

Boxes - The box(s) must be checked yes or no to the listed questions and explain where asked. Write in the vehicle Make, Model, and tank size.

Health Officer Certification - This is the health officer’s printed and signed name certifying that the vehicle is equipped with the proper spreading and screening equipment.

SEPTIC TANK PUMPER VEHICLE INSPECTION			
Name of Applicant:		DEQ License Number: _____	
Name of Business:		<input type="checkbox"/> New Applicant	
Business Address:		City:	State: Zip:
Mailing Address:		City:	State: Zip:
County:	Phone Number:	Fax Number:	
YES	NO	<i>(answer Yes or No to the following questions)</i>	
<input type="checkbox"/>	<input type="checkbox"/>	Does the vehicle show signs of leakage?	
<input type="checkbox"/>	<input type="checkbox"/>	Is the vehicle equipped with the proper spreading equipment? Specify: _____	
<input type="checkbox"/>	<input type="checkbox"/>	Is the spreading equipment mounted on the vehicle or separate? Specify: _____	
<input type="checkbox"/>	<input type="checkbox"/>	If required to screen septage before land applying, is the vehicle, or site, equipped with the proper screening equipment (ARM 17.50.811(9))? Specify: _____	
<input type="checkbox"/>	<input type="checkbox"/>	Is the spreading equipment approved for use?	
<input type="checkbox"/>	<input type="checkbox"/>	Is the screening equipment approved for use?	
Make/Model of Vehicle: _____			
Tank Size: _____			
<p>I, _____ am the health officer or designated representative of the County. I certify that, based on the above inspection, the vehicle listed above is equipped with the proper spreading and screening equipment necessary to ensure that the licensee is properly equipped to land apply material in a manner protective of human health and the environment.</p> <p>SIGNATURE: _____</p> <p>DATE: _____</p> <p>TITLE: _____</p>			

CHAPTER 2

1. WHAT HAPPENS AFTER MT DEQ RECEIVES YOUR APPLICATION?: (ARM 17.50.806)

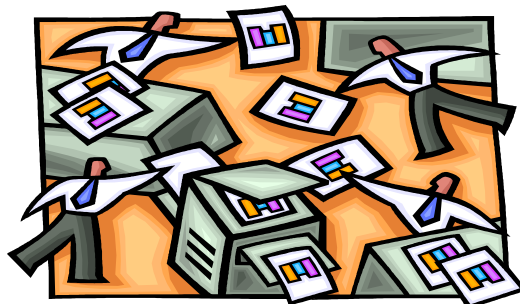
Each application submitted for a new or renewed license will be reviewed by MT DEQ to ensure that it is complete. If additional information is required, MT DEQ will notify the applicant in writing within 30 days after receiving the application and will postpone processing the application until the additional information is received and the application is complete. If MT DEQ does not receive the additional information within 90 days after requesting it, the applicant will be required to start the application process again and resubmit the application using a “New License Application Form” and provide all supporting documents.

MT DEQ will review each completed application and relevant information and make a decision whether to issue, deny, or renew a license based on the applicant’s ability to comply with the State and Federal requirements.

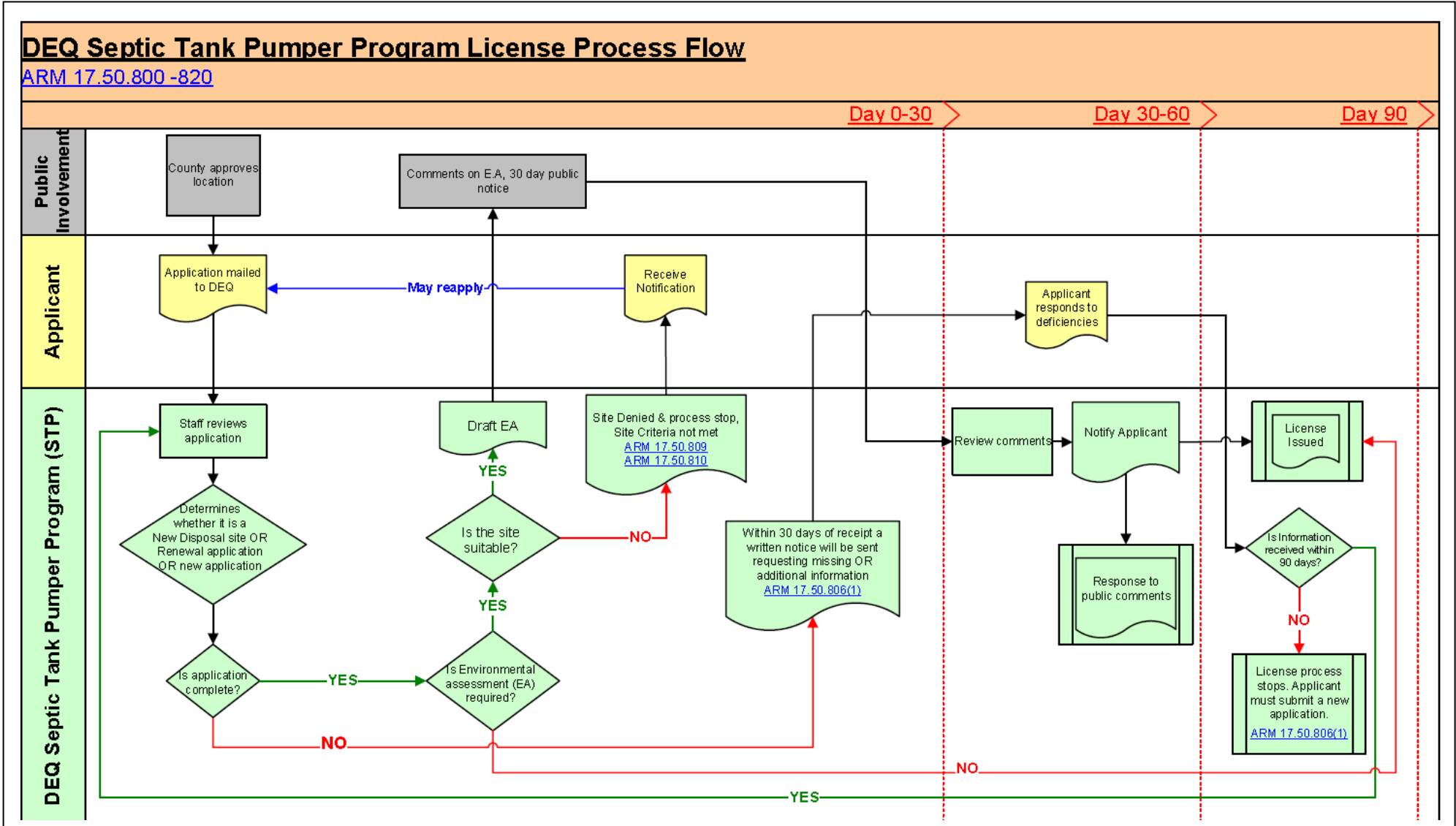
MT DEQ’s decision to grant or renew a license may include special conditions in consideration of the protection of public health and the environment, and avoiding public nuisances.

If your new Disposal Site Application is for a land application site or dewatering operations and you have not obtained the certification of the local health officer prior to submitting your application, then within five days of receiving an application for license MT DEQ will send the application to the local health officer or designated representative in the county where you propose to do business. This gives the county the opportunity to review and comment on all applications in their county. MT DEQ will not issue a license until 14-days after notifying the local health officer or designated representative and has 30 days after the health officer decision to approve or deny the application to issue a license.

Normally the process is much faster than the times listed above. Our goal is to promptly process all applications in order to keep from delaying business start-up. Please feel free to contact the Department prior to application submission if you have any questions.



LICENSE PROCESS



CHAPTER 3

(ARM 17.50.809, ARM 17.50.810, and ARM 17.50.811)

1. DISPOSAL SITES:

A person is not allowed, by law, to dispose of septage or material derived from septage unless they have first applied in writing and obtained MT DEQ's and the local County Health Department's written approval that the proposed disposal methods are protective of human health and the environment.

a. WASTEWATER TREATMENT SITE:

Septage may be placed at a permitted wastewater treatment plant only if the facility is designed and operated to handle septage in a manner protective of human health and the environment and is in compliance with the SDL laws and rules.

b. SEPTAGE PROCESSOR OR COMPOSTER:

Septage may be placed at a licensed septage processor or licensed composting facility that is operated to handle septage in a manner that is protective of human health and the environment and is in compliance with the SDL laws and rules.

c. LANDFILL:

Dewatered septage may be placed at a licensed Class II Landfill for disposal. Grease trap waste and sump waste may be placed in dewatering pits at a licensed landfill that have this capability.

d. LAND APPLICATION SITE:

Land application is the spreading, spraying, injection, or incorporation of pumpings onto or below the surface of the land to take advantage of the soil enhancing qualities of the septage. Septage is land applied to improve the structure of the soil. It is also applied as a fertilizer to supply nutrients to crops and other vegetation grown in the soil. Certain management practices for land application of these pumpings must be followed. Sump waste dewatering pits at a land application site must be lined and approved by the local County Health Department.

Pumpings will not be applied:

- within 500 feet of any occupied or inhabitable building.
- within 150 feet of any state surface water, including ephemeral or intermittent drainages and wetlands. Greater distances may be required where slopes or other factors may increase the likelihood of runoff from the land application area. This increase will be determined by MT DEQ or local health officer and/or their designated representative.
- within 100 feet of any state, federal, county or city maintained highway or road. The 100 feet setback is measured from the edge of any right-of-way.

