LINCOLN COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH
WASTEWATER TREATMENT AND DISPOSAL SYSTEM PERMIT

Issue Date: 10/08/2025 Expiration Date: 10/07/2026 Permit#25-11669

Property Owner: Jeff Butler

Mailing Address: [redacted]

Installer: Sean McNamara License #: 221

Approved Work: (Check One) ☐ New Installation ☒ Existing System

☒ Replace Drainfield ☒ Replace Tank ☐ Extension

Describe: Installation of new elevated sand mound system for 3 Bedroom House to replace failing system.

Legal: S22, T36 N, R28 W, COS 4170, PARCEL A, ACRES 2.344

Property Address: 58386 MT HWY 37, Rexford, MT 59930 Assessment Code: 11669

DEQ COSA: E.Q.# 27-93-S57-1261 Date: 06/01/1993

Approved Design Criteria: Installation of new elevated sand mound system for 3 Bedroom House to replace failing system.

# of Bedrooms: 3 ESM: See Design 13'X52' Septic Tank Size: 1000/500

# of Laterals: 3 Length of Laterals: 44'

SYSTEM MUST INCLUDE INSTALLATION OF EFFLUENT FILTER AT SEPTIC TANK OUTLET!!

Special Instructions: Install system according to the lot layout, the Lincoln County Wastewater Treatment and Disposal Regulation, Circular DEQ-4, and COSA(If Applies). It is the installer's responsibility to ensure that all required horizontal setbacks are met. CHANGES MUST BE PRE-AUTHORIZED BY THE DEPARTMENT.

Issued By: *Robin Blumberg, RS*

NOTICE: The Department must be notified at least 3 business days (72 hours) prior to backfilling the system. Call 406-283-2442. Any system not inspected by the Department or its designated representative prior to closure is an illegal installation in violation of Lincoln County Health Board Regulation Ch. 3. Illegal installations may result in fines and/or requirements to remove or reconstruct the system.

Closure Statement:

This system is in compliance with the approved design criteria and Lincoln County's Wastewater Treatment and Disposal Regulation.

Signed: Robin Blumberg *Date:* 10/14/25

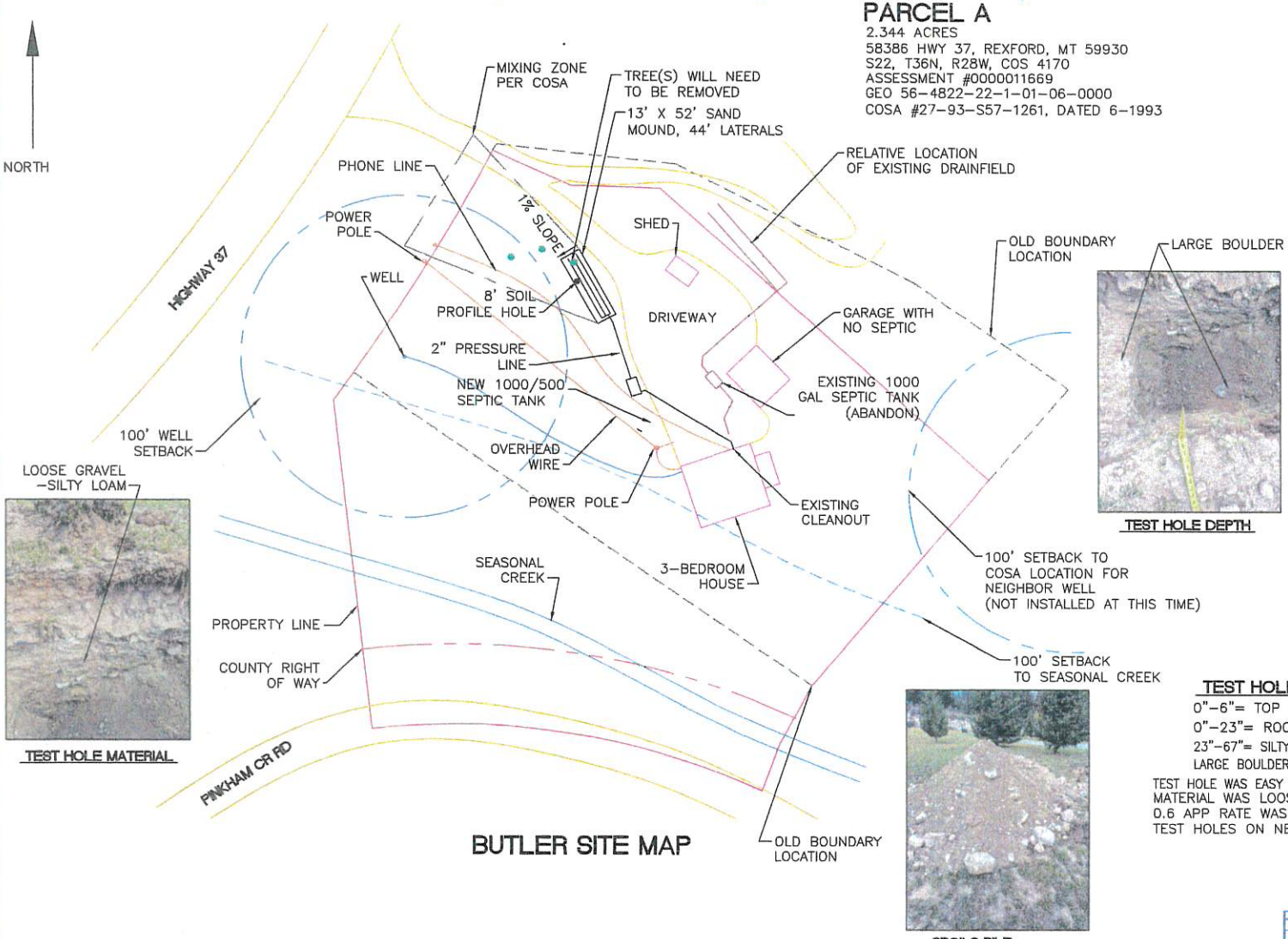
This permit is not finalized until the system is inspected and the closure statement is signed.

