GALLATIN CANYON
COUNTY WATER & SEWER DISTRICT

PUBLIC MEETING AGENDA

Wednesday August 27th, 2025, 5:15

This meeting will be held at 561 Little Coyote Road, Big Sky and via zoom
https://us06web.zoom.us/j/86375934855?pwd=GJghUocgn8d4NM3mJlM77fzXj2U7bI.1
(Meeting ID: 863 7593 4855, Passcode: 888243)

I. REGULAR BOARD MEETING PUBLIC FORUM (STARTING AT 5:15 PM)

A. Call to Order/start recording
B. Revise July 25th and 30th Meeting Minutes- *Action*
C. Public comment on relevant non-agenda items – *Discuss*
D. Disclosure of Conflict of Interest on any agenda items - *Discuss*

II. New Business

A. Board member updates, correspondence, and small expenditures – *Discuss*
B. Subcommittee and other Sewer Project Updates – *Discuss*
C. Phase 1 Discharge Permit Application Updates – *Action*
D. Contractor Insurance Requirements – *Action*
E. BSRAD and ARPA Draw Requests and Invoice Payments – *Action*
F. Work Order #08A and #09B for Grant Admin and District Admin - *Action*

III. Old Business

A. Sewer Alternative Project Delivery Applicability Resolution - *Action*
B. CMGC Contractor Procurement– *Discuss*
C. Independent Cost Estimator (ICE) Procurement – *Discuss*
D. Work Order # 11 for 90% Design - *Discuss*

IV. Next Meeting Planning

A. Date & Draft Agenda – *Discuss*

----------(break) ----------

V. WATER PRELIMINARY ENGINEERING REPORT PUBLIC FORUM (STARTING AT 6:15 PM)

A. Water PER Presentation by WGM Group – *Discuss*
B. Brief Sewer Project Status Update - *Discuss*
C. Public Comment - *Discuss*

VI. Any Other Business Which May Properly Come Before the Board – *Discuss*

VII. Adjourn

Public comment is encouraged before all non-emergency non-ministerial actions.

PUBLIC MEETING MINUTES

Friday July 25th, 2025, 10 AM

This meeting was held via Zoom only

Regular Board Meeting Public Forum

A. Call to Order/start recording

B. Appointment of board officers (President, VP, Secretary/Treasurer) – *Action*

asd

Altman moved to table this until next week when more board members are in attendance. Wilson seconded. There was no discussion. The motion passed unanimously.

C. Revise June 25th Meeting Minutes- *Action*

Altman, Wilson

D. Public comment on relevant non-agenda items – *Discuss*

None.

E. Disclosure of Conflict of Interest on any agenda items – *Discuss*

None.

I. New Business

A. Board member updates, correspondence, and small expenditures – *Discuss*

None from board members. WGM Group gave a heads up that joint communications with the task force are underway and that TEDD/TIFF coordination with the county is still ongoing.

Altman would like GRTF to help connect him to people from American Rivers that will be in town next week to talk about the project.

B. FY 26 budget – *Action*

A proposed budget was presented and discussed (see attached). Altman questioned why there was a 2024 expiration date budget item in the plan – these have been extended and don't expire until late 2025 or 2026.

Generally the project is on track to effectively spend funds before they expire.

Of note, the BSCWSD Interlocal funds have not been used to date, but some will likely be needed within the next year. This is in the BSCWSD's purview to release.

GALLATIN CANYON
COUNTY WATER & SEWER DISTRICT

PUBLIC MEETING MINUTES
Wednesday July 30th, 2025, 10 AM

This meeting was held via Zoom only

Regular Board Meeting Public Forum

A. **Call to Order/start recording**
B. **Appointment of board officers (President, VP, Secretary/Treasurer) – *Action***

Wilson moved to keep the positions the same as before (Scott President, Jon Vice President, and Joe as Treasurer. Altman seconded. There was not further discussion. The motion passed unanimously.

C. **Public comment on relevant non-agenda items – *Discuss***
D. **Disclosure of Conflict of Interest on any agenda items - *Discuss***

I. **New Business**

A. **Board member updates, correspondence, and small expenditures – *Discuss***

No. There was a special meeting last week that covered most things.

B. **Additional insurance – *Discuss***

Last week there was a vote to
Last minute changes.

Justin Mackenzie with First West (took over when Tyler Delaney retired).
Atlantic specialty insurance. Premium is renewing at the same price as last year with no gap in coverage. There is a limit of $1M protecting officers of the board.

Could go back to the carrier to try and to expand coverage limits and to see what the premium would be. Altman would like that.

Draft contracts and RFPs will be shared with Justin to ensure proper insurance requirements are required of consultants.

Insurance will change once we get to construction and owning anything.

Professional liability coverage has been discussed for preconstruction services. Shane asked what appropriate amounts would be? Tara said $1M per claim, $2M aggregate is standard and in the WGM contract, but this is likely light. But you don't want limits so high that premiums are super high or scaring away the insurance providers. Justin recommended thinking through what claims could occur. If there is a design error, what would it cost to fix it, etc.
He thinks contractors are used to seeing higher coverage limits. If we are requiring higher limits then they already have, the contractor would pass the extra premium cost off to you.
Justin does think higher limits should be explored.

WGM's limits may need to be increased. This will be evaluated further. Chad Wilson thinks they are low.

Justin mentioned there are a variety of ways to handle this. He would like to learn more about the project and contracts before advising more. He requested a working session to discuss further.

Olsen asked Johnny what sort of insurance they have at BSCWSD. He will share it, but says it is much larger since they own and operate infrastructure.

Wilson would like to see the draft contract that Shane mentioned – these will be shared with the board.

II. Old Business

A. Alternative Project Delivery Applicability, Written Findings – *Action*

See attached. Draft versions have been reviewed in the past. The written findings addressing MCA findings are ready to go. The resolution will be on the next agenda to adopt, pending BSCWSD attorney input.

Olsen moved to adopt. Wilson. No discussion. The motion passed unanimously.

B. Canyon Water PER Updates and public meeting planning – *Discuss*
Asjkdf

C. CMGC Contractor SOQ – *Action*
No action needed. The technical selection committee reviewed the 7 CMGC qualifications and 2 ICE proposals received, individually reviewed them, and then got together to short list 3 finalists for the CMGC position – they will now prepare proposal. There are two local options and 1 larger firm.

D. Independent Cost Estimator (ICE) Proposal – *Action*
Krebs was selected for ICE. It was close scoring. WGM will facilitate the next steps with Krebs. Cost will need to be finalized still.

ICE should be on board in time to advise on selection for the CMGC.

III. Any Other Business Which May Properly Come Before the Board – *Discuss*

IV. Next Meeting Planning

A. Date & Draft Agenda – *Discuss*
27th, 5:15 for regular meeting and 6:15 for the water PER.

Working session with Justin – full board discussion could be at august or September board meeting.

V. Adjourn

Wilson. Olsem. 10:31

Minutes Drafted by: Michelle Pond, WGM Group

Minutes Approved:
Signed: Scott Altman, Board President

Attested: Jessica Martin-Trulen, GCCWSD Secretary

Committee Updates
August 20, 2025

GALLATIN CANYON
COUNTY WATER & SEWER DISTRICT

Joint Committee

- Meeting held 8/19/25
  - Contractor Procurement Update
    - Provided summary of SOQ review and narrowing the contractor list down to Kiewitt, Dick Anderson and SIME.
    - Presented RFP dates (submittal due date of 8/29, interviews 9/11)
    - Discussed procedural paperwork (BSCWSD has the Written Findings and CMGC Resolution on their 8/20 board meeting agenda).
  - Funding
    - AE2S presented funding overview to initiate coordination with BSRAD. $20M proposed for Hwy 64 infrastructure, $10M for existing septic connection subsidy, and $30M for Ph.2 WRRF. Additional coordination to identify how much of the total would be grant type dollars (capital cost offset) vs. bonding capacity (debt repayment covered by rate payers).
    - $30M identified as "Other" that is covered outside the above bullets. The total represents the "gap funding" identified in the August 2024 funding package report. Primary funding mechanisms are Targeted Economic Development District (TEDD) tax increment, State Revolving Fund (SRF) Loan and new development connection fees.
    - BSRAD will likely be hesitant to put a ballot initiative in front of the voters until the County substantively supports the project (e.g. TEDD establishment).
  - Project Update
    - Geotechnical data collection completed. Slope stability evaluation pending for "pinch point". MDT meeting anticipated upon completion.
    - Additional field data was collected to supplement MBMG study. Specifically subsurface characterization for the area between the Quarry drainfields and the alluvial aquifer. Refined fate and transport analysis to be submitted to DEQ in late August or early September.

Engineering & Permitting Committee

- Engineering:
  - 60% Plan Set and Specs complete and available via SharePoint link.
  - Quarry reuse and collection main alignments – WGM is coordinating with Genesis Engineering to identify sleeves to facilitate cost effective connection to future District mains.
  - Easement coordination to be initiated in September w/ objective to show preliminary easements on the 80% Plan Set in December.
    - Legal to work with Quarry to develop draft easement language as a template for other landowners.
  - "Pinch point" slope stability analysis and solutions to be coordinated with MDT in October (CMGC to participate).
- Permitting:
  - Refined fate and transport analysis is ongoing. Incorporates MBMG study findings/assumptions and recently collected field date at Quarry and Newberry drainfield sites.
  - Late August or early September submittal to DEQ.

Committee Updates
August 20, 2025

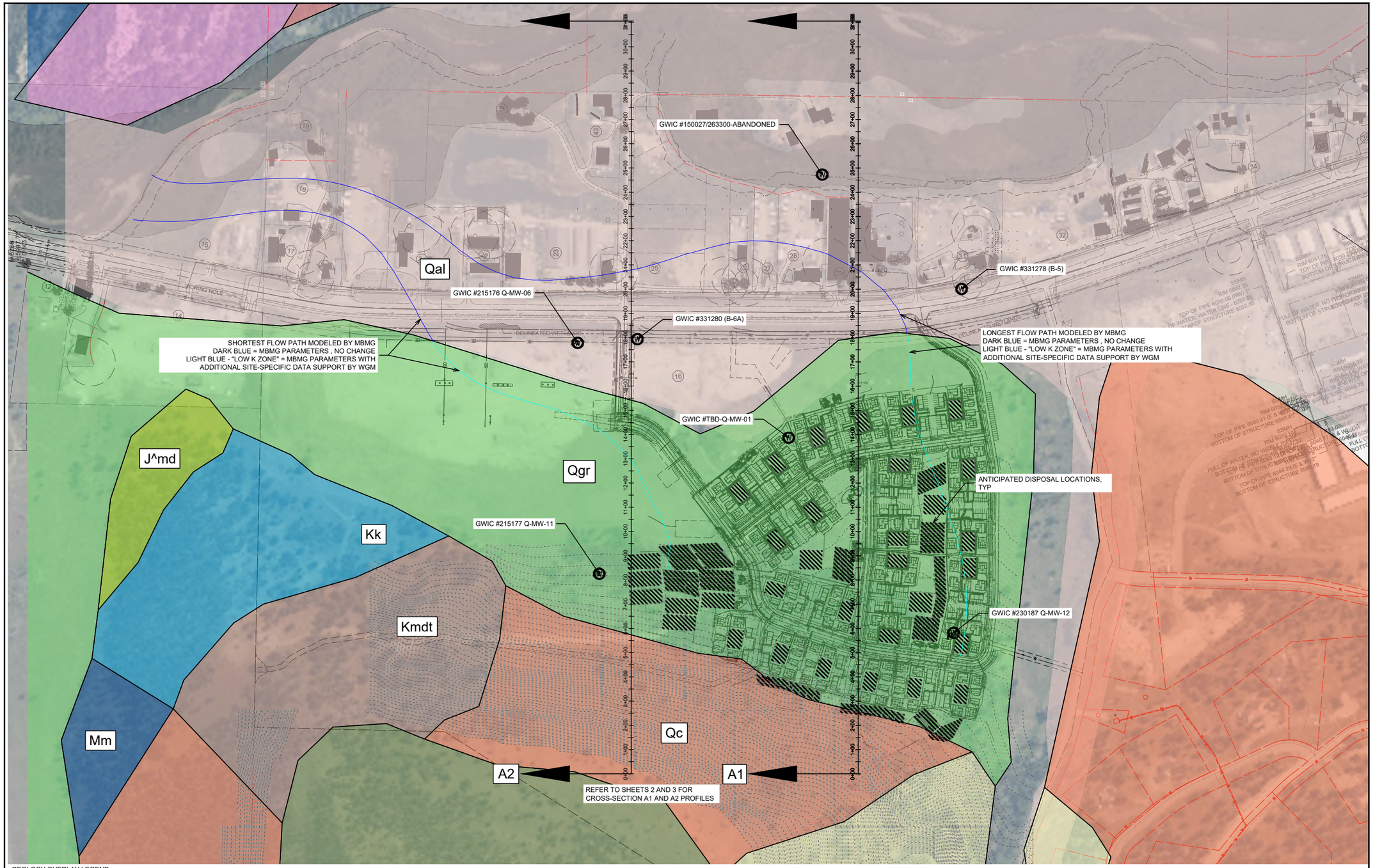
GALLATIN CANYON
COUNTY WATER & SEWER DISTRICT

Funding Committee

- Fiscal year budget aligns with utilizing grant funds before they expire.
- The $12M BSRAD pot remains untouched. May or may not be needed in 2026 depending on project pace.
- Current priority is building the case for a TEDD.
    - TEDD memo sent to Gallatin County Commissioners in April 2025.
    - Response received in August with specific bullets highlighting County hesitations and need to be "convinced".
    - Directive from Joint Committee is to advance the infrastructure deficiency report and develop a campaign strategy with key stakeholders (Task Force and Housing Trust specifically)
- Schedule meeting with BSRAD to present updated "financing stack"
- Continue to watch for grant opportunities. MCEP and RRGL grants at risk due to not being able to meet start-up conditions (firm funding commitments and financing package). Plan to resubmit upon formalizing MOU with BSCWSD.

Annexation and Outreach Committee

- Schedule meeting in early September. Include Gallatin River Task Force and Big Sky Housing Trust.
    - TEDD advocacy is near-term priority.
    - Update website Q&A to address local misconceptions.
    - Piggyback off upcoming Gallatin River Task Force led "Water Plan" communications effort
- Develop clear presentation as to why the Canyon Project is good for the Gallatin River. Specific emphasis on how groundwater discharge provides substantial "tertiary" treatment for nitrogen and phosphorous.
- Develop clear presentation on infrastructure deficiencies posing threat to environment and human health and safety (include lack of housing resulting in increased traffic and community impacts).
    - Current infrastructure deficiencies are in excess of $100M.
    - WGM infrastructure deficiency report (in progress) will provide additional detail on the capital scale and implications of not addressing deficiencies.
- Website updates:
    - Updated maps and timelines.
    - Funding / TEDD overview page
        - What is a TEDD (emphasis that it doesn't increase taxes).
        - Links to WGM deliverables
        - Links to County Commissioner presentations
    - FAQ page



GEOLOGY OVERLAY LEGEND
Kk - Kootenai Formation
Kmdt - Muddy & Thermopolis Formations
J^md - Ellis Group, Morrison, & Dinwoody Formations
Qal - Alluvium
Qc - Colluvium
Qgr - Gravel

200 0 200 400
SCALE - FEET

N

WGM GROUP
WWW.WGMGROUP.COM

PRELIMINARY
PLOTTED: 8/19/25
SAVED: 8/15/25

QUARRY SUBSURFACE PLAN OVERVIEW
U.S. HIGHWAY 191 CANYON CORRIDOR
GALLATIN COUNTY, MONTANA

REVISIONS:

NO.	DESCRIPTION	DATE

PROJECT: 22-07-24
LAYOUT: Q1
SURVEYED: WGM
DESIGN: AIH
DRAFT: AIH
APPROVE: MAM
DATE:

AUGUST 2025

SHEET 1 OF 3

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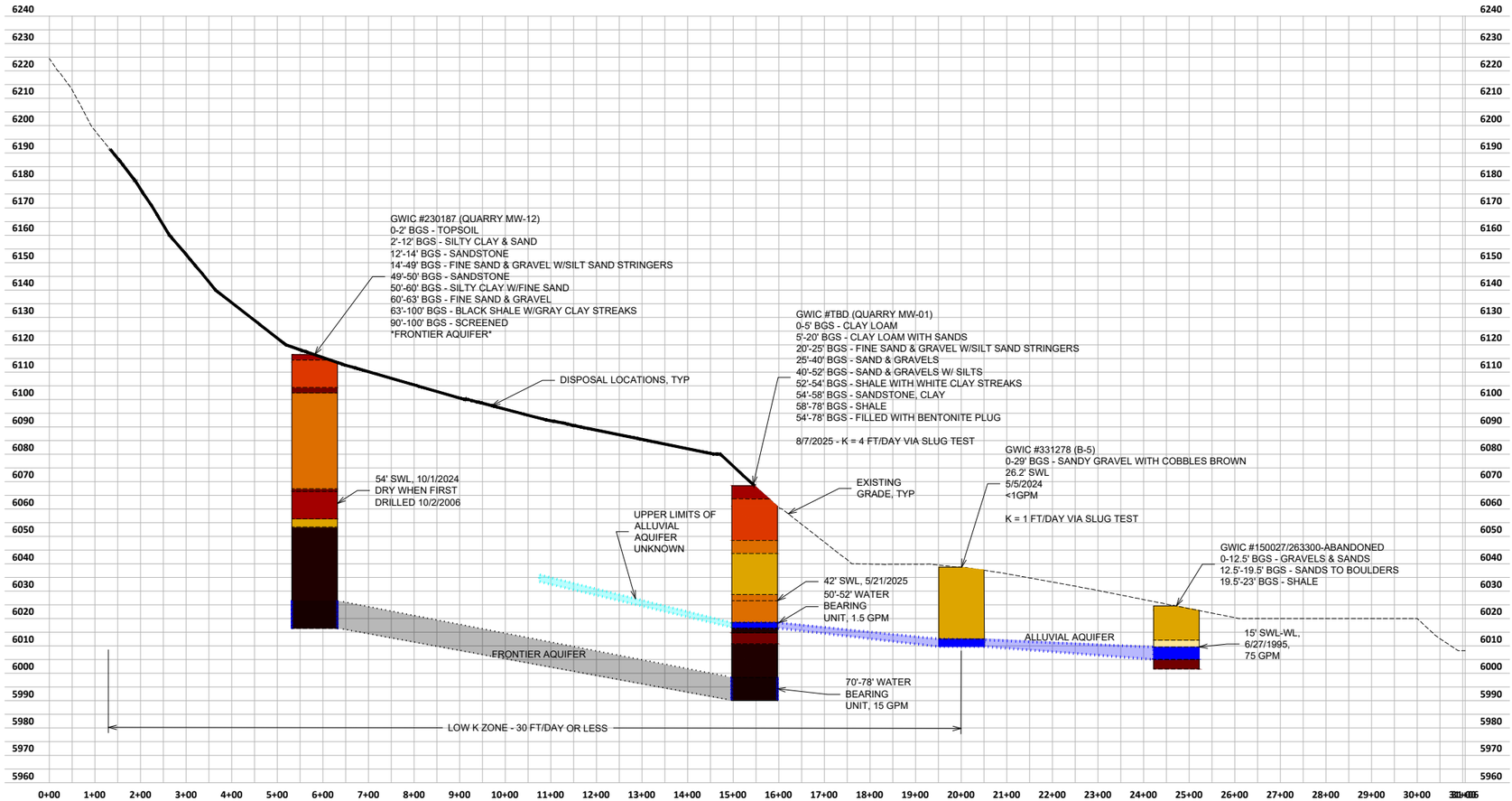

SECTION A1-A1

SCALE: HORIZ = 1"=150'; VERT = 1" = 25'

WGM GROUP
WWW.WGMGROUP.COM

PRELIMINARY

PLOTTED: 8/19/25
SAVED: 8/15/25

QUARRY SECTION A1-A1

U.S. HIGHWAY 191 CANYON CORRIDOR

GALLATIN COUNTY, MONTANA

REVISIONS:

NO.	DESCRIPTION	DATE

PROJECT: 22-07-24
LAYOUT: Q2
SURVEYED: WGM
DESIGN: AIH
DRAFT: AIH
APPROVE: MAM
DATE:

AUGUST 2025

SHEET 2 OF 3

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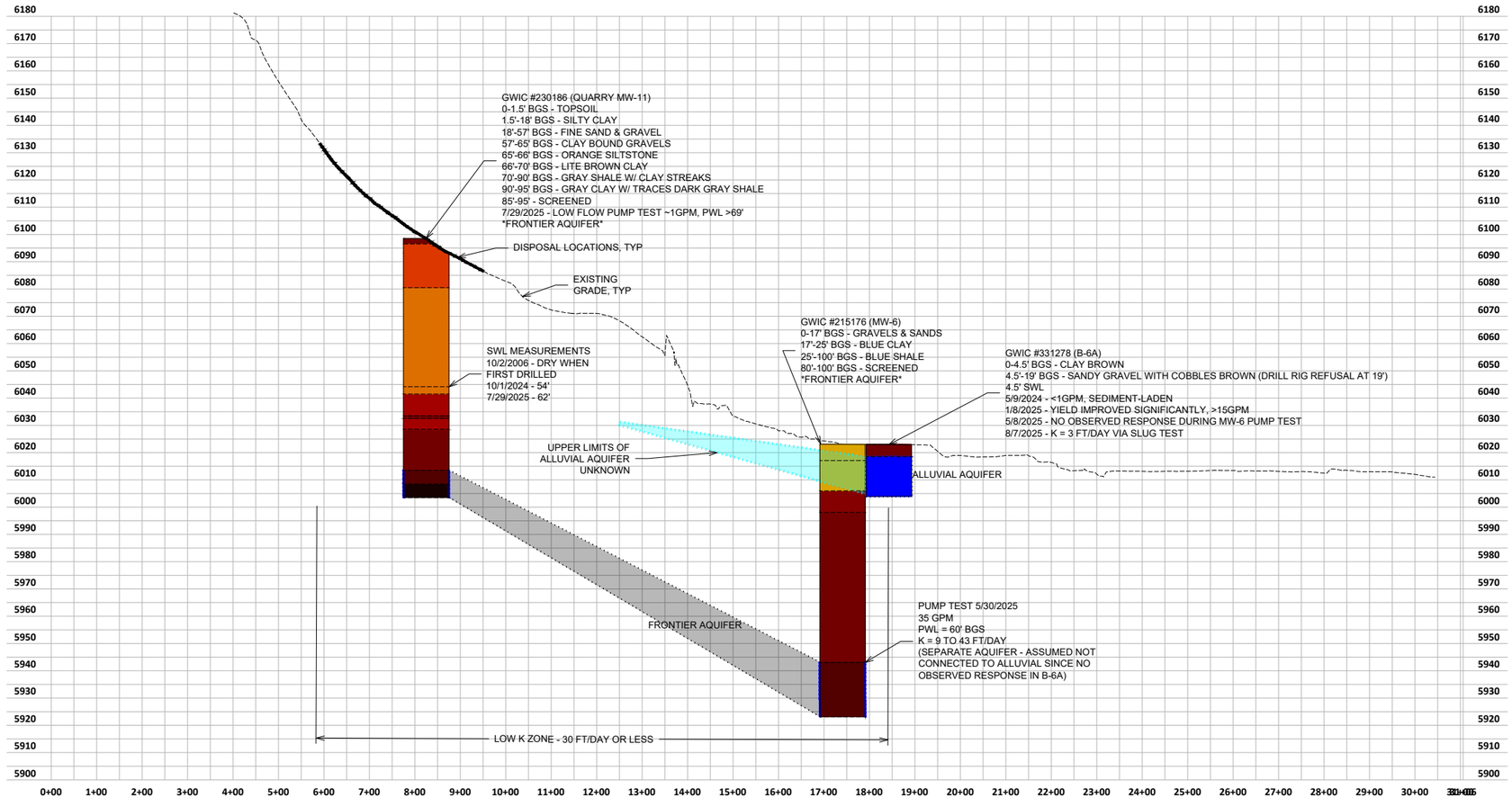


SECTION A2-A2

SCALE: HORIZ = 1"=150'; VERT = 1" = 25'

WGM GROUP
WWW.WGMGROUP.COM

PRELIMINARY

PLOTTED: 8/19/25
SAVED: 8/15/25

QUARRY SECTION A2-A2

U.S. HIGHWAY 191 CANYON CORRIDOR

GALLATIN COUNTY, MONTANA

REVISIONS:

NO.	DESCRIPTION	DATE

PROJECT: 22-07-24
LAYOUT: Q3
SURVEYED: WGM
DESIGN: AIH
DRAFT: AIH
APPROVE: MAM
DATE:

AUGUST 2025

SHEET 3 OF 3

FILE: W:\Projects\220724\20 Data\CAD\02 Exhibits\220724 SUBSURFACE.dwg

HORIZONTAL TRAVEL TIME

Project Name: New Public Sewer System for GCCWSD
Project No.: 220724
Prepared By: AIH
Checked By: MP
Date: 5/27/2025, updated 7/17/2025, updated 8/22/2025

Description: HORZ. TRAVEL TIME (HTT)

*Various scenarios of travel time in gw from below site to nearest surface water along flow path
*MBMG used a "hydraulic gradient range of 0.005-0.007 ft/ft in model setup, which also agrees with potentiometric surface map from Meredith & others (2025)"

	MBMG	WGM - orange, otherwise MBMG	WGM - calculated with MBMG's potentiometric surface	low range - gravel in alluvial	high range - gravel in alluvial							
Discharge Site	Avg. Flow Path (ft)	Avg. Hydraulic Conductivity, K (ft/day)	Gradient, I (ft/ft)	Porosity, n, low	Porosity, n, high	GWv (ft/day), low n	GWv (ft/day), high n	Htt (days), high n	Htt (days), low n			
Quarry1-terrace	1024	30	0.051	0.13	0.44	11.70	3.46	296.08	87.48	191.78		
Quarry2-alluvial*	2923	575	0.008	0.13	0.44	34.52	10.20	286.60	84.68	185.64	377.42	Q1+Q2
LJ1-terrace	1000	34	0.051	0.13	0.44	13.34	3.94	253.65	74.94	164.29		
LJ2-alluvial*	4132	988	0.008	0.13	0.44	59.26	17.51	235.99	69.72	152.85	317.15	LJ1+LJ2
Newberry	4957	454	0.009	0.13	0.44	30.56	9.03	549.00	162.21		355.60	
Ramshorn	3690	295	0.009	0.13	0.44	20.23	5.98	617.40	182.41		399.91	
School	6491	428	0.009	0.13	0.44	28.77	8.50	763.78	225.66		494.72	

*Conservative average of all the highest MBMG K values along all potential flow paths, since the terrace K values are the average of the lows or used WGM data (orange).
This calculation is most representative/realistic using MBMG derived data, some WGM site-specific data, and provides a breakdown of different terrain (alluvial & terraces).

VERTICAL TRAVEL TIME

Project Name: New Public Sewer System for GCCWSD
Project No.: 220724
Prepared By: AIH
Checked By: MP
Date: May 27, 2025
Description: VERT. TRAVEL TIME

**If the soil is unsaturated, the hydraulic conductivity (K) is not constant and may vary significantly with moisture content, requiring more complex models beyond Darcy's Law" - calcs assumed constant saturated K
*In the vertical scenario, the hydraulic head difference (delta h) over a vertical distance (l) is used to calc the hydraulic gradient
*For vertical gradient calcs, EPA's calculator was used assuming the discharge site is the "shallow well" - 4' depth to water, 1' height of water (screen) to bottom of infiltrative surface.
Nearby monitoring well was assumed to be the "deep well" - developed well parameters are conservative - SWLs are higher than level of gw first encountered during drilling (hydrostatic pressure).
*Range of porosity - use low range for potential silt/loam/clays, high range for gravel in alluvial closer to aquifer

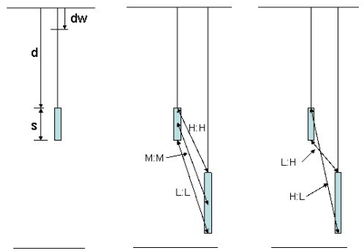
EPA Calculator: https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/vgradient02.html#:~:text=Vertical%20Gradient,-Water%20levels%20in&text=The%20change%20of%20head%20(roughly,vertical%20gradients%20between%20adjacent%20wells.

Reference: https://books.gw-project.org/hydrogeologic-properties-of-earth-materials-and-principles-of-groundwater-flow/chapter/hydraulic-gradient/

NRCS soil data: https://websoilsurvey.sc.egov.usda.gov/WssProduct/u4phbhupvrvqfd2r5wuy2irw/GN_00000/20250530_11594511158_28_Soil_Report.pdf

Discharge Site	Vertical Distance (ft) (Btm of Infiltrative surface to MW SWL)	Avg. Saturated Hydraulic Conducivitity, K (ft/day) (From NRCS - ranges from 0.2-0.57 in/hr)	Gradient, I (ft/ft) (EPA calculator)	Porosity, n, low (low range - silt in terraced area)	Porosity, n, high (high range - gravel in alluvial)	GWv (ft/day), low n	GWv (ft/day), high n	Vtt (days), high n	Vtt (days), low n	Avg. VTT (days)
Quarry	37	0.76	0.7917	0.01	0.44	60.17	1.37	27.06	0.61	13.84
LJ	42.5	0.76	0.4009	0.01	0.44	30.47	0.69	61.38	1.39	31.38
Newberry	16	0.76	0.4359	0.01	0.44	33.13	0.75	21.25	0.48	10.87
Ramshorn	7	0.76	0.5000	0.01	0.44	38.00	0.86	8.11	0.18	4.14
School	25	0.76	0.3023	0.01	0.44	22.97	0.52	47.88	1.09	24.48

Screenshots from EPA Calculator results - the H:L gradient was used in the above calculations



Definition of inputs for each well (piezometer):

- dw = depth to water
- d = depth to top of screen
- s = screen length

Assumptions concerning screen lengths:

- Distance is from top of screen to top of screen (H:H)
- Distance is from mid-point of screen to mid-point of screen (M:M)
- Distance is from bottom of screen to bottom of screen (L:L)
- Distance is from top of screen to bottom of screen (H:L)
- Distance is from bottom of screen to top of screen (L:H)

Newberry-new MW

Input Parameters

	Surface Elevation	Depth to Well Screen	Screen Length	Depth to Water
Shallow Well	100	4	1	4
Deep Well	100	28	15	21

Results

	Magnitude	Flow Direction
Low to high value (L:H)	0.4359	down
High to high value (H:H)	0.7083	down
Mid-point value (M:M)	0.5484	down
Low to low value (L:L)	0.4474	down
Low to high value (H:L)	0.7391	down

Concise version

Flow directions can be determined.

Gradient Estimate Between Piezometers (screen lengths equal to zero)

Piezoemeters	0.7083	down

Quarry-new MW

Input Parameters

	Surface Elevation	Depth to Well Screen	Screen Length	Depth to Water
Shallow Well	100	4	1	4
Deep Well	100	37	15	42

Results

	Magnitude	Flow Direction
Low to high value (L:H)	0.7917	down
High to high value (H:H)	1.000	down
Mid-point value (M:M)	0.8941	down
Low to low value (L:L)	0.8085	down
Low to high value (H:L)	1.027	down

Concise version

Flow directions can be determined. Deep well is a water table well. Only submerged length used in calculations.

Gradient Estimate Between Piezometers (screen lengths equal to zero)

Piezoemeters	1.152	down

LJ GWIC283210

Input Parameters

	Surface Elevation	Depth to Well Screen	Screen Length	Depth to Water
Shallow Well	6100	4	1	4
Deep Well	6060	50	20	6.5

Results

	Magnitude	Flow Direction
Low to high value (L:H)	0.4009	down
High to high value (H:H)	0.4942	down
Mid-point value (M:M)	0.4450	down
Low to low value (L:L)	0.4048	down
Low to high value (H:L)	0.5000	down

Concise version

Flow directions can be determined.

Gradient Estimate Between Piezometers (screen lengths equal to zero)

Piezoemeters	0.4942	down

RH GWIC220481

Input Parameters

	Surface Elevation	Depth to Well Screen	Screen Length	Depth to Water
Shallow Well	100	4	1	4
Deep Well	100	17	3	12

Results

	Magnitude	Flow Direction
Low to high value (L:H)	0.5000	down
High to high value (H:H)	0.6154	down
Mid-point value (M:M)	0.5714	down
Low to low value (L:L)	0.5333	down
Low to high value (H:L)	0.6667	down

Concise version

Flow directions can be determined.

Gradient Estimate Between Piezometers (screen lengths equal to zero)

Piezoemeters	0.6154	down

School GWIC276750

Input Parameters

	Surface Elevation	Depth to Well Screen	Screen Length	Depth to Water
Shallow Well	100	4	1	4
Deep Well	100	40	50	30

Results

	Magnitude	Flow Direction
Low to high value (L:H)	0.3023	down
High to high value (H:H)	0.7222	down
Mid-point value (M:M)	0.4298	down
Low to low value (L:L)	0.3059	down
Low to high value (H:L)	0.7429	down

Concise version

Flow directions can be determined.

Gradient Estimate Between Piezometers (screen lengths equal to zero)

Piezoemeters	0.7222	down

DENITRIFICATION

Project Name: New Public Sewer System for GCCWSD
Project No.: 220724
Prepared By: AIH
Checked By: MP
Date: 5/27/2025, updated 8/22/2025

Description: DENITRIFICATION

*Concentration reduction is from dentrification only, no dilution.

	AE2S		WGM Original Assumptions - provided for comparison			WGM-MBMG data (top calculation on the HTT tab + VTT component)		
Discharge Site	Max. Effluent TN (mg/L)	1st Order Decay - 25th percentile (1/day)	HTT (days)	Dentrified Concentration (mg/L)	% Removed	HTT + VTT(days)	Dentrified Concentration (mg/L)	% Removed
Quarry	5	0.0065	377	0.43	91%	391	0.39	92%
LJ	5	0.0065	317	0.64	87%	349	0.52	90%
Newberry	5	0.0065	356	0.50	90%	366	0.46	91%
Ramshorn	5	0.0065				404	0.36	93%
School	5	0.0065				519	0.17	97%

	AE2S		WGM Original Assumptions - provided for comparison			WGM-MBMG data (top calculation on the HTT tab + VTT component)		
Discharge Site	Avg. Effluent TN (mg/L)	1st Order Decay - 25th percentile (1/day)	HTT (days)	Dentrified Concentration (mg/L)	% Removed	HTT + VTT(days)	Dentrified Concentration (mg/L)	% Removed
Quarry	3	0.0065	377	0.26	91%	391	0.24	92%
LJ	3	0.0065	317	0.38	87%	349	0.31	90%
Newberry	3	0.0065	356	0.30	90%	366	0.28	91%
Ramshorn	3	0.0065				404	0.22	93%
School	3	0.0065				519	0.10	97%

GW DILUTION

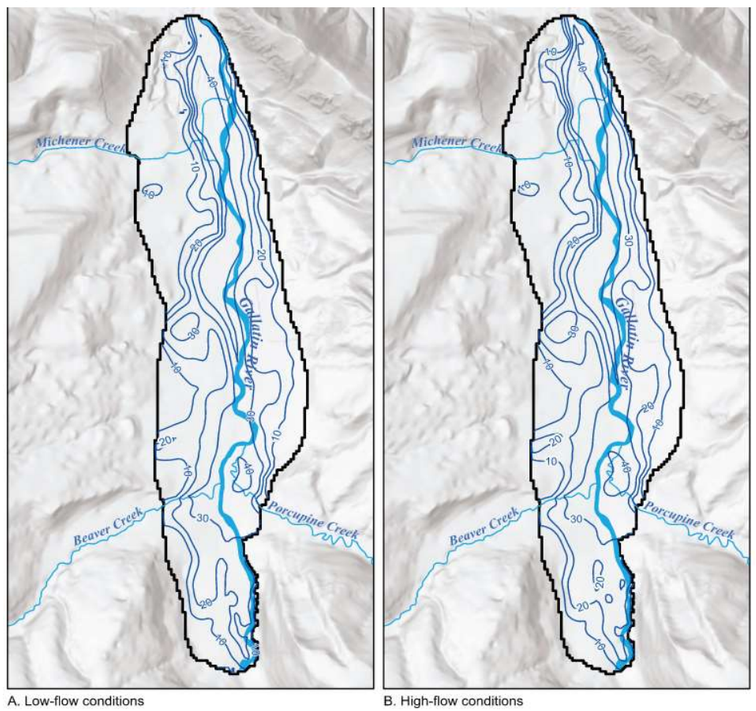
Project Name: New Public Sewer System for GCCWSD
Project No.: 220724
Prepared By: AIH
Checked By: MP
Date: May 21, 2025
Description: GW DILUTION CALCS

*Mixing zone assumptions are 5deg dispersion and 15' depth align with ARM 17.30.517

*Assumes 15' depth average - valley floor may have 40' of aquifer thickness versus 2' in Quarry terrace

	Flow Path Distance (ft) - MBMG			see dimensions on MBMG map	see trapezoidal equation assumptions	depth of gw - common mz assumption	V1	V2	V1 / (V1 + V2)
Discharge Site	Shortest	Longest	Avg	Width Perpendicular to GW Flow (ft)	Area of MZ (sf)	Avg. Depth of MZ (ft)	Vol. of GW (gal)	Vol. of Discharge (gal)	Dilution Potential
Quarry	2,964	4,793	3,879	800	3102882.06	15	348143367	100000	99.97%
LJ	3,927	6,336	5,132	520	2668449.42	15	299400025	20000	99.99%
Newberry	4,152	5,762	4,957	341	1690372.83	15	189659832	120000	99.94%
Ramshorn	2,349	5,031	3,690	902	3328331.52	15	373438796	100000	99.97%
School	5,562	7,420	6,491	331	2148620.23	15	241075190	60000	99.98%

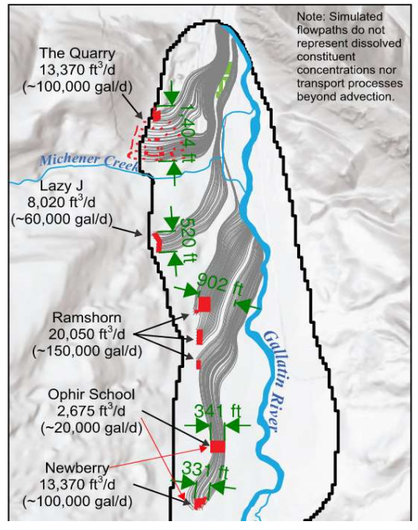
Depth of MZ / GW - Saturated Thickness:



A. Low-flow conditions

B. High-flow conditions

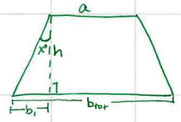
Figure 18. The simulated UGA saturated thickness for both the (A) low- and (B) high-flow conditions.