- within 100 feet of a drinking water supply source. Greater distances may be required where site conditions might increase the likelihood of contamination of a drinking water source. This increase will be determined by MT DEQ, the local health officer, and/or their designated representative.
- where ponding or runoff of septage is likely to occur. Remember to take into account topographical slopes on fields when selecting land application areas.
- on land with slopes greater than 6%.
- through subsurface injection on slopes greater than 12%.
- to land before you obtain written permission (MT DEQ Form) of the land owner or the land owner's designated representative. If land is leased from a tribe or governmental agency, permission of the tribe or agency must be obtained before pumpings may be applied to the land. If the pumpings are to be applied to land owned by the owner of the land on which they were generated, the pumper shall keep a permission slip or signed receipt. The MT DEQ may require the submittal of the permission slip or receipt.
- as bulk septage or other pumpings to agricultural land, forest land, pasture land, or range land at a rate greater than the agronomic rate of the site for nitrogen on an annual basis.
- as bulk septage at a reclamation site in excess of the agronomic rate unless the person first obtains site-specific approval from MT DEQ.
- to land where a threatened or endangered species or its designated critical habitat is likely to be adversely affected.
- to flooded, frozen, or snow covered ground if the pumpings may enter state waters.
- apply septage to public contact sites or home lawns or gardens.
- as bulk materials derived from septage, or materials derived from septage sold or given away in a bag or other containers to public contact sites or home lawns or gardens unless the pollutant concentrations are met in 40 CFR 503.13(b)(3), the Class A pathogen requirements in 40 CFR 503.3 1(a), and one of the vector attraction reduction requirements in 40 CFR 503.33(b)(1) through (b)(8).

Pumpers will:

- apply to the land surface only where at least six feet separate the land surface from seasonally high ground water. Greater separation distances may be required where soil types or specific application processes might increase the likelihood of ground water contamination. This increase will be determined by MT DEQ or local health officer and/or their designated representative.
- control litter at land application sites as necessary to prevent its spread to adjoining properties. Litter must be removed from a land application site **within six hours** after application.
- use the annual application rate (AAR) for **bulk septage**, in gallons/acre/year. The AAR is determined by using the formula $AAR = N / 0.0026$, where N equals the amount of nitrogen, in pounds per acre per 365-day period, needed by the crop or vegetation grown on the land. See the Montana Extension Services Bulletin or call DEQ.

$$AAR(\text{gallons/acre/year}) = \frac{\text{Pounds Nitrogen Required for Crop Yield}}{0.0026}$$

As an example, if 100 pounds of nitrogen per acre is required to grow a 40 bushel per acre crop of wheat, then the annual application rate of domestic septage is 38,500 gallons per acre.

$$\text{AAR} = \frac{100}{0.0026} = 38,500 \text{ gallons/acre/year}$$

The primary reason for this annual rate calculation is to prevent the over application of nitrogen in excess of crop needs and its potential movement through soil to groundwater.

- use the maximum AAR for **privy waste, pit toilet waste, portable toilet waste, vessel pumpout facility waste or recreational vehicle waste**, in gallons/acre/year, as determined by the formula $\text{AAR} = \text{N}/0.0052$, where N equals the amount of nitrogen in pounds per acre per 365-day period needed by the crop or other vegetation grown on the land.

$$\text{AAR(gallons/acre/year)} = \frac{\text{Pounds Nitrogen Required for Crop Yield}}{0.0052}$$

As an example, if 100 pounds of nitrogen per acre is required to grow a 40 bushel per acre crop of wheat, then the annual application rate of domestic septage is 19,230 gallons per acre.

$$\text{AAR} = \frac{100}{0.0052} = 19,230 \text{ gallons/acre/year}$$

The primary reason for this annual rate calculation is to prevent the over application of nitrogen in excess of crop needs and its potential movement through soil to groundwater.

- apply septage to land with a spreader bar, splash plate, or other dispersive mechanism approved by MT DEQ.
- land apply routine maintenance pumpings or emergency pumpings including, but not limited to, pumpings required due to septic system freeze-ups, overflows, flooding, or failures, to frozen or snow covered ground, **only** if no other reasonable treatment method is available. Reasonable treatment method options include hauling the waste to a waste water treatment plant or a septage storage, treatment, or dewatering facility that will accept the waste and that is within 25 miles of where you pumped.
- land apply pumpings to frozen or snow covered ground only if:
 - ◀ sites or fields used have a slope of less than or equal to 3%;
 - ◀ the land is not within a 100-year floodplain;
 - ◀ bulk septage, privy waste; pit toilet waste; portable toilet waste; vessel pumpout facility waste; and recreational vehicle dump station waste, have undergone treatment by the vector reduction technique of adding alkali material so that the pH is raised to and remains at 12 or higher for a period of at least 30 minutes; or
 - ◀ if not alkali stabilized, are incorporated into the soil as soon as the weather permits.
 - ◀ grease trap waste is incorporated into the soil as soon as the weather permits.

- *alkali stabilization of septage, privy waste; pit toilet waste; portable toilet waste; vessel pumpout facility waste; and recreational vehicle dump station waste, is required for wastes disposed of on frozen or snow-covered ground unless the property owner or the owner's authorized representative is unwilling to accept pH-stabilized wastes. If this is the case, then you are required to keep the signed written statement of objection to the alkali-stabilization from the owner or authorized representative on file. Site restrictions apply if not alkali-stabilized.*
- apply septage with the following restrictions:
 - ◀ food crops with harvested parts that touch the septage/soil mixture and are totally above the land surface are not harvested for 14 months after application;
 - ◀ food crops with harvested parts below the surface of the land are not harvested for 20 months after application of material if the material remains on the land surface for four months or longer prior to incorporation into the soil;
 - ◀ food crops with harvested parts below the surface of the land are not harvested for 38 months after application of material if the material remains on the land surface for less than four months prior to incorporation into the soil; and
 - ◀ other food crops, feed crops, and fiber crops are not harvested for 30 days after application.
 - ◀ animals may not be permitted to graze on the land for 30 days after application of the material;
 - ◀ turf grown on the land may not be harvested for one year after application of the material if the harvested turf is to be placed on land with a high potential for public exposure or on a lawn, unless otherwise specifically authorized by MT DEQ;
 - ◀ public access to land with high potential for public exposure must be restricted for one year after application; and
 - ◀ public access to land with a low potential for public exposure must be restricted for 30 days after application.

Examples of Crops Impacted by Site Use Restrictions

These crops have harvested parts that...		
Usually do not touch the ground	Usually touch the ground	Are below the ground
Peaches	Melons	Potatoes
Apples	Eggplants	Yams
Com	Squash	Sweet Potatoes
Wheat	Tomatoes	Rutabegas
Oats	Cucumbers	Peanuts
Barley	Celery	Onions
Oranges	Strawberries	Leeks
Grapefruits	Cabbage	Radishes
Cotton	Hay	Tumips
Soybeans	Lettuce	Beets

- if mechanical dewatering of septage is required, perform the dewatering on the property where the waste is to be removed, at an approved land application site, at a licensed solid waste management system, or at a permitted waste water treatment plant.
- removed water from septage through a dewatering process is subject to septage disposal requirements. It may be:
 - ◀ land applied as required under the septage rules;
 - ◀ discharged to a licensed wastewater treatment plant;
 - ◀ discharged to an engineered commercial septic system; or
 - ◀ put back into the individual septic system it was removed from.
- apply dewatered solids to land as long as the rules are followed, or composted, or disposed in a licensed solid waste management system.
- land-apply gray water at approved sites without the need for vector or pathogen reduction only if it will not pollute state waters.
- comply with the water haulers laws/rules and use separate tanks with no common wall for pumpings and potable water if your truck is used to carry potable water and pumpings.
- handle all mixed loads of different types of pumpings appropriately and follow the applicable restrictions. ● control litter at the site: if determined by MT DEQ to be inadequate you may be required to screen the septage prior to land applications.
 - ◀ the screen will have a maximum opening width of three-quarters of an inch to remove non-putrescible waste. The non-putrescible wastes will be collected and disposed of at a licensed Class II Landfill.
 - ◀ screening is not required during the months of December, January, or February, but non-putrescible wastes must be removed from the land application site within one week after the snow melts.

NOTE: MT DEQ upon reviewing each license application will take into account proximity to population centers, volume of septage or other pumpings, soil types, protection of human health and the environment, and the avoidance of public nuisances and may place more or less restrictive criteria on septage treatment processes, individual land application, and disposal sites.

Screening Requirement:

If land applying and it is determined that litter control is inadequate the MT DEQ may require screening prior to land application of all pumpings. The screen must have a maximum opening width of three-quarters of an inch to remove the litter. All litter removed must be placed in a licensed Class II landfill for disposal. Screening is not required during the months of December, January, or February, but litter must be removed from the land application site within one week after the snow melts. See Appendix G for examples of screening devices.