This permit is not a guarantee that the system will function properly for a prescribed period of time.

PARCEL A

2.344 ACRES
58386 HWY 37, REXFORD, MT 59930
S22, T36N, R28W, COS 4170
ASSESSMENT #0000011669
GEO 56-4822-22-1-01-06-0000
COSA #27-93-S57-1261, DATED 6-1993

REV	DESCRIPTION	BY/DATE	APPR'D/DATE



BUTLER SITE MAP

LOOSE GRAVEL -SILTY LOAM

TEST HOLE MATERIAL

LARGE BOULDER

TEST HOLE DEPTH

SPOILS PILE

Elevate Sand Mound Design
Permit # Butler (444)
09/23/25
Montana Design Services, Inc.
Green = Input Value | Gray = Calculated

Input Parameter	Value	Units	Notes
Soil Texture/Perc Rate	Fifty Sand/gravel		Soil horizon within 12in of surface
Design Flow Rate	500	(gpd)	MCCHD Reg(10.17)(A)
Sand Loading Rate	0.6	(gal/ft2)	Washed coarse sand 0.5, Medium 0.6 (DEQ 4.)
Basal Loading Rate	0.6	(gal/ft2)	App. rate for soil in contact with sand
Hydraulic Linear Loading Rate	7	(gal/ft)	Clays, Clay/Silt Loams = 3,4,5 | Loam, Sands = 7,8,9
Slope Percent	1.5		See Site Map
Down Slope Correction	1.03		See Table 1 (Wisc. Manual)
Up Slope Correction	0.97		See Table 1 (Wisc. Manual)
Reduction if Level II	1.00	decimal	None = 1.0 | Sands,Loams = 0.5 | Clays,Silts = 0.75

Required Mound Design	Value	Units	Notes
MIN Absorption Area	375	(ft2)	Calculated Min. (DEQ 4.,Wisc. Manual)
MIN Basal Area	700	(ft2)	Calculated, Design Flow/Basal Loading Rate
MAX Absorption Area Width	2.5	(ft)	Calculated Max. (Wisc. Manual)
MIN Absorption Area Length	42	(ft)	Calculated Min. (Wisc. Manual)
MAX Number of Laterals	3		Calculated (3' Min) (DEQ 4.,Wisc. Manual)

Proposed Mound Design	Value	Units	Notes
(L) Proposed Basal Length	56.0	(ft)	Provided by applicant
(W) Proposed Basal Width	3.0	(ft)	Provided by applicant
(D) Proposed Absorption Area Length	48.0	(ft)	Provided by applicant
(A) Proposed Absorption Area Width	2.0	(ft)	Provided by applicant
(D) Proposed Sand Fill Depth	1.0	(ft)	Provided by applicant (Min 12 inches DEQ 4.)