WGMGROUP
Community Values. Inspired Futures.

DATE: 5/23/25
PROJECT ID: 220724
SHEET #: OF:
TYPE OF COMPUTATION: GW Dilution
CALCULATED BY: AIH CHECKED BY:

Assuming trapezoidal flow path characteristics



a = width of site ⊥ to gw flow
h = gw flowpath length
x° = 5° dispersion, common mixing zone assumption
$b_1 \Rightarrow \tan(x^\circ) = \frac{b_1}{h}$
$b_{tot} = 2(b_1) + a$
$Area = \frac{1}{2}(a + b_{tot})h$

HYDRAULIC GRADIENT

Project Name: New Public Sewer System for GCCWSD
Project No.: 220724
Prepared By: AIH
Checked By: MP
Date: May 27, 2025

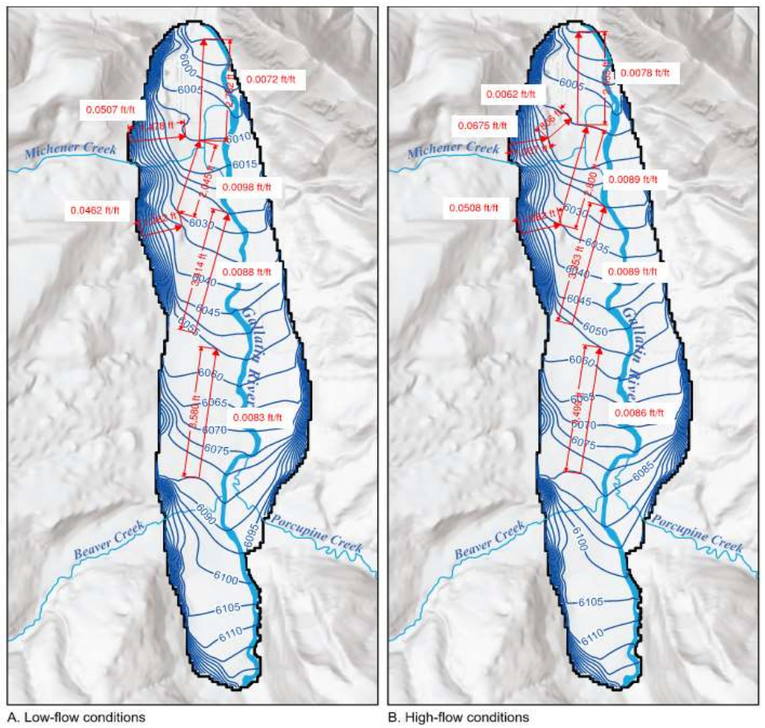
Description: HYDRAULIC GRADIENT

*MBMG used a "hydraulic gradient range of 0.005-0.007 ft/ft in model setup, which also agrees with potentiometric surface map from Meredith & others (2025)"

The above appears to be generally true for the valley center, however Quarry and Lazy J on the terraced areas result in much higher gradient, which is to be expected if gradient follows topography.

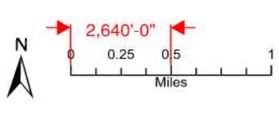
Selected (i)-low vs. high flow- is most conservative (highest) value

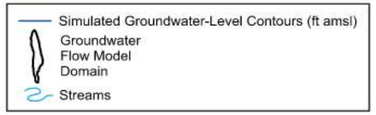
Discharge Site	Avg. Flow Path (ft)	i_1	i_1 Distance	i_2	i_2 Distance	i_3	i_3 Distance	Weighted Avg. (i) across flow path
Quarry	3,879	*0.0507*	1478	0.0078	2555			0.0235
LJ	5,132	*0.0508*	1082	0.0098	2045	0.0078	2555	0.0167
Newberry	4,957	*0.0086*	3499	*0.0089*	3353			0.0087
Ramshorn	3,690	*0.0089*	3353					0.0089
School	6,491	*0.0086*	3499	*0.0089*	3353			0.0087

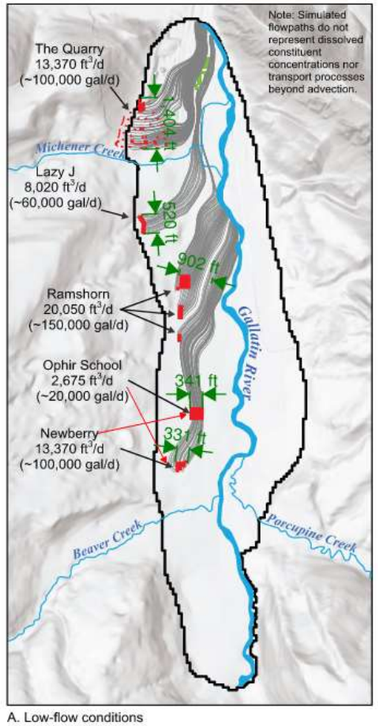


A. Low-flow conditions

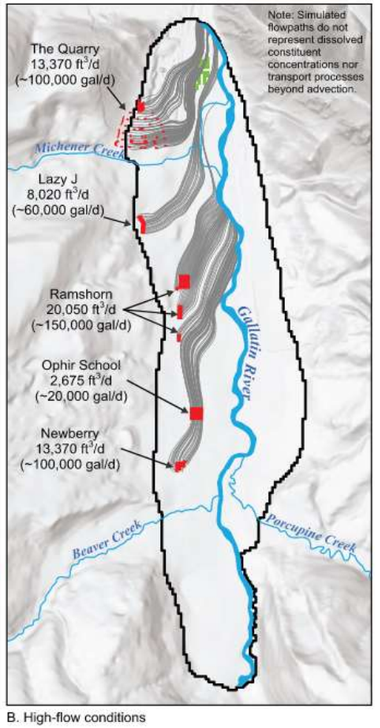
B. High-flow conditions



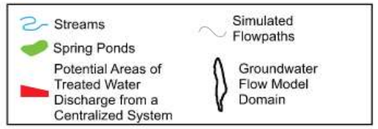


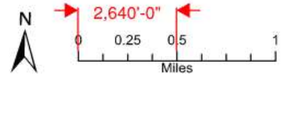


A. Low-flow conditions



B. High-flow conditions





DATA ASSESSMENT

Project Name: New Public Sewer System for GCCWSD
Project No.: 220724
Prepared By: AIH
Checked By: MP
Date: May 27, 2025

Description: Key Differences in WGM original assumptions & MBMG report/model

Groundwater Flow - WGM potentiometric surface depicts more northeasterly trend further away from the river on the west side. Reason: data gap & interpolation. Access constraints.
MBMG has many more data points on the west side and depicts more northerly trend. WGM's gw flow in close proximity to river channel matches MBMG.
Impact: WGM's original gw flow and distance to surface water assessment was more conservative with shorter flow paths.
Unknown: Quality of surveyed elevations / datum reference.
Hydraulic Conductivity - WGM's K values depicted magnitudes lower in certain areas with more site specific data and use of Modified Cooper-Jacobs equation for unconfined aquifers.
Hydraulic Gradient - WGM's higher (i) values were the result of the interpolated potentiometric contours. MBMG's model range of (i) is 0.005-0.007 ft/ft with low and high flow conditions, and is cited to match MBMG's hydrogeo study (Meredith & Others, 2025).
WGM site specific calculations / evaluation of (i) using MBMG data shows higher (i) than indicated range, across specific flow paths (but still lower than WGM original calcs).
This was done using a weighted average across the general flow path areas. Separate (i) values were calculated when flow path veered, in an attempt to keep flow path distance as perpendicular to gw contours as possible.
Impact: In combination of K & i differences, WGM's original travel time was more conservative in some areas, less conservative in others. Same with WGM's original denitrification.
Model Boundaries - WGM model boundaries incorporate more north alluvium zone (including all of Quarry discharge areas).
MBMG stimulated flow paths extend beyond WGM mapped Gallatin River alignment - actual line data from MBMG's model was used. MBMG clarified that some stimulated flow paths predicted intersection with the Gallatin outside of their model boundary.
Minor discrepancies - Figure 21 School/Newberry locations are incorrect (swapped). Discharge flows do not exactly match current assumptions.

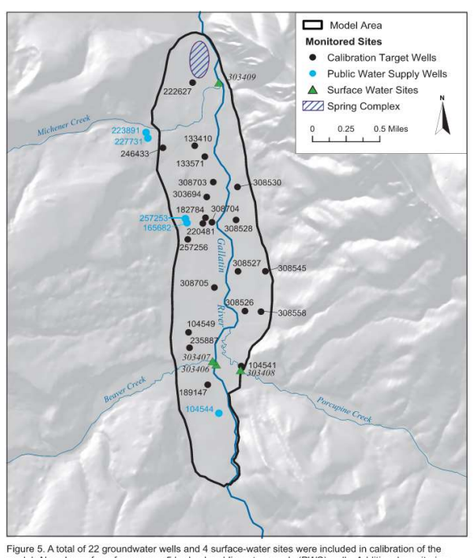


Figure 5. A total of 22 groundwater wells and 4 surface-water sites were included in calibration of the model. Also shown for reference are 5 bedrock public water supply (PWS) wells. Additional monitoring sites for the study area are included in Meredith and others (2025). East of the river is the Porcupine unit of the Gallatin Wildlife Management area.

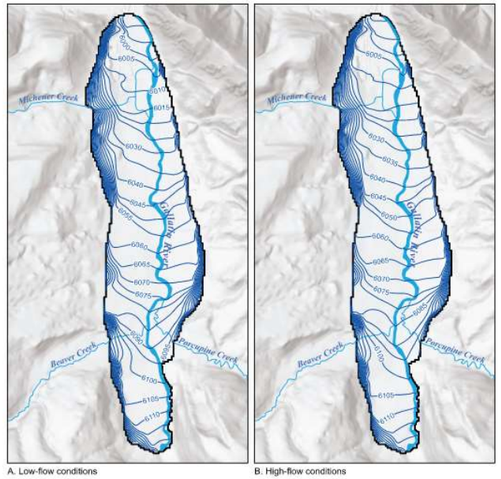
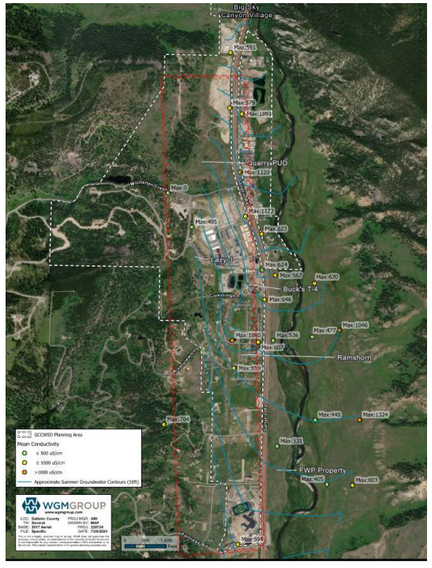


Figure 17. The simulated potentiometric surface for both the (A) low- and (B) high-flow conditions.



MBMG Model File	Proposed Discharge Site	Proposed Discharge Site	Season	Flow Path to Surface Water	Flow Path Distance (FT)	Flow Path Distance (MI)	Avg K Value along Flow Path (ft/d)	Lowest K Value along Flow Path (ft/d)	Highest K Value along Flow Path (ft/d)
Quarry	Quarry	Outfalls 1-3	Fall	Shortest	2,964.00	0.56	305.76	103.59	449.00
Quarry	Quarry	Outfalls 1-3	Fall	Longest	4,793.21	0.91	437.34	72.60	437.34
Quarry	Quarry	Outfalls 1-3	Spring	Shortest	2,964.17	0.56	305.76	103.59	449.00
Quarry	Quarry	Outfalls 1-3	Spring	Longest	4,668.52	0.88	421.49	57.64	965.93
Central Treatment	Lazy J	Outfall 4	Fall	Shortest	4117.96	0.78	491.27	10.94	970.22
Central Treatment	Lazy J	Outfall 4	Fall	Longest	6,347.60	1.20	599.08	49.13	1,000.00
Central Treatment	Lazy J	Outfall 4	Spring	Shortest	3,927.28	0.74	699.05	65.57	980.31
Central Treatment	Lazy J	Outfall 4	Spring	Longest	5,938.63	1.13	486.47	10.95	1,000.00
Baseline not used in data averages									
Baseline	Newberry	Outfall 5	Fall	Shortest	3,230.51	0.61	425.27	139.16	954.17
Central Treatment	Newberry	Outfall 5	Fall	Shortest	5,076.10	0.96	420.19	86.84	990.28
Central Treatment	Newberry	Outfall 5	Fall	Longest	5,762.04	1.09	472.97	32.33	999.99
Central Treatment	Newberry	Outfall 5	Spring	Shortest	4,152.19	0.79	453.66	93.07	1,000.00
Central Treatment	Newberry	Outfall 5	Spring	Longest	5,762.00	1.09	470.03	32.33	999.99
Central Treatment	School	1 C-P Disposal	Fall	Shortest	6,104.46	1.16	423.28	86.84	1,000.00
Central Treatment	School	1 C-P Disposal	Fall	Longest	7,420.39	1.40	440.31	32.33	999.99
Central Treatment	School	1 C-P Disposal	Spring	Shortest	5,562.23	1.05	400.51	86.84	990.28
Central Treatment	School	1 C-P Disposal	Spring	Longest	7,366.48	1.40	446.02	32.33	980.14
Central Treatment	Ramshorn	2 C-P Disposal	Fall	Shortest	3,515.44	0.67	230.20	62.85	999.98
Central Treatment	Ramshorn	2 C-P Disposal	Fall	Longest	3,623.55	0.69	255.93	67.87	999.98
Central Treatment	Ramshorn	2 C-P Disposal	Spring	Shortest	3,485.61	0.66	231.68	62.85	999.98
Central Treatment	Ramshorn	2 C-P Disposal	Spring	Longest	3,634.34	0.69	252.30	67.87	999.98
Central Treatment	Ramshorn	3 C-P Disposal	Fall	Shortest	3,025.93	0.57	247.67	109.75	503.54
Central Treatment	Ramshorn	3 C-P Disposal	Fall	Longest	3,173.98	0.60	178.17	73.75	273.47
Central Treatment	Ramshorn	3 C-P Disposal	Spring	Shortest	3,035.09	0.57	248.62	103.64	521.45
Central Treatment	Ramshorn	3 C-P Disposal	Spring	Longest	3,181.52	0.60	178.79	73.75	273.47
Central Treatment	Ramshorn	4 C-P Disposal	Fall	Shortest	2,349.07	0.44	210.46	127.59	329.09
Central Treatment	Ramshorn	4 C-P Disposal	Fall	Longest	5,030.83	0.95	707.99	36.55	999.98
Central Treatment	Ramshorn	4 C-P Disposal	Spring	Shortest	2,301.97	0.44	214.80	127.59	329.09
Central Treatment	Ramshorn	4 C-P Disposal	Spring	Longest	4,540.80	0.86	589.06	42.89	999.98

WGMGROUP

2025 GCCWSD Data Summary Report
Canyon Sewer Discharge Permitting & Design
WGM Project Number: 220724.10
08.29.2025

109 East Main – Suite B, Bozeman, MT 59715 I **OFFICE** 406.728.4611 I **EMAIL** wgm@wgmgroup.com

PREPARED FOR:
Montana Department of Environmental Quality (MDEQ)

Gallatin Canyon County Water and Sewer District (GCCWSD)

PREPARED BY:
WGM Group, Inc.

REPORT DATE:
08.29.25

HYDROLOGY TECHNICAL QA/QC REVIEW PERFORMED BY:
Bruce Anderson, Senior Hydrologist
WGM Group, Inc.

CONTENTS

APPENDICES

1.0 OVERVIEW

WGM Group, Inc. (WGM) performed several rounds of fieldwork initiated in 2023 and throughout 2025 in accordance with the draft Sampling Analysis Plan (SAP) and updated versions, for the Gallatin Canyon County Water and Sewer District (GCCWSD) master sewer project. The objective of the data collection is to provide the necessary information required to effectively model, design, and permit the proposed wastewater collection, conveyance, and treated effluent discharge facilities as well as to evaluate potential impacts associated with the installation and operation of the GCCWSD infrastructure.

WGM's fieldwork efforts in late 2024 and 2025 included monitoring well construction, aquifer tests, groundwater quality sampling, subsurface characterization including test pits, soil gradations, phosphorous sorption testing, and basin flood testing, and surface soil/vegetation characterization via double-ring infiltrometer testing. A fieldwork summary in this period of 2024-2025 for each investigation is included below with the corresponding results. An overview map with locations of all data collection sites is included in **Appendix A**.

2.0 MONITORING WELL CONSTRUCTION

Two new monitoring wells were completed by a licensed well driller at the Newberry property (NB-MW-01) and the Quarry site (Q-MW-01). The well construction was observed by WGM and was accomplished using a dual rotary drilling method. Both wells were constructed with a 4-inch diameter casing and screened to represent the first 15 ft of the shallowest, saturated aquifer.

Q-MW-01

Q-MW-01 was completed at the Quarry site, just east of the first phase of the proposed development on May 22, 2025. After hitting first water at 52 ft which with an estimated yield of 1.5-2 gpm, drilling continued to attempt to find enough flow for a standard pump test or encounter a limiting layer. The drillers continued down into shale until a clay layer isolating a second aquifer was encountered at 78 ft, producing about 15 gpm. To isolate the upper aquifer which was identified as the target alluvial aquifer for this investigation, the well was backfilled with bentonite up to 54 ft and screened across this water bearing unit.

NB-MW-01

NB-MW-01 was constructed at the northeast corner of the Newberry property, adjacent to the MDT right of way of Hwy 191 on May 24, 2025. First water was encountered at 28 ft. Drilling continued until the same clay layer immediately below the shale was encountered that was observed in Q-MW-01. Similarly the Q-MW-01, the well was backfilled with bentonite in order to isolate the first 15 ft of the shallow water unit.

Data from the construction of the monitoring wells are summarized below. Monitoring well construction field forms and GWIC well logs are included in **Appendix A**.

TABLE 1: NEW MONITORING WELL CONSTRUCTION DETAILS

Parameter	NB-MW-01	Q-MW-01
First Water Encountered (ft)	28	52
Static Water Level after Completion (ft)	21	42
Screened Interval (ft)	28 - 43	39 - 54
TOC to bottom (ft)	43	54

3.0 AQUIFER TESTS

Aquifer tests were conducted in seven wells to estimate representative aquifer parameters at the proposed discharge sites. Due to limitations with pumping equipment, existing well size, and available well yield, a combination of testing methods was used.

Two conventional pump tests, following the procedures in SOP 204, were completed at NB-MW-01 and Q-MW-6 by a licensed well driller and pump specialist. Each consisted of a 24-hour test pumping at a minimum flow rate of 35 gpm, with the intent to stress the aquifer as much as feasible.

Alternative aquifer testing methods—low-flow pump tests and added-water slug tests—were performed by WGM staff on five additional monitoring wells within or near the quarry area: Q-MW-01, Q-MW-11, Q-MW-12, B-05, and B-06. Low-flow pump tests were conducted using environmental sampling pumps since the 2-inch diameters of these monitoring well casings were a limiting factor. For each test, background static water levels were established prior to pumping, pumping continued until equilibrium was reached, and recovery was measured after shutdown. Added-water slug tests were performed by introducing water into the well to raise the water column with positive displacement, then monitoring the recovery back to equilibrium.

Background, test, and recovery water levels were recorded using In-Situ pressure transducers installed in the pumping wells. When possible, Onset HOBO data loggers were installed in the nearest available monitoring wells to observe aquifer response, if any, during testing.

The Q-MW-6 pump test was performed on May 9, 2025. The test routed discharge at least 100 ft away from the well head to established drainage areas. Q-MW-6 is a 6" diameter well extending to 100 ft below ground surface (bgs). The water level dropped below the in-well transducer immediately upon turning the pump on, however manual measurements were taken with a separate water level meter in order to interpolate the data and are shown along with the transducer data in the figures below. Data from both the 24-hour tests as well as the isolated recovery curve are shown in Figures X and X, below.

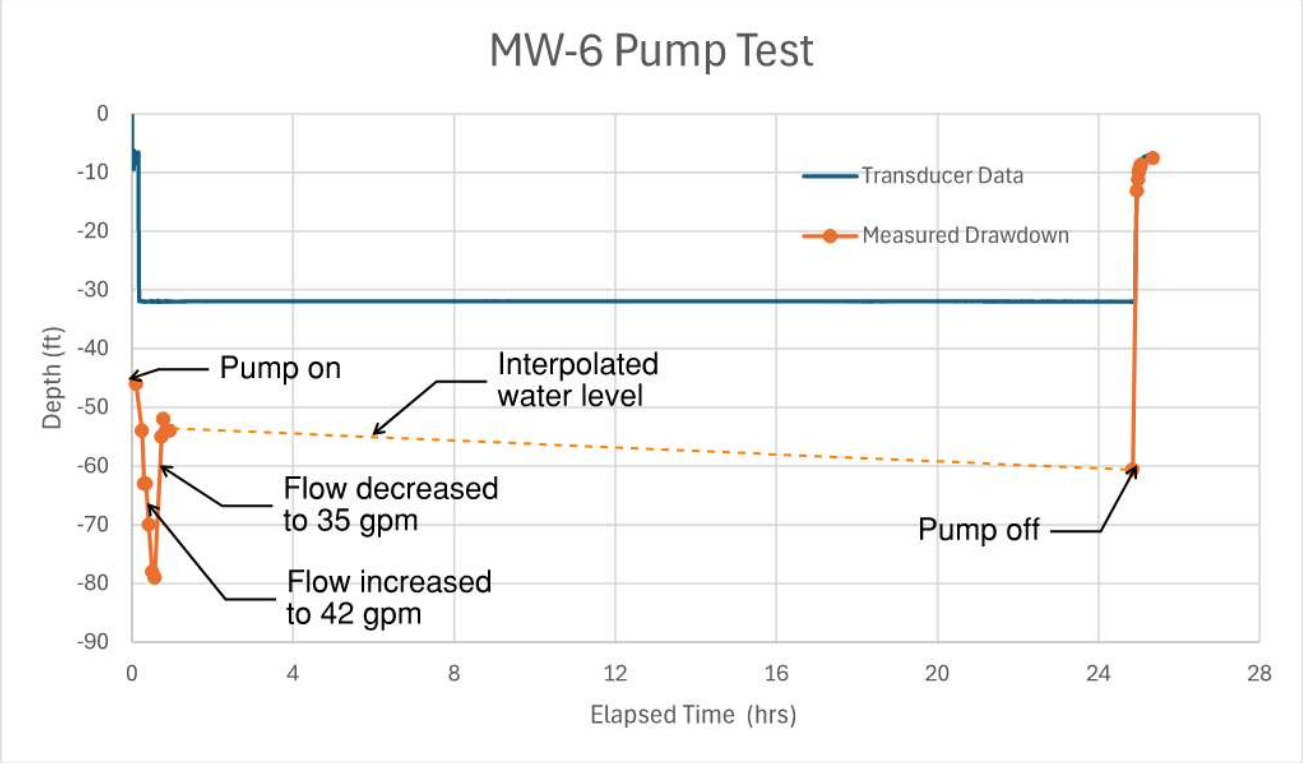


FIGURE 1: XXXX

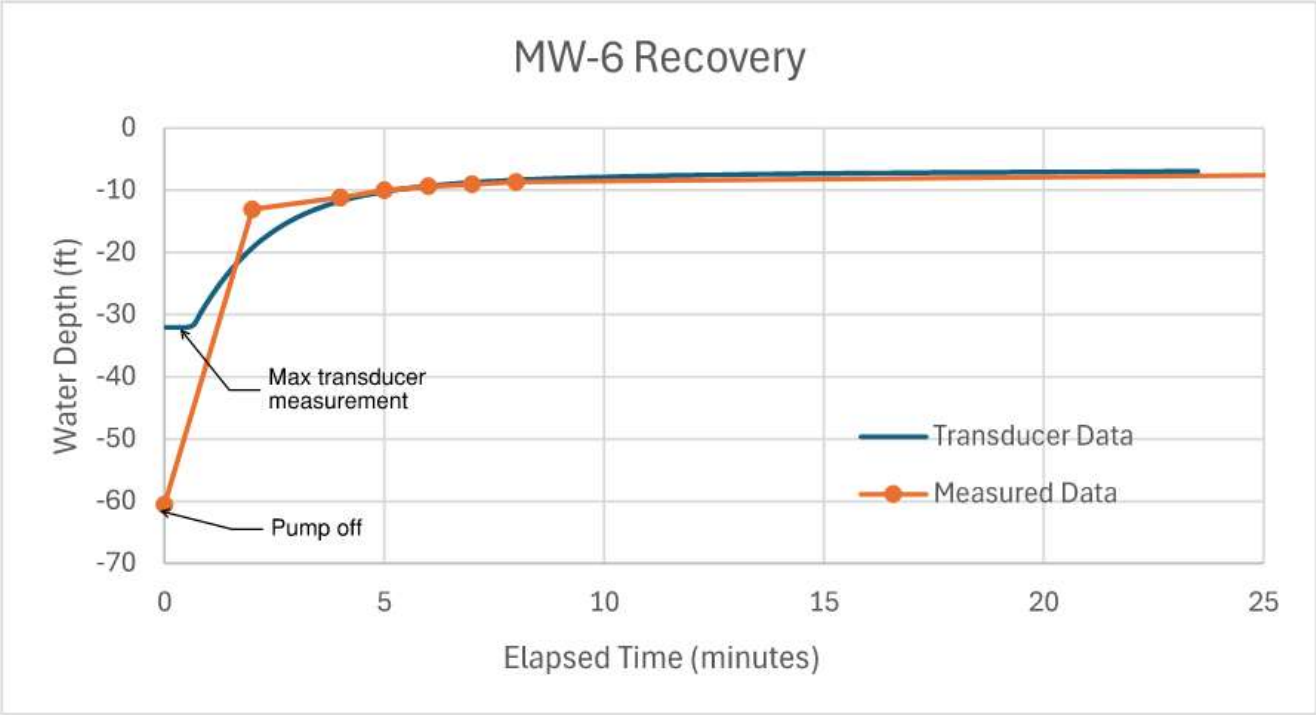


FIGURE 2: XXXX

The conventional 24-hour pump test for NB-MW-01 began on July 11, 2025, after some troubleshooting with the pump the day before. The pump test is shown in Figure X below.

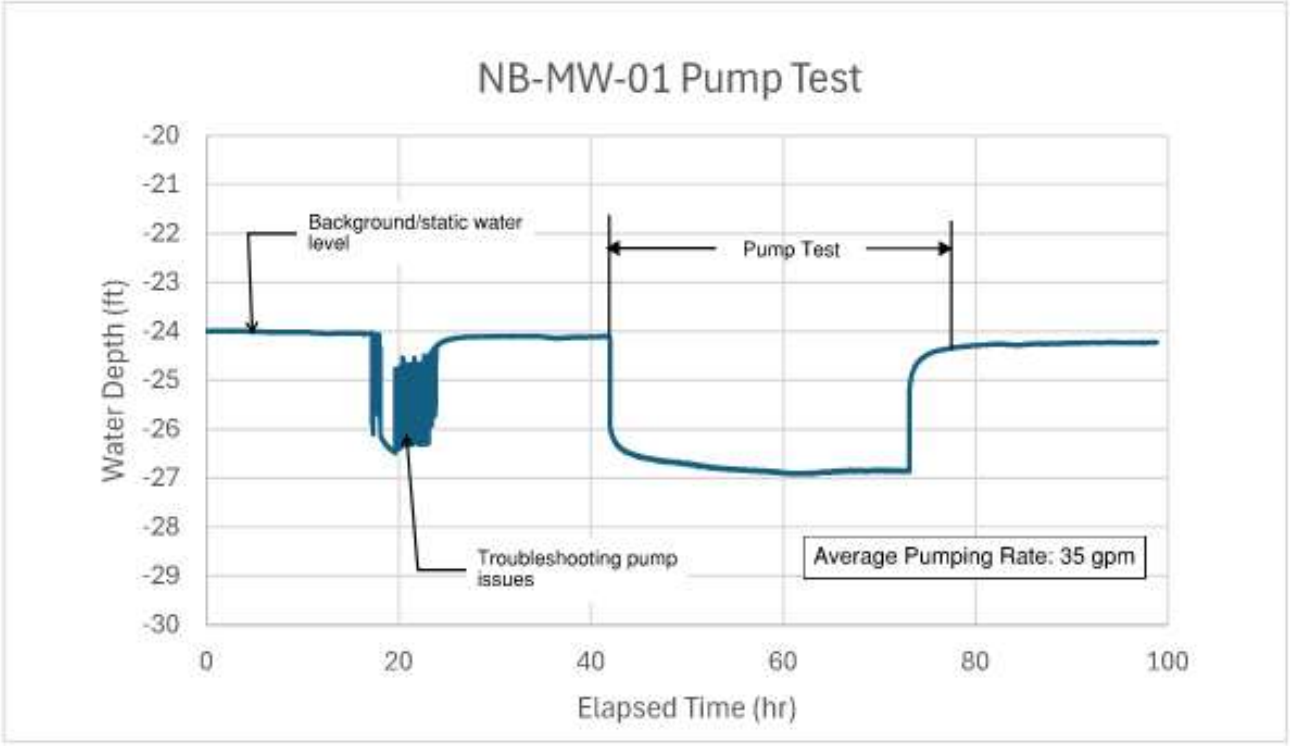


FIGURE 3: XXXX

ADD CURVES FOR:
Q-mw-01 : slug and low flow
Mw-11 : slug and low flow
Mw-12: slug and low flow
B-05: slug
B-06: slug

A low flow pump test and added water slug test were performed at Q-MW-01 on July 21, 2025. The pump was set at approximately 53 ft and yielded approximately 1.2 gpm. Two rounds of pumping were completed, each pumping for approximately 30 minutes and recovering within approximately 15 minutes. Observational data was acquired from MW-6 and B-06 and is included in the appendix.

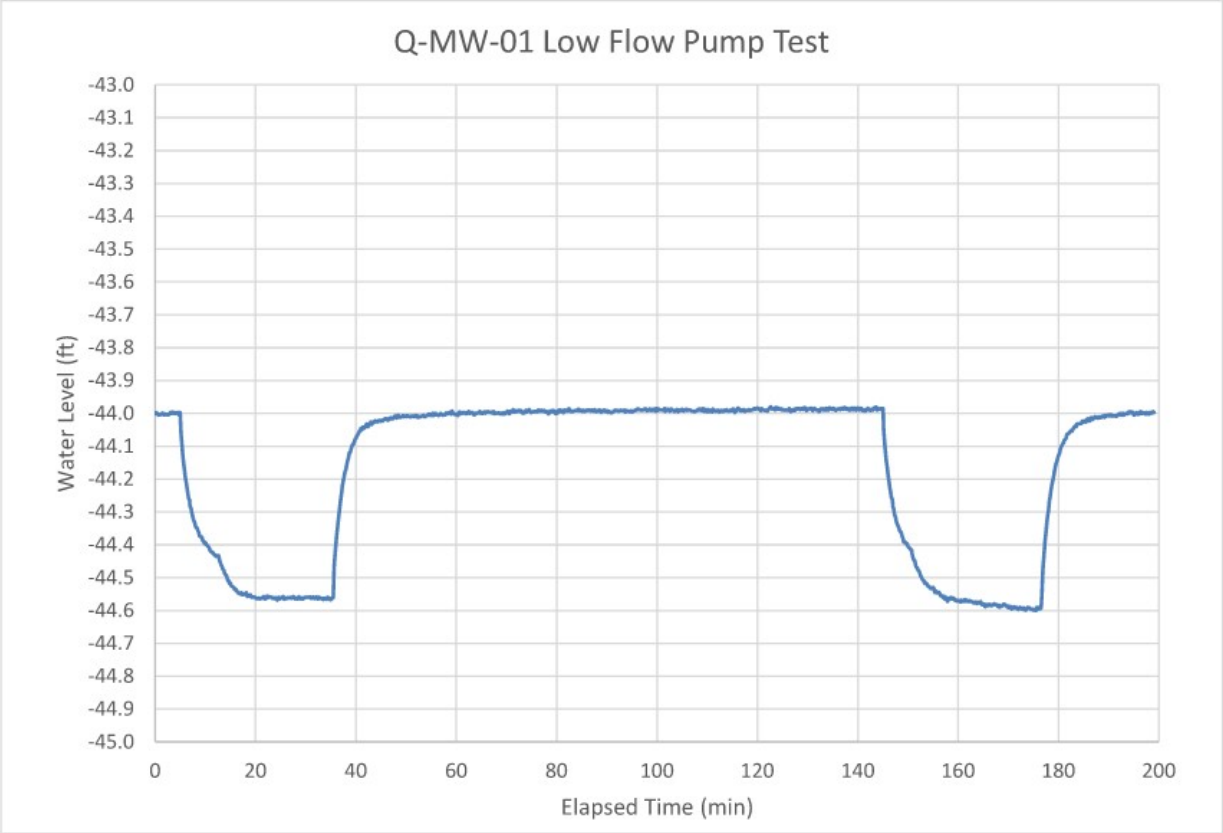


FIGURE 4: XXXX

ADDED WATER TESTS - Analyzed as slug tests with positive displacement using this USGS spreadsheet, Bouwer & Rice analysis of slug test, WRR 1976 - Version 1.2:

Before any aquifer testing, B-05 (a monitoring well installed during the 2024 Hwy 191 GCCWSD geotechnical investigation) was developed and cleaned out by a licensed well driller in attempt to address a potential clogged screen and/or excess sediment build-up in the casing.

Background data available for pumping wells and observation wells are included in Appendix B.

The slug volume used for the Q-MW-01 Added Water Slug Test 1 was initially calculated based on attempting to achieve a 5 ft water column increase in the 4" casing. However, results showed the water level raising a maximum of 7 inches. Tests 2 & 3 were conducted with increasingly large slug volumes of 5 gallons and 20 gallons, respectively. In addition the last two tests were completed using a funnel, allowing the slug to be applied much quicker than the first round. The curves for all three tests are shown in the figures below.

Q-MW-01
7/21/2025 Initial test with 3 separate trials
Trial 1 – 2.5 gallons added

Trial 2 – 3.5 gallons added
Trial 3 – 3.5 gallons added

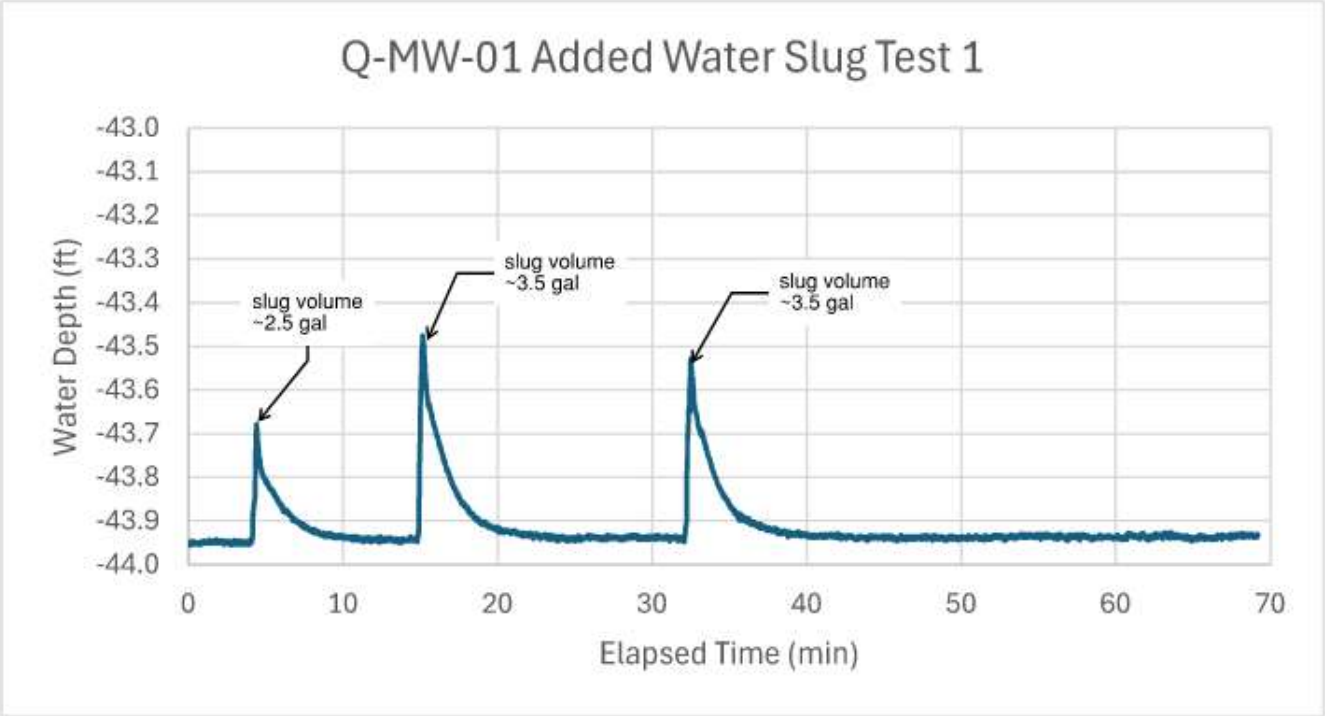


FIGURE 5: XXXX

Based on the above trends, response appears to be generally consistent.
Trial 1 & Trial 2 were further evaluated with the USGS spreadsheet. Water level data was input in the "DATA" tab, with start time 0 = the peak of displacement. On the "OUTPUT" tab, monitoring well properties were input based on well log or installation observation notes.