Local health officer or their designated representative:

- Will certify that the proposed land application site meets all applicable state and local requirements.
- May reject sites for public health or public nuisance problems or for proximity to public water supplies. In no case may a site be within 500 feet of an occupied or inhabitable building or within 100 feet of a drinking water source.
- May withdraw approval of previously approved sites if:
 - ◀ the site has not been properly managed for vectors or litter;
 - ◀ waste has been applied in excess of the agronomic rate or improperly applied;
 - ◀ the minimum separation distances as required by the SDL laws and rules are not being met; or
 - ◀ the site is in proximity to new public water supplies.
- Will approve or disapprove holding/storage tank request in accordance with local city/county requirements.
- Will inspect the pumper vehicle to include spreading and screening equipment.

CHAPTER 4

(ARM 17.50.811, ARM 17.50.814, ARM 17.50.815, and ARM 17.50.816)

WASTE CATEGORIES:

SEPTIC TANKS

- Only a licensed pumper can remove and dispose of waste from a septic tank with the following exception:
 - ◄ an owner or lessee of the property where the septage is generated can pump the tank with their own equipment and dispose of the septage on their property. Disposal rules and restriction must be followed. (MCA 75-10-1210)
- Septage can be disposed by:
 - ◄ taking it to a permitted wastewater treatment plant that is designed and operated to handle septage,
 - ◄ taking it to a licensed septage processor or licensed composting facility,
 - ◄ dewatering the septage at an approved site, dewater material can be placed at a licensed Class II Landfill for disposal,
 - ◄ land application at an approved site. (See Chapter 3 of this guide.)
- Septage being pumped by a licensed pumper and land applied on the property of the tank owner will have a signed permission slip or signed receipt. All disposal rules and restrictions must be followed.

CAR WASH SUMPS AND OTHER SUMP WASTES

- Only a licensed pumper or the owner, operator or employee of the facility to be pumped can remove or dispose of waste from a car wash sump or other types of sumps.
- Sump waste from other than a car wash sump can not be pumped or disposed of unless you apply to and receive approval from MT DEQ.
 - ◄ MT DEQ will conduct a case-by-case evaluation, consider the source of the waste and the possible constituents when making its decision.
- Waste from an automatic car wash bay sump may be:
 - ◄ used as clean fill, or
 - ◄ if it has been dewatered, it can be used as cover at a licensed Class II landfill.

ATTENDED CAR WASH BAY SUMP PUMPING

- If chlorinated solvents are prohibited at the facility and the sump pumpings are free from visible oil and grease, they can be used as clean fill or, if dewatered, as daily or intermediate cover at a licensed Class II landfill.
 - ◄ You must have a written statement from the car wash owner stating that the material is solvent-free,
- If the pumpings contain visible oil or grease, they can be taken to a licensed landfarm or if dewatered, disposed of at a licensed Class II landfill with the operator's permission.
- If the use of chlorinated solvents are not prohibited at the facility, the sump pumpings must be handled in the same manner as an unattended car wash bay sump.

UNATTENDED CAR WASH BAY SUMP PUMPINGS

- The pumpings must:
 - ◄ be visually examined for oil and grease; and
 - ◄ tested for chlorinated solvents, or have a written statement from the owner stating that the sump pumpings are solvent-free.
- No visible oil or grease and free of chlorinated solvents (testing or written statement), may be:
 - ◄ used as clean fill or,
 - ◄ if dewatered, used as daily or intermediate cover at a licensed Class II landfill.
- Contains visible oil or grease, but are free of chlorinated solvents (testing or written statement), can be taken to:
 - ◄ a licensed landfarm or,
 - ◄ if dewatered, disposed of at a licensed Class II landfill with the landfill operator's permission.
- If owner cannot provide a statement of knowledge of the material, the pumpings must be tested for: volatile organic compounds (VOCs), screened for petroleum hydrocarbons, and tested for total chromium, lead, zinc, and cadmium.
 - ◄ If sump waste is removed from the sump prior to receiving the lab results, it must be stored in a manner to prevent contamination of the environment until the test results are received and the waste is disposed of. Examples of proper storage – a lined pond, a holding tank, or a concrete bin.
 - ◄ If free of contaminants above regulated levels, the pumpings may be:
 - ◆ used as clean fill or,
 - ◆ if dewatered, as daily or intermediate cover at a licensed Class II landfill.
 - ◄ If contamination is above regulated levels, the operator must notify MT DEQ. MT DEQ will tell you what further testing is required and provide waste disposal options.
- All testing results must be maintained for five years by the pumper. They must be made available to MT DEQ upon request.
- Facilities receiving sump waste may require additional testing before accepting the waste.

VOCs - a test method capable of detecting and quantifying at least one part per billion VOCs in the waste.
Petroleum hydrocarbons - a test method capable of detecting at least one part per million hydrocarbons.
Total chromium, lead, zinc, and cadmium - a test method capable of detecting and quantifying at least one part per million of each element.

See Appendix E for a list of Montana laboratories.

GREASE TRAP WASTES

- “Grease interceptor” and “grease trap” mean grease trap. Oil/water separators at commercial and industrial facilities are not grease traps. Oil/water separators may not be pumped unless the material is being processed by a used oil processor or at a licensed landfarm.
- The waste cannot be discharged at a wastewater treatment plant not specifically designed to manage the grease trap waste.
- The waste may be:
 - ◄ dewatered at a permitted wastewater treatment facility designed to accept the waste, or

- ◀ at a licensed landfill, or
 - ◀ at an approved land application site.
- Dewatering of the grease trap waste can be conducted:
 - ◀ only by the licensed pumper, the owner of the property, or by the person leasing the property.
 - ◀ at the property it is pumped at only if the facility sits on five acres or more; and
 - ◀ if the dewatering does not constitute a nuisance or public health hazard and is not harmful to human health or the environment.
- The water from a grease trap dewatering process is commercial wastewater. It may be:
 - ◀ discharged to an individual commercial wastewater treatment system or approved wastewater treatment facility.
 - ◀ land-applied at an approved septage land application site.
- Dewatered grease trap waste may be disposed of at a Licensed Class II Landfill.
- Grease trap waste, dewatered or not, may be:
 - ◀ composted at a licensed compost facility;
 - ◀ treated at a rendering plant; or
 - ◀ land-applied at an approved septage land-application site by either injection into the soil or by tilling into the soil within 6 hours of application. Application frozen or snow cover ground would be the same as applying septage.
- Disposal of grease trap waste at facilities other than a licensed Class II landfill or at a permitted wastewater treatment plant must first be approved by MT DEQ. You must:
 - ◀ submit a written application for the proposed disposal method to MT DEQ;
 - ◀ receive written approval from MT DEQ prior to using the proposed disposal method.

PRIVY WASTE; PIT TOILET WASTE; PORTABLE TOILET WASTE; VESSEL PUMP OUT FACILITY WASTE; AND RECREATIONAL VEHICLE DUMP STATION WASTE

- Only a licensed pumper can remove or dispose of this type of waste.
- Privy waste, pit toilet waste, portable toilet waste, vessel pump out facility waste or recreational vehicle waste cannot be disposed of:
 - ◀ in a wastewater treatment system with a cesspool, or
 - ◀ at a wastewater treatment system with a septic tank, unless the septic tank and connected liquid treatment system was designed for this purpose by a licensed Montana professional engineer.
- The same conditions that were spelled out in Chapter 3 of this guide for septage must also be met when land-apply privy waste, pit toilet waste, portable toilet waste, vessel pump out facility waste or recreational vehicle waste.

GRAY WATER

- The MT DEQ requires that those businesses pumping and disposing of gray water in the State of Montana are to be licensed in the State of Montana.
- Gray water may be land-applied at an approved site without vector or pathogen reduction only if it will not pollute state waters.
- If gray water is pumped using a vehicle that also pumps septage, portable toilet waste, etc. the material would be considered a mixed load and must be handled and disposed of as septage waste.

CHAPTER 5

(ARM 17.50.8 13)

RECORD KEEPING REQUIREMENTS:

As a licensed pumper, you must maintain the records at your place of business indicated on the license application or other MT DEQ-approved location. The records must be maintained for five (5) years and must contain the following information:

Land Application

- Type of material deposited at each disposal location;
- Location of each disposal site, by street address, latitude and longitude, or township, range, section, and quarter section;
- Volume of each material deposited at each site, such as septage, grease trap wastes, sump pumpings, privy waste, pit toilet waste, portable toilet waste, vessel pumpout facility waste, and recreational vehicle dump station waste;
- Number of acres to which pumpings are applied;
- Date and time of each application;
- Nitrogen requirement for the crop or other vegetation grown on each site;
- Rate at which the different kinds of pumpings are deposited at each site in gallons per acre during a year;
- Vector attraction and pathogen reduction method used for each volume of pumpings applied;
- pH of the material 30 minutes after alkali addition, if that method is chosen for pathogen and vector attraction reduction.

NOTE: If the land owner objects to application of alkali-stabilized septage, a written statement from the land owner must be maintained with your records.

Wastewater Treatment Plant

- Type of material being disposed;
- Location of each disposal site, by street address, latitude and longitude, or township, range, section, and quarter section;
- Volume of each material deposited at each site, such as septage, grease trap wastes, sump pumpings, privy waste, pit toilet waste, portable toilet waste, vessel pumpout facility waste, and recreational vehicle dump station waste;
- Date and time of each disposal;

The licensed pumper will submit a summary of these records to MT DEQ for the following time periods:

- January 1 through June 30. You must submit the documents by **July 15**;
- July 1 through December 31. You must submit the documents with your annual renewal form. If you submit your renewal in November submit those records up until that date. The remainder of the records can be submitted in January.