Minimum Checks	Min Design	Result	
Basal Sand Area	500.0	504.0	OK
Absorption Area	375.0	432.0	OK
Absorption Area Length:Width ratio	3	3.3	OK
Max Width (Wis. Manual)	5.0	3.0	OK limited from Linear Loading Rate

Calculate Mound Design	Value	Units	Notes
Additional Sand Bed Width	2.0	(ft)	Required 24inches (DEQ 4.)
(E) Mound Fill Depth	1.50	(ft)	Calculated from slope
(F) Aggregate Depth	0.75	(ft)	Minimum 9 inches (DEQ 4.)
(G) Cap Depth	0.25	(ft)	Required 6 inches (DEQ 4.)
(H) Cover Depth	1.0	(ft)	Required 12 inches (DEQ 4.)
(I) Down Slope Sand Width	5.7	(ft)	Calculated from slope (Wisc. Manual)
(J) Up Slope Sand Width	5.3	(ft)	Calculated from slope (Wisc. Manual)
(K) End Slope Sand Length	5.3	(ft)	Calculated from 3:1 rtns (DEQ 4.)

FINAL MOUND DESIGN	Value	Units	Notes
(A) Absorption Area Width	8.0	(ft)	Proposed, may not meet standards
(D) Absorption Area Length	48.0	(ft)	Proposed, may not meet standards
(I) Down Slope Sand Width	5.7	(ft)	Calculated from Proposed, may not meet standards
(J) Up Slope Sand Width	5.3	(ft)	Calculated from Proposed, may not meet standards
(K) End Slope Sand Length	5.3	(ft)	Calculated from Proposed, may not meet standards
(C) Sand Bed Width	13.0	(ft)	Calculated from Proposed, may not meet standards
(CL) Sand Bed Length	52.0	(ft)	Calculated from Proposed, may not meet standards
(L) Basal Sand Area Length	52.0	(ft)	Calculated from Proposed, may not meet standards
(W) Basal Sand Area Width	14.0	(ft)	Calculated from Proposed, may not meet standards

TEST HOLE INFO: (DUG 9-29-25)

0"-6"= TOP SOIL/DUFF 5% ROCK
0"-23"= ROOT DEPTH 5%-10% ROCK
23"-67"= SILTY LOAM, GRAVEL & ROCKS 40% ROCK 1"-12"
LARGE BOULDERS DID NOT ALLOW US TO COMPLETE HOLE TO 96"

TEST HOLE WAS EASY TO DIG TO THE 67" DEPTH-MINUS LARGE ROCKS
MATERIAL WAS LOOSE AND CRUMBLED EASILY TO DEPTH ACHIEVED
0.6 APP RATE WAS DETERMINED FOR BASAL LOADING
TEST HOLES ON NEIGHBORING PROPERTIES SHOWED 0.8 APP RATE

THIS DRAWING IS PROPERTY OF MDS UNTIL CONTRACT HAS BEEN RECEIVED BETWEEN OWNER & MDS IT CAN NOT BE SUBMITTED TO ANY OTHER PARTIES WITHOUT WRITTEN APPROVAL FROM MDS MANAGEMENT

REV	DATE	COMPANY	SCALE:	ARCHITECT / ACCEPT / CONTRACTOR	MONTANA DESIGN SERVICES, INC.
		MDS	1/16 = NOTED		BUTLER SEPTIC
		CONTRACT:	DATE:	DWG TOLERANCES:	SITE LAYOUT
		VERBAL	9/2025		9/15/25
		PLOT FILE:	WEIGHT	FINISH	S. MCNAMARA 2/20/25
		PML-0001	---		444-001 1