In these trials, **K = 3 ft/day**

However, the spreadsheet notes these both in error, stating a slug discrepancy of 168-174%, greater than the set maximum of 20%.

The 20% slug discrepancy is a default property of the spreadsheet that allows for manual adjustment. It is the maximum percent discrepancy between the slug and the observed displacement. Essentially, the model predicts that displacement should have been greater given the input volume of "poured" gallons into the well.

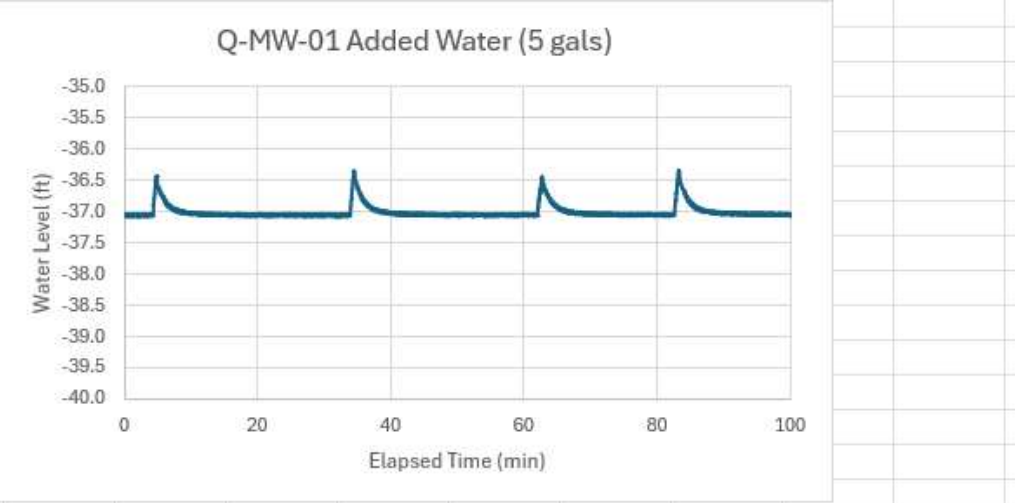
A manual input of 0.18 gallons instead of the actual input of 2.5 gallons (in Trial 1) would allow the program to recognize a consistent input where displacement = slug.

The most likely explanation for this discrepancy is that the majority of the added water rapidly seeps and disperses into the remaining screened zone & sand filter pack above the static water level (+/-5'), which is not normally saturated. Once saturated or when equilibrium is reached, the remaining added water causes the aquifer to respond and stack on top of the static water column with positive displacement. The positive displacement peak at time 0 until recovery to original static water level follows an obvious trend line with slope used to estimate the output K. Slope was manually adjusted on the "COMPUTATION" tab cell C35 until matched to majority of the plotted data points.
It is anticipated that this response is still an accurate prediction of the hydraulic conductivity in the saturated zone.

Also of note, the spreadsheet states K is less than likely minimum of 30 for Sand and Gravel Mixes. The aquifer material may more closely align with "Stream Terrace Deposit" or "Fine sand & silt" material given those range of values and the expected hydrogeologic properties in the study area. However, these were not used due to the geographic differences in location (Texas & Florida references).

Added water tests were again performed on Q-MW-01 in attempt to add even more water and observe if the slug discrepancy could be improved. Tests were also performed on B-05 and B-06 (located along the Hwy 191 corridor east of the Quarry) with this same intent.

Q-MW-01
8/07/2025 Re-test with 4 separate trials, 5 gallons added



TOC to gw = 44.2 ft
used funnel

USE TRIAL 2 IN BOUWER RICE CALCS

Adjusted SWL to account for initial reference of TOC to gw = 44.20

Trial 2 was further evaluated with the USGS spreadsheet with output of **K = 3.6 ft/day**
The same errors and explanations apply as previously mentioned. The slug discrepancy was slightly reduced to 166%.

Q-MW-01
8/07/2025 2nd Re-test with 3 separate trials, 20 gallons added

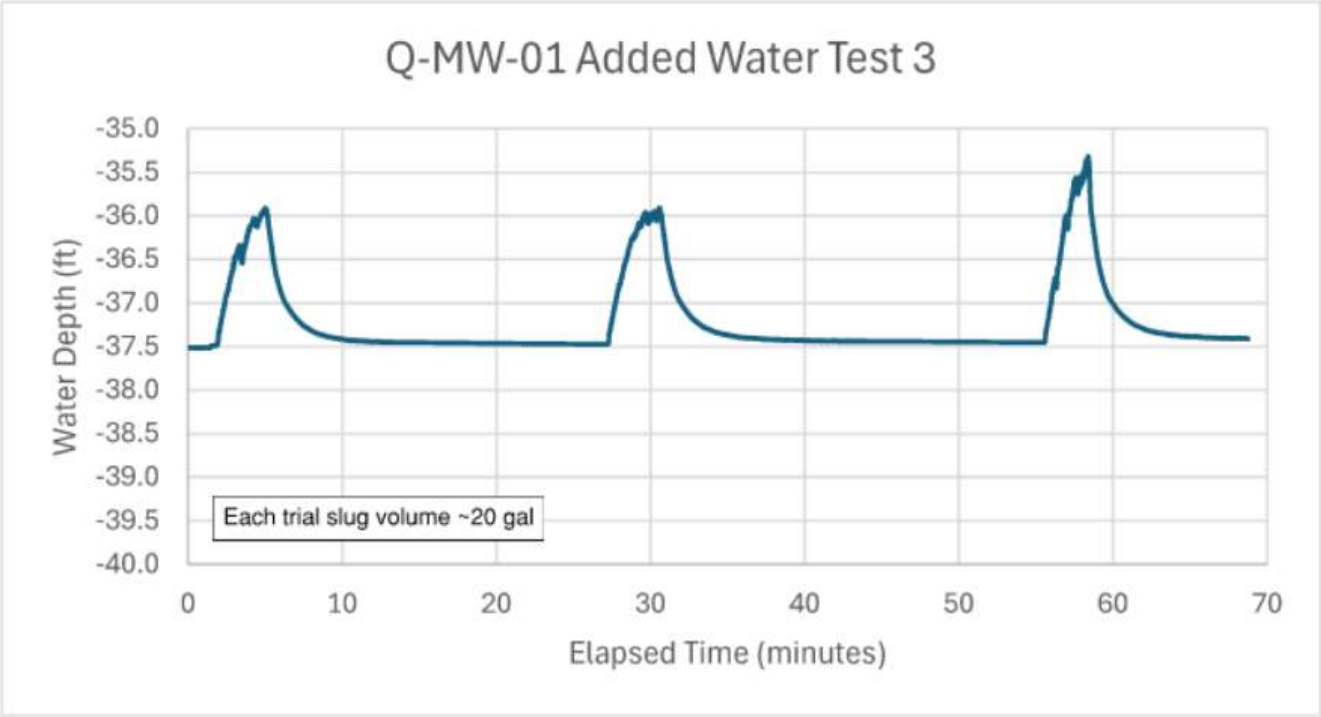
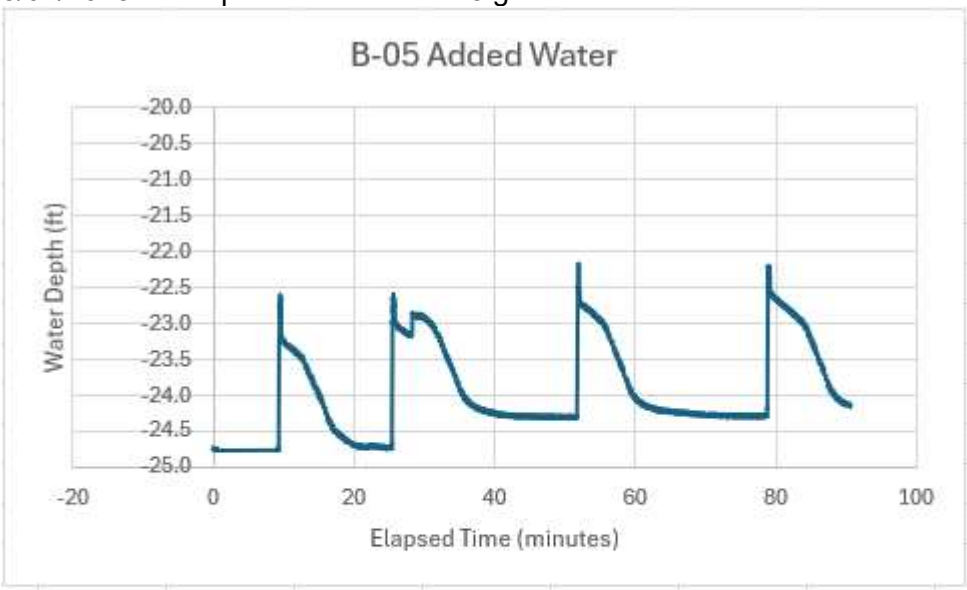


FIGURE 6: XXXX

Trial 3 was further evaluated with the USGS spreadsheet with output of **K = 3.7 ft/day**
The same errors and explanations apply as previously mentioned. The slug discrepancy was 173%. Note also that the slope was adjusted to match the steepest/most consistent part of the response curve which levels out and becomes less steep as original SWL is reached.

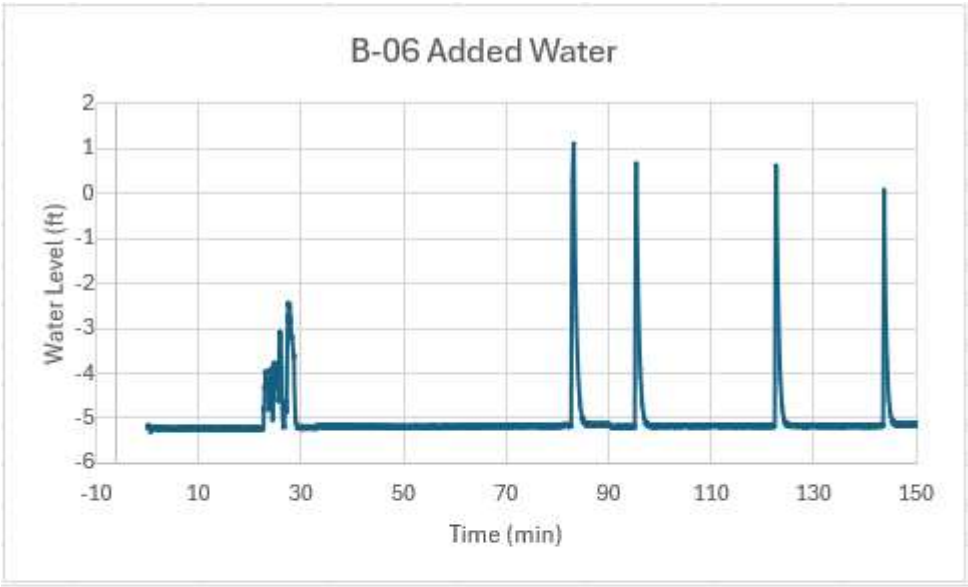
B-05
8/07/2025 - 4 separate trials – all 2.5 gallons added



notes
- TOC to gw = 24.76ft
- used funnel
- Excel mentioned that the mw was empty after they cleaned it out. (total depth ~26 ft, so about 1.2 ft water here)
- applied approximately 2.5 gals of water

Based on the above trends, response appears to be generally consistent.
Trial 1 was further evaluated with the USGS spreadsheet with output of **K = 1 ft/day**
The same errors and explanations apply as previously mentioned.

B-06
8/07/2025 – see notes below



notes
- TOC to gw = 5.20 ft
Application #1 was 15 gallons, but took approximately 2 minutes to pour in.
- Remainder of applications went much faster with use of funnel (~30 sec)
- Application #2 overflowed somewhere between 2.5-5 gallons.
- Applications #3-5 were approximately 2.5 gals.
- reference point was TOC (from static surface), but bluetooth receiver sat just below that outside of casing. Water level spilled out when TOC reached, didn't build up any head above.

Note – this is the only well that was able to be tested that has a static water column above the entire screened interval. It is assumed this data point will provide the most accurate assessment without interference from an unsaturated zone.

Trial 3 was further evaluated with the USGS spreadsheet with output of **K = 3 ft/day**
The same errors and explanations apply as previously mentioned, **however the slug discrepancy was the lowest of all tests at 89%.**

Conclusion:
Based on the above data and concerning the Quarry terraced area in particular, the assumed hydraulic conductivity in the low K target alluvial aquifer area will be **30 ft/day**, which aligns with the referenced likely minimum of the Sand and Gravel Mixes aquifer material of the Bouwer-Rice calculations. This applies a 10x factor of safety to the actual observed data, which is an acceptable range of magnitude.

See Quarry subsurface exhibit that depicts all of this data:

Other pertinent info:
Additional aquifer testing was performed in the Quarry to better delineate the extents and connectivity of multiple wells in the area with the shallow aquifer.

Q-MW-6 located near the Hwy 191 corridor – was pump tested with no measurable response in nearby monitoring well B-06A. The pumping water level (60') also exceeded the extents of the anticipated shallow aquifer formation in this area. Although MBMG 772 does note MW-6 exhibits similar chemical signature to the alluvial aquifer, it is classified as MBMG to be located in the Frontier formation.

Additionally, Q-MW-11 & MW-12 are located on the upper bench of the Quarry. Low flow pumps tests were performed on each of these. The results of the low flow pumping indicates that the static water column in these wells is quickly depleted and draws down to at least the beginning of the shale layer per the well log. This indicates a likely entirely separate aquifer (Frontier) from the target shallow aquifer on the site. The associated well logs for both of these monitoring wells do not indicate or deny the presence of a shallow aquifer in this area – it may not exist.

MBMG 772 also confirms that MW-12 is located in the Frontier Aquifer. MW-11 was not assessed in their study but due to it's similarities with MW-11, it is assumed the same.

Additionally, an aquifer pump test was performed on NB-MW-01 to better inform the hydraulic conductivity used for the southern discharge areas in the Canyon. The resulting K values indicate a range of 256-550 ft/day, which aligns with the MBMG modeled values as well if not indicate MBMG values may be on the conservative side at the higher end of that range.

All of this data was compiled resulting in estimates of hydraulic conductivity and transmissivity shown in **Table 2** below.

TABLE 2: ESTIMATED AQUIFER PROPERTIES

	Q-MW-06[1]	Q-MW-01[2]	B-05[2]	B-06[2]	NB-MW-01[1]
Aquifer Test and Data Reported By:	WGM	WGM	WGM	WGM	WGM
GWIC ID	215176		331278	331280	
(Q) GPM or GAL Slug Volume Added	35	20	2.5	2.5	58
Static Water Level	7	44.2	24.8	5.2	24
Pumping or Peak Slug Water Level	60	42	22.5	0.0	27
Bottom of well	100	54	26	19	43
*(b) Aquifer Thickness	20	15	10	10	15
Unconfined Transmissivity (ft^2/day)	132-863	36	4.2	41.0	3844-8245
Unconfined Conductivity (ft/day)	6-43	3.7	1	3	342-550
Reference: [1]Conventional pump tests - Razack & Huntley and Modified Cooper-Jacobs Equations both represent the range of report T and					
Reference: [2]Added water slug tests - Bouwer & Rice Method via spreadsheet provided by USGS. *Aquifer thickness was was set equal to perforation thickness for screened wells (these are all screened).					

Note the Q-MW-06 aquifer properties correspond to the Frontier Formation, as confirmed during the test, and not the target alluvial aquifer.

4.0 GROUNDWATER QUALITY SAMPLING

Background groundwater quality data was collected to support non-degradation analyses and to fulfill discharge permitting requirements in accordance with Section K, Groundwater Characteristics, of the MGWPCS Form-1. Groundwater samples were collected and analyzed from the two newly constructed monitoring wells at Q-MW-01 and NB-MW-01. A summary of water quality results is shown in **Table 3**. At least two prior quarters of water quality data were collected for nearby, adjacent wells during previous fieldwork efforts. All of the parameters required to meet MGWPCS requirements for quarterly sampling are included, along with additional parameters which will help further understand the properties of the groundwater and help inform non-degradation analyses, as well as potential future GCCWSD water system considerations.

TABLE 3: MONITORING WELL WATER QUALITY DATA SUMMARY

ANALYTE	UNITS	Q-MW-01	NB-MW-01
DATE OF SAMPLE		7/21/2025	7/23/2025
Specific Conductivity	µS/cm	334	323
Total Dissolved Solids (TDS)	mg/L	372	288
pH	s.u.	7.53	7.46
Chloride	mg/L	22.8	9.45
Escherichia Coli	No./100 mL	ND	ND
Kjeldahl Nitrogen, Total, as N	mg/L	0.47	0.29
Nitrate+Nitrite, as N	mg/L	1.18	1.87
Total Organic Carbon (TOC)	mg/L	1.6	1.2
Ammonia as N	mg/L	ND	ND
Total Nitrogen, TN	mg/L	1.65	2.14
Phosphate as P	mg/L	ND	ND
Total Phosphorous, TP	mg/L	0.0824	ND
Sodium Adsorption Ration (SAR)	-	0.747	0.303
Calcium	mg/L	79.1	74.4
Hardness	mg/L	254	252
Magnesium	mg/L	19.4	22.3
Sodium	mg/L	28.6	11.6
Total Coliform Count	No./100 mL	ND	ND
BOD5	mg/L	ND	ND
Total Iron	mg/L	0.05	ND
Arsenic	ug/L	1.07	ND

Note: Green highlighted cells are parameters required for the MGWPCS Permit, Section K – Groundwater Characteristics.

The laboratory analysis results and well sampling forms from each WGM sampling event are included in **Appendix C.**

5.0 SUBSURFACE SOILS INVESTIGATION

Test Pit Profiling

Fourteen test pits were excavated to approximately ten feet deep per SOP 404 on July 14 & 15, 2025 to further identify shallow subsurface characterization at the Quarry and Newberry sites, as well as to ensure DEQ-2, 122.51.b. could be met – "A minimum of one test pit is required within each I/P basin or subsurface cell location." The four test pits at Newberry meet this requirement with one per each planned cell. The ten other test pits in Quarry were planned to meet this requirement as well and supplement the prior test pit data that was collected by Others for the development planning. Refer to the overview map in **Appendix A** for locations. Test pits were excavated prior to flood basin excavation to confirm suitable soil conditions and target depth to perform the flood testing.

In the Quarry area, test pits at the depth of proposed treatment or below predominantly consisted of clay loam. Across the project area, a loam topsoil layer with organics was observed from the surface to approximately 8–24 inches bgs. In the northern and western portions of the site, this topsoil was underlain by a gravelly clay loam extending up to 3.7 ft bgs, containing flagstones and fragmented rocks. Some test pits also contained a sandy clay loam transition layer beneath the gravelly clay loam, followed by clay loam extending to depths of up to 10 ft, with variable amounts of gravel. On the eastern and southern sides, the profile generally consisted of clay loam topsoil extending to about 2 ft bgs, underlain by another clay loam horizon similar to that in the north and west but lacking gravel. At greater depths, most test pits encountered a return to clay loam extending to the bottom, again with variable gravel content within the clay loam matrix, ranging from no gravels to extremely gravelly. Any soils with gravels comprising greater than 20% of the soil was specified as "gravelly", and anything less than 20% gravels was shown as "with some gravels".

ADD NEWBERRY TEST PIT SUMMARY

See **Table 4** below for a summary of the results. Detailed test pit logs are provided in **Appendix D.**

TABLE 4: TEST PIT SUMMARY

TEST PIT ID	TOTAL DEPTH (FT)	TEXTURE SUMMARY OF SOIL CONDITIONS	STANDARD APPLICATION RATE (GPD/FT2)
Q-TP#1	10	0'-2.5' – Loam 2.5'-4.5' – Gravelly Clay Loam 4.5-7' – Gravelly Sandy clay loam 7'-8' – Clay Loam	0.5 0.3 0.4 0.3
Q-TP#2	10	0'-1' – Loam 1'-3.3' – Gravelly Clay Loam 3.3'-5.5' – Gravelly Sandy Clay Loam 5.5'-10' – Clay Loam	0.5 0.3 0.4 0.3
Q-TP#3	10	0'-0.7' – Loam 0.7'- 3.7' – Gravelly Clay Loam	0.5 0.3

		3.7’-10' –Clay Loam w/ some gravels	0.3
Q-TP#4	10	0’-1.3’ – Loam 16" - 3.3' – Gravelly Clay Loam 3.3'- 10’ Gravelly Clay Loam	0.5 0.3 0.3
Q-TP#5	10	0-8" – Loam 8"-2.7' – Gravelly Clay Loam 2.7’-4.7’– Gravelly Sandy Clay Loam 4.7’– 10’ Clay Loam w/ some gravels	0.5 0.3 0.4 0.3
Q-TP#6	10	0’-1’ – Loam 1’-1.5’ – Clay Loam 1.5’-5 ’– Clay Loam 5’-10’ – Gravelly Sandy Loam	0.5 0.3 0.3 0.6
Q-TP#7	10	0’-2’ – Loam 2’-3’ – Clay Loam 3’-3.5’ – Gravelly Clay Loam 4’-10’ – Sandy Clay Loam w/ some gravels	0.5 0.3 0.3 0.4
Q-TP#8	10	0’-1.5’ - Loam 1.5’-3.5’ - Clay Loam 3.5’-7’ Gravelly Sandy Loam 7’-10’ Clay Loam w/ some gravels	0.5 0.3 0.6 0.3
Q-TP#9	10	0-16" – Loam 16"- 4.3' – Gravelly Clay Loam 4.3' - 10' Gravelly Clay Loam	0.5 0.3 0.3
Q-TP#10	10	0’-2’ – Loam 2’-5’ Clay Loam 5’-10’ Gravelly Clay Loam	0.5 0.3 0.3
NB-TP#1	10		
NB-TP#2	10		
NB-TP#3	10		
NB-TP#4	10		

Gradations

Soil samples were collected from the sites at depths at and below the proposed RIBs, for each major varying soil type, and sent to a geotechnical lab for gradation analyses. The gradations will be used to design a filter band of sand/gravel material in accordance with NEH Part 633, Chapter 26 that will help prevent upward intrusion of fine particle base material and promote extended useful life of the infiltration gallery. Following the step-by-step procedure in the NEH guidance, the gradations were also regraded by the lab as necessary per the below summary in **Table 5**. See **Appendix D** for the full reports from the lab.

TABLE 5: GRADATION SUMMARY

SAMPLE ID	BASE SOIL CATEGORY (NEH TABLE 26-1)	BASE SOIL DESCRIPTION (NEH TABLE 26-1)	REGRADED? Y/N, IF Y - SIEVE, CORRECTION FACTOR
NB TP#2-X’	3	Silty and Clayey Sand and Gravels	Y - ¾”, 0.787
NB TP#3-X’	3	Silty and Clayey Sand and Gravels	Y - ¾”, 0.787

Q TP#5-4'	3	Silty and Clayey Sand and Gravels	Y - ¾", 0.579
Q TP#5-6'	2	Sands, Silts, Clays, and Silty Clays	Y - ¾", 0.579
Q TP#6-X'	4	Sands and Gravels	Y - ¾", 0.579

Phosphorous Sorption Capacity

The soil samples collected from the sites at depths at and below the proposed RIB, for each major varying soil type, were also sent to an analytical sciences laboratory for phosphorous sorption capacity analyses in accordance with DEQ-2, 122.51.d. The results of this testing indicates the 200 ppm constant used in the original phosphorous breakthrough calculations was conservative by several factors of safety, as summarized below in Table 6. Full reports from the lab are include in **Appendix D**.

TABLE 6: PHOSPHOROUS SORPTION CAPACITY SUMMARY

LAB ID	SAMPLE LOCATION	SOIL SORBED (µg P/g)
S2500533		655
S250534		398
S250535		555
S250536		3022

Basin Flood Testing

Three basin flood tests were conducted in the upper Quarry (Q) area which targeted one area just outside a proposed drainfield footprint for the development as well as near two proposed RIB areas. The three locations together were spaced and gridded to generally cover all of the proposed subsurface disposal area and provide representation across the site. Two basin flood tests were conducted within the proposed RIB footprint at the Newberry (NB) property.

The flood testing procedure consisted of filling the excavated basins with at least 12 inches of water and monitoring the infiltration over a 24-hour period. After the first fill/infiltration over 24 hours and a drying cycle of +48 hours, the same procedure was repeated two more times – for 3 total fills each with a drying cycle in order to meet DEQ-2, 122.51.c. Due to various site factors, timing, and availability of the contracted water truck, only the first fill at each basin was monitored over the initial hours of testing for short-term measurements – otherwise the fills were observed as initial fill/time/water level and time the next day when all the basins were dry. Therefore, most of the reported measured infiltration rates in the basins are overly conservative in that the end time for each fill cycle when all the water had seeped away was observed hours after it likely occurred. The summary table displays this information.

TABLE 7: BASIN FLOOD TESTING SUMMARY

SITE	TEST INTERVAL	MEASURED INFILTRATION RATE (IN/HR)	NOTES
Q – BASIN 1	1ST FILL AVERAGE	0.60	Bottom of basin was built on a slope – low end area likely took on majority of infiltration and affected results
	2ND FILL AVERAGE	0.53	"
	3RD FILL AVERAGE	0.47	"
	LIMITING SHORT-TERM MEASUREMENT	0.71	Slowest short-term measurement over 2-hr interval during 1st fill test

Q – BASIN 2	1ST FILL AVERAGE	1.04	End time is conservative – likely dry before arrival at site
	2ND FILL AVERAGE	0.54	"
	3RD FILL AVERAGE	0.93	"
	LIMITING SHORT-TERM MEASUREMENT	1.38	Slowest short-term measurement over 1-hr interval during 2nd fill test
Q – BASIN 3	1ST FILL AVERAGE	2.80	Most accurate infil. rate – water was seen seeping away in the same day
	2ND FILL AVERAGE	0.56	End time is conservative – likely dry before arrival at site
	3RD FILL AVERAGE	0.70	End time is conservative – likely dry before arrival at site
	LIMITING SHORT-TERM MEASUREMENT	1.42	Slowest short-term measurement over 1-hr interval during 2nd fill test
NB – BASIN 1NE	1ST FILL AVERAGE	0.54	End time is conservative – likely dry before arrival at site
	2ND FILL AVERAGE	0.55	"
	3RD FILL AVERAGE	0.53	"
	LIMITING SHORT-TERM MEASUREMENT	1.24	Slowest short-term measurement over 3-hr interval during 1ST fill test
NB – BASIN 2SW	1ST FILL AVERAGE	4.24	Assumed dry 60 mins. after last measurement on the same day as the fill
	2ND FILL AVERAGE	0.54	End time is conservative – likely dry before arrival at site
	3RD FILL AVERAGE	0.58	End time is conservative – likely dry before arrival at site
	LIMITING SHORT-TERM MEASUREMENT	3.60	Slowest short-term measurement over 1-hr interval during 2nd fill test

The red and orange values above display the low and high range of limiting measured infiltration rates at each test site. Again, the red, low values are overly conservative due to how the test was performed. A detailed report of all of the measurements and additional field notes are included in **Appendix D**.

Additionally, several shallow aquifer monitoring wells adjacent to the basins were observed during the flood testing. There was no recognizable response or increase in water levels in any observation wells. A recognizable response would be considered anything greater than the +/-0.1' fluctuations that occur in these wells based on background data.

6.0 DOUBLE RING INFILTROMETER TESTS

Double ring infiltrometer (DRI) tests were performed at ten locations throughout the Lazy J, Bucks T4 and Newberry sites from October 2024 through July 2025. Two DRIs at the existing Lazy J drainfields were completed at the elevation of the exposed laterals using an excavator, to evaluate the condition of the existing soil in the drainfield for continuing to use that for subsurface disposal. The remainder of the tests were conducted at the ground surface in undisturbed vegetation to evaluate appropriate rates to use for land application. A summary of the results is shown below.

TABLE 8: DRAINFIELD DRI SUMMARY

DRAINFIELD Site	Avg. Measured Infiltration Rate (in/hr)
LJ-2	6.96

LJ-3	3.76

TABLE 9: LAND APPLICATION DRI SUMMARY

LAND APPLICATION Site	Avg. Measured Infiltration Rate (in/hr)
BT-1	0.10
BT-2	0.38
BT-3	14.06
Q-1	0.47
Q-2	14.76
LJ-1	1.57
NB-1	2.59
NB-2	0.16

Reaching equilibrium during the test required frequent adjustments to the system as the soil profile became increasingly saturated. In many instances this involved modifying the Mariotte tube heights between measurements and addressing air bubbles trapped in the tubes. Air bubble adjustment included either bleeding the tubes to release trapped air or repositioning the tubes to move bubbles out of the system. To ensure data reliability, only measurements collected under consistent conditions, defined as two or more consecutive readings without system adjustments, were included when calculating averages. Extreme high and low outliers were also excluded to avoid skewing the results.

Test pit logs describing the classified soils are included in **Appendix E**.

APPENDIX A
MONITORING WELL CONSTRUCTION

MONITORING WELL INSTALLATION RECORD

MONITORING WELL

MONITORING WELL NO.: NB-MW-01
PROJECT: 220724 Canyon
SITE: Newberry property
BOREHOLE NO.:
WELL PERMIT NO.:
TOC TO BOTTOM OF WELL: 43 ft

DRILLING INFORMATION

DRILLING BEGAN:
DATE: 5/23/25 TIME: 10 AM
WELL INSTALLATION BEGAN:
DATE: 5/24/25 TIME: 11 am
WELL INSTALLATION FINISHED:
DATE: 5/24/25 TIME: 1 pm
DRILLING CO.: Excel Pump & Well
DRILLER: Colton Baertsch
LICENSE: MT BOARD OF WATER WELL CONTRACTORS
DRILL RIG: WWC 756
DRILLING METHOD:
- ☐ HOLLOW STEM AUGER
- ☐ AIR ROTARY
- ☐ OTHER: Dual rotary

DIAMETER OF AUGERS:
ID: OD:

WELL CASING

- ☒ SCHEDULE 40 PVC (with 8" steel casing to 24 ft)
- ☐ OTHER:

PRODUCT:
MFG. BY:
CASING DIAMETER:
ID: 4" OD: 4.5"
LENGTH OF CASING (TOTAL): 54 ft

**NOTE:* *IF CASING SEGMENTS OF VARYING LENGTH ARE USED, RECORD ALL SEGMENT LEGTHS ON BACK*

WELL SCREEN

- ☒ SCHEDULE 40 PVC
- ☐ OTHER:

PRODUCT:
MFG. BY:
CASING DIAMETER:
ID: 4" OD: 4.5"
SLOT SIZE:
LENGTH OF SCREEN: 15 ft

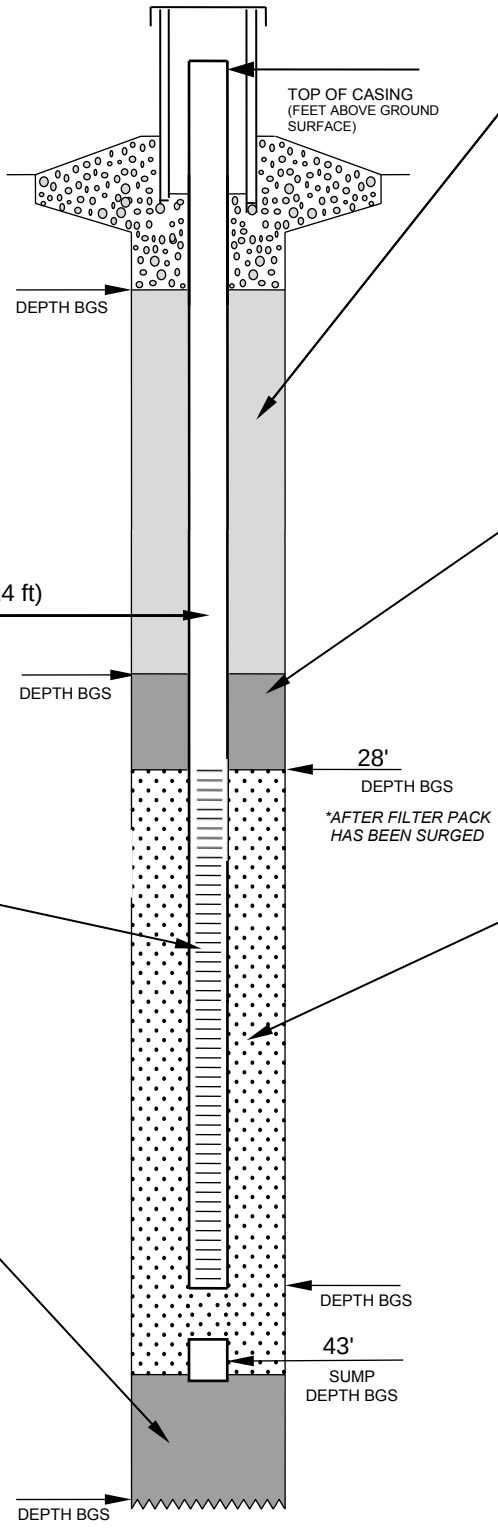
BOREHOLE BACKFILL

AMOUNT CALCULATED:
AMOUNT USED:
- ❑ BENTONITE CHIPS, SIZE:
- ❑ BENTONITE PELLETS, SIZE:
- ❑ SLURRY:
- ❑ FORMATION COLLAPSE:
- ❑ OTHER:

PRODUCT:
MFG. BY:
METHOD INSTALLED:
- ❑ POURED ❑ TREMIE
- ❑ OTHER:

SURFACE COMPLETION

- ❑ FLUSH MOUNT
- ❑ ABOVE GROUND WITH BUMPER POST
- ❑ CONCRETE ❑ ASPHALT



SURVEY INFORMATION

TOC ELEVATION:
GROUND SURFACE ELEVATION:
NORTHING:
EASTING:
DATE SURVEYED:
SURVEY CO.:

ANNULAR SEAL (bentonite)

AMOUNT CALCULATED:
AMOUNT USED: 8 bags
- ☒ BENTONITE CHIPS, SIZE: -3/8" + 1/4"
- ❑ BENTONITE PELLETS, SIZE:
- ❑ SLURRY:
- ❑ FORMATION COLLAPSE:
- ❑ OTHER:

PRODUCT: enviroplug medium
MFG. BY: WYO,BEN
METHOD INSTALLED:
- ☒ POURED ❑ TREMIE
- ❑ OTHER:

SAND PACK

VOLUME CALCULATED:
AMOUNT USED: 3 bags
- ☐ PELLETS, SIZE:
- ☐ CHIPS, SIZE:
- ☐ OTHER:

PRODUCT: All Purpose Sand
MFG. BY: Quikcrete
METHOD INSTALLED:
- ☐ POURED ☐ TREMIE
- ☐ OTHER:

AMOUNT OF WATER USED:

FILTER PACK

- ❑ PREPACKED FILTER

VOLUME CALCULATED:
AMOUNT USED: 3 bags
- ☒ SAND, SIZE:

PRODUCT: all purpose gravel
MFG. BY: quikcrete
METHOD INSTALLED:
- ☒ POURED ❑ TREMIE
- ❑ OTHER:

WATER LEVEL: 21 ft
(BTOC AFTER WELL INSTALLATION)

CENTRALIZERS USED?