NOTE: Disposal records must be maintained for five years

You can use a form or document generated by your business or one of the forms provided by the MT DEQ as long as it contains the required information.

Waste Water Treatment Disposal Form

WASTE WATER TREATMENT SUMMARY LOG

LIC. # _____

STP BUSINESS NAME: _____

REPORTING PERIOD:

Disposal Date	TYPE OF MATERIAL (S - septic, PT - Portable Toilet, VT - Vault, G - grease, C - carwash, GW - graywater, O - other specify)	Volume Disposed (gallons)	Date/Time Material pumped	Material pumped by: (list pumper name)

Land application Site Disposal Form

LAND APPLICATION SUMMARY LOG

STP BUSINESS NAME: _____

LIC. # _____

REPORTING PERIOD:

DATE	LAND APPLICATION SITE (ADDRESS OR T-R-S)	TYPE OF MATERIAL (S - septic, G - grease, C - carwash, O - other specify)	VOLUME (gallons)	AREA OF APPLICATION (ft ² or acreage)	TIME OF APPLICATION	NITROGEN REQUIREMENT OF CROP ON SITE (lbs/acre)	VAPR METHOD (T - tillage, L - lime or I - injection)	pH IF SEPTAGE IS LIMED	TIME TILLE D/ LITTE R PICKE D

TOTAL: Septic - _____, PT/VT - _____, Grease - _____, Carwash - _____,
Graywater: _____, Other - _____

CHAPTER 6

(ARM 17.50.812 and 17.50.820)

INSPECTIONS AND ENFORCEMENT:

MT DEQ and local health officers (or local designated health representatives) will conduct inspections of disposal facilities or proposed disposal facilities for septage and other wastes. Septic applicants, licensed pumpers and the property owners of the disposal site must allow the inspectors on the property to conduct inspections of these sites. Refusing to allow the disposal site to be inspected will cause license denial or revocation of site approval.

LICENSE DENIAL OR REVOCATION; APPEAL

MT DEQ can issue an order denying or revoking a Septic Pumpers license. If this occurs, MT DEQ will serve a written notice of an order of denial or revocation. This will be done by certified mail to the named individual on the septic pumper's application, license or the agent of the applicant or licensee.

The order denying or revoking the septic pumper's license will become final thirty days after the date it was mailed unless, during the thirty days, you request a contested case hearing before the Board of Environmental Review.

CHAPTER 7

(ARM 17.50.802)

This section contains words and terminologies you will encounter while working in the septage business. The definition of those words and terminologies are list below.

AGRICULTURAL LAND - is land on that a food crop, a feed crop, or a fiber crop is grown. It also includes range land and land used as pasture.

AGRONOMIC RATE - is the whole septage application rate (dry rate basis) designed to: (a) provide the amount of nitrogen needed by the food crop, feed crop, cover crop, or vegetation grown on the land; and (b) minimize the amount of nitrogen in the septage that passes below the root zone of the crop or vegetation grown on the land to the ground water.

APPLIED TO THE LAND SURFACE - is the uniform application of liquid or semi-liquid waste material at a rate closely approximating that which will result in maximum benefit to the crop or vegetative cover in the field, without ponding, runoff, or leaching.

ATTENDED CAR WASH BAY - is a place for washing trucks or automobiles that has an attendant on site while open to the public.

AUTOMATIC CAR WASH BAY - is a place for washing trucks or automobiles that has machinery designed to do the washing without allowing access to the bay during the process.

BULK SEPTAGE - is septage that is not sold or given away in a bag or other container for application to the land.

CAR WASH SUMP - is an interceptor or settling device, designed to be emptied by mechanical means, located below the normal grade of a wastewater gravity system used to precipitate mud from wastewater at a car wash, garage, or vehicle maintenance facility before the water enters an oil/water interceptor, a sanitary sewer or individual wastewater treatment system. Oil/water interceptors are not car wash sumps.

CESSPOOL - is a seepage pit without a septic tank to pretreat the wastewater.

CONTROL OF PUBLIC ACCESS - is taking reasonable precautions to prevent exposure of humans to pathogenic materials. This does not mean that all entry must be stopped.

DEWATERED - is waste that passes the Paint Filter Liquids Test (Method 9095 in Manual SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," USEPA (Update IIIA)).

FEED CROPS - are crops produced primarily for animals.

FIBER CROPS - means non-edible crops such as flax and cotton raised for fiber.

FOOD CROPS - are crops consumed by humans. A few examples are fruits, vegetables, grains and tobacco.

FOREST - is a tract of land with trees and underbrush.

GREASE INTERCEPTOR - means an interceptor of at least 750-gallon (2839 L) capacity that serves one or more fixtures and is remotely located from the fixtures.

GREASE TRAP - is a device designed to retain grease from one to four fixtures.

GREASE TRAP WASTE - is the water, solids, and semi-solid material removed from a grease trap or grease interceptor designed to remove cooking grease from home or restaurant wastewater in a sewer system. It does not include oil/water separator wastes at commercial or industrial facilities.

GRAY WATER - is any wastewater other than toilet wastes or industrial chemicals, and includes, but is not limited to, shower and bath wastewater, kitchen wastewater, and laundry wastewater. It may not contain listed hazardous wastes or hazardous substances above regulatory thresholds.

HOLDING TANK - is a watertight receptacle that receives wastewater for retention and does not as part of its normal operation dispose of or treat wastewater.

INCORPORATED INTO THE SOIL - means the injection of waste beneath the surface of the soil or the mixing of waste with the surface soil by plow, disk harrow, spring harrow, tiller, or other department-approved method.

INTERCEPTOR - or "clarifier" is a device designed and installed so as to separate and retain deleterious, hazardous, or undesirable matter from normal wastes and permit discharge of normal sewage or liquid wastes into the disposal terminal by gravity.

LAND WITH A HIGH POTENTIAL FOR PUBLIC EXPOSURE - is land that the public uses frequently. This includes, but is not limited to, public contact sites and reclamation sites located in populated areas (e.g., a construction site located in a city).

LAND WITH A LOW POTENTIAL FOR PUBLIC EXPOSURE - is land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest, and reclamation sites located in unpopulated areas (e.g., a strip mine located in a rural area).

PASTURE LAND - is land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover (fodder).

PATHOGEN - is a disease-causing organism. This includes, but is not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

PORTABLE TOILET - means a sealed pit privy designed to be readily transportable.

PRIVY - is a covered or uncovered facility for placement of non-water-carried toilet wastes where the wastes are discharged directly into a seepage pit without treatment in a septic tank or are discharged into a watertight vault.

PUBLIC CONTACT SITE - is land with a high potential for contact by the public. This includes, but is not limited to, public parks, cemeteries, plant nurseries, turf farms, and golf courses.

PUMPINGS - is the materials, liquid and solid, removed from a cesspool, septic tank, privy, portable toilet, grease trap, or car wash (or similar) sump that may be land applied for a beneficial purpose. The term also includes other primarily liquid wastes that may be land applied for a beneficial purpose. These include, but are not limited to, wastes from food processing operations, septage that contains commercial and industrial wastewater, and wastes from snow melt wastewater sumps. The term does not include commercial or industrial wastes that contain listed hazardous wastes or hazardous substances above regulatory thresholds.

RANGE LAND - is open land with indigenous vegetation.

RECLAMATION SITE - means drastically disturbed land that is being reclaimed. This may include, but is not limited to, strip mines and construction sites.

SEALED PIT PRIVY - is an enclosed receptacle designed to receive non-water-carried toilet wastes into a watertight vault.

SEPTIC TANK - is a watertight tank that receives and partially treats sewage through the process of sedimentation, oxidation, floatation, and bacterial action so as to separate solids from the liquid in the sewage, and then discharges the liquid to further treatment.

SEWAGE SLUDGE - is the solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. (a) Sewage sludge includes, but is not limited to: (i) domestic septage; (ii) scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and (iii) material derived from sewage sludge. (b) Sewage sludge does not include ash generated during firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

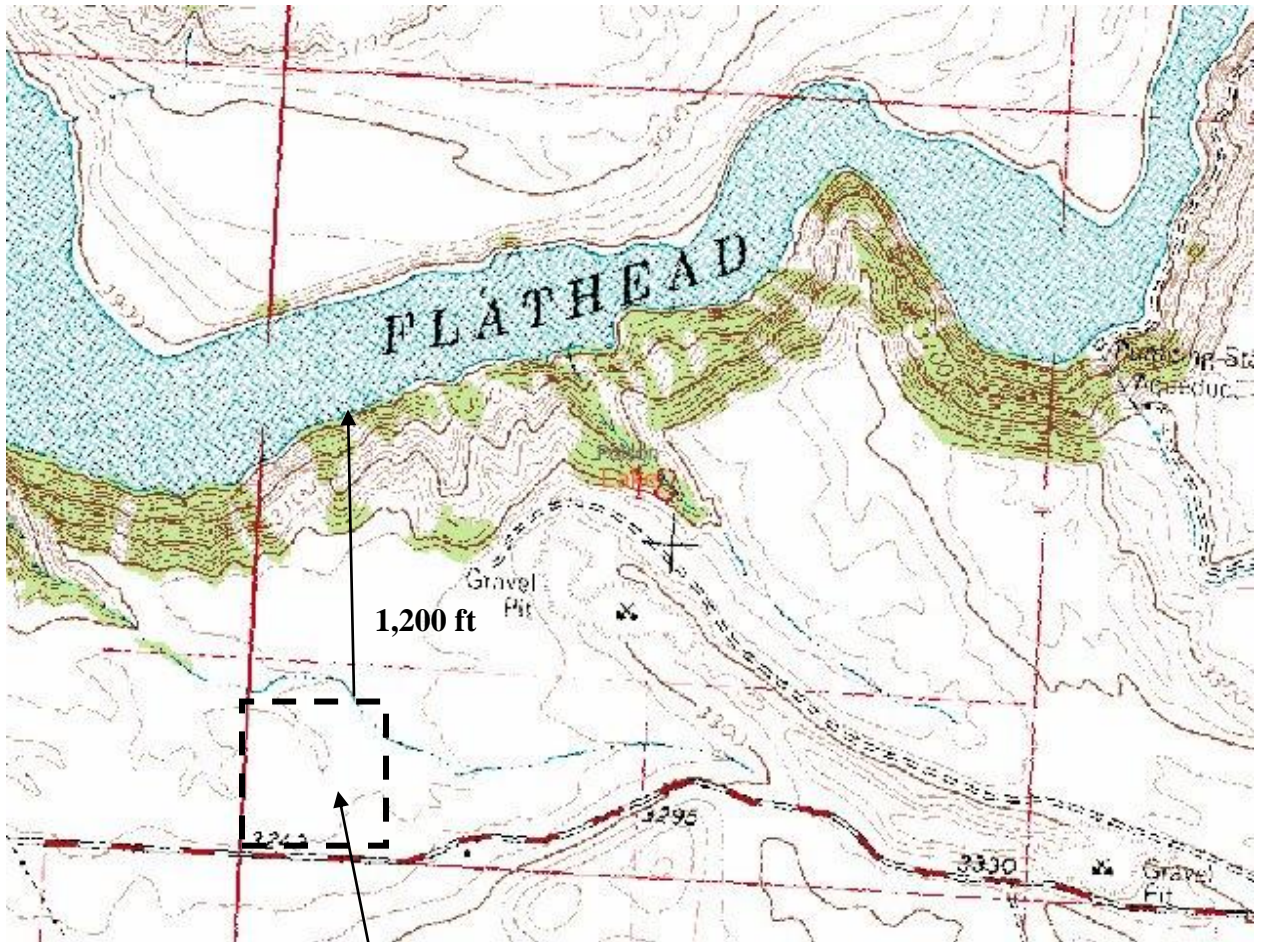
UNATTENDED CAR WASH BAY - is a place for washing cars or trucks that is not an automatic car wash bay and does not have supervision while open to the public.

VECTOR - is any rodent, insect, or other organism, capable of transmitting disease to humans.

VECTOR ATTRACTION - is the characteristic of sewage sludge and other pumpings that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

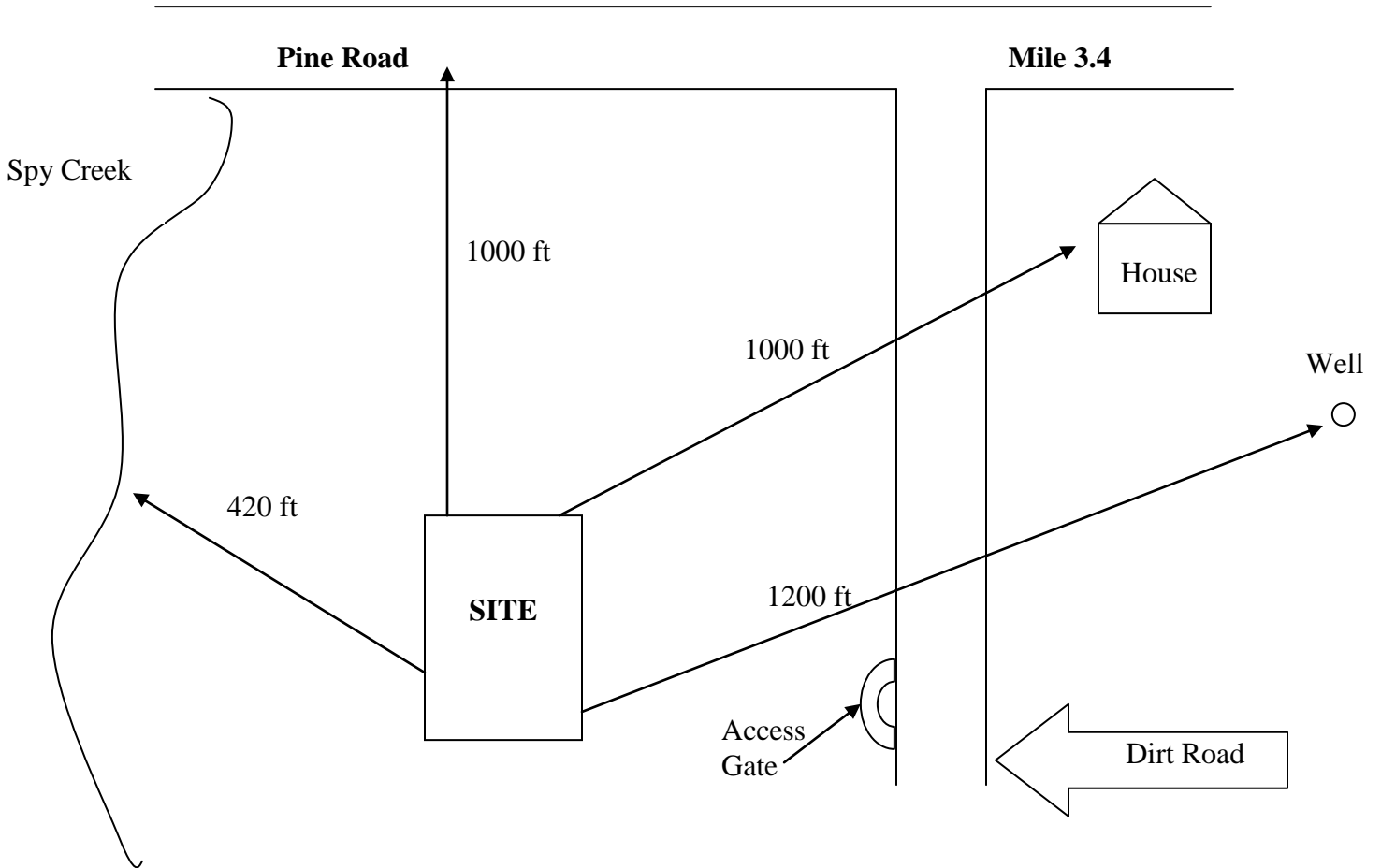
VESSEL PUMPOUT FACILITY - is a facility designed to receive wastes from marine sanitation devices, as defined in 23-2-522(3)(a), MCA.

Sample Maps

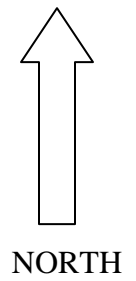


Approximate land application site boundary

Sample Maps



APPLICATION SITE – Pasture Land
Property Slopes 4% to the east
(SW/4 Section 18, T26, R22W)





HOW TO DETERMINE SLOPES

Why Measuring Slopes Is Important?

ARM 17.50.809(5): Topographical slopes on fields must be taken into account when a person is selecting land application areas. A person may not apply pumpings where ponding or runoff of septage is likely to occur.

ARM 17.50.809(6): A person may not apply pumpings to land with slopes greater than 6%.

ARM 17.50.809(7): A person may not apply pumpings to land through subsurface injection on slopes greater than 12%.

ARM 17.50.810(3):...a person may apply pumpings to frozen or snow covered ground only if: (a) sites or fields used have a slope of less than or equal to 3%;

The Basics of Slopes

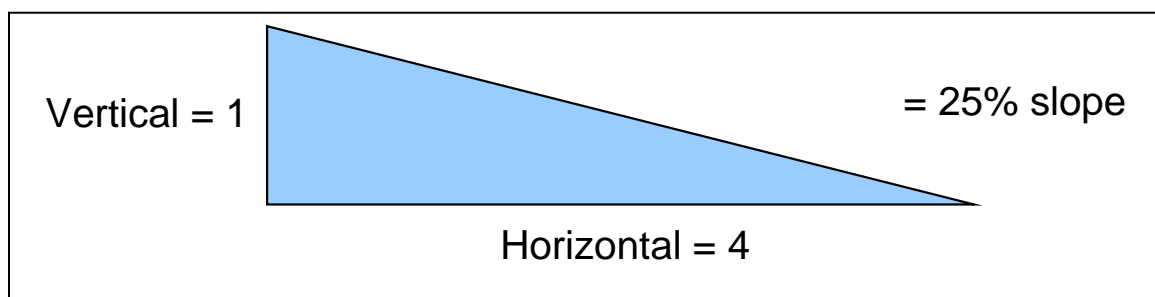
Slope describes how much a surface varies from horizontal. Slopes are typically expressed in three ways:

Degrees (i.e. 2.25°)

Ratio (i.e. 20:1)

Percent (5%)

All of the values above are equal slopes. Percent slope is used by the rules, so that is how it will be explained through out the appendix. Percent slopes are calculated by dividing the Vertical Change by the Horizontal Change and then multiply by 100. A simple way to understand percent slope: It is the amount of vertical change over a distance of 100 feet. The example below indicates the vertical is 1 and the horizontal is 4.
 $1 \div 4 \times 100 = 25\%$