☒ YES ❑ NO;
CENTRALIZER DEPTHS:

BGS – BELOW GROUND SURFACE
BTOC – BELOW TOP OF CASING
N/A – NOT APPLIC ABLE
NR – NOT RECORDED
TOC – TOP OF CASING

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MONITORING WELL INSTALLATION RECORD

MONITORING WELL

MONITORING WELL NO.: Q-MW-01
PROJECT: 220724 Canyon
SITE: Quarry
BOREHOLE NO.:
WELL PERMIT NO.:
TOC TO BOTTOM OF WELL: 56 ft

DRILLING INFORMATION

DRILLING BEGAN:
DATE: 5/21/25 TIME: 9:45 am
WELL INSTALLATION BEGAN:
DATE: 5/22/25 TIME: 9 am
WELL INSTALLATION FINISHED:
DATE: 5/22/25 TIME: 1 pm
DRILLING CO.: Excel Pump & Well
DRILLER: Colton Baertsch
LICENSE: MT BOARD OF WATER WELL CONTRACTORS
DRILL RIG: WWC 756
DRILLING METHOD:
☐ HOLLOW STEM AUGER
☐ AIR ROTARY
☐ OTHER: Dual rotary
DIAMETER OF AUGERS:
ID: OD:

WELL CASING

☒ SCHEDULE 40 PVC (with 8" steel casing to 56 ft)
☐ OTHER:
PRODUCT:
MFG. BY:
CASING DIAMETER:
ID: 4" OD: 4.5"
LENGTH OF CASING (TOTAL): 54 ft

NOTE: IF CASING SEGMENTS OF VARYING LENGTH ARE USED, RECORD ALL SEGMENT LEGTHS ON BACK

WELL SCREEN

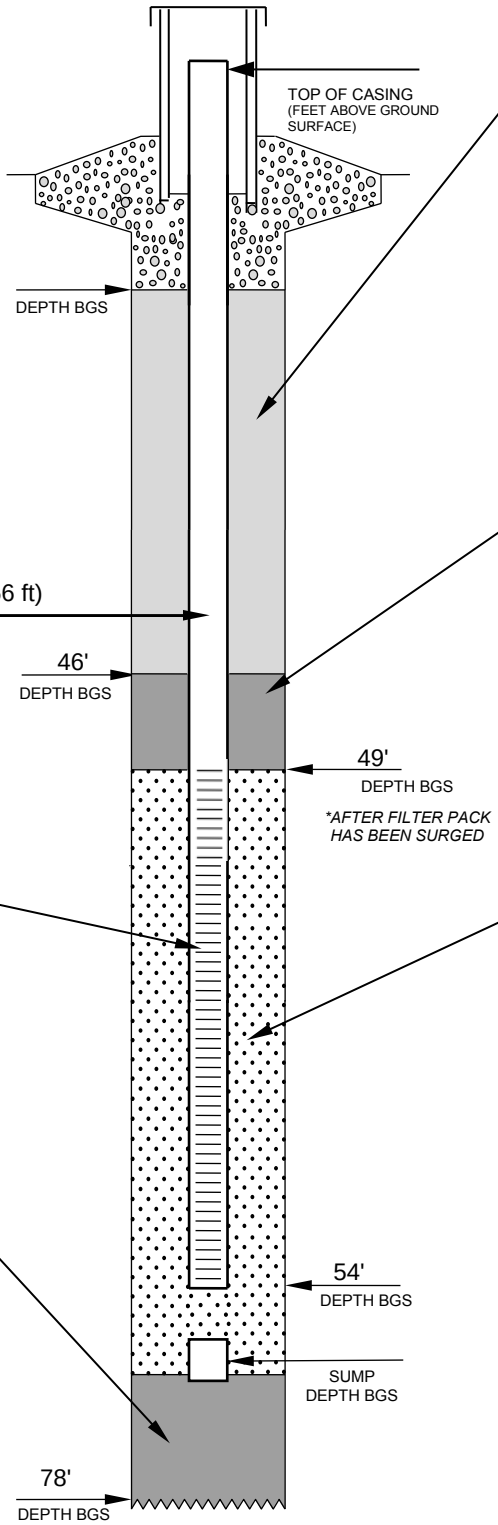
☒ SCHEDULE 40 PVC
☐ OTHER:
PRODUCT:
MFG. BY:
CASING DIAMETER:
ID: 4" OD: 4.5"
SLOT SIZE:
LENGTH OF SCREEN: 15 ft

BOREHOLE BACKFILL

AMOUNT CALCULATED:
AMOUNT USED:
☒ BENTONITE CHIPS, SIZE: -3/8" + 1/4"
❑ BENTONITE PELLETS, SIZE:
❑ SLURRY:
❑ FORMATION COLLAPSE:
❑ OTHER:
PRODUCT: enviroplug medium
MFG. BY: WYO,BEN
METHOD INSTALLED:
☒ POURED ❑ TREMIE
❑ OTHER:

SURFACE COMPLETION

❑ FLUSH MOUNT
❑ ABOVE GROUND WITH BUMPER POST
❑ CONCRETE ❑ ASPHALT



SURVEY INFORMATION

TOC ELEVATION:
GROUND SURFACE ELEVATION:
NORTHING:
EASTING:
DATE SURVEYED:
SURVEY CO.:

ANNULAR SEAL

VOLUME CALCULATED:
AMOUNT USED:
❑ GROUT FORMULA (PERCENTAGES)
PORTLAND CEMENT: same as bentonite backfill, see borehole backfill section
BENTONITE:
WATER:
❑ PREPARED MIX
PRODUCT:
MFG. BY:
METHOD INSTALLED:
❑ POURED ❑ TREMIE
❑ OTHER:

SAND PACK

VOLUME CALCULATED:
AMOUNT USED: 3 bags
☐ PELLETS, SIZE:
☐ CHIPS, SIZE:
☐ OTHER:
PRODUCT: All Purpose Sand
MFG. BY: Quikcrete
METHOD INSTALLED:
☐ POURED ☐ TREMIE
☐ OTHER:
AMOUNT OF WATER USED:

FILTER PACK

❑ PREPACKED FILTER
VOLUME CALCULATED:
AMOUNT USED: 10 bags
☒ SAND, SIZE:
PRODUCT: all purpose gravel
MFG. BY: quikcrete
METHOD INSTALLED:
☒ POURED ❑ TREMIE
❑ OTHER:
WATER LEVEL: 42 ft
(BTOC AFTER WELL INSTALLATION)

CENTRALIZERS USED?

☒ YES ❑ NO;
CENTRALIZER DEPTHS:

BGS – BELOW GROUND SURFACE
BTOC – BELOW TOP OF CASING
N/A – NOT APPLIC ABLE
NR – NOT RECORDED
TOC – TOP OF CASING

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APPENDIX B
AQUIFER TESTS

APPENDIX C
GROUNDWATER QUALITY SAMPLING

BRIDGER ANALYTICAL LAB

7539 Pioneer Way Suite B, Bozeman, MT 59718 Phone: (406) 582-0822
US EPA ID# MT00953 MT Certification Number CERT0094

WGM Group
109 E. Main St., Suite B
Bozeman, MT 59715

Reported:
08/01/2025 13:50

Project Name: 220724 - GCCWSD July 21, 2025

Client Sample ID: Q-MW-01
Lab Sample ID: 2507498-01

Collection Date: 07/21/2025 12:15
Collected By: Emma Raeside

Date Received: 07/22/2025

Analyte	Result	Units	RL	Qual	MCL	Method	Analysis Date/By
Inorganic							
Calcium	79.1	mg/L	0.20			ASTM D6919-09	07/24/25 18:05/FAF
Chloride	22.8	mg/L	0.25		250	EPA 300.1	07/22/25 18:03/FAF
Conductivity	334	uS/cm	0.10			SM 2510 B	07/22/25 14:46/HKO
Hardness	254	mg/L	10.00	H-3		SM 2340 C	07/23/25 11:34/HKO
Iron, Total	0.05	mg/L	0.02			HACH 8008	07/24/25 15:10/LRO
Magnesium	19.4	mg/L	0.05			ASTM D6919-09	07/24/25 18:05/FAF
Nitrate + Nitrite as N	1.18	mg/L	0.05		10	EPA 300.1	07/22/25 17:44/FAF
pH	7.53	S.U.	0.10			SM 4500-H+B	07/22/25 14:46/HKO
Phosphate as P	ND	mg/L	0.05			EPA 300.1	07/22/25 17:44/FAF
Sodium Adsorption Ratio (SAR)	0.747		0.05			Calculation	08/01/25 13:48/DJA
Sodium	28.6	mg/L	0.20			ASTM D6919-09	07/24/25 18:05/FAF
Total Dissolved Solids	372	mg/L	1.00			SM 2540 C	07/25/25 09:45/LRO
Microbiological							
E.coli Count	ND	MPN/100 mL	1.00			Colilert Q-T/2000	07/23/25 12:08/DJA
Total Coliform Count	ND	MPN/100 mL	1.00			Colilert Q-T/2000	07/23/25 12:08/DJA
Waste							
BOD, 5 Day	ND	mg/L	3.00			SM 5210B	07/28/25 08:50/LRO
Total Kjeldahl Nitrogen as N	0.470	mg/L	0.05			Calculation	07/28/25 16:29/LRO
Nitrogen, Ammonia as N (SM)	ND	mg/L	0.02			EPA 350.1	07/25/25 11:25/LRO
Total Nitrogen as N	1.65	mg/L	0.10			SM 4500-N	07/28/25 12:40/LRO
Phosphorus, Total as P	0.0824	mg/L	0.02			HACH 8190	07/24/25 14:02/LRO
Metals							
Arsenic	1.07	ug/L	0.50		10	EPA 200.8	07/24/25 20:50/FAF

BRIDGER ANALYTICAL LAB

7539 Pioneer Way Suite B, Bozeman, MT 59718 Phone: (406) 582-0822
US EPA ID# MT00953 MT Certification Number CERT0094

WGM Group
109 E. Main St., Suite B
Bozeman, MT 59715

Reported:
08/01/2025 13:50

Project Name: 220724 - GCCWSD July 21, 2025

Data Analyzed by: Pace Analytical Services, LLC -

Client Sample ID: Q-MW-01
Lab Sample ID: 2507498-01

Collection Date: 07/21/2025 12:15
Collected By: Emma Raeside

Date Received: 07/22/2025

Analyte	Result	Units	RL	Qual	MCL	Method	Analysis Date/By
SM 5310C-2014							
Total Organic Carbon	1.6	mg/L	1.00	1M		5310C WDU	07/29/25 07:45/DW3

BRIDGER ANALYTICAL LAB

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US EPA ID# MT00953 MT Certification Number CERT0094

WGM Group
109 E. Main St., Suite B
Bozeman, MT 59715

Reported:
08/01/2025 13:50

Notes and Definitions

Item	Definition
1M	[Undefined]
H-3	Over 180 mg/L of total hardness as calcium carbonate is considered very hard water by the Water Quality Association.
cfu	Colony Forming Unit
MCL	Maximum Contaminant Level
mg/L	milligrams per liter (ppm)
mL	milliliter
MPN	Most Probable Number
ND	Not Detected
NTU	Nephelometric Turbidity Units
ppb	parts per billion (µg/L)
ppm	parts per million (mg/L)
RL	Reporting Limit
S.U.	Standard Units
µg/L	micrograms per liter (ppb)
µS/cm	microsiemens per centimeter

GROUNDWATER SAMPLING & MONITORING FORM

Project:	GCCWSD *Big Sky , Montana*	**Project #**	220724.10
		Task ID	Ph 03 Data Collection
Date:	July 21, 2025	**Time:**	11:00 AM
Personnel:	Emma Raeside	**Form#**	---
Sample Location:	Q-MW-01	**Well Type:**	Monitoring
Sampling Order:		**DTW:**	43.96 *feet*
Total Depth:	**54.00** *feet*	**Ht:**	10.04 *feet*
Measuring Point Description:	TOC North		
Casing Type:	PVC	**Well Ø**	4"

Well Log: ☑ Yes ☐ No **Well Locked:** ☐ Yes ☑ No **Mount Type:** ☐ Flush ☑ Stickup:

Purge & Sampling Equipment

Instrument	Calibration	Operational Notes:
Peristaltic / LoFlo 12v	N/A	**Set at ~50' below TOC (bottom 15' is screened)**
Multimeter (Temp/pH/ORP/Cond/DO)		No parameters recorded this round of sampling
Turbidity		

Parameter	Stabilization Criteria
pH	± 0.1 units
ORP	± 10 mV
Spec Cond	± 3%
DO	± 10%
Turbidity*	± 10%
***Turbidity can also be considered stable when three consecutive turbidity values are less than 5 NTU	

Well Evacuation & Monitoring Data

Time	Temp (deg C)	pH (S.U.)	ORP (mV)	Spec Cond (uS/cm)	DO (mg/L)	Turb (NTU)	Q (gpm)	Elapsed (gallons)
11:07 AM								
11:11:06 AM							1.2	5
12:15 PM		No parameters recored this round of sampling					1.2	81.60

Well Volume Calculation: (TD - DTW) * 0.653 = 1 well volume 6.55612 gal (4" casing calc = .653)

Water Description: clear

Sampling Data

Bottle Label	Sampling Parameter	Preservative	Sample Time	Other
Q-MW-01	**INORGANICS**	**RAW**	**12:15 PM**	
Q-MW-01	**METALS**	**RAW**	**12:15 PM**	
Q-MW-01	**BACT**	**lab specific**	**12:15 PM**	
Q-MW-01	**NUTRIENTS**	**H2SO4**	**12:15 PM**	

Samples analyzed by:	Bridger Analytical Lab, Bozeman, Montana
	406-582-0822

Comments:
Silty at first but cleared quickly, then remained cloudy light green color, turbid.
Some pvc shavings were present on data logger when removed. Water level 44.4 ft drawdown at 11:12 am
(while pumping). Had battery issues with pump, restarted using car battery at 11:12 am. Water level
44.56 ft while pumping. Sampled at 12:15 pm.

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BRIDGER ANALYTICAL LAB

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US EPA ID# MT00953 MT Certification Number CERT0094

WGM Group
109 E. Main St., Suite B
Bozeman, MT 59715

Reported:
08/14/2025 15:22

Project Name: 220724 - GCCWSD July 23, 2025

Client Sample ID: NB-MW-01
Lab Sample ID: 2507546-01

Collection Date: 07/23/2025 10:20
Collected By: Emma Raeside

Date Received: 07/23/2025

Analyte	Result	Units	RL	Qual	MCL	Method	Analysis Date/By
Inorganic							
Calcium	74.4	mg/L	0.20			ASTM D6919-09	07/25/25 00:33/FAF
Chloride	9.45	mg/L	0.25		250	EPA 300.1	07/23/25 19:53/FAF
Conductivity	323	uS/cm	0.10			SM 2510 B	07/24/25 15:59/HKO
Hardness	252	mg/L	10.00	H-3		SM 2340 C	07/28/25 11:25/HKO
Iron, Total	ND	mg/L	0.02			HACH 8008	07/24/25 15:10/LRO
Magnesium	22.3	mg/L	0.05			ASTM D6919-09	07/25/25 00:33/FAF
Nitrate + Nitrite as N	1.87	mg/L	0.05		10	EPA 300.1	07/23/25 19:53/FAF
pH	7.56	S.U.	0.10			SM 4500-H+B	07/24/25 15:59/HKO
Phosphate as P	ND	mg/L	0.05			EPA 300.1	07/23/25 19:53/FAF
Sodium Adsorption Ratio (SAR)	0.303		0.05			Calculation	08/14/25 15:15/DJA
Sodium	11.6	mg/L	0.20			ASTM D6919-09	07/25/25 00:33/FAF
Total Dissolved Solids	288	mg/L	1.00			SM 2540 C	07/31/25 15:00/LRO
Microbiological							
E.coli Count	ND	MPN/100 mL	1.00			Colilert Q-T/2000	07/24/25 16:31/DJA
Total Coliform Count	ND	MPN/100 mL	1.00			Colilert Q-T/2000	07/24/25 16:31/DJA
Waste							
BOD, 5 Day	ND	mg/L	3.00			SM 5210B	07/28/25 08:50/LRO
Total Kjeldahl Nitrogen as N	0.290	mg/L	0.05			Calculation	07/28/25 16:29/LRO
Nitrogen, Ammonia as N (SM)	ND	mg/L	0.02			EPA 350.1	07/25/25 11:25/LRO
Total Nitrogen as N	2.14	mg/L	0.10			SM 4500-N	07/28/25 12:40/LRO
Phosphorus, Total as P	ND	mg/L	0.02			HACH 8190	07/24/25 14:02/LRO
Metals							
Arsenic	ND	ug/L	0.50		10	EPA 200.8	07/24/25 22:27/FAF

BRIDGER ANALYTICAL LAB

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US EPA ID# MT00953 MT Certification Number CERT0094

WGM Group
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Bozeman, MT 59715

Reported:
08/14/2025 15:22

Project Name: 220724 - GCCWSD July 23, 2025

Data Analyzed by: Pace Analytical Services, LLC -

Client Sample ID: NB-MW-01
Lab Sample ID: 2507546-01

Collection Date: 07/23/2025 10:20
Collected By: Emma Raeside

Date Received: 07/23/2025

Analyte	Result	Units	RL	Qual	MCL	Method	Analysis Date/By
SM 5310C-2014							
Total Organic Carbon	1.2	mg/L	1.00	1M		5310C WDU	08/09/25 15:14/DW3

BRIDGER ANALYTICAL LAB

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US EPA ID# MT00953 MT Certification Number CERT0094

WGM Group
109 E. Main St., Suite B
Bozeman, MT 59715

Reported:
08/14/2025 15:22

Notes and Definitions

Item	Definition
1M	[Undefined]
H-3	Over 180 mg/L of total hardness as calcium carbonate is considered very hard water by the Water Quality Association.
cfu	Colony Forming Unit
MCL	Maximum Contaminant Level
mg/L	milligrams per liter (ppm)
mL	milliliter
MPN	Most Probable Number
ND	Not Detected
NTU	Nephelometric Turbidity Units
ppb	parts per billion (µg/L)
ppm	parts per million (mg/L)
RL	Reporting Limit
S.U.	Standard Units
µg/L	micrograms per liter (ppb)
µS/cm	microsiemens per centimeter

GROUNDWATER SAMPLING & MONITORING FORM

Project:	GCCWSD *Big Sky , Montana*	**Project #**	220724.10
		Task ID	Ph 03 Data Collection
Date:	July 23, 2025	**Time:**	9:30 AM
Personnel:	Emma Raeside	**Form#**	---
Sample Location:	NB-MW-01	**Well Type:**	Monitoring
Sampling Order:		**DTW:**	24.6 *feet*
Total Depth:	**43.00** *feet*	**Ht:**	18.40 *feet*
Measuring Point Description:	TOC North		
Casing Type:	PVC	**Well Ø**	4"

Well Log: ☑ Yes ☐ No **Well Locked:** ☐ Yes ☑ No **Mount Type:** ☐ Flush ☑ Stickup:

Purge & Sampling Equipment

Instrument	Calibration	Operational Notes:
Peristaltic / LoFlo 12v	N/A	**Set at ~40' below TOC (bottom 15' is screened)**
Multimeter (Temp/pH/ORP/Cond/DO)		No parameters recorded this round of sampling
Turbidity		

Parameter	Stabilization Criteria
pH	± 0.1 units
ORP	± 10 mV
Spec Cond	± 3%
DO	± 10%
Turbidity*	± 10%
***Turbidity can also be considered stable when three consecutive turbidity values are less than 5 NTU	

Well Evacuation & Monitoring Data

Time	Temp *(deg C)*	pH *(S.U.)*	ORP *(mV)*	Spec Cond *(uS/cm)*	DO *(mg/L)*	Turb *(NTU)*	Q *(gpm)*	Elapsed *(gallons)*
9:34 AM								
9:36:49 AM							1.77	5
10:00 AM		No parameters recored this round of sampling						
10:20 AM							1.77	36

Well Volume Calculation: (TD - DTW) * 0.653 = 1 well volume 12.0152 gal (4" casing calc = .653)

Water Description: clear

Sampling Data

Bottle Label	Sampling Parameter	Preservative	Sample Time	Other
NB-MW-01	**INORGANICS**	**RAW**	**10:20 AM**	
NB-MW-01	**METALS**	**RAW**	**10:20 AM**	
NB-MW-01	**BACT**	**lab specific**	**10:20 AM**	
NB-MW-01	**NUTRIENTS**	**H2SO4**	**10:20 AM**	

Samples analyzed by:	Bridger Analytical Lab, Bozeman, Montana
	406-582-0822

Comments: Water clear. Purge volume approximately 36 gallons. Tube slipped off of the outlet at 9:42 am and again at 9:45 am, restarted at 10 am. Sampled at 10:20 am

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APPENDIX D
SUBSURFACE SOILS INVESTIGATION

SOIL DESCRIPTION	MDEQ-4 TABLE 2.1-1 SOIL TEXTURE	APPLICATION RATE (GPD/FT^2)	PROFILE	DEPTH (FT)
(0"- 30"): TOPSOIL; DARK BROWN; PRESENCE OF MANY FINE AND SOME MASSIVE ROOTS (1.5" DIAM) UP TO 3' BGS. SOME ORGANICS, SOMEWHAT MOIST.	LOAM	0.5		
(30"- 54"): CLAY LOAM. ORANGEISH BROWN, SOMEWHAT MOIST.	CLAY LOAM	0.3		4
(54"- 84"): GRAVELLY SANDY CLAY LOAM. FRAGMENTED SHALE, GRITTY.	GRAVELLY SANDY CLAY LOAM	0.4		
(84"- 120"): CLAY LOAM. LIGHT BROWN, SOME WHITE SPECKS, CLUMPS.	CLAY LOAM	0.3		8
BOTTOM OF TEST PIT				12
				16
				20

DEPTH TO GROUNDWATER: X FT	DEPTH TO BEDROCK: X FT	NOTES: VEGETATION - NATURAL GRASSES AND PINE TREES. ON A SLIGHT SLOPE. NO GROUNDWATER OR LIMITING LAYER ENCOUNTERED
LOGGED BY: EVR	DATE OF TEST PIT: 7/15/25 / TOTAL DEPTH: 10 FT	

TEST PIT #1
CANYON
GALLATIN COUNTY, MT

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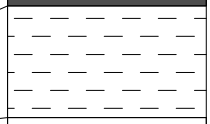
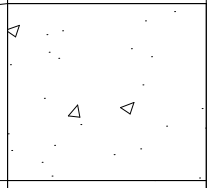
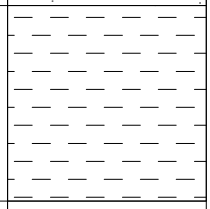
PROJECT: 220724.10
FILE No: 220724_Test Pit Logs-Quarry.dwg
FILE PATH
W:\Projects\220724\20 Data\CAD\02 Exhibits
LAYOUT: Q-TP#1
SURVEYED: Initials
DESIGN:
DRAFT: EVR
APPROVE:
DATE: DATE
SHEET 01 OF 14 SHEETS

SOIL DESCRIPTION	MDEQ-4 TABLE 2.1-1 SOIL TEXTURE	APPLICATION RATE (GPD/FT^2)	PROFILE	DEPTH (FT)
(0"- 16"): TOPSOIL; DARK BROWN; PRESENCE OF MANY FINE AND SOME COARSE ROOTS UP TO 3' BGS. SOME ORGANICS, SOMEWHAT MOIST.	LOAM	0.5		
(16"- 40"): GRAVELLY/FLAGGY CLAY LOAM. ORANGEISH BROWN, SOMEWHAT MOIST. DENSE. FRAGMENTED ROCK.	CLAY LOAM	0.3		
(44"- 66"): CLAY LOAM WITH SOME GRAVELS. LIGHT BROWN WITH SOME WHITE POCKETS WHEN DRIED. FRAGMENTED ROCKS.	GRAVELLY SANDY CLAY LOAM	0.4		4
(66"-120"): GRAVELLY CLAY LOAM WITH SOME GRAVELS. LIGHT BROWN.	GRAVELLY CLAY LOAM	0.3		8
BOTTOM OF TEST PIT				12 16 20

DEPTH TO GROUNDWATER: X FT	DEPTH TO BEDROCK: X FT	NOTES: VEGETATION - NATURAL GRASSES, PINE TREES ~20 FT AWAY. NO GROUNDWATER OR LIMITING LAYER ENCOUNTERED
LOGGED BY: EVR	DATE OF TEST PIT: 7/15/25 / TOTAL DEPTH: 10 FT	

QUARRY TEST PIT #2
CANYON
GALLATIN COUNTY, MT

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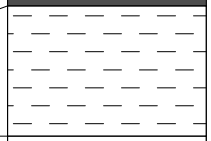
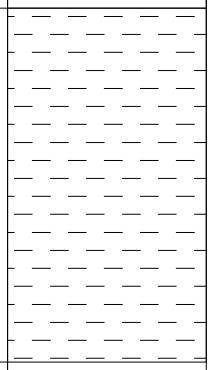
PROJECT: 220724.10
FILE No: 220724_Test Pit Logs-Quarry.dwg
FILE PATH
W:\Projects\220724\20 Data\CAD\02 Exhibits
LAYOUT: Q-TP#2
SURVEYED: Initials
DESIGN:
DRAFT: EVR
APPROVE:
DATE: DATE
SHEET 02 OF 14 SHEETS

SOIL DESCRIPTION	MDEQ-4 TABLE 2.1-1 SOIL TEXTURE	APPLICATION RATE (GPD/FT^2)	PROFILE	DEPTH (FT)
(0"- 18"): TOPSOIL; DARK BROWN; PRESENCE OF MANY FINE AND SOME COARSE ROOTS UP TO 3' BGS. SOME ORGANICS, SOMEWHAT MOIST.	LOAM	0.5		
(18"- 44"): GRAVELLY/FLAGGY CLAY LOAM. ORANGEISH BROWN, SOMEWHAT MOIST. DENSE. FRAGMENTED ROCK.	GRAVELLY CLAY LOAM	0.3		
(44"- 120"): CLAY LOAM WITH SOME GRAVELS. LIGHT BROWN WITH SOME WHITE POCKETS WHEN DRIED.	CLAY LOAM W/ SOME GRAVELS	0.3		4 8
BOTTOM OF TEST PIT				12 16 20

DEPTH TO GROUNDWATER: X FT	DEPTH TO BEDROCK: X FT	NOTES: VEGETATION - GRASSY AREA WITHIN DENSE PINE TREES. NO GROUNDWATER OR LIMITING LAYER ENCOUNTERED
LOGGED BY: EVR	DATE OF TEST PIT: 7/15/25 / TOTAL DEPTH: 10 FT	

QUARRY TEST PIT #3
CANYON
GALLATIN COUNTY, MT

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PROJECT: 220724.10
FILE No: 220724_Test Pit Logs-Quarry.dwg
FILE PATH
W:\Projects\220724\20 Data\CAD\02 Exhibits
LAYOUT: Q-TP#3
SURVEYED: Initials
DESIGN:
DRAFT: EVR
APPROVE:
DATE: DATE
SHEET 03 OF 14 SHEETS

SOIL DESCRIPTION	MDEQ-4 TABLE 2.1-1 SOIL TEXTURE	APPLICATION RATE (GPD/FT^2)	PROFILE	DEPTH (FT)
(0"- 16"): TOPSOIL; DARK BROWN; PRESENCE OF MANY FINE AND SOME COARSE ROOTS UP TO 3' BGS. SOME ORGANICS, SOMEWHAT MOIST.	LOAM	0.5		
(16"- 40"): GRAVELLY/FLAGGY CLAY LOAM. ORANGEISH BROWN, SOMEWHAT MOIST. FRAGMENTED ROCK. SAMPLED AT 3'.	CLAY LOAM	0.3		
(40"-120"): CLAY LOAM WITH SOME GRAVELS. LIGHT BROWN. SIMILAR TO BOTTOM LAYER IN TP#5.	CLAY LOAM WITH SOME GRAVELS	0.3		4 8
BOTTOM OF TEST PIT				12 16 20

DEPTH TO GROUNDWATER: X FT	DEPTH TO BEDROCK: X FT	NOTES: VEGETATION: NATURAL GRASSES AND SAGE BRUSH. AT EDGE OF CLEARED PINE TREE AREA. NO GROUNDWATER OR LIMITING LAYER ENCOUNTERED
LOGGED BY: EVR	DATE OF TEST PIT: 7/15/25 / TOTAL DEPTH: 10 FT	

QUARRY TEST PIT #4
CANYON
GALLATIN COUNTY, MT

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PROJECT: 220724.10
FILE No: 220724_Test Pit Logs-Quarry.dwg
FILE PATH
W:\Projects\220724\20 Data\CAD\02 Exhibits
LAYOUT: Q-TP#4
SURVEYED: Initials
DESIGN:
DRAFT: EVR
APPROVE:
DATE: DATE
SHEET 04 OF 14 SHEETS

SOIL DESCRIPTION	MDEQ-4 TABLE 2.1-1 SOIL TEXTURE	APPLICATION RATE (GPD/FT^2)	PROFILE	DEPTH (FT)
(0"- 8"): TOPSOIL; DARK BROWN; PRESENCE OF MANY FINE ROOTS UP TO 1' BGS AND SOME COARSE ROOTS UP TO 3' BGS. SOME ORGANICS, SOMEWHAT MOIST, SOME ROCK FRAGMENTS.	LOAM	0.5		
(8"- 32"): GRAVELLY CLAY LOAM. ORANGEISH BROWN, SOMEWHAT MOIST. FRAGMENTED ROCK.	CLAY LOAM	0.3		
(32"- 56"): EXTREMELY FLAGGY/ GRAVELLY SANDY CLAY LOAM. GRITTY. SAMPLED AT 4'. DRY.	GRAVELLY SANDY CLAY LOAM	0.4		4
(56"- 120"): CLAY LOAM WITH SOME GRAVELS. SAMPLED AT 6 FT.	CLAY LOAM W/ SOME GRAVELS	0.3		8
BOTTOM OF TEST PIT				12
				16
				20

DEPTH TO GROUNDWATER: X FT	DEPTH TO BEDROCK: X FT	NOTES: VEGETATION - NEAR CLEARED TREES AND BRUSH PILES (PINES, WEEDS GRASSES). NO GROUNDWATER OR LIMITING LAYER ENCOUNTERED
LOGGED BY: EVR	DATE OF TEST PIT: 7/15/25 / TOTAL DEPTH: 10 FT	

QUARRY TEST PIT #5
CANYON
GALLATIN COUNTY, MT

WGM GROUP
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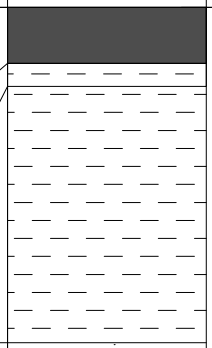
PROJECT: 220724.10
FILE No: 220724_Test Pit Logs-Quarry.dwg
FILE PATH
W:\Projects\220724\20 Data\CAD\02 Exhibits
LAYOUT: Q-TP#5
SURVEYED: Initials
DESIGN:
DRAFT: EVR
APPROVE:
DATE: DATE
SHEET 05 OF 14 SHEETS

SOIL DESCRIPTION	MDEQ-4 TABLE 2.1-1 SOIL TEXTURE	APPLICATION RATE (GPD/FT^2)	PROFILE	DEPTH (FT)
(0"- 12"): TOPSOIL; DARK BROWN; PRESENCE OF MANY FINE ROOTS UP TO 1' BGS. SOME ORGANICS, SOMEWHAT MOIST.	LOAM	0.5		4
(12"-18"): CLAY LOAM. DENSE, ORANGEISH BROWN, SOMEWHAT MOIST. NO GRAVELS PRESENT.	CLAY LOAM	0.3		
(18"-60"): CLAY LOAM, LIGHT BROWN. SIMILAR TO ABOVE LAYER WITH COLOR CHANGE. SOMEHWAT MOIST.	CLAY LOAM	0.3		
(60"-120"): EXTREMELY GRAVELLY SANDY CLAY LOAM. SAMPLED AT 6 FT. LIGHT BROWN. GRITTY.	GRAVELLY SANDY CLAY LOAM	0.4		8
BOTTOM OF TEST PIT				12
				16
				20

DEPTH TO GROUNDWATER: X FT	DEPTH TO BEDROCK: X FT	NOTES: VEGETATION - NATURAL GRASSES. NO SIGN OF GROUNDWATER OR LIMITED LAYER ENCOUNTERED
LOGGED BY: EVR	DATE OF TEST PIT: 7/15/25 / TOTAL DEPTH: 10 FT	

QUARRY TEST PIT #6
CANYON
GALLATIN COUNTY, MT

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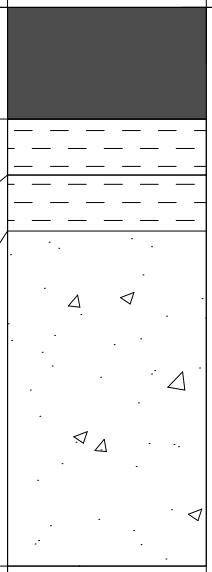
PROJECT: 220724.10
FILE No: 220724_Test Pit Logs-Quarry.dwg
FILE PATH
W:\Projects\220724\20 Data\CAD\02 Exhibits
LAYOUT: Q-TP#6
SURVEYED: Initials
DESIGN:
DRAFT: EVR
APPROVE:
DATE: DATE
SHEET 06 OF 14 SHEETS

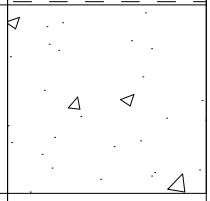
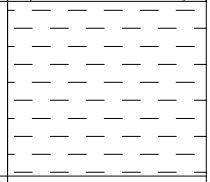
SOIL DESCRIPTION	MDEQ-4 TABLE 2.1-1 SOIL TEXTURE	APPLICATION RATE (GPD/FT^2)	PROFILE	DEPTH (FT)
(0"- 24"): TOPSOIL; DARK BROWN; PRESENCE OF MANY FINE ROOTS UP TO 2' BGS, SOME ORGANICS, SOMEWHAT MOIST.	LOAM	0.5		4 8 12 16 20
(24"- 36"): CLAY LOAM, BROWN, FINE GRAINED. SOMEWHAT MOIST. SAMPLED AT 2.5 FT. FEW COARSE ROOTS TO 3' BGS UP TO $\frac{1}{2}$" IN DIAMETER.	CLAY LOAM	0.3		
(36"- 48"): GRAVELLY CLAY LOAM, ORANGEISH BROWN. SOMEWHAT MOIST. ROCK FRAGMENTS BREAK VERY EASILY, FLAGGY. FEW COARSE ROOTS TO 3' BGS UP TO $\frac{1}{2}$" IN DIAMETER.	GRAVELLY CLAY LOAM	0.3		
(48"- 120"): SANDY CLAY LOAM WITH MANY GRAVELS (FRAGMENTED SHALE). MOST GRAVELS RANGE FROM 1"-6", SUBROUNDED. LESS CLAY THAN ABOVE LAYER. BARELY MOIST. SAMPLED AT 5'. TAN, BREAKS IN CLUMPS, GRITTY.	GRAVELLY SANDY CLAY LOAM	0.4		
BOTTOM OF TEST PIT				

DEPTH TO GROUNDWATER: X FT	DEPTH TO BEDROCK: X FT	NOTES: VEGETATION - NATURAL GRASSES AND SAGE BRUSH. NO SIGN OF GROUNDWATER OR LIMITED LAYER ENCOUNTERED
LOGGED BY: EVR	DATE OF TEST PIT: 7/15/25 / TOTAL DEPTH: 10 FT	

QUARRY TEST PIT #7
CANYON
GALLATIN COUNTY, MT

WGM GROUP
WWW.WGMGROUP.COM

PROJECT: 220724.10
FILE No: 220724_Test Pit Logs-Quarry.dwg
FILE PATH
W:\Projects\220724\20 Data\CAD\02 Exhibits
LAYOUT: Q-TP#7
SURVEYED: Initials
DESIGN:
DRAFT: EVR
APPROVE:
DATE: DATE
SHEET 07 OF 14 SHEETS

SOIL DESCRIPTION	MDEQ-4 TABLE 2.1-1 SOIL TEXTURE	APPLICATION RATE (GPD/FT^2)	PROFILE	DEPTH (FT)
(0"- 18"): TOPSOIL; DARK BROWN; PRESENCE OF MANY FINE ROOTS UP TO 1' BGS. SOME ORGANICS, SOMEWHAT MOIST.	LOAM	0.5		
(18"- 42"): GRAVELLY CLAY LOAM. ORANGEISH BROWN. SOMEWHAT MOIST.	GRAVELLY CLAY LOAM	0.3		
(42"- 84"): EXTREMELY GRAVELLY, RANGING SMALL TO LARGE COBBLES. SIMILAR TO TP#5&7 GRAVELLY LAYER	GRAVELLY SANDY CLAY LOAM	0.3		4
(84"- 120"): CLAY LOAM WITH FEW GRAVELS	CLAY LOAM	0.2		8
BOTTOM OF TEST PIT				12 16 20

DEPTH TO GROUNDWATER: X FT	DEPTH TO BEDROCK: X FT	NOTES: VEGETATION - NATURAL GRASSES AND SAGE BRUSH. AT EDGE OF CLEARED DISPOSAL AREA. NO SIGN OF GROUNDWATER OR LIMITED LAYER ENCOUNTERED
LOGGED BY: EVR	DATE OF TEST PIT: 7/15/25 / TOTAL DEPTH: 10 FT	

QUARRY TEST PIT #8
CANYON
GALLATIN COUNTY, MT

WGM GROUP
WWW.WGMGROUP.COM

PROJECT: 220724.10
FILE No: 220724_Test Pit Logs-Quarry.dwg
FILE PATH
W:\Projects\220724\20 Data\CAD\02 Exhibits
LAYOUT: Q-TP#8
SURVEYED: Initials
DESIGN:
DRAFT: EVR
APPROVE:
DATE: DATE
SHEET 08 OF 14 SHEETS

SOIL DESCRIPTION	MDEQ-4 TABLE 2.1-1 SOIL TEXTURE	APPLICATION RATE (GPD/FT^2)	PROFILE	DEPTH (FT)
(0"- 16"): TOPSOIL; DARK BROWN; PRESENCE OF MANY FINE ROOTS UP TO 2' BGS, FEW COARSE ROOTS TO 3' BGS UP TO $\frac{1}{2}$" IN DIAMETER. SOME ORGANICS, SOMEWHAT MOIST.	LOAM	0.5		
(16"- 52"): GRAVELLY CLAY LOAM. SIMILAR TO ABOVE BUT HAS PRESENCE OF FLAGGY GRAVELS/DENSELY PACKED SHALE FRAGMENTS. VERY DENSE. SOMEWHAT MOIST.	GRAVELLY CLAY LOAM	0.3		4
(52"- 120"): FLAGGY CLAY LOAM WITH MANY GRAVELS (FRAGMENTED SHALE). POTENTIAL MOTTLING AT 8', SOMEWHAT MOIST.	GRAVELLY CLAY LOAM	0.3		8
BOTTOM OF TEST PIT				12
				16
				20

DEPTH TO GROUNDWATER: X FT	DEPTH TO BEDROCK: X FT	NOTES: NEAR CLEARED TREED AREA. INSERTED 10' PVC MONITORING WELL UPON BACKFILLING.
LOGGED BY: EVR	DATE OF TEST PIT: 7/15/25	TOTAL DEPTH: 10 FT

QUARRY TEST PIT #9
CANYON
GALLATIN COUNTY, MT

WGM GROUP
WWW.WGMGROUP.COM

PROJECT: 220724.10
FILE No: 220724_Test Pit Logs-Quarry.dwg
FILE PATH
W:\Projects\220724\20 Data\CAD\02 Exhibits
LAYOUT: Q-TP#9
SURVEYED: Initials
DESIGN:
DRAFT: EVR
APPROVE:
DATE: DATE
SHEET 09 OF 14 SHEETS

SOIL DESCRIPTION	MDEQ-4 TABLE 2.1-1 SOIL TEXTURE	APPLICATION RATE (GPD/FT^2)	PROFILE	DEPTH (FT)
(0"- 24"): TOPSOIL; DARK BROWN; PRESENCE OF MANY FINE ROOTS UP TO 2' BGS, SOME COARSE ROOTS TO 3' BGS. SOME ORGANICS, SOMEWHAT MOIST.	LOAM	0.5		
(24"- 60"): GRAVELLY CLAY LOAM. ORANGEISH BROWN. SOMEWHAT MOIST.	GRAVELLY CLAY LOAM	0.3		4
(60"- 120"): FLAGGY CLAY LOAM WITH MANY GRAVELS (FRAGMENTED SHALE). POTENTIAL MOTTLING AT 8', SOMEWHAT MOIST.	GRAVELLY CLAY LOAM	0.3		8
BOTTOM OF TEST PIT				12
				16
				20

DEPTH TO GROUNDWATER: X FT	DEPTH TO BEDROCK: X FT	NOTES: VEGETATION - CLEARED TREED AREA. NO GROUNDWATER OR LIMITING LAYER ENCOUNTERED
LOGGED BY: EVR	DATE OF TEST PIT: 7/15/25 | TOTAL DEPTH: 10 FT	

QUARRY TEST PIT #10
CANYON
GALLATIN COUNTY, MT

WGM GROUP
WWW.WGMGROUP.COM

PROJECT: 220724.10
FILE No: 220724_Test Pit Logs-Quarry.dwg
FILE PATH
W:\Projects\220724\20 Data\CAD\02 Exhibits
LAYOUT: Q-TP#10
SURVEYED: Initials
DESIGN:
DRAFT: EVR
APPROVE:
DATE: DATE
SHEET 10 OF 14 SHEETS

CASE
QUALITY CONSTRUCTION TESTING & INSPECTION

415 Floss Flats, Ste. D - Belgrade, MT 59714

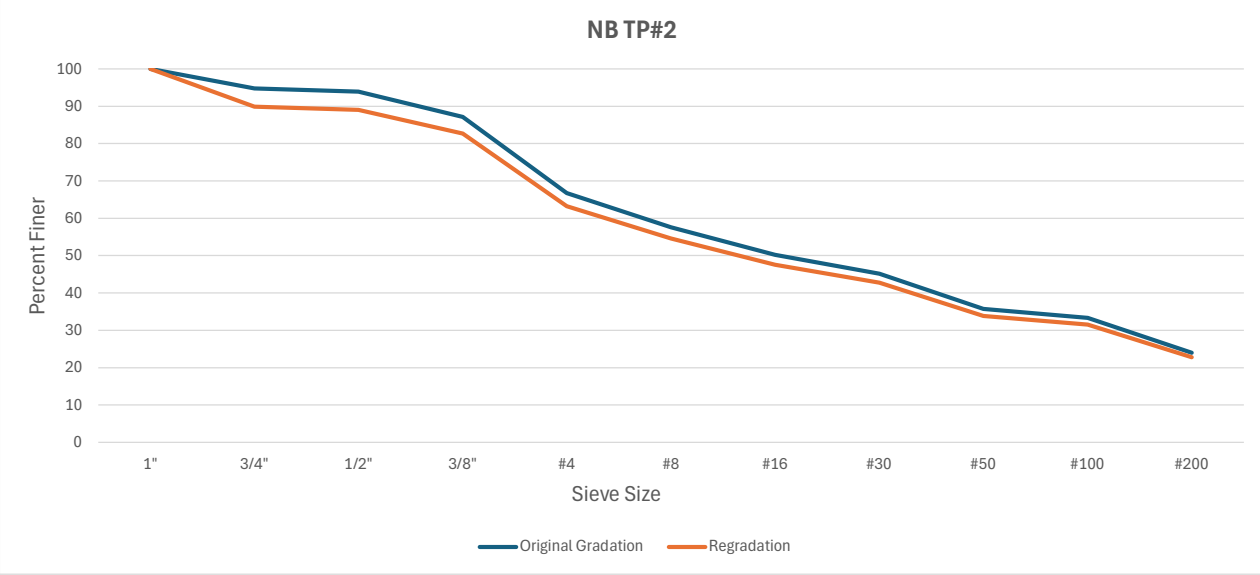
7/22/2025
Tested by: C. Pantori
Reviewed by T. Miller

NB TP#2

Testing Protocol: NEH Chapter 26

Sieve Size	Percent Finer	Correction Factor	New Percent Finer
1"	100	1	100
3/4"	94.8	0.948	89.87
1/2"	93.9	0.948	89.02
3/8"	87.2	0.948	82.67
#4	66.7	0.948	63.23
#8	57.6	0.948	54.60
#16	50.2	0.948	47.59
#30	45.1	0.948	42.75
#50	35.7	0.948	33.84
#100	33.3	0.948	31.57
#200	24.0	0.948	22.75

Base Soil Category (Based on Table 26-1)	Base Soil Description (Based on Table 26-1)
3	Silty and Clayey Sand and Gravels



CASE
QUALITY CONSTRUCTION TESTING & INSPECTION

415 Floss Flats, Ste. D - Belgrade, MT 59714

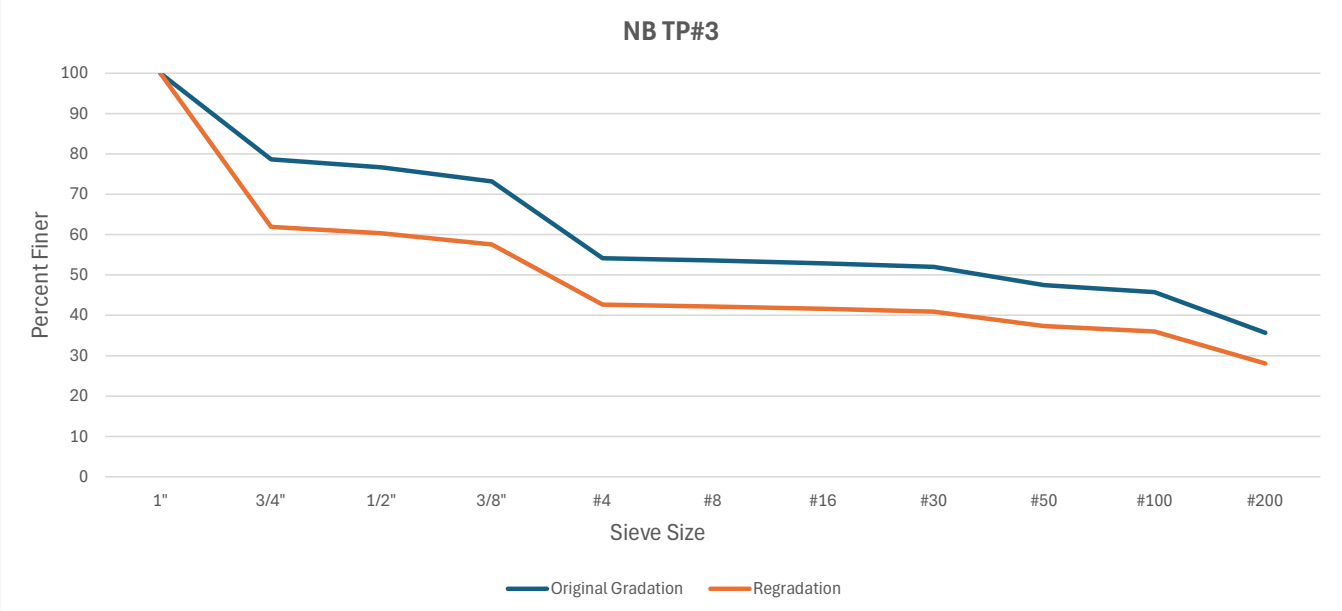
7/22/2025
Tested by: C. Pantori
Reviewed by T. Miller

NB TP#3

Testing Protocol: NEH Chapter 26

Sieve Size	Percent Finer	Correction Factor	New Percent Finer
1"	100	1	100
3/4"	78.7	0.787	61.94
1/2"	76.7	0.787	60.36
3/8"	73.2	0.787	57.61
#4	54.2	0.787	42.66
#8	53.6	0.787	42.18
#16	52.9	0.787	41.63
#30	52.0	0.787	40.92
#50	47.5	0.787	37.38
#100	45.8	0.787	36.04
#200	35.7	0.787	28.10

Base Soil Category (Based on Table 26-1)	Base Soil Description (Based on Table 26-1)
3	Silty and Clayey Sand and Gravels



CASE
QUALITY CONSTRUCTION TESTING & INSPECTION

415 Floss Flats, Ste. D - Belgrade, MT 59714

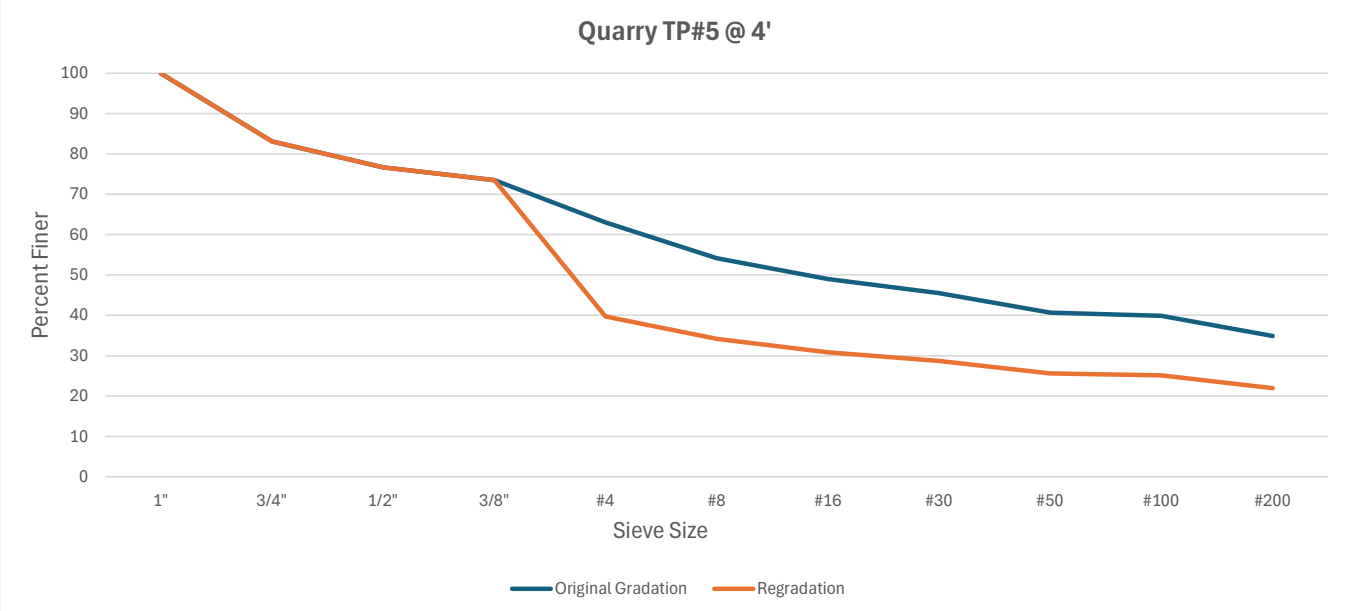
7/22/2025
Tested by: C. Pantori
Reviewed by T. Miller

Quarry TP#5@4'

Testing Protocol: NEH Chapter 26

Sieve Size	Percent Finer	Correction Factor	New Percent Finer
1"	100	1	100
3/4"	83.1	1	83.10
1/2"	76.7	1	76.70
3/8"	73.5	1	73.50
#4	63.0	0.63	39.69
#8	54.2	0.63	34.15
#16	49.0	0.63	30.87
#30	45.5	0.63	28.67
#50	40.7	0.63	25.64
#100	39.9	0.63	25.14
#200	34.9	0.63	21.99

Base Soil Category (Based on Table 26-1)	Base Soil Description (Based on Table 26-1)
3	Silty and Clayey Sand and Gravels



CASE
QUALITY CONSTRUCTION TESTING & INSPECTION

415 Floss Flats, Ste. D - Belgrade, MT 59714

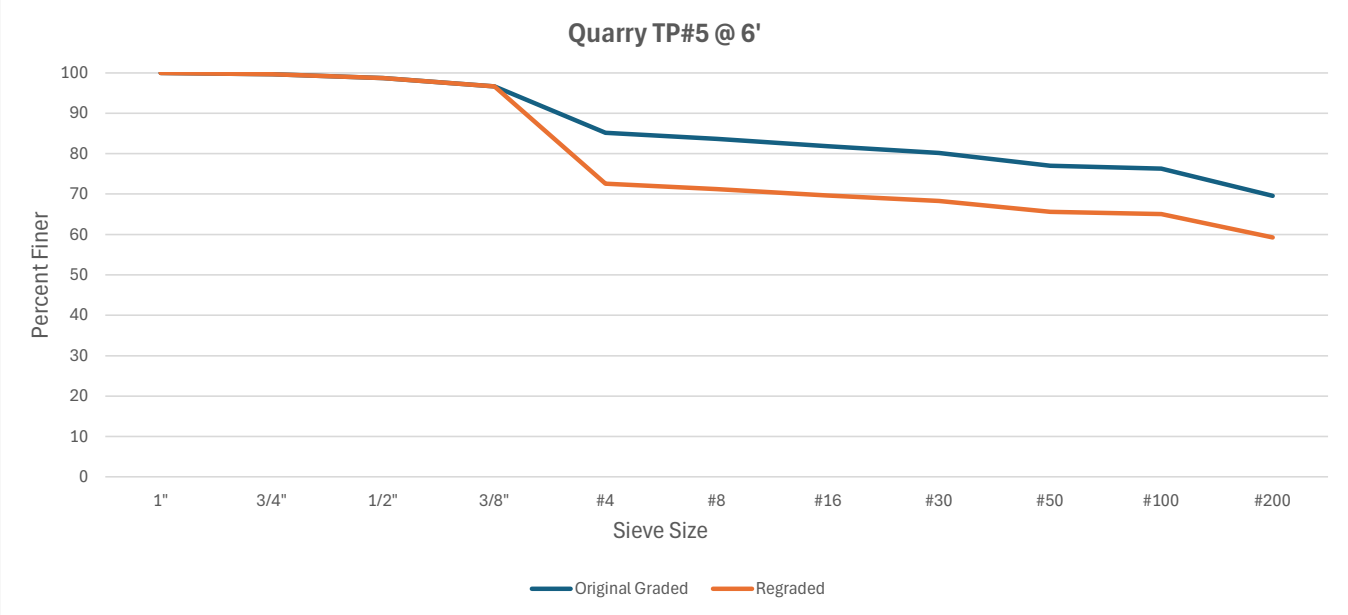
7/22/2025
Tested by: C. Pantori
Reviewed by T. Miller

Quarry TP#5@6'

Testing Protocol: NEH Chapter 26

Sieve Size	Percent Finer	Correction Factor	New Percent Finer
1"	100	1	100
3/4"	99.7	1	99.70
1/2"	98.7	1	98.70
3/8"	96.7	1	96.70
#4	85.2	0.852	72.59
#8	83.6	0.852	71.23
#16	81.8	0.852	69.69
#30	80.2	0.852	68.33
#50	77.0	0.852	65.60
#100	76.3	0.852	65.01
#200	69.6	0.852	59.30

Base Soil Category (Based on Table 26-1)	Base Soil Description (Based on Table 26-1)
2	Sands, Silts, Clays, and Silty clays



CASE
QUALITY CONSTRUCTION TESTING & INSPECTION

415 Floss Flats, Ste. D - Belgrade, MT 59714

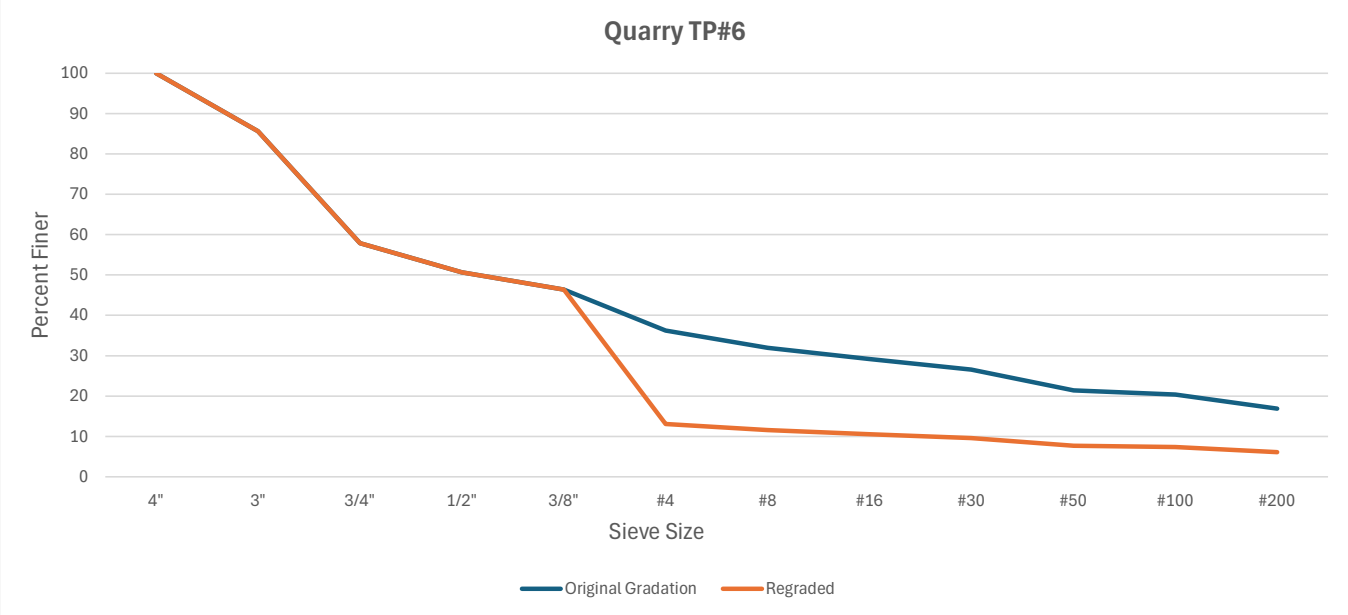
7/22/2025
Tested by: C. Pantori
Reviewed by T. Miller

Quarry TP6

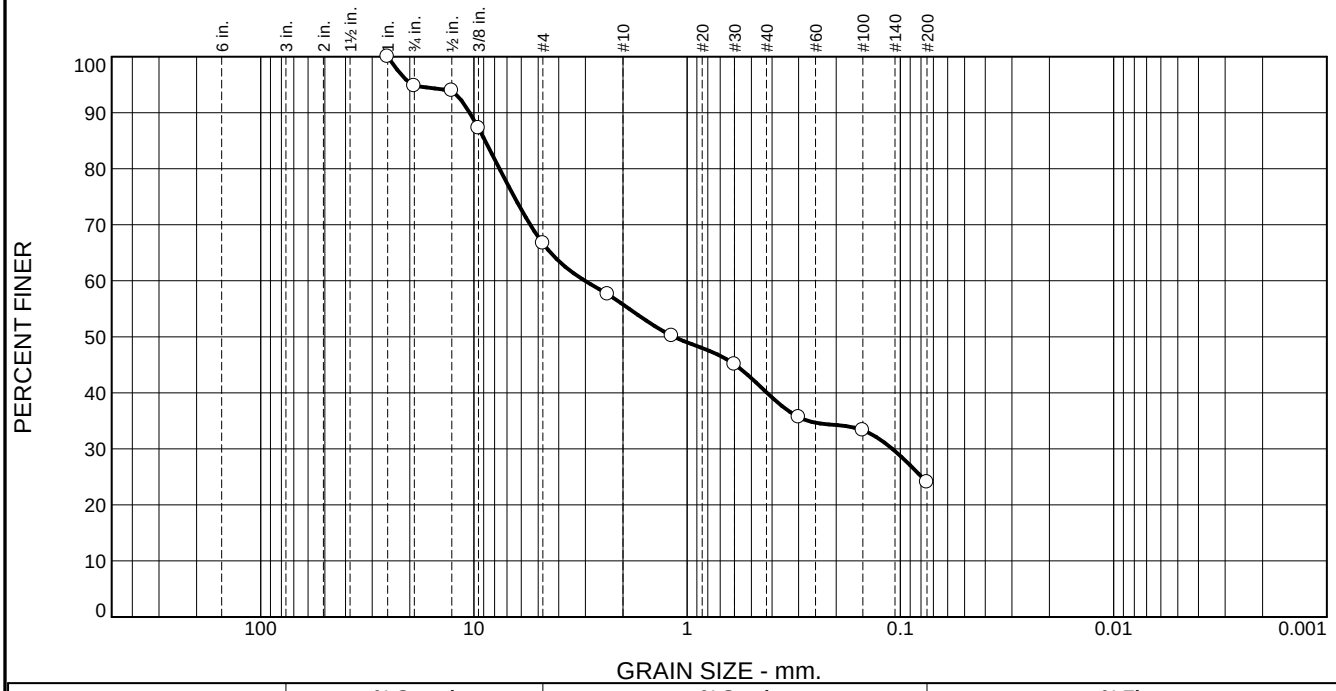
Testing Protocol: NEH Chapter 26

Sieve Size	Percent Finer	Correction Factor	New Percent Finer
4"	100	1	100
3"	85.6	1	85.60
3/4"	57.9	1	57.90
1/2"	50.7	1	50.70
3/8"	46.4	1	46.40
#4	36.2	0.362	13.10
#8	32.0	0.362	11.58
#16	29.2	0.362	10.57
#30	26.6	0.362	9.63
#50	21.4	0.362	7.75
#100	20.4	0.362	7.38
#200	16.9	0.362	6.12

Base Soil Category (Based on Table 26-1)	Base Soil Description (Based on Table 26-1)
4	Sands and Gravels



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	5.2	28.1	10.9	15.7	16.1	24.0	

Test Results (ASTM C 136 & ASTM C 117)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1"	100.0		
3/4"	94.8		
1/2"	93.9		
3/8"	87.2		
#4	66.7		
#8	57.6		
#16	50.2		
#30	45.1		
#50	35.7		
#100	33.3		
#200	24.0		

* (no specification provided)

Material Description

NB TP #2

Atterberg Limits (ASTM D 4318)

PL= NT **LL=** NT **PI=** NT

Classification

USCS (D 2487)= NT **AASHTO (M 145)=** NT

Coefficients

D_{90}= 10.4671 D_{85}= 8.8646 D_{60}= 3.0120
D_{50}= 1.1547 D_{30}= 0.1091 D_{15}=
D_{10}= C_u= C_c=

Remarks

None

Date Received: 7/18/2025 **Date Tested:** 7/21/2025

Tested By: C. Pantori

Checked By: T. Haan

Title: Engineer

Location: Canyon 220724
Sample Number: 6831 **Depth:** NA

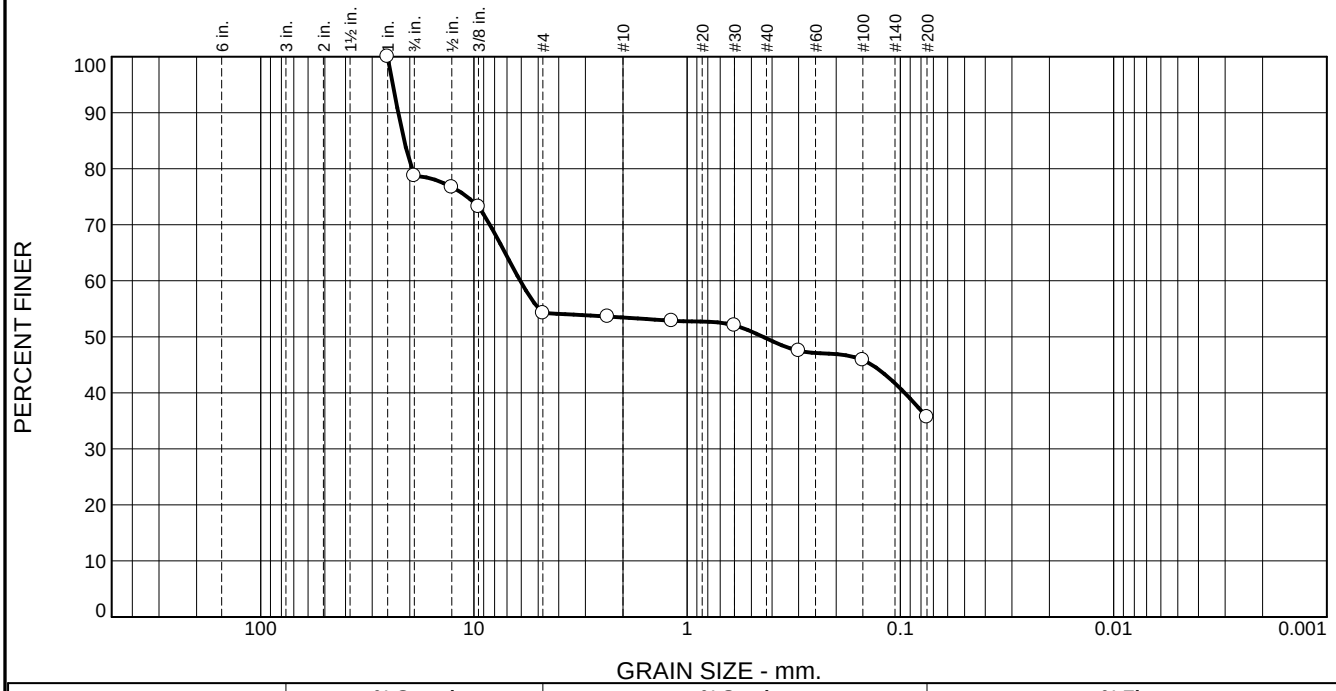
Date Sampled: 7/18/2025

CASE

Client: WGM Group
Project: Canyon 220724

Project No: 10089.04 **Lab Number** 6831

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	21.3	24.5	0.8	3.7	14.0	35.7	

Test Results (ASTM C 136 & ASTM C 117)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1"	100.0		
3/4"	78.7		
1/2"	76.7		
3/8"	73.2		
#4	54.2		
#8	53.6		
#16	52.9		
#30	52.0		
#50	47.5		
#100	45.8		
#200	35.7		

* (no specification provided)

Material Description

NB TP #3

Atterberg Limits (ASTM D 4318)

PL= NT **LL=** NT **PI=** NT

Classification

USCS (D 2487)= NT **AASHTO (M 145)=** NT

Coefficients

D_{90}= 22.6536 D_{85}= 21.2339 D_{60}= 6.0687
D_{50}= 0.4407 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

None

Date Received: 7/18/2025 **Date Tested:** 7/21/2025

Tested By: C. Pantori

Checked By: T. Haan

Title: Engineer

Location: Canyon 220724
Sample Number: 6832 **Depth:** NA

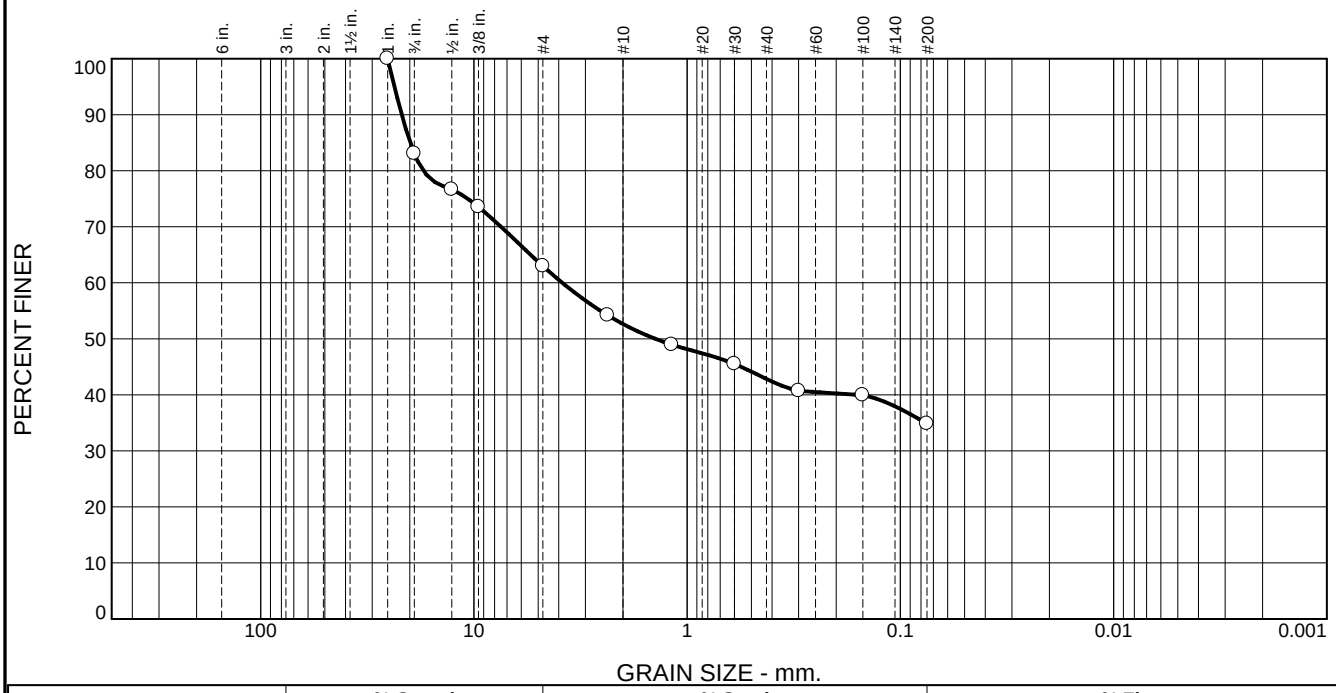
Date Sampled: 7/18/2025

CASE

Client: WGM Group
Project: Canyon 220724

Project No: 10089.04 **Lab Number** 6832

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	16.9	20.1	10.4	9.8	7.9	34.9	

Test Results (ASTM C 136 & ASTM C 117)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1"	100.0		
3/4"	83.1		
1/2"	76.7		
3/8"	73.5		
#4	63.0		
#8	54.2		
#16	49.0		
#30	45.5		
#50	40.7		
#100	39.9		
#200	34.9		

* (no specification provided)

Material Description

Quarry TP #5 @ 4'

Atterberg Limits (ASTM D 4318)

PL= NT **LL=** NT **PI=** NT

Classification

USCS (D 2487)= NT **AASHTO (M 145)=** NT

Coefficients

D_{90}= 21.8103 D_{85}= 19.9032 D_{60}= 3.8532
D_{50}= 1.4106 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

None

Date Received: 7/18/2025 **Date Tested:** 7/21/2025

Tested By: C. Pantori

Checked By: T. Haan

Title: Engineer

Location: Canyon 220724
Sample Number: 6834 **Depth:** 4'

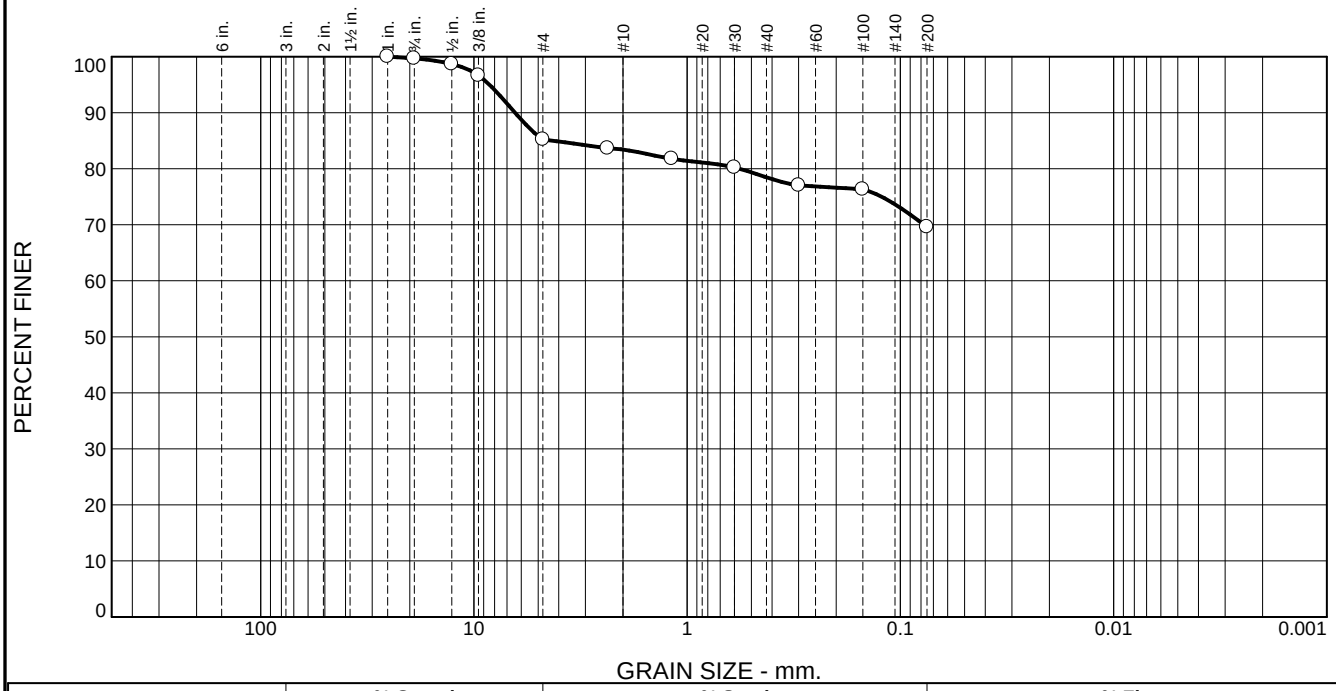
Date Sampled: 7/18/2025

CASE

Client: WGM Group
Project: Canyon 220724

Project No: 10089.04 **Lab Number** 6834

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.3	14.5	1.8	4.9	8.9	69.6	

Test Results (ASTM C 136 & ASTM C 117)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1"	100.0		
3/4"	99.7		
1/2"	98.7		
3/8"	96.7		
#4	85.2		
#8	83.6		
#16	81.8		
#30	80.2		
#50	77.0		
#100	76.3		
#200	69.6		

* (no specification provided)

Material Description

Quarry TP #5 @ 6'

Atterberg Limits (ASTM D 4318)

PL= NT **LL=** NT **PI=** NT

Classification

USCS (D 2487)= NT **AASHTO (M 145)=** NT

Coefficients

D_{90}= 6.4202 D_{85}= 4.2863 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

None

Date Received: 7/18/2025 **Date Tested:** 7/21/2025

Tested By: C. Pantori

Checked By: T. Haan

Title: Engineer

Location: Canyon 220724
Sample Number: 6835 **Depth:** 6'

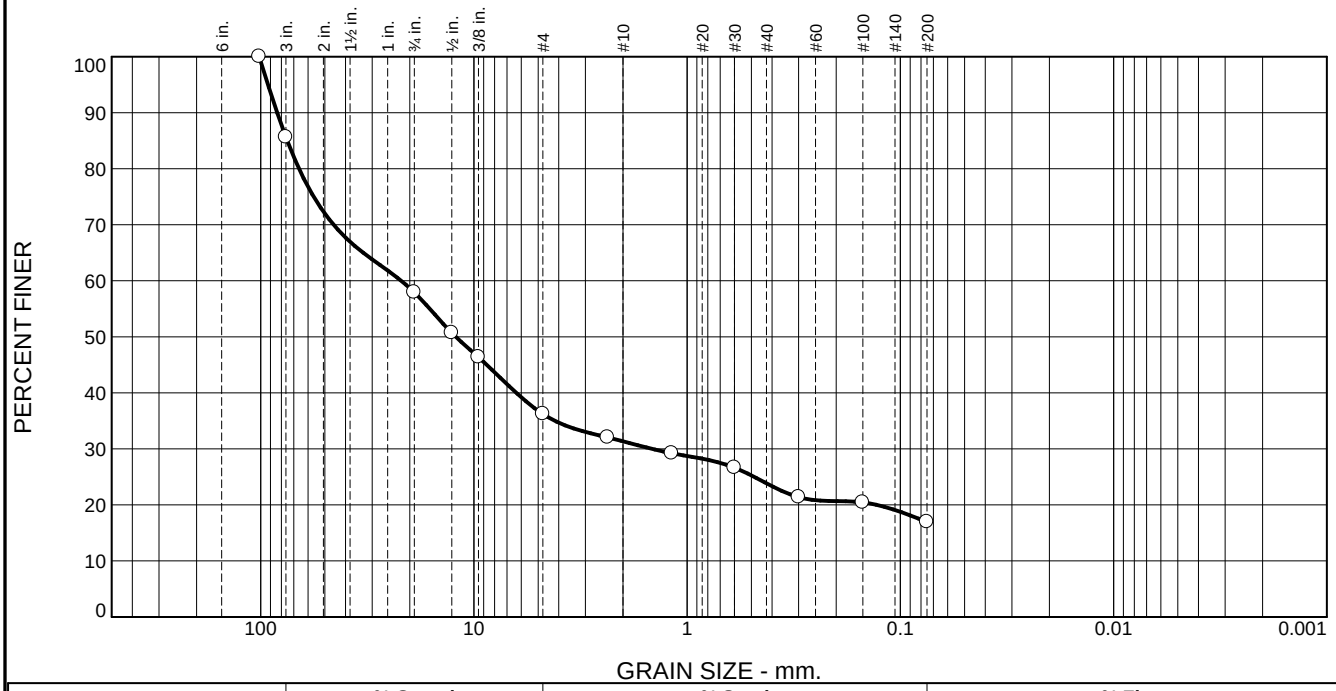
Date Sampled: 7/18/2025

CASE

Client: WGM Group
Project: Canyon 220724

Project No: 10089.04 **Lab Number** 6835

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
14.4	27.7	21.7	4.9	7.4	7.0	16.9	

Test Results (ASTM C 136 & ASTM C 117)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
4"	100.0		
3"	85.6		
3/4"	57.9		
1/2"	50.7		
3/8"	46.4		
#4	36.2		
#8	32.0		
#16	29.2		
#30	26.6		
#50	21.4		
#100	20.4		
#200	16.9		

* (no specification provided)

Material Description

Quarry TP #6

Atterberg Limits (ASTM D 4318)

PL= NT **LL=** NT **PI=** NT

Classification

USCS (D 2487)= NT **AASHTO (M 145)=** NT

Coefficients

D_{90}= 83.7180 D_{85}= 75.1230 D_{60}= 21.9451
D_{50}= 12.1680 D_{30}= 1.4600 D_{15}=
D_{10}= C_u= C_c=

Remarks

None

Date Received: 7/18/2025 **Date Tested:** 7/21/2025

Tested By: C. Pantori

Checked By: T. Haan

Title: Engineer

Location: Canyon 220724
Sample Number: 6833 **Depth:** NA

Date Sampled: 7/18/2025

CASE

Client: WGM Group
Project: Canyon 220724

Project No: 10089.04 **Lab Number** 6833

Analytical Sciences Laboratory
University of Idaho

Holm Research Center
875 Perimeter Dr. MS 2203
Moscow, Idaho 83844-2203

Phone: (208) 885-7081 FAX: (208) 885-8937
email: asl@uidaho.edu http://www.agls.uidaho.edu/asl/

Certificate of Analysis

Prepared For: Emma Raeside
WGM Group, Inc.
109 East Main Street
Suite B
Bozeman, MT 59715

Case ID: SJUL25-011
Report Date: 01-Aug-25
Date Received: 23-Jul-25
Client Ref.: Bill
Project ID:

1st Level QC: Lodi Linsweld Date: 8/1/2025
2nd Level QC: VR Date: 8-1-25

Case Comments:

Samples will be discarded one month after date of final report unless otherwise requested.