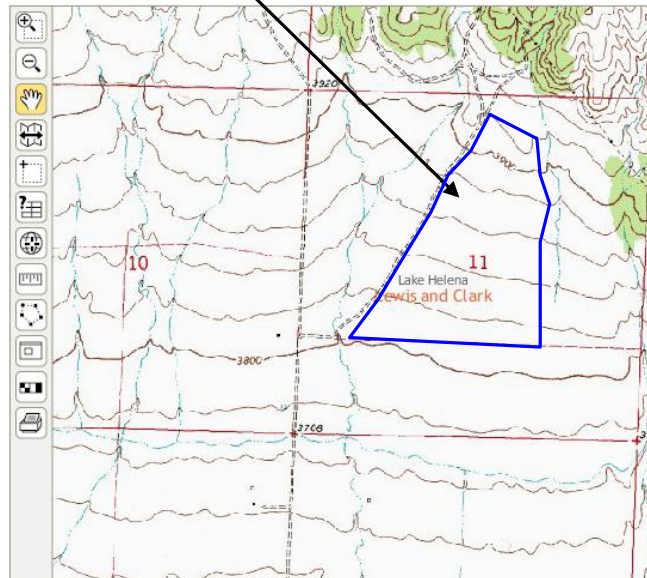


Measuring Slopes on a Topographic Map

Slopes can be determined by reviewing a topographic map of the area in question. A topographic map shows elevation by using lines of equal elevation called “contours.” Montana maps are available online:

<http://nris.mt.gov/topofinder2/default.asp>

What are the slopes at this site?



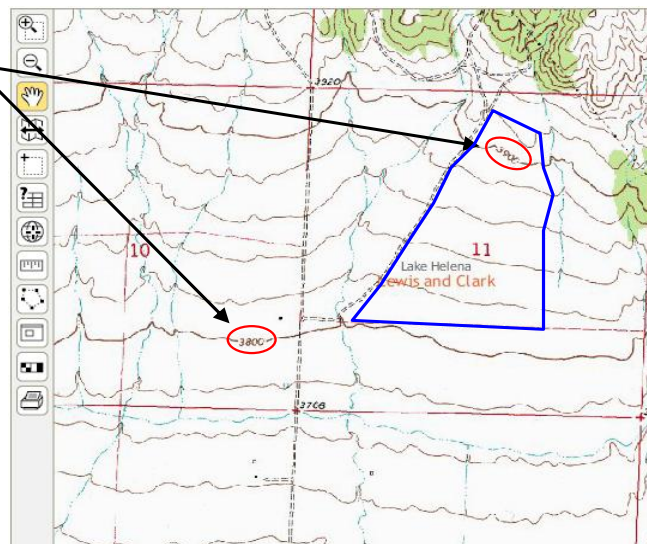
First, determine the interval of the contours:

Every fifth contour is an index contour and the index contours are labeled.

From this we can calculate the interval of the contours:

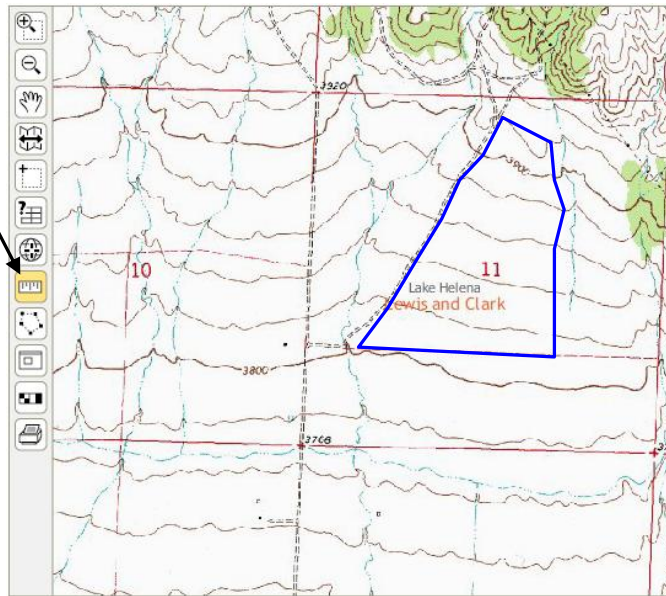
$$3900\text{ft} - 3800\text{ft} = 100\text{ft}$$
$$100\text{ft} / 5 = 20\text{ft}$$

So, the interval between each pair of contours represents 20 feet of elevation change.



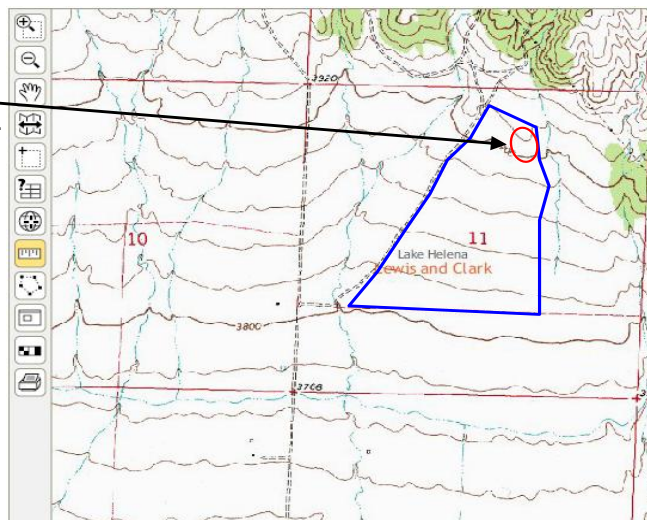
Next, measure the distance between the contours:

Topofinder II has a built in measurement tool.



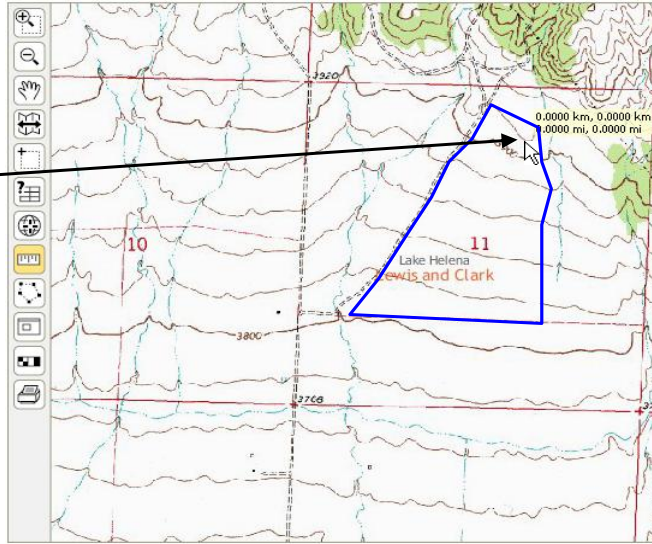
Topofinder II has a built in measurement tool.

The steepest slopes are where the contours are closer together.

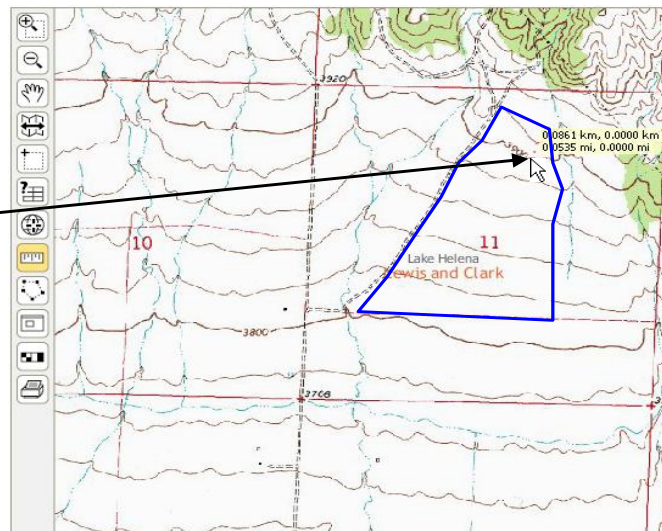


7

Click on one contour...



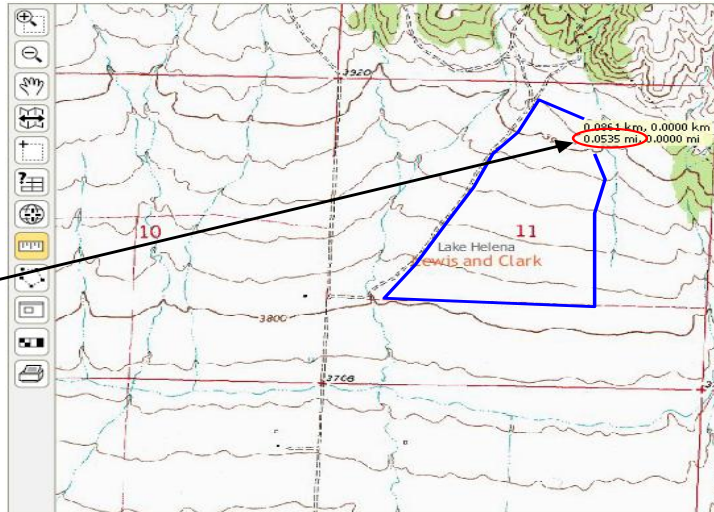
Then move to the next contour



The distance is displayed in miles, to convert to feet:

$$0.0535\text{mi} \times 5280\text{ft}/\text{mi} = 282.5\text{ft}$$

So, the contour lines are 282.5 feet apart.



Now calculate the slope:

The vertical difference is 20ft.

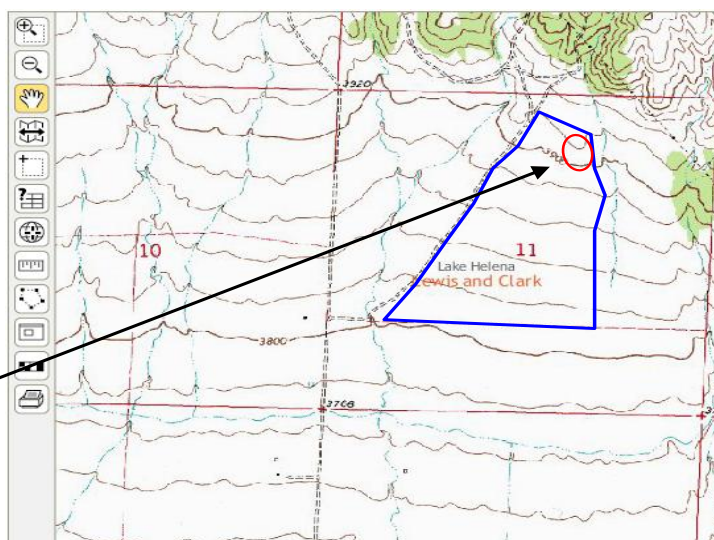
The horizontal distance is 282.5ft.

Percent slope is:

Vertical / Horizontal x 100

$$20\text{ft} / 282.5\text{ft} \times 100 = 7.1\%$$

So the slope in this area is too steep for land application, unless subsurface injection is used.



Repeat the procedure for the next pair of contours:

The vertical difference is 20ft.

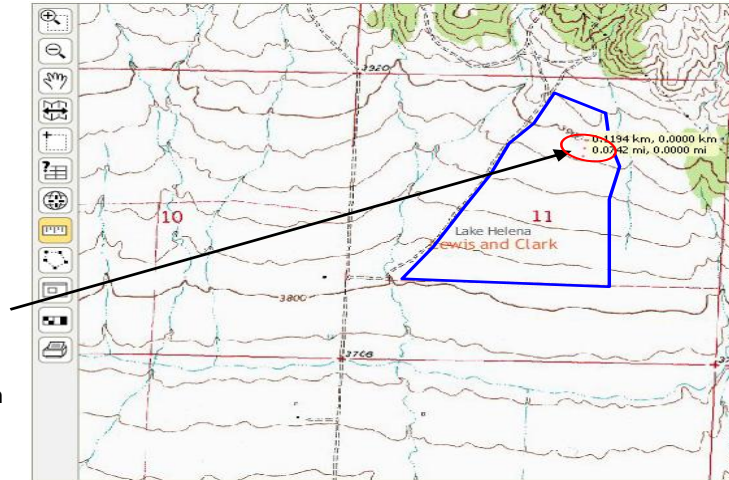
The horizontal distance is:

$$0.0742\text{mi} \times 5280\text{ft/mi} = 391.8\text{ft}$$

Percent slope is:

$$20\text{ft} / 391.8\text{ft} \times 100 = 5.1\%$$

So the slope in this area is suitable for land application when the ground is not frozen or snow covered.



This method will also work on paper maps by using a ruler, the scale printed on the map, and a calculator to determine distance.

For example, on a 1:24,000 scale map, 1 in. = 2,000ft. If the distance between two contours on the map is 3/8 in (3/8 = 0.375).

$$0.375 \times 2000\text{ft} = 750\text{ft}$$

Once you have the contour interval and the horizontal distance, you can calculate the slope, the same as done above on the on-line maps.

Most topographic maps have a contour interval of 10ft, 20ft, or 40ft. Below is a simple table for figuring out slopes.

Topographic Map Slopes Cheat Sheet					
10ft			3%	6%	12%
20ft		3%	6%	12%	
40ft	3%	6%	12%		
Feet	1333.3	666.7	333.3	166.7	83.3
Miles	0.2525	0.1263	0.0631	0.0316	0.0158

Here is an example for using the cheat sheet. The being used has a 20ft contour interval, and you want to know if the slope in an area is less than 6%. Start at the contour interval for the map of the site and follow that row over to the desired slope. Then, follow that column down to the row of the desired unit of distance that is being used for measurements. If the measured distance between contours is greater than the number in that cell, the actual slope is less than the desired slope.

Topographic Map Slopes Cheat Sheet					
10ft			3%	6%	12%
20ft		3%	6%	12%	
40ft	3%	6%	12%		
Feet	1333.3	666.7	333.3	166.7	83.3
Miles	0.2525	0.1263	0.0631	0.0316	0.0158

Measuring Slopes in the Field

Slopes can be measured directly in the field, or calculated from vertical and horizontal distance measurements. There are many methods to make these measurements, and they can be used interchangeably. Some field methods can be performed by one person, but most are easier with two. Field methods vary in complexity and in the type of equipment needed.

Direct measurements of slopes can be made with an inclinometer. Inclinometers are also known as gradiometers, abney levels, slope gauges, tilt meters, pitch indicators, etc.,

You can also use a level line or hand level for measuring vertical change and pacing, tape measure, or the distance wheel methods for measuring distance.

Field calculations of slope require two measurements: horizontal distance and vertical change. Once you have both measurements calculate as before by dividing the vertical change by the horizontal change and then multiply by 100.

$$\text{Vertical/Horizontal} \times 100 = \text{Percent Slope}$$

USING LIME TO STABLIZE SEPTAGE

The purpose of adding lime (alkali-stabilization) to septage is to treat and reduce the number of pathogens present in the septage and to reduce odors. The pH of the septage must be raised to 12.0 or greater by alkali addition, and without the addition of more alkali must remain at 12.0 or higher for 30 minutes. The high pH kills bacteria, viruses, and parasites. Odor reduction occurs because the high pH slows the biological activity and break down of the septage taking place. The reduction in odor is a benefit because it improves public acceptance of septage and also reduces its attractiveness to vectors. It is important to remember that lime treatment does not kill all of the pathogens present; therefore, site use restrictions are still required.

A side benefit of adding lime to septage is that, in some soils, it can change the soil pH. This is a benefit for farmers that have low pH soils. Farmers prefer soils that are near neutral in pH because it makes nutrients more available to their crops. The pH adjustment is dependent on many factors including soil texture, initial soil pH, etc. Monitoring the soil pH is a standard farming practice, so you can work with the farmer to see if and how much the soil pH is changing after septage is applied. Other benefits include a reduction of hydrogen sulfide gas generation and a reduction in the leachability of metals in the septage.

What Kind of Lime to Use

Hydrated lime, also know as calcium hydroxide, is an alkaline compound that can create pH levels as high as 12.4. Hydrated lime is produced by reacting quicklime with water in continuous hydrators. The end product is a fine, dry powder. Hydrated lime, as opposed to quicklime, is recommended for the alkali-stabilization of septage.

Quicklime, calcium oxide, is the product of calcining or heating limestone. Depending upon its use, quicklime can be used as pebble lime, or may be crushed or pulverized. Quicklime is reactive when mixed with water - an exothermic reaction occurs that can increase the temperature of the biological waste to 70°C (158°F). This material should NEVER be added directly to a septic tank or pumper truck. It should only be added as a hydrated lime slurry.

CAUTION: *Quicklime is more reactive than hydrated lime and it releases a lot of heat.*

IF QUICKLIME IS USED, SAFETY PRECAUTIONS MUST BE TAKEN.

Quicklime can cause bad burns if it gets onto moist skin or into your eyes. Appropriate safety precautions include the use of rubberized gloves, a respirator to exclude dust, and protective eyewear and clothing to keep moist skin from contacting the quicklime. In addition, a fire could start if a bag of quicklime gets wet and sits around. Any fire involving quicklime must be put out using a carbon dioxide [CO₂] extinguisher, not water. Water sprayed onto such a fire would only react with the quicklime and release more heat.

Agricultural lime **cannot** be used. This type of lime is produced to adjust the soil to a neutral pH of 7.0. Because of this, it does not have the strength or potency needed for lime stabilization of septage. *Do not substitute ground agricultural limestone for hydrated lime or quicklime.*

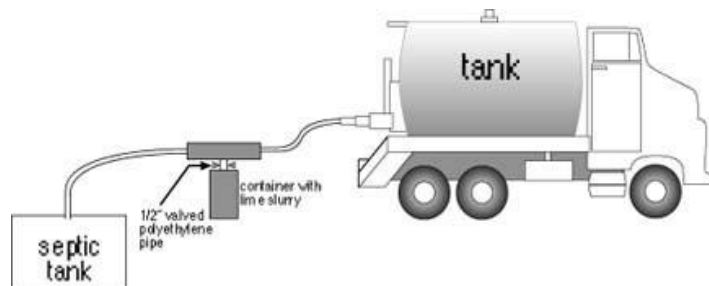
CAUTION: Both hydrated lime and quicklime are highly caustic, and care must be taken during use and storage. Lime is not hazardous or toxic, but it can be quite dusty and may be irritating to sensitive skin and the eyes. The operator should wear long sleeves, gloves, goggles, and a painter's mask or a respirator mask. Quicklime produces large amounts of heat when water is added to it.