Soil Phosphorus Isotherm
SOP: SMM.85.120.07

Form Verified By/Date: MC 8-1-25

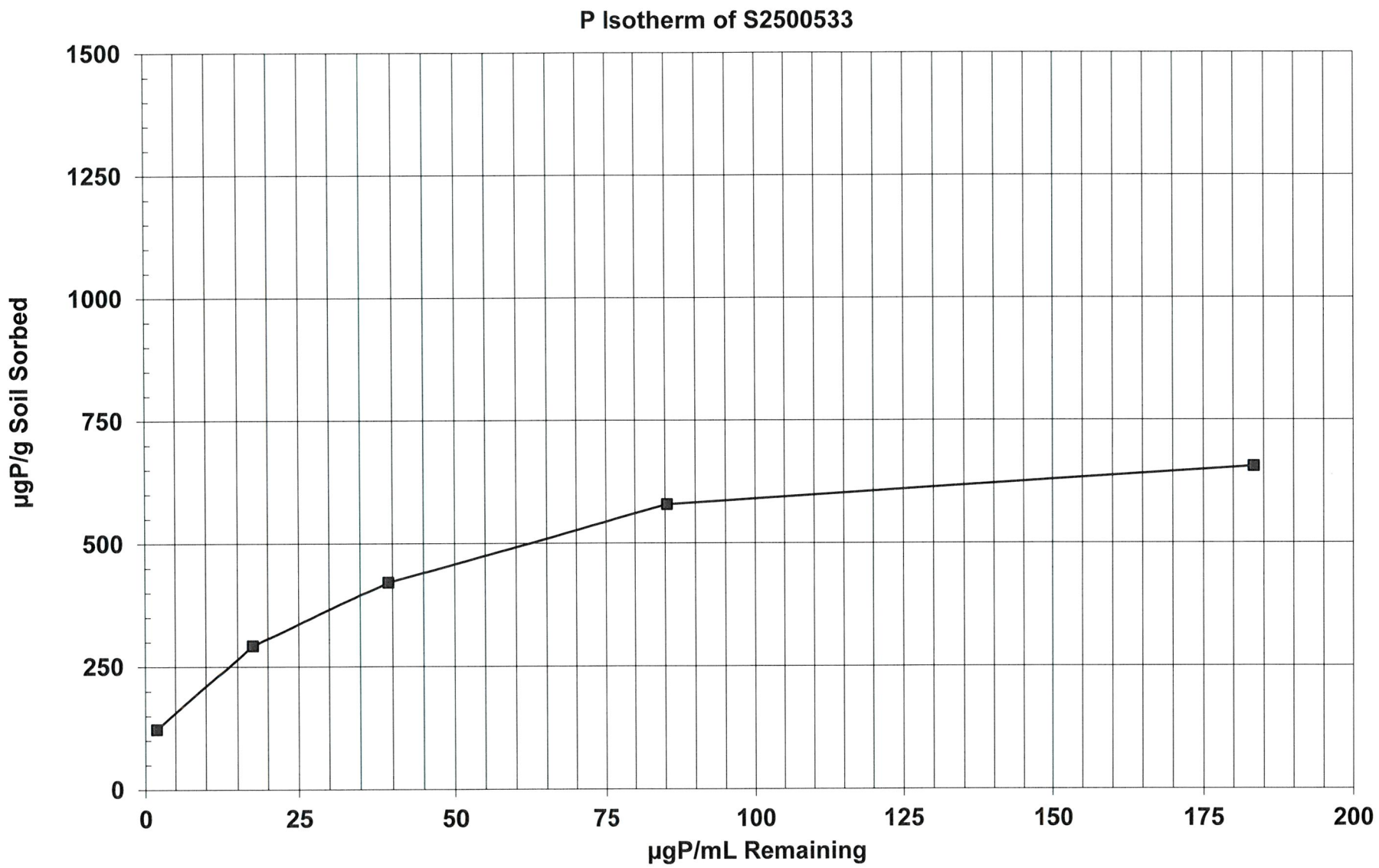
Sample ID	Sample Code	Wt.(g)	Conc. µg P/mL	Conc. Dup. µg P/mL	Multiplier	Solution µg P/mL	Soil Sorbed µg P/g	CHART
						X	Y	
BLANK	**blk 0**	NA	0.000	0.000	1	0.00	0.0	Blank
	blk 5	NA	5.020	5.010	1	5.02	0.0	
	blk 25	NA	26.100	26.010	1	26.1	-1.1	
	blk 50	NA	50.400	50.120	1	50.3	-0.3	
	blk 100	NA	100.150	100.210	1	100	-0.2	
	blk 200	NA	197.430	197.810	1	198	2.4	
						X	Y	
J Reference	**J5**	1.000	1.370	1.410	1	1.39	90.3	R
	J25	1.000	15.300	15.330	1	15.3	242	
	J50	1.000	35.560	36.180	1	35.9	353	
	J100	1.000	80.810	81.280	1	81.0	474	
	J200	1.000	173.530	174.540	1	174	649	
						X	Y	
S2500533	**A5**	0.634	1.890	1.890	1	1.89	122.6	A
	A25	0.634	17.540	17.630	1	17.6	292	
	A50	0.634	39.710	38.940	1	39.3	421	
	A100	0.634	85.010	85.630	1	85.3	579	
	A200	0.634	182.900	183.860	1	183	655	
						X	Y	
S250534	**B5**	0.741	2.330	2.350	1	2.34	89.7	B
	B25	0.741	19.730	19.640	1	19.7	179	
	B50	0.741	41.900	42.030	1	42.0	271	
	B100	0.741	89.760	90.080	1	89.9	340	
	B200	0.741	186.960	189.420	1	188	398	
						X	Y	
S250535	**C5**	0.701	2.040	1.760	1	1.9000	110.6	C
	C25	0.701	17.600	17.640	1	17.62	263	
	C50	0.701	39.390	38.650	1	39.0	392	
	C100	0.701	85.370	85.970	1	85.7	511	
	C200	0.701	184.250	184.640	1	184	555	
						X	Y	
S250536	**D5**	0.692	1.010	1.220	1	1.1150	140.4	D
	D25	0.692	15.820	15.070	1	15.45	345	
	D50	0.692	35.930	36.680	1	36.3	495	
	D100	0.692	78.530	76.990	1	77.8	803	
	D200	0.692	116.270	116.420	1	116	3022	

Form Verified By/Date: MC 8-1-25

Sample #	Soil & Tray Before Grinding (g)	Soil & Tray After Grinding (g)	Tray Weight (g)	>2mm %	Grams to weigh for P Isotherm
Date:					
Initials:					
Blank					
S2500533	1459.2	937.4	117.6	**38.8939**	0.611
S2500533 #2	1736.4	1122.5	121.7	**38.0194**	0.620
S2500533 #3	1526.5	1033.7	121.2	**35.0672**	0.649
S2500533 #4	1521.9	1036.9	108.3	**34.3096**	0.657
S2500533 Avg	6244.0	4130.5	468.8	**36.5961**	0.634
S2500534	1470.3	1111.9	120.4	**26.5501**	0.734
S2500534 #2	1236.2	898.5	122.8	**30.3305**	0.697
S2500534 #3	1331.6	1012.2	108.7	**26.1182**	0.739
S2500534 #4	1228.3	1002.6	123.2	**20.4235**	0.796
S2500534 Avg	5266.4	4025.2	475.1	**25.9053**	0.741
S2500535	1173.2	848.7	100.2	**30.2423**	0.698
S2500535 #2	904.9	666.2	124.0	**30.5673**	0.694
S2500535 #3	1039.1	754.0	121.9	**31.0837**	0.689
S2500535 #4	927.8	701.3	118.1	**27.9733**	0.720
S2500535 #5	1067.0	771.7	126.8	**31.4082**	0.686
S2500535 #6	1043.2	788.1	121.5	**27.6771**	0.723
S2500535 Avg	6155.2	4530.0	712.5	**29.8602**	0.701
S2500536	1060.5	766.0	115.4	**31.1607**	0.688
S2500536 #2	1201.8	899.2	119.6	**27.9616**	0.720
S2500536 #3	977.9	811.8	119.2	**19.3432**	0.807
S2500536 #4	1372.6	983.9	122.2	**31.0861**	0.689
S2500536 #5	1541.2	981.8	121.5	**39.4027**	0.606
S2500536 Avg	6154.0	4442.7	597.9	**30.8004**	0.692

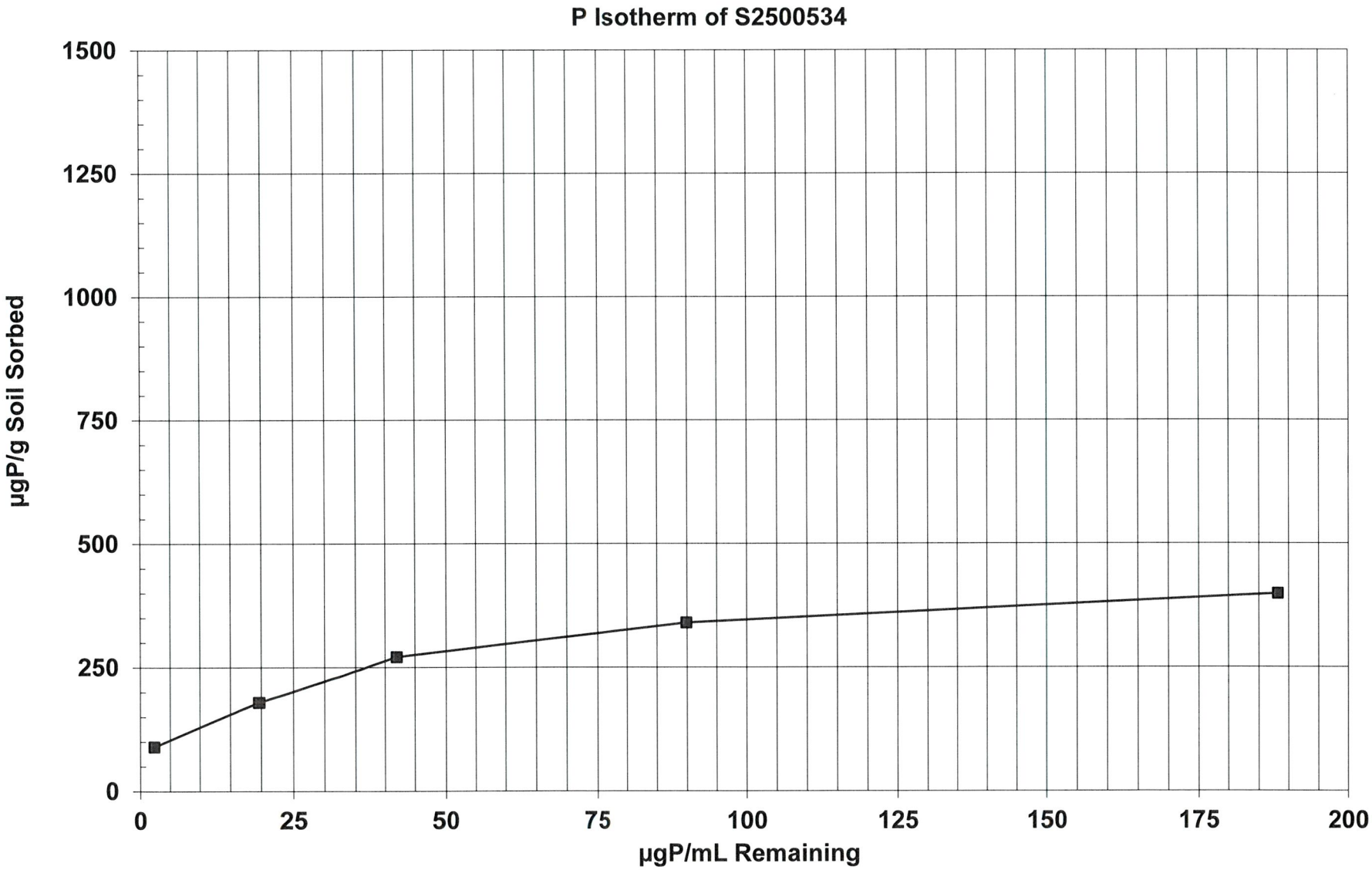
Soil Phosphorus Isotherm
SOP: SMM.85.120.07

Form Verified By/Date: _____



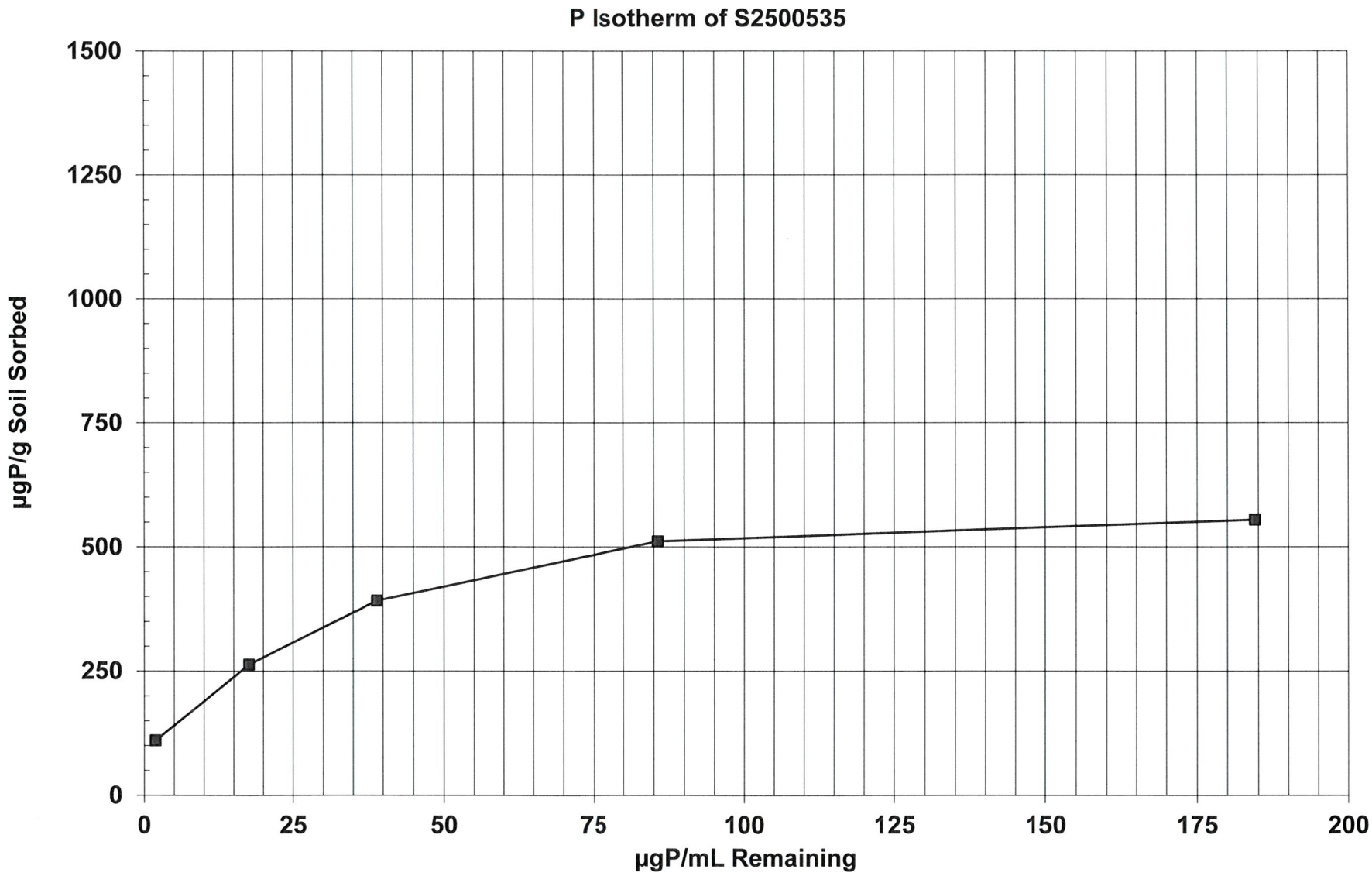
Soil Phosphorus Isotherm
SOP: SMM.85.120.07

Form Verified By/Date: MR 8-1-25



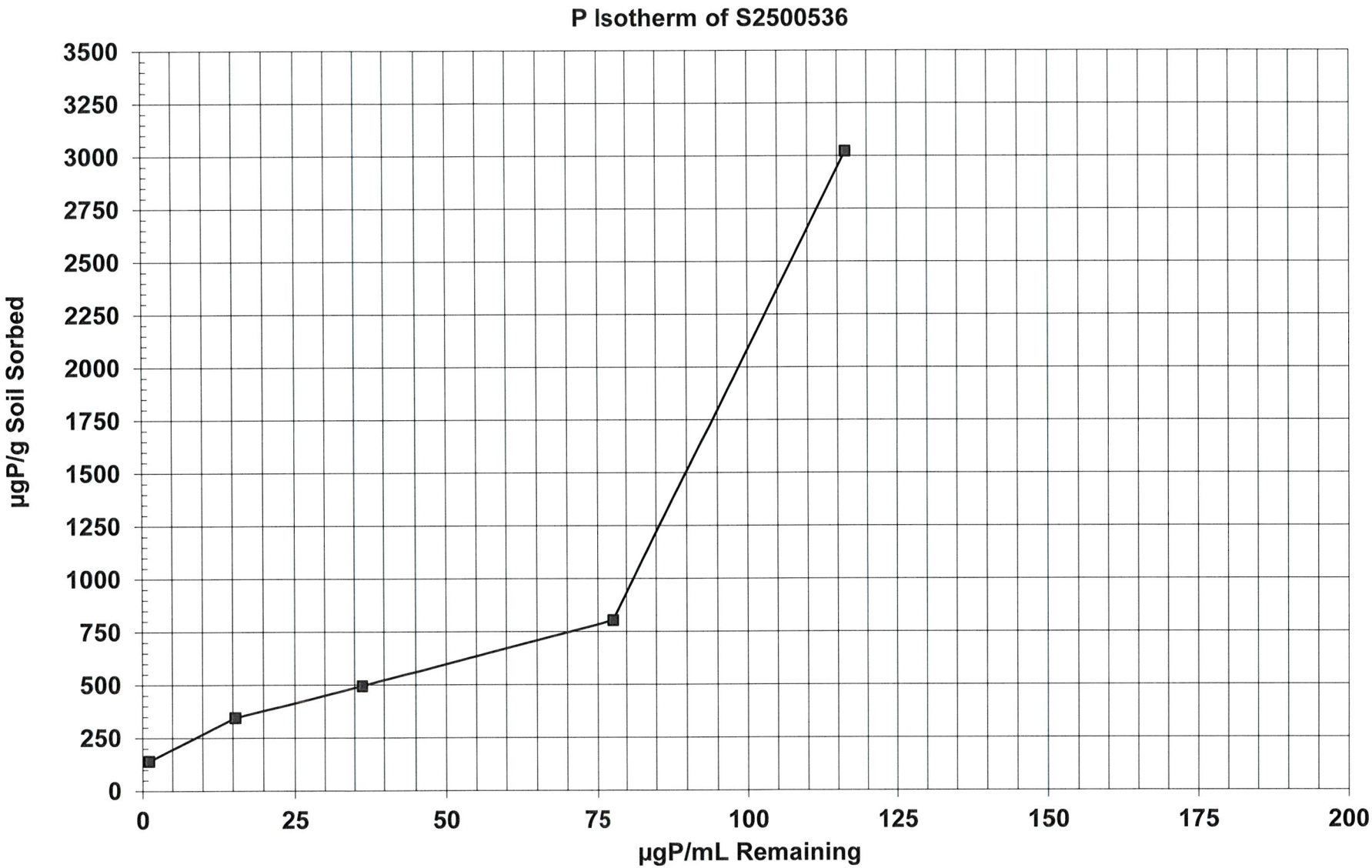
Soil Phosphorus Isotherm
SOP: SMM.85.120.07

Form Verified By/Date: MR 8-1-25



Soil Phosphorus Isotherm
SOP: SMM.85.120.07

Form Verified By/Date: MH 8-1-25



APPENDIX E
DOUBLE RING INFILTROMETER TESTS

Insurance Requirements for Professional Services

Consultant shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Consultant, its agents, representatives, or employees.

MINIMUM SCOPE AND LIMIT OF INSURANCE

Coverage shall be at least as broad as:

1. **Commercial General Liability** (CGL): Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal & advertising injury with limits no less than:

Per Project General Aggregate:	$4,000,000
Products/Completed Operations Aggregate:	$4,000,000
Personal and Advertising Injury:	$2,000,000
Each Occurrence:	$2,000,000

   - The general aggregate limit shall apply separately to this project/location (ISO CG 25 03 or 25 04)
   - Consultant's CGL policy shall not exclude coverage for injury to subcontractor's employees.
   - Consultant's CGL policy shall not include any modifications limiting coverage to Work Performed by Subcontractors.

2. **Automobile Liability:** Insurance Services Office Form Number CA 0001 covering, Code 1 (any auto), or if Consultant has no owned autos, Code 8 (hired) and 9 (non-owned), with limit no less than **$1,500,000** per accident for bodily injury and property damage.

3. **Workers' Compensation** insurance as required by the State of Montana, with Statutory Limits, and Employer's Liability Insurance with limit of no less than **$1,000,000** per accident for bodily injury or disease.

(Not required if Consultant has no employees)

4. **Professional Liability** (Errors and Omissions) Insurance appropriates to the Consultant's profession, with limit no less than **$2,000,000** per occurrence or claim, **$2,000,000** aggregate.

5. **Cyber Insurance**, with limits not less than **$2,000,000** per occurrence or claim, **$2,000,000** aggregate. Coverage shall be sufficiently broad to respond to the duties and

obligations as is undertaken by Consultant in this agreement and shall include, but not be limited to, claims involving security breach, system failure, data recovery, business interruption, cyber extortion, social engineering, infringement of intellectual property, including but not limited to infringement of copyright, trademark, trade dress, invasion of privacy violations, information theft, damage to or destruction of electronic information, release of private information, and alteration of electronic information. The policy shall provide coverage for breach response costs, regulatory fines and penalties as well as credit monitoring expenses.

If the Consultant maintains broader coverage and/or higher limits than the minimums shown above, the Entity requires and shall be entitled to the broader coverage and/or the higher limits maintained by the Consultant. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the Entity.

Other Insurance Provisions

The insurance policies are to contain, or be endorsed to contain, the following provisions:

Additional Insured Status

The Entity, its officers, officials, employees, and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the Consultant including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Consultant's insurance (at least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of **both** CG 20 10, CG 20 26, CG 20 33, or CG 20 38; **and** CG 20 37).

Primary Coverage

For any claims related to this contract, the **Consultant's insurance coverage shall be primary and non-contributory** and at least as broad as ISO CG 20 01 12 19 as respects the Entity, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the Entity, its officers, officials, employees, or volunteers shall be excess of the Consultant's insurance and shall not contribute with it. This requirement shall also apply to any Excess or Umbrella liability policies.

Umbrella or Excess Policy

The Consultant may use Umbrella or Excess Policies to provide the liability limits as required in this agreement. The policies shall be provided on a true "following form" coverage basis, with coverage at least as broad as provided on the underlying Commercial General Liability insurance.

Notice of Cancellation

Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the Entity.

Waiver of Subrogation

Consultant hereby grants to Entity a waiver of any right to subrogation which any insurer of said Consultant may acquire against the Entity by virtue of the payment of any loss under such insurance. Consultant agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the Entity has received a waiver of subrogation endorsement from the insurer.

Self-Insured Retentions

Self-insured retentions must be declared to and approved by the Entity. The Entity may require the Consultant to purchase coverage with a lower retention or provide proof of ability to pay losses and related expenses within the retention. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or Entity.

Acceptability of Insurers

Insurance is to be placed with insurers authorized to conduct business in the state with a current A.M. Best's rating of no less than A:VII, unless otherwise acceptable to the Entity.

Claims Made Policies (note – should be applicable only to professional liability, see below)

If any of the required policies provide claims-made coverage:

1. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.

2. Insurance must be maintained and evidence of insurance must be provided ***for at least five (5) years after completion of the contract of work or until the statute of repose applicable to such claims, whichever is greater.***

3. If coverage is canceled or non-renewed, and not replaced ***with another claims-made policy form with a Retroactive Date prior to*** the contract effective date, the Consultant must purchase "extended reporting" coverage for a minimum of ***five (5)*** years after completion of work or until the statute of repose applicable to such claims, whichever is greater.

Verification of Coverage

Consultant shall furnish the Entity with original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause All required documents are to be received and approved by the Entity before work commences. However, failure to obtain the documents prior to the work beginning shall not waive the Consultant's obligation to provide them. The Entity reserves the right to require complete, certified copies of all required insurance policies, including endorsements, at any time.

Subcontractors

Consultant shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and Consultant shall ensure that Entity is an additional insured on insurance required from subcontractors.

Duration of Coverage

CGL & Excess liability policies **for any construction related work, including, but not limited to, maintenance, service, or repair work**, shall continue coverage for a minimum of 5 years for Completed Operations liability coverage. Such Insurance must be maintained and evidence of insurance must be provided ***for at least five (5) years after completion of the contract of work or until the expiration of the statue of repose applicable to such claims, whichever is greater.***

Special Risks or Circumstances

Entity reserves the right to modify these requirements, including limits, based on special risks or circumstances.

WAIVER AND INDEMNIFICATION. CONTRACTOR waives any and all claims and recourse against the District or its directors, officers, agents or employees, including the right of contribution for loss or damage to person or property arising from, growing out of, or in any way connected with or incident to the performance of this agreement except claims arising from the intentional acts or negligence of the District or its directors, officers, agents or employees.

a. CONTRACTOR will indemnify, hold harmless, and defend the District and its directors, officers, agents, and employees against any claim, damage, liability, loss, expense, fee, action or charge (including liability where activity is inherently or intrinsically dangerous), including attorney's fees (including fees of the District's

Attorney) arising out of CONTRACTOR'S acts, errors, omissions, or negligence or from CONTRACTOR'S failure to comply with the requirements of this agreement or with any applicable law relevant to the performance of this agreement. In the event of an action filed against District resulting from CONTRACTOR'S performance under this agreement, District may elect to represent itself and incur all costs and expenses of suit.

b. These obligations shall survive termination of this agreement.

CONTRACT & INVOICE SUMMARY

Work Order and/or Vendor	Description	Budget	Current Invoice Packet	Previous Billing	FY26 Billing (to date)	Total	Budget Remaining	Notes
CANYON DISTRICT ADMINISTRATION								
200323.8 (WO#8A)	FY26 Grant Administration	$40,000.00	$4,414.40	$0.00	$0.00	$4,414.40	$35,585.60	
200323.9 (WO#9A)	FY26 District Administration	$90,000.00	$0.00	$0.00	$13,500.00	$13,500.00	$76,500.00	
Slopeside CPAs	Accounting	$5,000.00	$332.64	$0.00	$0.00	$332.64	$4,667.36	
Tara DePuy	Legal Counsel	$10,000.00	$750.00	$0.00	$0.00	$750.00	$9,250.00	
Dorsey & Whitney	Bond Counsel	$20,000.00	$544.50	$0.00	$0.00	$544.50	$19,455.50	
Nexus CPA Group	Auditing	$23,100.00	$4,500.00	$0.00	$0.00	$4,500.00	$18,600.00	
AE2S Nexus	Financial Planning & Support	$30,000.00	$0.00	$0.00	$0.00	$0.00	$30,000.00	
Miscellaneous	Dues, Insurance, Etc.	$10,000.00	$0.00	$0.00	$0.00	$0.00	$10,000.00	
Contingency		$10,000.00	$0.00	$0.00	$0.00	$0.00	$10,000.00	
	Subtotal	**$238,100.00**	**$10,541.54**	**$0.00**	**$13,500.00**	**$24,041.54**	**$214,058.46**	
CANYON SEWER ENGINEERING								
220724.7 (WO#7)	60% Engineering	$403,000.00	$20,728.58	$340,001.11	$0.00	$360,729.69	$42,270.31	
220724.8 (WO#8)	Contractor Procurement (CM/GC)	$70,000.00	$18,402.20	$36,694.90	$0.00	$55,097.10	$14,902.90	
220724.9 (WO#9)	TEDD/TIF Funding	$55,000.00	$3,760.00	$48,317.90	$0.00	$52,077.90	$2,922.10	
220724.10 (WO#10)	Discharge/Disposal	$170,000.00	$41,319.57	$85,031.10	$0.00	$126,350.67	$43,649.33	
(WO#10) - Subconsultants & Fees		$70,000.00	$0.00	$35,100.00	$0.00	$35,100.00	$34,900.00	
	Subtotal	**$768,000.00**	**$84,210.35**	**$545,145.01**	**$0.00**	**$629,355.36**	**$138,644.64**	
BSCWSD - HIGHWAY 64 INFRASTRUCTURE ENGINEERING								
AE2S	60% Engineering	$604,440.00	$12,981.65	$376,159.06	$0.00	$389,140.71	$215,299.29	
TD&H	Geotechnical Engineering	$105,000.00	$31,500.00	$99,537.82	$0.00	$131,037.82	-$26,037.82	
	Subtotal	**$709,440.00**	**$44,481.65**	**$475,696.88**	**$0.00**	**$520,178.53**	**$189,261.47**	
CANYON WATER SYSTEM PER								
220806.1	Canyon Water System PER	$80,000.00	$0.00	$79,821.46	$0.00	$79,821.46	$178.54	
	Subtotal	**$80,000.00**	**$0.00**	**$79,821.46**	**$0.00**	**$79,821.46**	**$178.54**	
	Total	**$1,795,540.00**	**$139,233.54**	**$1,100,663.35**	**$13,500.00**	**$1,253,396.89**	**$542,143.11**	

FUNDING DASHBOARD - FY26

Date Revised: 8/20/2025

Current Invoices: $ 139,233.54

Invoice Date	Vendor	Invoice Number	Amount	Project #	General Invoice Description	Notes	Draw Notes	State ARPA Agmt ends 12/31/25	County ARPA LFR Agmt ends 12/31/25	RRG PHASE 1.1 Spend by 12/31/26	BSRAD FY26 Budget ~10/1/25 - 6/30/26	BSRAD Interlocal	County ARPA LFR CM/GC Spend by 12/31/2026	CASH ON HAND
							Budget Remaining:	$ 230,549.64	$ 5,144.13	$ 50,222.81	$ 200,000.00	$ 12,000,000.00	$ 181,598.00	$ (881.64)
								$2M	$207,520	$125,000	$200,000	$12M	$200,000	
8/14/2025	WGM	76207	$ -	200323.9	District admin	pre-paid in FY25								$ -
7/31/2025	Slopeside	73125-35	$ 332.64	NA	accounting	Non-project								$ 332.64
8/1/2025	Tara DePuy	8/1/2025	$ 750.00	NA	legal	Project = $200		$ 200.00						$ 550.00
8/12/2025	WGM	76143	$ 41,319.57	220724.10	disposal			$ 41,319.57						
8/12/2025	WGM	76145	$ 20,728.58	220724.7	design WO#7			$ 20,728.58						
8/12/2025	TD&H/BSCWSD	43875	$ 5,250.00	NA	geotech			$ 5,250.00						
7/22/2025	AE2S/BSCWSD	104427	$ 12,981.65	NA	design			$ 12,981.65						
7/10/2025	TD&H/BSCWSD	43491	$ 26,250.00	NA	geotech			$ 26,250.00						
8/13/2025	WGM	76161	$ 3,760.00	220724.9	TEDD/TIF			$ 3,760.00						
8/15/2025	Dorsey & Whitney	4103540	$ 544.50	NA	bond counsel			$ 544.50						
6/23/2025	Holmes & Turner	68538	$ 4,500.00	NA	single audit			$ 4,500.00						
8/12/2025	WGM	76141	$ 4,414.40	200323.8	funding admin				$ 4,414.40					
8/12/2025	WGM	76144	$ 18,402.20	220724.8	CM/GC								$ 18,402.00	
							FY 2025 CARRYOVER:	$ 1,653,916.06	$ 197,961.47	$ 74,777.19				
							SPENT:	$ 1,769,450.36	$ 202,375.87	$ 74,777.19	$ -	$ -	$ 18,402.00	$ -

BIG SKY WATER & SEWER DISTRICT COSTS
PAID WITH GCCWSD FUNDING

BSCWSD COSTS TO DATE

					ARPA - PHASE 1.1			RRG PHASE 1.1
					State ARPA	County ARPA		
					1:1 match required	Match met by State ARPA	No match required	Spend by 12/31/2026
					Competitive	Min Allocation	SLFRF	
Invoice Date	**Vendor**	**Invoice Number**	**Amount**	**General Invoice Description**	**$2M**	**$542,480**	**$207,520**	**$125,000**
8/12/2025	TD&H/BSCWSD	43875	$ 5,250.00	geotech/design	$ 5,250.00			
7/22/2025	AE2S/BSCWSD	104427	$ 12,981.65	design	$ 12,981.65			
7/10/2025	TD&H/BSCWSD	43491	$ 26,250.00	geotech/design	$ 26,250.00			
6/24/2025	AE2S/BSCWSD	103724	$ 23,265.20	design	$ 23,265.20			
6/12/2025	TD&H/BSCWSD	43058	$ 99,537.82	geotech/design	$ 99,537.82			
5/28/2025	AE2S/BSCWSD	103011	$ 47,527.89	design				$ 47,527.89
4/22/2025	AE2S/BSCWSD	102292	$ 76,479.80	design			$ 76,479.80	
3/25/2025	AE2S/BSCWSD	101740	$ 85,635.80	design		$ 85,635.80		
2/25/2025	AE2S/BSCWSD	101144	$ 62,973.53	design			$ 62,973.53	
1/21/2025	AE2S/BSCWSD	100406	$ 28,091.21	design		$ 22,313.02	$ 5,778.19	
12/17/2024	AE2S/BSCWSD	99861	$ 18,717.64	sewer design	$ 18,717.64			
11/19/2024	AE2S/BSCWSD	99153	$ 33,536.00	design	$ 33,536.00			
8/27/2024	AE2S/BSCWSD	97057	$ 24,572.35	design	$ 24,572.35			
7/23/2024	AE2S/BSCWSD	96573	$ 11,881.39	design	$ 11,881.39			
					$ 255,992.05	**$ 107,948.82**	**$ 145,231.52**	**$ 47,527.89**

TOTAL COSTS - BSCWSD: $ 556,700.28

CANYON DISTRICT ADMINISTRATION

WGMGROUP
Community Values. Inspired Futures.

INVOICE

Gallatin Canyon County Water & Sewer District
c/o Knaub & Company
PO Box 161030
Big Sky, MT 59716

August 12, 2025
Project No: 200323.8
Invoice No: 76141
Current Invoice: $4,414.40

Project Manager: **Mace Mangold**
Project Name: **Canyon District Funding Administration - Fiscal Year 2026**

Email invoices to Scott Altman at gallatincanyonwsd@gmail.com and Jessica Martin-Trulen at jtrulen@slopesidecpa.com

Invoice Notes: Funding administration

Professional Services from July 01, 2025 to July 31, 2025

Professional Personnel

	Hours	Rate	Amount	
Senior Project Engineer 1	3.00	210.00	630.00	
Project Engineer 1	.30	171.00	51.30	
Staff Engineer 2	.50	127.00	63.50	
Project Coordinator 2	26.40	139.00	3,669.60	
Totals	30.20		4,414.40	
Total Labor				**$4,414.40**
			Current Invoice Total	**$4,414.40**

	Current	Prior	Total
Invoiced to Date	**$4,414.40**	**0.00**	**$4,414.40**

Remit payment to WGM Group, Inc ● 1111 East Broadway, Missoula, MT, 59802 ● 406-728-4611
First Interstate Bank ● Routing Number 092901683 ● Account Number 1400978134

To pay by credit card, please call 406-728-4611
A 3.5% convenience surcharge will be added to all credit card payments

WGMGROUP
Community Values. Inspired Futures.

INVOICE

Gallatin Canyon County Water & Sewer District
c/o Slopeside CPAs & Advisors
PO Box 161030
Big Sky, MT 59716

August 14, 2025
Project No: 200323.9
Invoice No: 76207
Current Invoice: 0.00

Project Manager: Mace Mangold
Project Name: Canyon District Administration - Fiscal Year 2026

Email invoices to Scott Altman at gallatincanyonwsd@gmail.com and Jessica Martin-Trulen at jtrulen@slopesidecpa.com

Invoice Notes: District administration, including Board meeting prep and attendance; coordination with Gallatin County, BSRAD, and Big Sky County Water & Sewer District

Professional Services from July 01, 2025 to July 31, 2025

Professional Personnel

	Hours	Rate	Amount	
Senior Project Engineer 1	19.00	210.00	3,990.00	
Staff Engineer 2	33.90	127.00	4,305.30	
Project Coordinator 2	1.20	139.00	166.80	
Project Coordinator 1	5.00	132.00	660.00	
Totals	59.10		9,122.10	
Total Labor				**$9,122.10**

Reimbursable Expenses

SELBY'S/ESSCO

7/29/2025	SELBY'S/ESSCO	Pagewide line drawing/mounting grommets	12.75	
	Total Reimbursables		**12.75**	**$12.75**

Unit Billing

Mileage	212.0 Miles @ 0.70	148.40	
Copies (Color) Letter/Legal	46.0 Copies @ 1.20	55.20	
Total Units		**$203.60**	**$203.60**

Additional Fees

Payment from Retainer	(9,338.45)	
Total Additional Fees	**(9,338.45)**	**($9,338.45)**

Current Invoice Total **0.00**

	Current	Prior	Total
Invoiced to Date	**0.00**	**$13,500.00**	**$13,500.00**

Remit payment to WGM Group, Inc ● 1111 East Broadway, Missoula, MT, 59802 ● 406-728-4611
First Interstate Bank ● Routing Number 092901683 ● Account Number 1400978134

To pay by credit card, please call 406-728-4611
A 3.5% convenience surcharge will be added to all credit card payments

SELBYS
BILLINGS • BOZEMAN • HELENA • MISSOULA
www.selbys.com

Bozeman Branch
525 Professional Drive
Bozeman, MT 59715
(406) 587-0782

Please
make all remittances to our home office:
Selby's
P.O. Box 80625
Billings, Montana 59108-0625

INVOICE

• Terms: Net 30 days • Past Due Account subject to a Finance Charge of 1.5% each month • Annual Rate: 18% • Minimum Finance Charge $1.00

Invoice Number: Z - **482460-000**
Date: **07/28/2025**
Page: **1** of **1**

Sold To:

WGM GROUP
1111 EAST BROADWAY
MISSOULA, MT 59802

Ship To:

WGM GROUP
1111 EAST BROADWAY
MISSOULA, MT 59802

200323.7 02

P.O. No.: **CANYON SEWER** Phone: **406-728-4611**

Terms	Order No./Rel.	Customer No.	SalesRep	Ship Via	Req. Date	Reference
NET 30	**482460-000**	**3216222**	**BOZEMAN ST**	**UPS**	**07/28/2025**	

Product No.	Description	Ordered	Shipped	UOM	Unit Price	Unit Discount	Extension
XL-POLY	**PAGEWIDE LINE DRAWING ON 8 MIL water resistant bright white polypropylene film**	7	7	EA	1.25		8.75
GROMMETS	**MOUNTING GROMMETS TO FULL COLOR SIGNS #2 Brass Self-Piercing Grommet**	4	4	EA	1.00		4.00

Sub Total: **12.75**
Total: **$ 12.75**

SLOPESIDE
CPAs & Advisors

Invoice

PO Box 161030
Big Sky, MT 59716

Date	Invoice #
7/31/2025	073125-35

Bill To
Gallatin Co.Canyon Water & Sewer District Scott Altman

Terms	Client Number
Due upon receipt	1376

Date	Description	Quantity	Rate	Amount
7/15/2025	Final BSRAD Payment Request	0.6	112.00	67.20
7/25/2025	Board Meeting	0.7	112.00	78.40
7/30/2025	Board Meeting	0.4	112.00	44.80
7/30/2025	Bank Rec; Correspondence re: BSRAD Application; Enter Invoices	1	112.00	112.00
7/31/2025	Copies, Postage, Etc.		30.24	30.24

Thank you!

Total	$332.64

Phone Number	E-mail
406-995-6040	jtrulen@slopesidecpa.com

Payments/Credits	$0.00
Balance Due	$332.64

Tara DePuy, Attorney at Law, PLLC
PO Box 222
Livingston, MT 59047

(406) 223-1803 attorney@riverworks.net (406) 222-7865 (fax)

STATEMENT **August 1, 2025**

Gallatin Canyon Water and Sewer District
PO Box 161030
Big Sky, MT 59716

July 14, 2025	Work on resolution for construction manager Request for proposals – PROJECT	.50	$ 100.00
July 25, 2025	Board meeting – ADMINISTRATIVE	.75	$ 150.00
July 28, 2025	Review insurance/indemnification clauses – PROJECT	.50	$ 100.00
July 29, 2025	Work through insurance issues with insurance Agent and Scott Altman; follow up on terms of policy - ADMINISTRATIVE	1.50	$ 300.00
July 30, 2025	Board meeting – ADMINISTRATIVE	.50	$ 100.00

TOTAL $ 750.00

DORSEY

DORSEY+WHITNEY LLP

MISSOULA OFFICE
406-721-6025

(Tax Identification No. 41-0223337)

STATEMENT OF ACCOUNT FOR PROFESSIONAL SERVICES

Gallatin Canyon County Water and Sewer District
P.O. Box 160095
Big Sky, MT 59716

August 15, 2025
Invoice Number 4103540

Client-Matter No.: 522552-00001
Preliminary Work Relating to Sewer System

For Legal Services Rendered Through July 31, 2025

For legal services rendered in July 2025, in connection with the District's efforts to develop a wastewater system, including telephone conference with the District, WGM Engineering, and the Department of Natural Resources and Conservation regarding status of the project.

Total For Legal Fees	**$544.50**
Total This Invoice	**$544.50**

Service charges are based on rates established by Dorsey & Whitney. A schedule of those rates has been provided and is available upon request. Disbursements and service charges, which either have not been received or processed, will appear on a later statement.

ALL INVOICES ARE DUE 30 DAYS FROM DATE OF INVOICE UNLESS OTHERWISE EXPRESSLY AGREED BY DORSEY & WHITNEY

Questions regarding this invoice? Please contact your Dorsey attorney or Accounts Receivable @ ARhelpdesk@dorsey.com or 612-492-5278.

Holmes & Turner

1283 North 14th Avenue, Suite 201
Bozeman, MT 59715
406-587-4265

Client #8806

GALLATIN CANYON WATER & SEWER DISTRICT
PO BOX 161030
BIG SKY, MT 59716

Invoice #68538

06/23/2025

CSLFRF (ARPA) alternative examination engagement performed for FY24.

Current Amount Due $ 4,500.00

All accounts are due on the 10th of the month following billing.
0.8333% interest per month due on past due accounts.

Holmes and Turner is now accepting credit cards
For information, please visit our website at **www.holmesandturner.com** and click on "**Make Payment**" in the upper right-hand corner. Please note, there is a **3%** processing fee for **ALL** card payments.

CANYON SEWER ENGINEERING

WGMGROUP
Community Values. Inspired Futures.

INVOICE

Gallatin Canyon County Water & Sewer District
c/o Knaub & Company
PO Box 161030
Big Sky, MT 59716

August 12, 2025
Project No: 220724.7
Invoice No: 76145
Current Invoice: $20,728.58

Project Manager: Shane Strong
Project Name: Gallatin Canyon Sewer 60% Design - Work Order #7

Email invoices to Scott Altman at gallatincanyonwsd@gmail.com and Jessica Martin-Trulen at jtrulen@slopesidecpa.com

Invoice Notes: Project team and resource management; continued development of easement exhibits; coordination with MDT and USFS; continued development of collection system design and lift station alternative; preparation of plans and specifications; continued development of Canyon discharge design; continued coordination and management of HWY 64 design; and advancing additional services to model operating pressures of combined disposal system, analyzing boost pumping needs, and coordinating/designing sewer and water extensions to serve the approved Quarry PUD

Professional Services from July 01, 2025 to July 31, 2025

Professional Personnel

	Hours	Rate	Amount	
Senior Project Engineer 1	35.70	210.00	7,497.00	
Project Engineer 1	7.60	171.00	1,299.60	
Staff Engineer 2	2.20	127.00	279.40	
Totals	45.50		9,076.00	
Total Labor				**$9,076.00**

Consultants

Advanced Engineering & Environmental Ser				
7/27/2025	Advanced Engineering & Environmental Services, LLC		4,433.25	
Check Your Answer LLC				
7/31/2025	Check Your Answer LLC		6,160.00	
	Total Consultants	**1.1 times**	**10,593.25**	**$11,652.58**
		Current Invoice Total		**$20,728.58**

Outstanding Invoices

Number	Date	Balance
75495	6/9/2025	48,957.33

Remit payment to WGM Group, Inc ● 1111 East Broadway, Missoula, MT, 59802 ● 406-728-4611
First Interstate Bank ● Routing Number 092901683 ● Account Number 1400978134

To pay by credit card, please call 406-728-4611
A 3.5% convenience surcharge will be added to all credit card payments

75713	7/7/2025	21,135.48	
Outstanding Total		**$70,092.81**	

Current Plus Outstanding **$90,821.39**

	Current	Prior	Total
Invoiced to Date	**$20,728.58**	**$340,001.11**	**$360,729.69**

Remit payment to WGM Group, Inc ● 1111 East Broadway, Missoula, MT, 59802 ● 406-728-4611
First Interstate Bank ● Routing Number 092901683 ● Account Number 1400978134

To pay by credit card, please call 406-728-4611
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Mr. Mace Mangold
WGM Group, Inc.
1111 E Broadway
Missoula, MT 59802

July 22, 2025
Project No: P13277-2023-002
Invoice No: 104429

Project Manager Kelsey Wagner

Project P13277-2023-002 WGM Gallatin Canyon Sewer and Disposal

Professional Services for the period: June 14, 2025 to July 11, 2025

Phase 030 Preliminary Engineering

Professional Services

	Hours	Rate	Amount	
Buecker, Scott	.50	274.00	137.00	
Tuan, David	15.00	242.00	3,630.00	
Wagner, Kelsey	3.25	205.00	666.25	
Totals	18.75		4,433.25	
Professional Services Total				**4,433.25**

Contract Maximum	**Current Billing Against Maximum**	**Previous Billings Against Maximum**	**Total Billings To Date**	
Total Billings	4,433.25	157,233.09	161,666.34	
Maximum			256,358.00	
Remaining			94,691.66	
			Phase Total	**4,433.25**

Phase 120 Financial Services

Contract Maximum	**Current Billing Against Maximum**	**Previous Billings Against Maximum**	**Total Billings To Date**
Total Billings	0.00	15,640.00	15,640.00
Maximum			15,640.00
		Phase Total	

Phase 130 Communication Services

Contract Maximum	**Current Billing Against Maximum**	**Previous Billings Against Maximum**	**Total Billings To Date**
Total Billings	0.00	5,922.00	5,922.00
Maximum			5,922.00

Please make checks payable to: Advanced Engineering and Environmental Services, LLC • 4050 Garden View Dr, Ste 200, Grand Forks, ND 58201

We accept most major credit cards for payment: a 3.5% convenience fee will be added to all credit card transactions.
To pay by credit card please call 701-746-8087.

Phase Total	
Project Invoice Total	**4,433.25**

Outstanding Invoices

Number	Date	Balance
103014	5/28/2025	19,018.75
103727	6/24/2025	2,623.25
Total		**21,642.00**

Please make checks payable to: Advanced Engineering and Environmental Services, LLC • 4050 Garden View Dr, Ste 200, Grand Forks, ND 58201

We accept most major credit cards for payment: a 3.5% convenience fee will be added to all credit card transactions.
To pay by credit card please call 701-746-8087.

Check Your Answer, LLC

146 Hitching Post Road
Bozeman, MT 59715
406-581-8256

WGM

8/4/2025

Invoice for
Canyon Project
Attention: Mace Mangold

230314.3, phase 01

Payable to
Check Your Answer LLC

Invoice #
215

Account Number
1

Due date
9/1/2025

Description	Date	Hours	Rate	Total price
c all with Mace	7/1/2025	0.5	$220.00	$110.00
Review RFP	7/2/2025	1	$220.00	$220.00
Teams Meeting	7/11/2025	1	$220.00	$220.00
Call with Scott Buecker	7/12/2025	0.5	$220.00	$110.00
RFP	7/15/2025	2	$220.00	$440.00
meeting with mace and other reviewers	7/23/2025	0.5	$220.00	$110.00
Review RFQ submittals	7/24/2025	2	$220.00	$440.00
Review RFQ submittals	7/25/2025	8	$220.00	$1,760.00
Review RFQ submittals	7/27/2025	4.5	$220.00	$990.00
Review RFQ and ICE RFQ's submittals	7/28/2025	5	$220.00	$1,100.00
Review Ice RFQ/Meeting with selection comittiee	7/29/2025	3	$220.00	$660.00

Subtotal	**$6,160.00**
Previous invoice 212	$2,860.00
Previous invoice 213	$220.00
Previous invoice 214	$1,650.00

Total Due

$10,890.00

WGMGROUP
Community Values. Inspired Futures.

INVOICE

Gallatin Canyon County Water & Sewer District
c/o Knaub & Company
PO Box 161030
Big Sky, MT 59716

August 12, 2025
Project No: 220724.8
Invoice No: 76144
Current Invoice: $18,402.20

Project Manager: Abby Indreland Hunt
Project Name: Gallatin Canyon Sewer CM/GC Contracting - Work Order #8

Email invoices to Scott Altman at gallatincanyonwsd@gmail.com and Jessica Martin-Trulen at jtrulen@slopesidecpa.com

Invoice Notes: Technical review committee coordination. Preliminary contract review. CM Q/A coordination. CM SOQ and ICE RFP evaluations, technical review committee scoring meeting. Recommendation of award, letters of notice. Final CM RFP edits and information to short-listers. Pre-proposal meeting preparation. Contract insurance requirements. CMAR contract review and edits.

Professional Services from July 01, 2025 to July 31, 2025

Professional Personnel

	Hours	Rate	Amount	
Senior Project Engineer 1	36.00	210.00	7,560.00	
Project Engineer 1	37.00	171.00	6,327.00	
Senior Construction Projects Manager	17.00	210.00	3,570.00	
Project Coordinator 2	6.80	139.00	945.20	
Totals	96.80		18,402.20	
Total Labor				**$18,402.20**
			Current Invoice Total	**$18,402.20**

Outstanding Invoices

Number	Date	Balance
75508	6/9/2025	2,627.70
75712	7/7/2025	10,796.50
Outstanding Total		**$13,424.20**

Current Plus Outstanding **$31,826.40**

	Current	Prior	Total
Invoiced to Date	**$18,402.20**	**$36,694.90**	**$55,097.10**

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INVOICE

Gallatin Canyon County Water & Sewer District
c/o Slopeside CPAs & Advisors
PO Box 161030
Big Sky, MT 59716

August 13, 2025
Project No: 220724.9
Invoice No: 76161
Current Invoice: $3,760.00

Project Manager: Mace Mangold
Project Name: Canyon Sewer TEDD/TIF Funding Evaluation Work Order #9

Email invoices to Scott Altman at gallatincanyonwsd@gmail.com and Jessica Martin-Trulen at jtrulen@slopesidecpa.com

Invoice Notes: Continued work on tax increment calculation spreadsheet. Ongoing coordination with Gallatin County. Scenarios development to support County coordination. Tech memo to document calculation assumptions. Tax revenue coordination with AE2S for funding model. Creation of presentation materials on tax increment financing for Gallatin County Commission.

Professional Services from July 01, 2025 to July 31, 2025

Professional Personnel

	Hours	Rate	Amount	
Senior Project Engineer 1	2.00	210.00	420.00	
Land Planner 2	20.00	167.00	3,340.00	
Totals	22.00		3,760.00	
Total Labor				**$3,760.00**
			Current Invoice Total	**$3,760.00**

Outstanding Invoices

Number	Date	Balance		
75512	6/9/2025	3,760.00		
75710	7/7/2025	8,644.50		
Outstanding Total		**$12,404.50**		
			Current Plus Outstanding	**$16,164.50**

	Current	Prior	Total
Invoiced to Date	**$3,760.00**	**$48,317.90**	**$52,077.90**

Remit payment to WGM Group, Inc ● 1111 East Broadway, Missoula, MT, 59802 ● 406-728-4611
First Interstate Bank ● Routing Number 092901683 ● Account Number 1400978134

To pay by credit card, please call 406-728-4611
A 3.5% convenience surcharge will be added to all credit card payments

WGMGROUP
Community Values. Inspired Futures.

INVOICE

Gallatin Canyon County Water & Sewer District
c/o Knaub & Company
PO Box 161030
Big Sky, MT 59716

August 12, 2025
Project No: 220724.10
Invoice No: 76143
Current Invoice: $41,319.57

Project Manager: Abby Indreland Hunt
Project Name: Canyon Sewer - Disposal

Email invoices to Scott Altman at gallatincanyonwsd@gmail.com and Jessica Martin-Trulen at jtrulen@slopesidecpa.com

Invoice Notes: Fieldwork - aquifer pump tests, slug tests, test pits, soil gradations, DRI tests including at Lazy J drainfield, basin flood testing, phosphorous sorption testing, data analyses and compilations; reuse nutrient management plan updates - DRI/land app data review and inputs; refined nondeg analysis with updated fieldwork; public outreach concepts for website update

Professional Services from July 01, 2025 to July 31, 2025

Phase 01 Project Management, Regulatory-Stakeholder Coordination

Professional Personnel

	Hours	Rate	Amount	
Project Engineer 1	7.60	171.00	1,299.60	
Totals	7.60		1,299.60	
Total Labor				**$1,299.60**

Unit Billing

Copies (No color)	200.0 Copies @ 0.30		60.00	
Total Units			**$60.00**	**$60.00**
		Phase Total		**$1,359.60**

Phase 02 Regulatory Crosswalk & Discharge Permitting Coordination

Professional Personnel

	Hours	Rate	Amount	
Project Engineer 1	3.20	171.00	547.20	
Senior Hydrologist	15.70	240.00	3,768.00	
Totals	18.90		4,315.20	
Total Labor				**$4,315.20**
		Phase Total		**$4,315.20**

Remit payment to WGM Group, Inc ● 1111 East Broadway, Missoula, MT, 59802 ● 406-728-4611
First Interstate Bank ● Routing Number 092901683 ● Account Number 1400978134

To pay by credit card, please call 406-728-4611
A 3.5% convenience surcharge will be added to all credit card payments

Phase 03 2025 Discharge Permitting Data Collection

Professional Personnel

	Hours	Rate	Amount	
Project Engineer 1	163.20	171.00	27,907.20	
Staff Engineer 2	14.10	127.00	1,790.70	
Project Coordinator 1	3.00	132.00	396.00	
Totals	180.30		30,093.90	
Total Labor				**$30,093.90**

Reimbursable Expenses

Raeside, Emma				
7/16/2025	Raeside, Emma	Fieldwork supplies	170.77	
Analytical Sciences Laboratory				
7/31/2025	Analytical Sciences Laboratory		1,000.00	
Bridger Analytical Lab Inc				
7/31/2025	Bridger Analytical Lab Inc		717.00	
CASE LLC				
7/31/2025	CASE LLC		1,062.50	
	Total Reimbursables		**2,950.27**	**$2,950.27**

Unit Billing

Mileage		1,260.0 Miles @ 0.70	882.00	
	Total Units		**$882.00**	**$882.00**

Phase Total **$33,926.17**

Phase 04 Net-Nutrient Reduction Assessment

Professional Personnel

	Hours	Rate	Amount	
Project Engineer 1	1.20	171.00	205.20	
Totals	1.20		205.20	
Total Labor				**$205.20**

Phase Total **$205.20**

Phase 05 Reuse Nutrient Management Plan

Professional Personnel

	Hours	Rate	Amount	
Project Engineer 1	8.40	171.00	1,436.40	
Totals	8.40		1,436.40	
Total Labor				**$1,436.40**

Phase Total **$1,436.40**

Phase	06	Additional Services			
Unit Billing					
Mileage			110.0 Miles @ 0.70	77.00	
	Total Units			**$77.00**	**$77.00**
				Phase Total	**$77.00**
				Current Invoice Total	**$41,319.57**

Outstanding Invoices

Number	Date	Balance
75507	6/9/2025	27,249.30
75711	7/7/2025	30,377.50
Outstanding Total		**$57,626.80**

Current Plus Outstanding **$98,946.37**

	Current	Prior	Total
Invoiced to Date	**$41,319.57**	**$85,031.10**	**$126,350.67**

University of Idaho
Analytical Sciences Laboratory

Holm Research Center
875 Perimeter Dr. MS 2203
Moscow, Idaho 83844-2203
Phone: (208) 885-7081 FAX: (208) 885-8937
email: asl@uidaho.edu www.uidaho.edu/asl

Invoice

Bill To: **Emma Raeside**
WGM Group, Inc.
109 East Main Street
Suite B
Bozeman, MT 59715

TIN: 82-6000945

Invoice: SJUL25-011

Invoice Date:	**Aug 1, 2025**
Date Received:	**Jul 23, 2025**
Reference:	**Bill**
Project:	
Group:	**Soil**

Quantity	Description / Method	Price Each	Total Charge
4	Phosphorus Isotherm / ICP	$250.00	$1,000.00

Total Due: **$1,000.00**

Total Tests: **4**
Total Samples: **8**

Please return one copy of this invoice with payment.

Make checks payable to: ***Analytical Sciences Laboratory, UI***
Mail to: *875 Perimeter Dr. MS 2203*
Moscow, Idaho 83844-2203

Terms: Net 30 Days

To pay by credit card, please complete the following information and return a copy by mail, FAX or email or you can phone us with the information.

Card Type: ***VISA M/C Discover*** *Please circle one* ***Expiration Date:*** _____ ***Amount:*** **$1,000.00**

Card Number: _____ ***Security Code:*** _____

Signature: _____ ***Phone:*** _____

Bridger Analytical Lab
7539 Pioneer Way Suite B
Bozeman, MT 59718
Phone: (406) 582-0822

New Business Hours
Starting Dec. 3rd, 2018
Mon-Thurs: 8:30 AM - 5:00 PM
Friday: 8:30 AM - 1:00 PM

INVOICE

Date	Invoice No.
08/01/2025	2508022

Remit Due Date: 09/01/2025

WGM Group
109 E. Main St., Suite B
Bozeman, MT 59715

Project: 220724 - GCCWSD
Work Order: 2507498
Project Number: July 21, 2025

Analysis/Description	Qty	Unit Cost	Extended Cost
Nitrogen, Ammonia as N	1	$25.00	$25.00
BOD, 5 Day	1	$65.00	$65.00
Calcium IC	1	$25.00	$25.00
Chloride	1	$32.00	$32.00
Conductivity	1	$21.00	$21.00
E.coli Count	1	$75.00	$75.00
Hardness	1	$26.00	$26.00
Iron, Total	1	$24.00	$24.00
Kjeldahl Nitrogen as N (TKN)	1	$5.00	$5.00
Arsenic	1	$28.00	$28.00
Nitrate+Nitrite as N	1	$32.00	$32.00
Nitrogen, Total (TN)	1	$40.00	$40.00
pH	1	$19.00	$19.00
Phosphate as P	1	$32.00	$32.00
Phosphorus, Total as P	1	$28.00	$28.00
Sodium Adsorption Ratio (SAR)	1	$10.00	$10.00
Sodium IC	1	$25.00	$25.00
Total Coliform Count	1	$5.00	$5.00
Total Dissolved Solids	1	$25.00	$25.00
Magnesium IC	1	$25.00	$25.00
Total Organic Carbon (TOC)	1	$150.00	$150.00

Invoice Total: **$717.00**

Note: Payment is due within 30 days from the date of this invoice. You agree to this payment schedule by signing the Chain of Custody document. A finance charge of 1.5% or $5.00 (whichever is larger) per month will be charged on invoices past due 30 days. We value your business. Thank you.

CASE, LLC
415 Floss Flats Unit D
Belgrade, MT 59714 US
+14068501470
info@caseqc.com

INVOICE

BILL TO
WGM - General

INVOICE # 02.12.1560
DATE 07/31/2025
DUE DATE 08/30/2025
TERMS Net 30

PROJECT
Canyon - Gradations 220724.10 Phase 3

DATE	ACTIVITY	QTY	RATE	AMOUNT
07/22/2025	**Reporting (2025)** Direct Labor/Reporting	2:30	95.00	237.50
	Sieve Analysis ASTM D 6913 Laboratory Testing of Soils and Rock Lab #: 6831-35	5	165.00	825.00

Thank you for your business! CASE accepts ACH payments as well as checks. Please send checks to 415 Floss Flats, STE. D - Belgrade, MT 59714

BALANCE DUE **$1,062.50**

BSCWSD - HIGHWAY 64 INFRASTRUCTURE

Johnny O'Connor
Big Sky County Water and Sewer District No. 363
PO Box 160670
Big Sky, MT 59716

July 22, 2025
Project No: P13218-2020-001
Invoice No: 104427

Project Manager Kelsey Wagner

Project P13218-2020-001 Canyon Area Lift Station, Forcemain and Reuse Pipeline Design

Professional Services for the period: June 14, 2025 to July 11, 2025

Phase 030 Preliminary Engineering

Professional Services

		Hours	Rate	Amount	
Buecker, Scott		2.25	274.00	616.50	
Ehlke, Kirk		1.25	205.00	256.25	
Hohn, Paul		3.50	192.00	672.00	
Thompson, Ryan		11.25	146.00	1,642.50	
Wagner, Kelsey		1.25	205.00	256.25	
Wendt, Alan		.50	237.00	118.50	
	Totals	20.00		3,562.00	
	Professional Services Total				**3,562.00**

Subcontractors

Mechanical Consultant				
6/30/2025	KFI Engineers, PC DBA KFI Engineers	Mechanical consultant	1,000.00	
Other Consultant				
7/16/2025	WGM Group, Inc.	Permitting and easement coordination	7,191.00	
	Subcontractors Totals	**1.15 times**	**8,191.00**	**9,419.65**

Contract Maximum	**Current Billing Against Maximum**	**Previous Billings Against Maximum**	**Total Billings To Date**	
Total Billings	12,981.65	801,759.06	814,740.71	
Maximum			1,030,040.00	
Remaining			215,299.29	
		Phase Total		**12,981.65**
		Project Invoice Total		**12,981.65**

Please make checks payable to: Advanced Engineering and Environmental Services, LLC • 4050 Garden View Dr, Ste 200, Grand Forks, ND 58201

We accept most major credit cards for payment: a 3.5% convenience fee will be added to all credit card transactions.
To pay by credit card please call 701-746-8087.

Outstanding Invoices

Number	Date	Balance
103011	5/28/2025	47,527.89
103724	6/24/2025	23,265.20
Total		**70,793.09**

I

Please make checks payable to: Advanced Engineering and Environmental Services, LLC • 4050 Garden View Dr, Ste 200, Grand Forks, ND 58201

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To pay by credit card please call 701-746-8087.

KFI ENGINEERS
CORPORATE HEADQUARTERS
670 COUNTY ROAD B WEST
ST. PAUL, MN 55113

Kelsey Wagner
Advanced Engineering and Environmental Services, LLC (AE2S)
4050 Garden View Drive
Suite 200
Grand Forks, ND 58201

June 12, 2025
Project No: 24-1216.00
Invoice No: 72024

Big Sky MT Canyon Sewer and Pipeline Lift Station Preliminary Mechanical Design
Professional Services through May 31, 2025

Fee

Total Fee	9,000.00			
Percent Complete	100.00	Total Earned	9,000.00	
		Previous Fee Billing	8,000.00	
		Current Fee Billing	1,000.00	
		Total Fee		1,000.00
			Total this Invoice	**$1,000.00**

Billings to Date

	Current	Prior	Total
Fee	1,000.00	8,000.00	9,000.00
Totals	**1,000.00**	**8,000.00**	**9,000.00**

INVOICE TERMS NET 30 DAYS

WGMGROUP
Community Values. Inspired Futures.

INVOICE

Kelsey Wagner
Advanced Engineering & Environmental Services, LLC
405 3rd St NW, Ste 205
Great Falls, MT 59404

July 07, 2025
Project No: 230314.3
Invoice No: 75715
Current Invoice: $7,191.00

Project Manager: Shane Strong
Project Name: BSCWSD-Canyon Sewer 60% Engineering Work Order #3

Email invoice to ap@ae2s.com

Invoice Notes: Project and resource management; team design meetings with CYA to discuss project alignments and constructability; review HWY 64 plans with permitting and easement needs; continued discussion with Kallestad for easements along common boundaries with Conoco; continued permitting coordination, review and discussions with USFS and MDT; and coordinating/managing additional services for slope stability and rockfall analysis along HWY 64

Professional Services from June 01, 2025 to June 30, 2025

Professional Personnel

		Hours	Rate	Amount	
Senior Project Engineer		25.60	210.00	5,376.00	
	Totals	25.60		5,376.00	
	Total Labor				**$5,376.00**

Consultants

Check Your Answer LLC

6/30/2025	Check Your Answer LLC			1,650.00	
	Total Consultants		**1.1 times**	**1,650.00**	**$1,815.00**
			Current Invoice Total		**$7,191.00**

Outstanding Invoices

Number	Date	Balance		
75249	5/9/2025	5,229.00		
75497	6/9/2025	10,948.00		
Outstanding Total		**$16,177.00**		
			Current Plus Outstanding	**$23,368.00**

	Current	Prior	Total
Invoiced to Date	**$7,191.00**	**$43,789.15**	**$50,980.15**

Remit payment to WGM Group, Inc ● 1111 East Broadway, Missoula, MT, 59802 ● 406-728-4611
First Interstate Bank ● Routing Number 092901683 ● Account Number 1400978134

To pay by credit card, please call 406-728-4611
A 3.5% convenience surcharge will be added to all credit card payments

Check Your Answer, LLC

146 Hitching Post Road
Bozeman, MT 59715
406-581-8256

WGM

7/7/2025

Invoice for
Canyon Project
Attention: Mace Mangold

230314.3

Payable to
Check Your Answer LLC

Invoice #
214

Account Number
1

Due date
8/1/2025

Description	Date	Hours	Rate	Total price
Meeting with Mace	6/2/2025	0.5	$220.00	$110.00
Meeting with group	6/4/2025	1.5	$220.00	$330.00
Call with Craig N. about geotech/email	6/4/2025	0.5	$220.00	$110.00
Review RFQ/call with Mace	6/5/2025	1.5	$220.00	$330.00
Meeting about constructibiity	6/12/2025	3	$220.00	$660.00
call with Mace	6/23/2025	0.5	$220.00	$110.00

Subtotal	**$1,650.00**
Previous overpayment carried forward	-$630.00
Previous invoice 209	$2,415.00
Previous invoice 210	$2,415.00
Previous invoice 211	$892.50
Previous invoice 212	$2,860.00
Previous invoice 213	$220.00

Total Due

$9,822.50

TD&H Engineering
1800 River Dr N
Great Falls, MT 59401
406-761-3010

Big Sky County Water & Sewer District
Johnny O'Connor
P.O. Box 160670
561 Little Coyote Road
Big Sky, MT 59716

Invoice number 43491
Date 07/10/2025

Project 25-022 Big Sky Sewer Highway 64 Geotechnical

Billing Period Ending: June 30, 2025

Description	Contract Amount	Percent Complete	Total Billed	Prior Billed	Current Billed
001 Geotechnical Investigation and Report	105,000.00	95.00	99,750.00	73,500.00	26,250.00
Total	105,000.00	95.00	99,750.00	73,500.00	26,250.00

Invoice total **26,250.00**

Aging Summary

Invoice Number	Invoice Date	Outstanding	Current	Over 30	Over 60	Over 90	Over 120
43058	06/12/2025	99,537.82	99,537.82				
43491	07/10/2025	26,250.00	26,250.00				
	Total	125,787.82	125,787.82	0.00	0.00	0.00	0.00

TD&H Engineering
1800 River Dr N
Great Falls, MT 59401
406-761-3010

Big Sky County Water & Sewer District
Johnny O'Connor
P.O. Box 160670
561 Little Coyote Road
Big Sky, MT 59716

Invoice number 43875
Date 08/12/2025

Project 25-022 Big Sky Sewer Highway 64 Geotechnical

Billing Period Ending: July 31, 2025

Description	Contract Amount	Percent Complete	Total Billed	Prior Billed	Current Billed
001 Geotechnical Investigation and Report	105,000.00	100.00	105,000.00	99,750.00	5,250.00
Total	105,000.00	100.00	105,000.00	99,750.00	5,250.00

Invoice total **5,250.00**

Aging Summary

Invoice Number	Invoice Date	Outstanding	Current	Over 30	Over 60	Over 90	Over 120
43058	06/12/2025	99,537.82			99,537.82		
43491	07/10/2025	26,250.00		26,250.00			
43875	08/12/2025	5,250.00	5,250.00				
	Total	131,037.82	5,250.00	26,250.00	99,537.82	0.00	0.00

MASTER SERVICES AGREEMENT
WORK ORDER #8A

PROJECT TITLE:
Gallatin Canyon County Water & Sewer District Grant Administration
CLIENT:
Gallatin Canyon County Water & Sewer District
WGM GROUP PROJECT NUMBER:
200323.8

As stated in the Master Services Agreement (Agreement) for the above-referenced client dated March 31, 2023, the Agreement may be modified by written amendment executed by both parties and defined in Work Orders incorporated into the Agreement. This document details the scope and fee associated with Work Order #8A. By both parties signing below, this document becomes incorporated into the Agreement as an Exhibit and is subject to the terms and conditions of said Agreement.

WORK ORDER SCOPE OF SERVICES:

WGM will provide funding administration services for GCCWSD for fiscal year 2026 (July 1, 2025 – June 30, 2026). Current funding includes:

- American Rescue Plan Act (ARPA) Competitive grant administered by Montana Department of Natural Resources and Conservation (DNRC)
- ARPA Local Fiscal Recovery grant administered by Gallatin County
- Montana Coal Endowment Program (MCEP) administered by Montana Department of Commerce
- Renewable Resource Grant and Loan (RRGL) grant administered by DNRC
- Annual District operations funds administered by BSRAD
- Canyon Sewer Project Interlocal Agreement funds administered by BSRAD

WGM will comply with differing requirements for each funding source to ensure compliance with all agencies. The following tasks are included:

- Correspond with agency representatives, including attending project meetings
- Coordinate with GCCWSD accounting personnel to maintain accurate financial records & conform to necessary accounting system procedures and practices
- Allocate expenditures to appropriate funding sources
- Update invoice tracker and associated documentation for District Board review & approval
- Prepare & submit quarterly progress reports
    - Note project activities, costs incurred, funds remaining, and anticipated activities during next quarterly period
    - Identify anticipated changes in scope, schedule, or budget
    - Provide photos, news articles, or other project progress documentation

- Prepare & submit draw requests
    - Assist with tracking vendor invoices and payments
    - Prepare vendor invoice forms
    - Allocate invoice amounts to appropriate funding source(s)
    - Maintain/update the Uniform Budget and Status of Funds Tracker
    - Prepare associated reports
- Coordinate signatures by authorized representatives for all submittals
- Calculate and track required matching funds
- Assist with appropriate procurement of necessary subconsultants
- Correspond with District personnel and engineering team
- Assist with audit coordination
- Maintain complete records to ensure proper use of funds and prepare for possible audit(s)
- Assist with additional funding applications as assigned
- QA/QC

Deliverables: Board invoice packets, progress reports, draw request packages, Uniform Budget and Status of Funds Tracker, vendor invoices, updated documents (schedule, budget, management plan, etc.), contracts as necessary

ADDITIONAL SERVICES

Services not specifically described in the tasks above are not included in this scope of work.

FEE ESTIMATE

Fees will be billed on a time and materials basis with an estimated budget of **$40,000**. Fees are valid through August 2026 and may need to be adjusted if the project extends beyond this date.

WGM Group, Inc. Acceptance of Work Order:

Mace Mangold, PE		8/20/2025
Vice President, Senior Project Engineer	(sign)	(date)

Client Authorization to Proceed with Work Order:

Scott Altman		
GCCWSD President	(sign)	(date)

MASTER SERVICES AGREEMENT
WORK ORDER #9B

PROJECT TITLE:
Gallatin Canyon County Water & Sewer District Administration
CLIENT:
Gallatin Canyon County Water & Sewer District
WGM GROUP PROJECT NUMBER:
200323.9

As stated in the Master Services Agreement (Agreement) for the above-referenced client dated March 31, 2023, the Agreement may be modified by written amendment executed by both parties and defined in Work Orders incorporated into the Agreement. This document details the scope and fee associated with Work Order #9B. By both parties signing below, this document becomes incorporated into the Agreement as an Exhibit and is subject to the terms and conditions of said Agreement.

WORK ORDER SCOPE OF SERVICES:

WGM will provide District administration for GCCWSD for fiscal year 2026 (July 1, 2025 – June 30, 2026). Services will vary based on the needs of the District but generally include:

General consultation and District administration support includes but is not limited to annual budget preparation and management, project schedules, Big Sky Resort Area District (BSRAD) coordination, Big Sky County Water and Sewer District (BSCWSD) coordination, connection and annexation agreements, County and State filings, legal coordination, accounting, and audit coordination. The budget estimate includes attendance and general assistance with monthly Board meetings including agenda development, presentation(s) and recording meeting minutes.

ADDITIONAL SERVICES

Services not generally described in the tasks above are not included in this scope of work.

FEE ESTIMATE

Fees will be billed on a time and materials basis with an estimated budget of **$85,000**. Fees are valid through August 2026 and may need to be adjusted if the project extends beyond this date.

WGM Group, Inc. Acceptance of Work Order:

Mace Mangold, PE		8/20/2025
Vice President, Senior Project Engineer	(sign)	(date)

Client Authorization to Proceed with Work Order:

Scott Altman		
GCCWSD President	(sign)	(date)

RESOLUTION 2025 – ____

A Resolution of the Big Sky County Water and Sewer District #363 to Award an Alternative Project Delivery Contract – Construction Management Contract Shared with Gallatin Canyon Water and Sewer District

WHEREAS, The Big Sky County Water and Sewer District #363 (BSWSD**)** has actively pursued the efforts for the Gallatin Canyon Water and Sewer District (GCWSD) to establish sewer treatment for the properties within the GCWSD boundaries.