How to Mix Lime with the Septage

Based on the size of the septic tank, approximately 50lbs of hydrated lime per 1000 gallons of domestic sewage is needed. A slight excess of lime insures stabilization and costs very little for insurance. Excess lime will not raise the pH above 12.4 @ 25°C. To insure adequate mixing of the lime and the septage, the hydrated lime must be added to the liquid septage. Domestic septage is easily treated by adding lime to the tank truck or through the suction hose. There are a number of methods to add the lime. Below are a few examples of those methods:

Example 1:

The preferred method for adding lime is provided in the diagram below. In this process, a "T" fitting is placed in the suction hose close to the tanker inlet (see diagram). The leg of the "T" is fitted with a flexible valved hose for vacuuming lime. Adequate mixing should take place during pumping as the septage and lime meet in the "T" fitting. Lime can be vacuumed dry from a 50# bag, or if one prefers, a 55-gallon drum can be utilized to mix water and lime to produce a slurry.



From: "Septage Management in Ohio", Bulletin 854, Part 1, The Ohio State University Extension

Example 2:

A valve or cap on the lime hose is desirable so one can close this line after the lime is fed. When pumping a septic tank, the pump is started and the hose is submerged into the tank, as normal. As the septage is being evacuated, the flexible valved hose is inserted into a 50lb bag of hydrated lime or the barrel of the lime slurry. The lime is then vacuumed into the small hose, flowing to the large septage hose where it will be mixed and deposited in the tanker.

Example 3:

Dry hydrated lime should be added to the truck tank only after the truck is at least partially full. Lime/water slurries may be sucked onto the truck prior to leaving for the worksite, but some additional lime or slurry should be carried on the truck to make sure the pH is properly adjusted.

Example 4:

The last way of mixing the hydrated lime with the septage is by adding it directly to the septic tank. The septic tank is first opened and 200 gallons or so is pumped. The hydrated lime is then dumped into the septic tank. The septage in the tank is then pumped into the tank truck where it automatically mixes the lime with the liquids and solids. However, the pumper must use care to insure that the liquid level of the septic tank is **below** the field line outlet prior to adding the lime so that the field lines are not contaminated with hydrated lime.

The major disadvantage of this method is that over time, the lime is so caustic that it can cause the baffles within the septic tank to fall off and deteriorate the tank, and, if this method is used repeatedly, a lime residue can build up in the tank that affects the pH, and impairs the efficiency of digestion in the tank. This method is not recommended by the Department.

pH Monitoring

Regardless of the alkali-stabilization method chosen, the pumper must ensure that the pH of the septage/lime mixture remains at a pH of 12 or greater for a minimum of 30 minutes. As stated above, the high pH levels destroy the cell membranes of harmful pathogens. To be effective, the pH must be maintained for a minimum of 30 minutes to discourage the regrowth of these harmful pathogens.

THE pH OF THE DOMESTIC SEPTAGE MUST REMAIN AT 12 OR HIGHER FOR AT LEAST 30 MINUTES AFTER THE ALKALINE MATERIAL IS ADDED.

Sampling and Testing to Determine the pH Of Domestic Septage

You should not automatically assume that the lime or other alkaline material you have added and the method of mixing chosen will adequately increase the pH of the domestic septage. The pH must be tested. A representative sample should be taken from the body of the truckload or tank of domestic septage for testing. For example, a sampling container could be attached to a rod or board and dipped into the septage through the hatch on top of the truck or tank or through a sampling port. Alternatively, a sample could be taken from the rear discharge valve at the bottom of the truck's tank. However, if the lime has settled to the bottom of the tank and has not been properly mixed with the septage, the sample will not be representative.

Two separate samples should be taken 30 minutes apart, and both of the samples must test at pH 12 or greater. If the pH is not at 12 or greater for a full 30 minutes, additional lime can be added and mixed with the septage. However, after mixing in the additional lime, the septage must be at 12 or greater for a full 30 minutes in order to meet the pH requirements.

The pH of the domestic septage sample can be tested using either a pH meter or pH-sensitive colored paper (litmus paper). If a meter is used, follow the manufacturer's directions for calibration and use. Sources for pH meters are included in this manual. Using litmus paper is an easy way to measure pH, but the litmus paper must be sensitive enough to work. You should use litmus paper with a pH range between 10 and 14 that has a sensitivity that can measure changes in pH at 0.1 increments. For example, the litmus paper must be sensitive enough to be able to

show the difference between a pH of 11.9 and 12.0 or it should not be used. You must request this sensitivity when ordering the paper.

Safety

Check the manufacture requirements for the product being used. Follow all safety precautions when working with lime. Protection of the eyes, lungs, and skin is very important. Safety equipment needed:

1. Wear long sleeves
2. Gloves
3. Safety Goggles
4. A painter's mask or a respirator mask.
5. Carbon dioxide fire extinguisher

Reporting Requirements

Document the pH level taken for each load being disposed at your land application site on the appropriate disposal form.

For additional questions about lime stabilization, contact the Montana Department of Environmental Quality, Solid Waste Program at (406)444-5300.

pH Indicator Paper and Meter Sources

Brands of pH meters include Oakton, Fischer and Corning. Suitable meters cost between \$50 - \$150 depending on features. Litmus indicator paper is a much cheaper method of monitoring pH: a 50-foot roll of pH paper costs under \$15. Below are listed a few companies you can order from:

Hach Company

P.O. Box 389
Loveland, Colorado 80539-0389
Phone: 800-227-4224
Fax: 970-669-2932
<http://www.hach.com>

Fischer Scientific

2000 Park Lane Drive
Pittsburgh, PA 15275
Phone: 800-766-7000
Fax: 800-926-1166
<http://www.fishersci.com>

Lab Safety Supply

PO Box 1368
Janesville, WI 53547-1368
Phone: 800-356-0783
Fax: 800-543-9910
<http://www.labsafety.com>

Thomas Scientific

PO Box 99
Swedesboro, NJ 08085
Phone: 800-345-2100
Fax: 800-345-5232
<http://www.thomassci.com>

Sump Waste Testing & Analytical Laboratories

If sump owner cannot provide a statement of knowledge of the sump waste material, the pumpings must be tested for:

VOCs - a test method capable of detecting and quantifying at least one part per billion VOCs in the waste.

Petroleum hydrocarbons - a test method capable of detecting at least one part per million hydrocarbons.

Total chromium, lead, zinc, and cadmium - a test method capable of detecting and quantifying at least one part per million of each element.

Additional Testing - facilities receiving sump waste may require additional testing before accepting the waste.

Below is a list of Montana laboratories:

**Energy & Environmental
Measurement Corp.**
1744 Mallowney Lane
Billings, MT 59101
Ed Wadington
(406) 252-4450

Energy Laboratories, Inc.
P.O. Box 30916
Billings, MT 59107
John Standish
(406) 252-6325

Energy Laboratories, Inc.
3161 E. Lyndale
Helena, MT 59601
Jon Hager
(877) 472-0711

Maxim Technologies Inc.
600 So. 25th St.
P.O. Box 30615
Billings, MT 59101
Kathleen A. Smit
(406) 248-4233

MSE Labs
P.O. Box 4078
Butte, MT 59701
Gary Wyss
(406) 494-7100

Pace Analytical Services
602 S 25th St
Billings, MT 59101
Denise Jensen
(406) 254-7226
Fax: (406) 254-1389

Examples of Spreading Devices



Examples of Screening Devices



Examples of Injection Systems



STP Web Page Link

The link to the Montana DEQ – Septic Tank Pumper Information Site is:
<http://deq.mt.gov/SolidWaste/pumpers.mcp>

The site has the following forms available for you to download:

- Application Form**
- Renewal Application Form**
- New Disposal Site Application Form**
- Operation and Maintenance Outline Form**
- Vehicle Inspection Form**
- Disposal Site Permission Slip Form**
- Disposal Record Forms**

The screenshot shows a web browser window displaying the Montana Department of Environmental Quality (DEQ) website. The URL in the address bar is <http://deq.mt.gov/SolidWaste/pumpers.mcp>. The page header features the 'mt.gov' logo and the text 'Montana's Official State Website' and 'DEPARTMENT OF ENVIRONMENTAL QUALITY'. A navigation menu includes links for 'DEQ Home', 'Divisions', 'Public Interest', 'Online Services', 'Contacts', and 'Search'. A search bar contains the text 'What are you looking for?'. The main content area is titled 'Septic Tank Pumper Program' and includes a breadcrumb trail: 'Home » Solid Waste » Septic Tank Pumper Information'. Below the title, there is a paragraph describing the program and a list of links to various forms. A table at the bottom of the page lists the forms available in two formats: PDF and Microsoft Word.

Forms - PDF Format	Forms - Microsoft Word Format
Application	No Word Format Available
New Disposal Site Application	No Word Format Available
Renewal Application	No Word Format Available
Operation and Maintenance Outline	No Word Format Available
Vehicle Inspection Form	No Word Format Available
Disposal Site Permission Slip	No Word Format Available
Holding Tank Summary Log Form	Holding Tank Summary Log Form
Land Application Summary Log Form	Land Application Summary Log Form
Waste Water Treatment Summary Log Form	Waste Water Treatment Summary Log Form