WHEREAS, GCWSD has adopted the necessary steps to utilize the Alternative Project Delivery Contract process. The BSWSD Board of Directors adopted the Alternative Project Delivery Contract process pursuant to § 18-4-124, MCA, by Resolution 2024-05, on January 21, 2024;

WHEREAS, together with GCCWSD, BSWSD is pursuing a Construction Management Contract for the BSWSD portion of the project referred to as the Gallatin Canyon Sewer Project; pursuant to § 18-2-501(9)(b), MCA, a board of directors of a county water or sewer district established pursuant to Title 7, chapter 13, parts 22 and 23, is a governing body for the purposes of Title 18, chapter 2, part 5;

WHEREAS, prior to awarding an alternative project delivery contract, pursuant to § 18-2-502, MCA, the Board of Directors must make specific findings as follows:

(a) the project has significant schedule ramifications and using the alternative project delivery contract is necessary to meet critical deadlines by shortening the duration of construction. Factors considered in making this finding include, but are not limited to:

(i) operational and financial data that show significant savings or increased opportunities for generating revenue as a result of early project completion; and

(ii) demonstrable public benefits that result from less time for construction.

(b) by using an alternative project delivery contract, the construction management contract will contribute to significant cost savings in the design process. Significant cost savings include but are not limited to value engineering, building systems analysis, life cycle analysis, and construction planning.

(c) the project presents significant technical complexities that necessitate the use of an alternative delivery project contract;

WHEREAS, the Board of Directors of BSWSD must also find, pursuant to § 18-2-502, MCA, that using an alternative project delivery contract will not encourage favoritism or bias in awarding the contract or substantially diminish competition for the contract;

Therefore, BE IT RESOLVED,

1. The BSCWSD project has schedule ramifications including funding deadlines, public health benefits, and community need for improved infrastructure. Likewise, the construction season at this location is relatively short due to early onset of winter and the requirement to keep this tourist destination area open. Accelerated construction techniques and construction staging innovation strategies necessitate the use of alternative contracting.

2. Revenue generation for the GCCWSD would begin as soon as connection fees and monthly service fees could be collected (upon immediate acceptance of the backbone main network installation). Otherwise, the GCCWSD currently has no means of generating revenue and has relied on grant funding for expenses to date. Absent separate funding BSCWSD has not established funding to pay for expenses to date.

   Due to the scale of the project, if earlier start of construction, and project completion is

achieved sooner, significant savings will occur just due to labor rate increases, inflation of materials, extra mobilization and demobilization, and inefficiencies associated with multiple year construction. (i.e. $50M project budget x 3% inflation over 1 year = $1.5M in savings).

3. Net nutrient reduction in the Upper Gallatin Canyon alluvial aquifer, as well as the main stem of the Gallatin River. is anticipated to be achieved by taking existing, aged, and failing onsite wastewater treatment systems offline and replacing them with a connection to the collection network and treatment at the BSCWSD Water Resource Recovery Facility (WRRF). This would also be anticipated to limit anthropogenic algae blooms in the river.

   Treatment of wastewater to Class A-1 effluent quality offers tremendous improvement over current conventional onsite wastewater treatment systems, for nutrients as well as pathogens and other water quality parameters. Class A-1 effluent quality is viable for reuse irrigation, which also promotes water conservation, cost savings, and aquifer recharge. Public health benefits and improved water quality would begin to be realized as soon as the project is complete. A reduced construction period also promotes public safety with limited road closures, traffic impacts, and improved safety throughout the project area.

4. The project will act as a relief valve to the current BSCWSD WRRF storage facility, by taking on additional BSCWSD treated flows for GCCWSD disposal. Increases in storage volume and further impacts to the WRRF public facility would be required if the project did not happen in the anticipated timeline. Reduced construction period results in less traffic disruption impacts and associated reduction in traffic conflicts.

5. The GCCWSD and BSCWSD (Districts) have adopted alternative contracting guidelines that require the Construction Manger to self-perform at least 30% of the project work, as well as solicit subcontractor bids from a minimum number of outside companies. It is expected that the Construction Manager will be able to more effectively solicit bids than the Districts, in an area of Montana where access to qualified subs is limited. In the Big Sky area specifically, open-bid prices tend to be as much as 30% higher than other regions. The Construction Manager bid process is anticipated to help ease local inflation trends through a broader outreach of qualified bidders.

   The Construction Manager process includes a robust Risk Management process wherein the Districts, Engineers, and Contractor identify, price, and mitigate project risks during the design process.

6. Technical complexities include but are not limited to: numerous stakeholders and agencies involved; geotechnical considerations – shoring, large boulders, high groundwater, slope stability; Montana Department of Transportation right-of-way trenching – traffic control requirements and access; and varied scopes of work – excavation, heavy civil, electrical, controls, lift station, plumbing, mechanical, foundation / building.

   Geotechnical slope stability issues along MT HWY 64 require innovative strategies from a constructability perspective to ensure the force main and reuse main can be built and are not compromised by unstable slope conditions. Incorporating a Construction Manager on this project in the design phase will reduce burden on the Districts and improve efficiency by adding them to the large stakeholder group early on.

7. The Technical Review Committee will be comprised of individuals from each of the Districts, Consultants, and Independent Cost Estimator entities, with different areas of expertise. Individual scores from Technical Review Committee members will be thoroughly vetted and discussed if there is significant variation in one score versus the collective group scores.

   The project will include a non-scoring Technical Review Committee facilitator who will manage the proposal review and scoring process. His/her responsibility will be to ensure transparency and fairness in the individual scoring of the statements of qualifications and proposals. The Districts will follow the Montana Department of Transportation Technical Review Committee review guidelines.

8. The Construction Manager selection process is publicly advertised and open to all qualified entities. If the Construction Manager final Guarantee Maximum Price exceeds 5% of the project price estimate, the Districts can open the project to public bidding in accordance with public procurement laws.

Done this _____day of _____, 2025.

Big Sky County Water and Sewer District

_____

Brian Wheeler President

Attest:

_____

Dick Fast, Secretary

RESOLUTION 2025 – 02

A Resolution of the Gallatin Canyon County Water and Sewer District (GCCWSD) to Award an Alternative Project Delivery Contract – Construction Management Contract

WHEREAS, the Board of Directors of the GCCWSD adopted the Alternative Project Delivery Contract process pursuant to Section 18-4-124, MCA, by Resolution 2024-05, on January 21, 2025;

WHEREAS, GCCWSD is pursuing a Construction Management Contract for the Gallatin Canyon Sewer Project; pursuant to Section 18-2-501(9)(b), MCA, a board of directors of a county water or sewer district established pursuant to Title 7, chapter 13, parts 22 and 23, is a governing body for the purposes of Title 18, chapter 2, part 5;

WHEREAS, prior to awarding an alternative project delivery contract, pursuant to Section 18-2-502, MCA, the Board of Directors must make specific findings as follows:

(a) the project has significant schedule ramifications and using the alternative project delivery contract is necessary to meet critical deadlines by shortening the duration of construction. Factors considered in making this finding include, but are not limited to:
(i) operational and financial data that show significant savings or increased opportunities for generating revenue as a result of early project completion; and
(ii) demonstrable public benefits that result from less time for construction.

(b) by using an alternative project delivery contract, the construction management contract will contribute to significant cost savings in the design process. Significant cost savings include but are not limited to value engineering, building systems analysis, life cycle analysis, and construction planning.

(c) the project presents significant technical complexities that necessitate the use of an alternative delivery project contract;

WHEREAS, the Board of Directors of GCCWSD must also find, pursuant to Section 18-2-502, MCA, that using an alternative project delivery contract will not encourage favoritism or bias in awarding the contract or substantially diminish competition for the contract;

Therefore, BE IT RESOLVED,

1. The GCCWSD project has schedule ramifications including funding deadlines, public health benefits, and community need for improved infrastructure. Likewise, the construction season at this location is relatively short due to early onset of winter and the requirement to keep this tourist destination area open. Accelerated construction techniques and construction staging innovation strategies necessitate the use of alternative contracting.

2. Revenue generation for the GCCWSD would begin as soon as connection fees and monthly service fees could be collected (upon immediate acceptance of the backbone main network installation). Otherwise, the GCCWSD currently has no means of generating revenue and has relied on grant funding for expenses to date.

Due to the scale of the project, if earlier start of construction, and project completion is achieved sooner, significant savings will occur just due to labor rate increases, inflation of materials, extra mobilization and demobilization, and inefficiencies associated with multiple year construction. (i.e. $50M project budget x 3% inflation over 1 year = $1.5M in savings).

3. Net nutrient reduction in the Upper Gallatin Canyon alluvial aquifer, as well as the main stem of the Gallatin River. is anticipated to be achieved by taking existing, aged, and failing onsite wastewater treatment systems offline and replacing them with a connection to the collection network and treatment at the Big Sky County Water and Sewer District (BSCWSD) Water Resource Recovery Facility (WRRF). This would also be anticipated to limit anthropogenic algae blooms in the river.

   Treatment of wastewater to Class A-1 effluent quality offers tremendous improvement over current conventional onsite wastewater treatment systems, for nutrients as well as pathogens and other water quality parameters. Class A-1 effluent quality is viable for reuse irrigation, which also promotes water conservation, cost savings, and aquifer recharge. Public health benefits and improved water quality would begin to be realized as soon as the project is complete. A reduced construction period also promotes public safety with limited road closures, traffic impacts, and improved safety throughout the project area.

4. The project will act as a relief valve to the current BSCWSD WRRF storage facility, by taking on additional BSCWSD treated flows for GCCWSD disposal. Increases in storage volume and further impacts to the WRRF public facility would be required if the project did not happen in the anticipated timeline. Reduced construction period results in less traffic disruption impacts and associated reduction in traffic conflicts.

5. Value engineering as a result of Construction Management review and constructability analysis is expected to save approximately 10% project cost, i.e., $5 million. Construction planning and estimating will confirm well ahead of construction the expected project budget, to allow for more informed funding requests from the variety of different grant and loan sources. Alternative contracting, specifically Construction Manager delivery, will virtually eliminate change orders as the contractor is heavily invested in the project design.

   The GCCWSD and BSCWSD (Districts) have adopted alternative contracting guidelines that require the Construction Manger to self-perform at least 30% of the project work, as well as solicit subcontractor bids from a minimum number of outside companies. It is expected that the Construction Manager will be able to more effectively solicit bids than the Districts, in an area of Montana where access to qualified subs is limited. In the Big Sky area specifically, open-bid prices tend to be as much as 30% higher than other regions. The Construction Manager bid process is anticipated to help ease local inflation trends through a broader outreach of qualified bidders.

   The Construction Manager process includes a robust Risk Management process wherein the Districts, Engineers, and Contractor identify, price, and mitigate project risks during the design process.

6. Technical complexities include but are not limited to: numerous stakeholders and agencies involved; geotechnical considerations – shoring, large boulders, high groundwater, slope stability; Montana Department of Transportation right-of-way trenching – traffic control requirements and access; and varied scopes of work – excavation, heavy civil, electrical, controls, lift station, plumbing, mechanical, foundation / building.

   Geotechnical slope stability issues along MT HWY 64 require innovative strategies from a constructability perspective to ensure the force main and reuse main can be built and are not compromised by unstable slope conditions. Incorporating a Construction Manager on this project in the design phase will reduce burden on the Districts and improve efficiency by adding them to the large stakeholder group early on.

7. The Technical Review Committee will be comprised of individuals from each of the Districts, Consultants, and Independent Cost Estimator entities, with different areas of expertise. Individual scores from Technical Review Committee members will be thoroughly vetted and discussed if there is significant variation in one score versus the collective group scores.

   The project will include a non-scoring Technical Review Committee facilitator who will manage the proposal review and scoring process. His/her responsibility will be to ensure transparency and fairness in the individual scoring of the statements of qualifications and proposals. The Districts will follow the Montana Department of Transportation Technical Review Committee review guidelines.

8. The Construction Manager selection process is publicly advertised and open to all qualified entities. If the Construction Manager final Guarantee Maximum Price exceeds 5% of the project price estimate, the Districts can open the project to public bidding in accordance with public procurement laws.

Done this _____ day of _____, 2025.

_____
Scott Altman, Board President

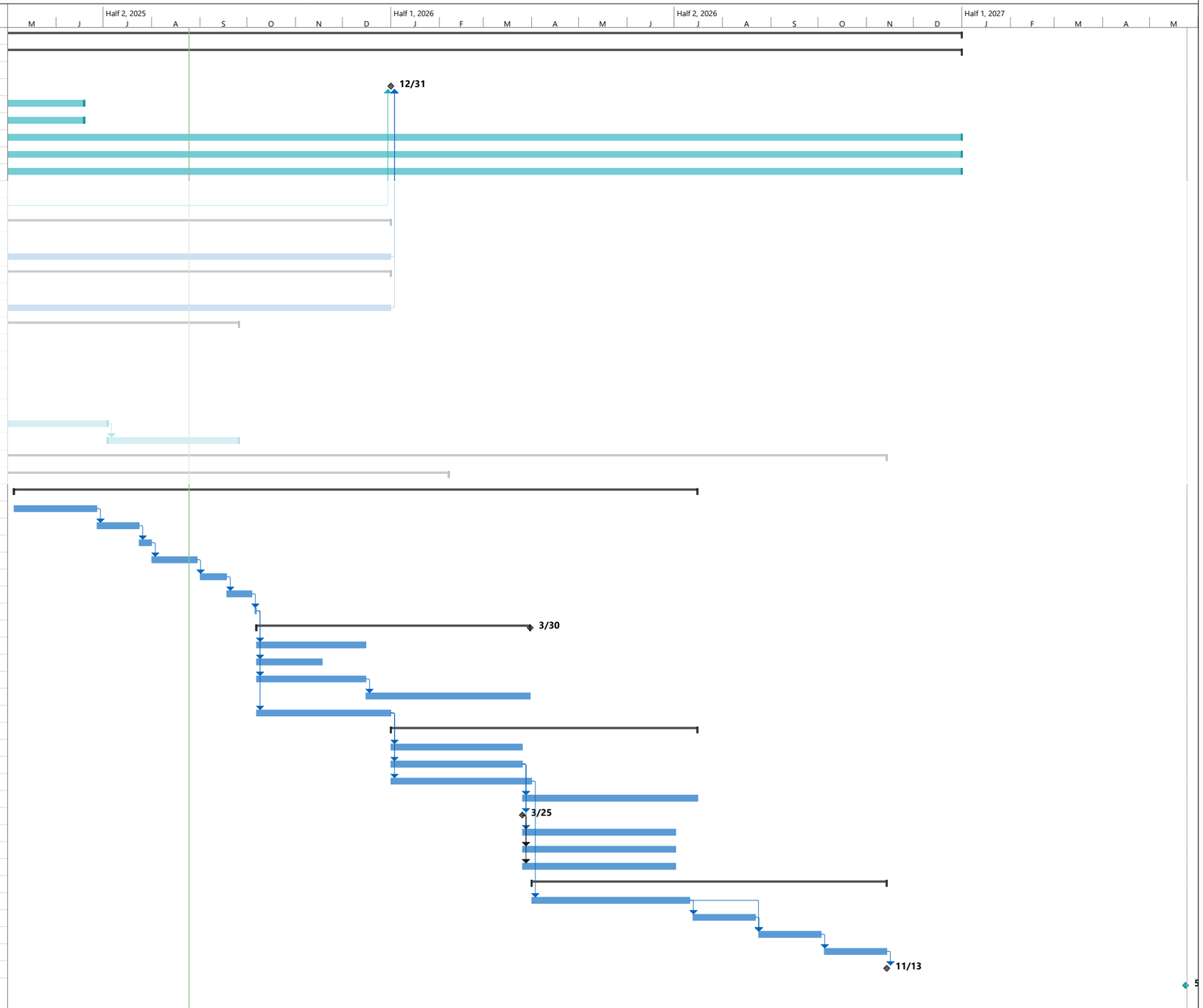
Attest:

_____

Jessica Martin-Trulen, Secretary

Canyon Sewer Project Schedule
60% Design Phase

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
1		**District Planning, Administration, Funding**	**564 days**	**Mon 11/4/24**	**Thu 12/31/26**	
2		**Joint Committee**	**564 days**	**Mon 11/4/24**	**Thu 12/31/26**	
3		Committee/Contracting ILA	30 days	Thu 1/2/25	Wed 2/12/25	
4		Co-solution vs. Go-it-Alone (final determination)	0 days	Wed 12/31/25	Wed 12/31/25	11,14,17
5		Treatment-Disposal MOU	120 days	Thu 1/2/25	Wed 6/18/25	
6		Phase 1 Project Limits	120 days	Thu 1/2/25	Wed 6/18/25	
7		TEDD Funding	564 days	Mon 11/4/24	Thu 12/31/26	
8		DNRC-SRF Funding/Loan	564 days	Mon 11/4/24	Thu 12/31/26	
9		1% Ballot Initiative Development	521 days	Thu 1/2/25	Thu 12/31/26	
10		**DEQ Infrastructure**	**89 days**	**Sun 12/1/24**	**Thu 4/3/25**	
11		Deviation Request - Hwy 64 Single Trench	90 days	Sun 12/1/24	Thu 4/3/25	
12		**MDT**	**250 days**	**Thu 1/16/25**	**Wed 12/31/25**	
13		Pre-App Meeting	30 days	Thu 1/16/25	Wed 2/26/25	29
14		Design Coordination	220 days	Thu 2/27/25	Wed 12/31/25	13
15		**USFS**	**253 days**	**Mon 1/13/25**	**Wed 12/31/25**	
16		Pre-App Meeting	30 days	Mon 1/13/25	Fri 2/21/25	13
17		Easement Coordination	223 days	Mon 2/24/25	Wed 12/31/25	16
18		**DEQ Discharge Permitting**	**270 days**	**Fri 9/13/24**	**Thu 9/25/25**	
19	✓	Application and Non-Deg Report Submittal	0 days	Fri 9/13/24	Fri 9/13/24	
20	✓	Post-App Meeting and Coordination	50 days	Fri 9/13/24	Thu 11/21/24	19
21		Groundwater Application Amendment (Newberry plus data updates)	60 days	Fri 11/22/24	Thu 2/13/25	20
22		DEQ Coordination and Review	60 days	Fri 1/17/25	Thu 4/10/25	21
23		Supplemental Data Collection	60 days	Fri 4/11/25	Thu 7/3/25	22
24		Final Non-Deg and Report(s)	60 days	Fri 7/4/25	Thu 9/25/25	23
25		**Infrastructure Design / Permit / Bid**	**520 days**	**Mon 11/18/24**	**Fri 11/13/26**	
26		**60% Drawings**	**320 days**	**Mon 11/18/24**	**Fri 2/6/26**	
40		**CMGC Contractor Procurement**	**313 days**	**Mon 5/5/25**	**Wed 7/15/26**	
41		RFQ-RFP-Bid Package Development	39 days	Mon 5/5/25	Thu 6/26/25	
42		Advertise RFQ, SOQ Period	19 days	Fri 6/27/25	Wed 7/23/25	41
43		Short List	6 days	Thu 7/24/25	Thu 7/31/25	42
44		RFP, Tech Proposal and Costs	21 days	Fri 8/1/25	Fri 8/29/25	43
45		Scoring, Contractor Selection	13 days	Mon 9/1/25	Wed 9/17/25	44
46		Contract Execution	12 days	Thu 9/18/25	Fri 10/3/25	45
47		CM Notice to Proceed	1 day	Mon 10/6/25	Mon 10/6/25	46
48		**~75% Drawings & Specs**	**125 days**	**Tue 10/7/25**	**Mon 3/30/26**	
49		First final design phase with CM	50 days	Tue 10/7/25	Mon 12/15/25	47
50		HWY 64 Geotech, supplemental field data colle	30 days	Tue 10/7/25	Mon 11/17/25	47
51		75% Drawings, Specs, Details	50 days	Tue 10/7/25	Mon 12/15/25	47
52		MDT Permit submittal, coordination, & review	75 days	Tue 12/16/25	Mon 3/30/26	51
53		Preliminary GMP Estimate with Contingency	62 days	Tue 10/7/25	Wed 12/31/25	47
54		**~90% Drawings & Specs**	**140 days**	**Thu 1/1/26**	**Wed 7/15/26**	
55		Second final design phase with CM	60 days	Thu 1/1/26	Wed 3/25/26	53
56		90% Drawings, Specs, Details	60 days	Thu 1/1/26	Wed 3/25/26	53
57		Generate Binding GMP	64 days	Thu 1/1/26	Tue 3/31/26	53
58		Finalize Easements & Site Title Opinion	80 days	Thu 3/26/26	Wed 7/15/26	56
59		DEQ Submittal	0 days	Wed 3/25/26	Wed 3/25/26	56
60		MEPA / NEPA / Misc. Permitting - FINAL	70 days	Thu 3/26/26	Wed 7/1/26	56
61		DEQ Review	70 days	Thu 3/26/26	Wed 7/1/26	59
62		SRF-DEQ Environmental Assessment	70 days	Thu 3/26/26	Wed 7/1/26	59
63		**Construction Procurement**	**163 days**	**Wed 4/1/26**	**Fri 11/13/26**	
64		Final Construction Drawings / Specs / Contract Do	73 days	Wed 4/1/26	Fri 7/10/26	57
65		Final Approvals	30 days	Mon 7/13/26	Fri 8/21/26	64
66		Final Contract Docs	30 days	Mon 8/24/26	Fri 10/2/26	64,65
67		Notice to Proceed	30 days	Mon 10/5/26	Fri 11/13/26	66
68		**Earliest Potential Construction Start**	0 days	Fri 11/13/26	Fri 11/13/26	67
69		**Alternative Construction Start, Accounting for Potential Delays and Spring Start**	0 days	Mon 5/24/27	Mon 5/24/27	



Project: 60% Eng to CMGC Star
Date: Mon 8/25/25

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Progress | Manual Progress

MASTER SERVICES AGREEMENT
WORK ORDER #11

PROJECT TITLE:
Canyon Sewer Engineering
CLIENT:
Gallatin Canyon County Water & Sewer District
WGM GROUP PROJECT NUMBER:
220724.11

As stated in the Master Services Agreement (Agreement) for the above-referenced client dated March 31, 2023, the Agreement may be modified by written amendment executed by both parties and defined in Work Orders incorporated into the Agreement. This document details the scope and fee associated with Work Order #11. By both parties signing below, this document becomes incorporated into the Agreement as an Exhibit and is subject to the terms and conditions of said Agreement.

Services under this Work Order are intended to advance design level of the current defined project's construction documents through an estimated two interim design progression phases to allow the CMAR's progression of their Opinion of the Cost of the Work to a Guaranteed Maximum Price (GMP). Final construction documents, including Drawings, Specifications and Construction Contract Documents that address Owner, Owner's Advisor, and CMAR comments, as appropriate; complete the design, are suitable for pricing by construction contractors; and are complete and ready for construction will be completed under a future Agreement Between Owner and Engineer For Professional Services (When Owner Retains a Construction Manager At Risk – EJCDC CMAR-500).

WORK ORDER SCOPE OF SERVICES:

Phase 01: Project Management & QA/QC

WGM's project manager will manage the project team, allocating appropriate resources and keeping in regular contact with the client. The PM will proactively evaluate project progress, calculating earned value to ensure we're on track at each step in the process. The following tasks are included:

- Develop and communicate scope, schedule and budget
- Provide oversight, coordination, resource allocation, and task delegation for WGM internal team, Project Team subconsultants, and selected CM.
- Correspond with Client and attend Project Team meetings
- Assist Client with stakeholder identification and project communication
- Complete earned value estimating and invoicing
- Provide QA/QC review of design and deliverables

Assumptions: Project communication will be provided directly to Client. WGM will assist Client to determine stakeholder communication plan, including engaging and selecting a 3rd party PR firm if desired.

Deliverables: Scope, fee estimate, monthly progress update correspondence to Client, meeting minutes, and presentation slides for team and Client meetings

Phase 02: Collection & Conveyance Design Development

WGM will advance design through two interim design development phases, progressing commensurate construction documents, for gravity collection main, discharge transmission main (purple pipe) in the Highway 191 corridor only, and connections to existing public collection and proposed disposal system headers based on the final alternative selection established in Work Order #7, conveying wastewater collection to the primary lift station located at the intersection of HWY 191/64.. The following items are included:

- Work with CM to define Work divisions, if any, and generate separate Plan volumes matching those divisions.
- Coordinate with CM to advance design development of gravity collection system, limited to two iterations.
- Coordinate with CM to advance design development of Buck's T4 lift station modifications and force main re-route to new Canyon gravity collection system, limited to two iterations.
- Conduct field reconnaissance/survey to acquire grade of proposed connections to existing public collection systems to ensure infrastructure grade requirements are achievable.
- Coordinate with CM to advance design development of re-use transmission main to disposal system headers which distribute to disposal areas/properties, limited to two iterations.
- Coordinate with utility occupiers of Montana Department of Transportation (MDT) HWY 191 right-of-way (R/W) to attain records of utility types, size, locations, and status.
- Coordinate with CM to determine limits of Work conflicts with existing utilities and recommend remedies for conflict resolution.
- Advance project design details for work items not covered by the current edition of Montana Public Works Standard Specifications (MPWSS) and BSCWSD Standard Specifications & Drawings.
- Advance technical specifications including MPWSS and modifications to MPWSS and BSCWSD Standard Specifications.
- Coordinate with CM to finalize work pay item summary with measurement and payment specifications for CMAR use in their Opinion of Cost of the Work and GMP.
- Revise limits of easements to accommodate the mainline work and temporary construction space and access.
- Continue design coordination and communication with MDT on project design, MDT facility anticipated improvements, and occupancy allowances.
- Prepare main extension and lift station Design Reports for DEQ review/approval.

Assumptions: Buck's T4 lift station can be re-used in its current state, requiring only a new structure penetration and force main re-routing. Future Agreement Between Owner and Engineer For Professional Services (When Owner Retains a Construction Manager At Risk – EJCDC CMAR-500) will be executed to provide final design and construction document package. Final project permitting, including environmental requirements and county requirements, will be included in this future agreement.

Deliverables: PDF drawings of collection and conveyance system plans, project technical specifications, Design Report for Main Extensions and Canyon Area lift stations

Exclusions: Approved permits; executed easement agreements; advancement of additional project alternatives beyond that selected with Work Order #7.

Phase 03: Discharge Infrastructure Design Development

WGM will advance design through two interim design development phases, progressing commensurate construction documents, for the new discharge disposal systems, based on Project areas as identified and submitted through the preliminary MGWPCS discharge permit process. Disposal areas for this Scope are limited to include new and existing land application areas in Quarry, Lazy J, and Buck's T4, as well as new and existing subsurface disposal areas in Quarry and Lazy J and the Newberry property. This phase also includes reuse main design for piping outside of the Highway 191 ROW (within private development areas to POC for disposal). The following items are included:

- Coordinate with CM to advance design development of disposal systems limited to those identified above, based on field data collection and infiltration rates
- Includes inline packaged booster pump station design and reuse main modeling via WaterCAD.
- Conduct field reconnaissance/survey to acquire grade of proposed connections to existing disposal systems (irrigation and subsurface disposal)
- Coordinate with utility occupiers / private landowners of disposal areas to attain records of utility types, size, locations, and status
- Coordinate with CM to determine limits of Work conflicts with existing utilities and recommend remedies for conflict resolution.
- Advance project design details for work items not covered by the current edition of Montana Public Works Standard Specifications (MPWSS) and BSCWSD Standard Specifications & Drawings.
- Advance technical specifications including MPWSS and modifications to MPWSS and BSCWSD Standard Specifications.
- Coordinate with CM to finalize work pay item summary with measurement and payment specifications for CMAR use in their Opinion of Cost of the Work and GMP.
- Determine design requirements for modifications to the existing Lazy J drainfield, proposed Quarry drainfields & RIBs, proposed Newberry RIB, and existing irrigation infrastructure throughout these areas (assumes Quarry drainfields will be installed by the time the Canyon sewer project goes to construction)
    - Limited to assessing horizontal and vertical conditions to allow connection and assessing volume capacity for planned disposal
- Prepare discharge infrastructure design report for DEQ review/approval
- Submit updated MGWPCS application to DEQ for continued review, if necessary

Assumptions: Design/retrofit to reutilize the existing Quarry and Lazy J drainfields as well as existing irrigation infrastructure will require minimal modifications. New land application design will include considerations for permanent irrigation infrastructure in current developed or planned developed common areas and green space. Otherwise, design will include considerations for more temporary spray application techniques.

Deliverables: PDF drawings of disposal system plans; project technical specifications; Design Report for Discharge Infrastructure.

Exclusions: Approved permits, executed easement agreements

Phase 04: AE2S Services – QA/QC & EI&C Design

Subconsultant AE2S will assist to advance design through two interim design development phases, progressing commensurate construction documents, for electrical, instrumentation, and control design for conveyance and discharge infrastructure components, as well as overall QA/QC as requested. The following items are included:

- Assist, QA/QC and advise on modeling of reuse pipeline and discharge systems, including incorporation of packaged booster pump station.
- Design electrical, instrumentation, and controls for:
  - Disposal valve vaults at each discharge location
  - Reuse main booster pump station
  - Conveyance lift stations, limited to necessary new or modified systems to repurpose Buck's T4 existing lift station and new packaged low pressure lift station for Service Area 2 – Big Horn Center area.
- Advance technical specifications for electrical, instrumentation and control work.

ADDITIONAL SERVICES

Services not specifically described in the tasks above are not included in this scope of work but may be added through an amendment.

FEE ESTIMATE

Our fees will be billed on a time and materials basis with an estimate of **$495,000**. Fees are valid through August 2026 and may need to be adjusted if the project extends beyond this date.

SCHEDULE

WGM is prepared to begin work immediately upon contract execution. The above scope will be is anticipated to be substantially complete by March 31, 2025. A deliverable schedule will be coordinated with the Client and subconsultant AE2S to support timely project advancement.

WGM Group, Inc. Acceptance of Work Order:

Mace Mangold, PE		
Vice President	(sign)	(date)

Client Authorization to Proceed with Work Order:

Scott Altman		
GCCWSD President	(sign)	(date)

From: Brown, Zach <Zach.Brown@gallatin.mt.gov>
Sent: Wednesday, August 6, 2025 11:02 AM
To: Mace Mangold; daniel@resorttax.org
Cc: Boyer, Jennifer; Rowley, Nicole; Doar, Jim; MacFarlane, Scott
Subject: RE: Canyon Sewer District - TEDD / TIF Financial Lift

Danny & Mace,

The Commission had a discussion this morning about whether or not we want to move forward with entertaining this Canyon W&S TEDD request, and the answer is no, not at this time. A rough summary of some of the rationale is as follows:

- We are not committed to pursuing a fully fledged economic development program within our organization, designed to "chase/create the increment" like the City of Bozeman has done. And we are convinced that this would not be successful without that kind of internal staffing and programming investment, made over a long period of time.
- We are not convinced that the plurality of voters / taxpayers would support county government financially incentivizing more development in Big Sky.
- We are not convinced that the developers of the Quarry, combined with the resources of BSRAD and the district itself, let alone the financial firms that own most of Big Sky and would stand to benefit – indirectly and probably directly too - from the redevelopment opportunity, couldn't achieve this level of financing and bonding on their own.
- We are not convinced that this project will substantially solve the nitrogen plume in the West Gallatin, because it will primarily serve new development and/or redevelopment.
- We are concerned that the new legislative reforms to newly taxable value calculations in the property tax assessment system are likely to harm the County's finances moving forward. Further limiting our future newly taxable value potential by locking the increment in this TEDD is likely to cause more constraints for us in the short to medium term, as we stretch to maintain services and serve new growth with very limited taxation authority and strained budgets.

I hope this provides the clarity you have been seeking from us. As always, we welcome more discussion moving forward.

GALLATIN COUNTY

ZACH BROWN
County Commissioner

Commission Office
311 W. Main St., Room 306
Bozeman, MT 59715
Office: 406-582-3000
Cell: 406-551-3879

From: Mace Mangold <mmangold@wgmgroup.com>
Sent: Thursday, April 17, 2025 5:14 AM
To: MacFarlane, Scott <Scott.MacFarlane@gallatin.mt.gov>
Cc: Boyer, Jennifer <Jennifer.Boyer@gallatin.mt.gov>; scott@bigsky.com; Brown, Zach <Zach.Brown@gallatin.mt.gov>; Dylan Pipinich <dpipinich@wgmgroup.com>
Subject: Canyon Sewer District - TEDD / TIF Financial Lift

Morning Commissioner Macfarlane,

The attached memo is intended as a follow-up to the TEDD discussions from late last year. A specific objective of the document is to delineate a conceptual TEDD boundary and subsequently quantify tax revenue implications with and without central sewer (see below Summary Table from the memo).

I'm hoping we could setup another meeting with yourself and the other commissioners to present an overview of the calculation methodology and assumptions, along with how the TEDD revenue is planned to fit in the "financing stack" that the Canyon District is actively coordinating with BSRAD.

PS – My understanding is that BSRAD is planning on the Canyon TEDD being on the upcoming "Eggs and Issues" and/or Joint Commission meeting agenda on May 14th. Maybe we target the week of the 5th to serve as a primer?

	Base Taxable Value	2029 Taxable Value	2029 Increment Generated (Per Year)	2034 Taxable Value	2034 Increment Generated (Per Year)	2039 Taxable Value
Sewer ASAP	$ 1,367,077	$ 11,571,495	$ 2,798,255	$ 22,815,481	$ 5,881,582	$ 23,425,750
No sewer	$ 1,367,077	$ 2,715,726	$ 369,827	$ 4,816,507	$ 945,903	$ 7,035,134

Definitions:

Market Value: The estimated price that a property would sell for in an open market under normal conditions. This is determined by location, property condition, comparable sales, and income potential (for commercial properties). Market value represents the full a calculations.

Taxable Value: The portion of a property's market value that is subject to taxation. In Montana, taxable value is determined by app which varies by property type.

Formula: Taxable Value=Market Value×Assessment Ratio
For example, if a residential property has a market value of $500,000 and the taxable percentage is 1.35%, the taxa $500,000×0.0135=$6,750

Mill Rate: The amount of tax levied per $1,000 of **taxable value** to fund local government services such as schools, roads, and fire mill = $1 per $1,000 of taxable value.

Formula: Property Tax=Taxable Value×(Mill Rate/1000)
For example, if a property has a taxable value of $6,750 and the local mill rate is 500 mills: $6,750×(500/1000)=$3,3
The annual property tax would be **$3,375**.

Increment Generated: The increase in **taxable value** within a Tax Increment Financing (TIF) district that results from new develop When a TIF district is established, the base taxable value is set, and any additional taxable value beyond that base is considered th increment are used to fund infrastructure and public improvements within the district.

Formula: Incremental Taxable Value=New Taxable Value−Base Taxable Value
Increment Generated=Incremental Taxable Value×(Mill Rate/1000)

Mace Mangold, PE, LEED AP
VP, Infrastructure

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WGMGROUP
Community Values. Inspired Futures.

Not much changed from what was presented last month.

Wilson moved to approve the budget as shown. Goldberg seconded the motion. There was no discussion. The motion passed unanimously.

C. BSRAD Operating Budget Grant Request – *Action*

This will be on next week's agenda with the newly approved budget attached. This is applying for government interlocal operations funds. This is nearly the same as last year, but we now have audits to include.

Firelight Meadows WSD asked about funding and now there is a chance that the three WSDs will need to coordinate their asks. This was mostly about capital improvement funds, not operations. Kristin with the Task Force would like to get more involved with funding. WGM will start going to most BSRAD meetings to help coordinate funding of the three districts, especially as it relates to the WRRF's phase 2 upgrades.

D. BSRAD and ARPA Draw Requests and Invoice Payments – *Action*

Invoices and the proposed funding plan were presented. Of note, one is a prepayment (retainer) to use up the FY25 budget and help bridge the gap between when the next fiscal year's operating funds come in.

Wilson clarified some drilling/pumping costs – these were for mornitoring wells that will inform discharge design.

Wilson, Altman.

E. Alternative Project Delivery Applicability, Written Findings – *Action*

This will likely be an action next week, after review by the joint committee, but the board should start reviewing this now. See attached finding and draft resolution (drafted by Tara). A similar resolution would need to be passed by the BSCWSD district.

II. Old Business

A. Canyon Water PER Updates and public meeting planning – *Discuss*
Ideally have a quorum, 6,7,25th-28th.

B. CMGC Contractor RFQ – *Discuss*
We got several responses come in. The committee is reviewing them and will meet next Tuesday to discuss. The technical review committee is Mace, Jon Olsen, Dave Tuan, and Johnny. There is a scoring metric to review these by.

Can all responses be shared with the board? Yes. These have also been shared with the joint committee. Don't reach out to the technical review committee with your opinions yet.

C. Independent Cost Estimator (ICE) RFP – *Discuss*

D. FY 26 Board Insurance – *Action*

Asdf lock in at highest limit. If we decide need more, add later as riders.

Is there a gap between D&O and WGM's design liability.

Our contract terms and WGM's to identify any gaps.

Wilson

The drilling that just happened would be covered by the contractors insurance. Tara recommends that the contracts with WGM or AE2s indemnify the GCCWSD for worker injuries, etc.

Altman moved to bind this policy as provided at option coverage level 5 "". Look at additional riders for the next meeting. Goldberg seconded the motion. There was no further discussion

E. FY 26 Auditor Services– *Action*

Nexus.

Wilson moved to approve the Nexus auditor services contract as presented. Goldberg seconded.

III. Any Other Business Which May Properly Come Before the Board – *Discuss*

IV. Next Meeting Planning

A. Date & Draft Agenda – *Discuss*
10 am next Wednesday, 30th.

V. Adjourn

Wilson, altman.

Minutes Drafted by: Michelle Pond, WGM Group
Minutes Approved:
Signed: Scott Altman, Board President

Attested: Jessica Martin-Trulen, GCCWSD Secretary