

## **Environmental Assessment & Public Notice for Public Comment**

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**Environmental Assessment &  
Public Notice for Public  
Comment**

# NOTICE AREA

Application No. 76LJ 30171747

Regional Office # 08

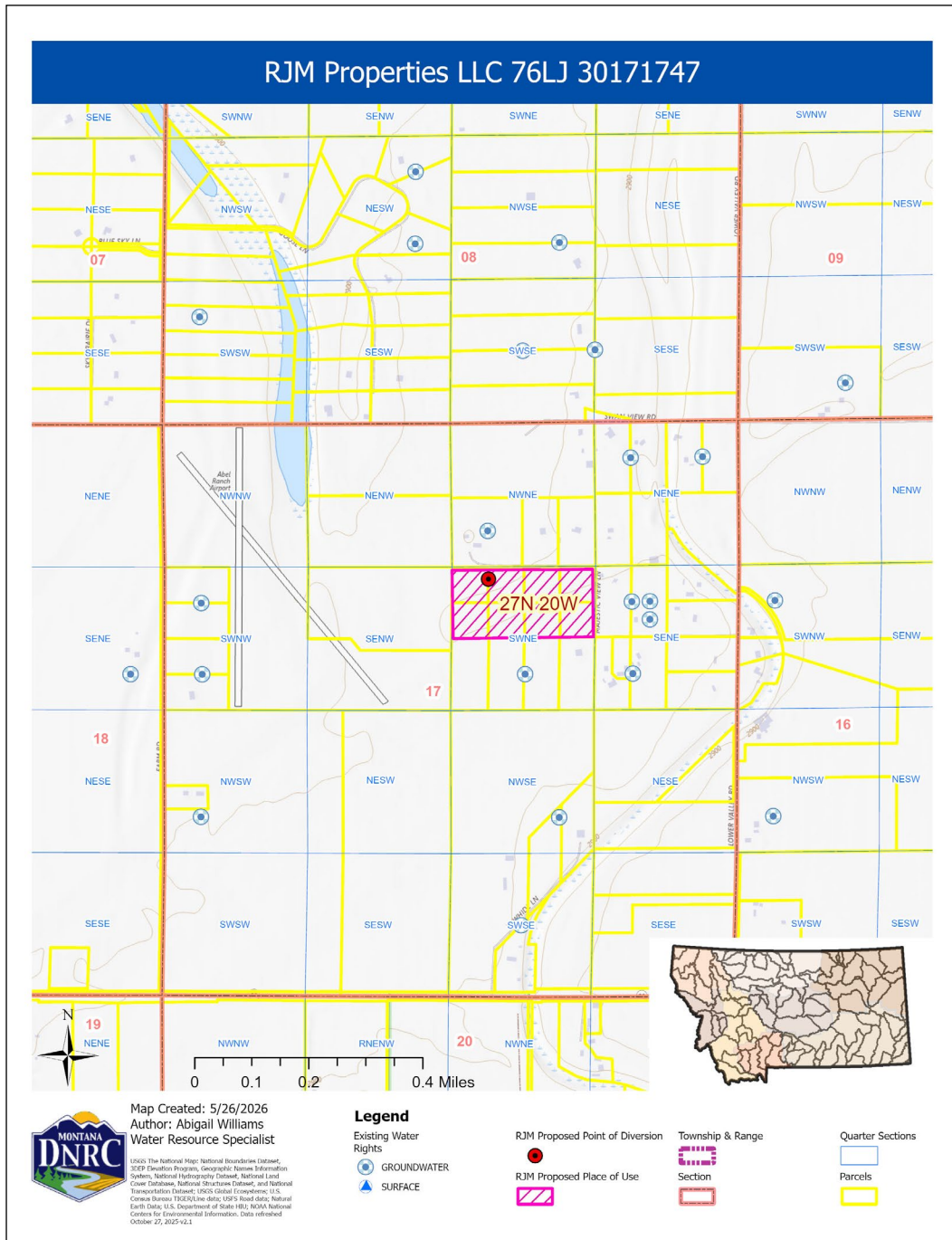
Applicant's Name RJM Properties LLC

Indian Reservation  Yes  No If yes, Reservation \_\_\_\_\_

Irrigation District  Yes  No If yes, District \_\_\_\_\_

Specialist Abigail Williams

Date 6/17/2026



Water Right Owner	Water Right No. (Basin ID, and Number)
Applicant: RJM Properties LLC	76LJ 30171747
Consultant: Core Water Consulting	N/A
1CFC	KRO STANDARD NOTICE CONTACTS
1FWS	
1FWP	
1WQB	
1PPL	
1WWP	
1DSL	
2FWP	
2BIA	
8KAL	
1BRW	
8CON	
BIGFORK COUNTY WATER & SEWER DIST	
BRIAN MCKOY; CHELSEA MCKOY	76LJ 30063775
BRUYER ARNIE & CAROL REVOCABLE TRUST	76LJ 30029424
ROY D THAGGARD; VITA H THAGGARD	76LJ 30012464
BETSY L SMITH; GREGORY W SMITH	76LJ 30029187
MILTON A CLAROS	76LJ 30020631
JOHN R BURGESS; SHARON L BURGESS	76LJ 65679 00
SANDRA BLAYDEN; CHRIS W SORENSEN	76LJ 98272 00
GWENDOLYN J NORTON; ROBERT E NORTON	76LJ 30164294
JONATHAN F MAHRT; KIRSTIN D MAHRT	76LJ 30152508
DAVID C MILLS; STEPHANIE D MILLS	76LJ 30163952
ANDREA UNDERHILL; LUKE UNDERHILL	76LJ 30152509
BERRY, ED & VAL TRUST	76LJ 30016472
SHAWN C KRAUSS	76LJ 30108963
DANIEL NESTOR	76LJ 30153176
CHRISTINE ZIMMERMAN; WAYNE ZIMMERMAN	76LJ 30117698
RODNEY MACFARLANE; TIA MACFARLANE	76LJ 30163620
SADIE HUTTER; JERRY SULLIVAN	76LJ 113108 00
RYAN WANTAJA	76LJ 30046292
DEBRA BARNETT; SOMEDAY ADVENTURES LLC	76LJ 30022141
DANIEL B BOON; JAN M BOON	76LJ 91058 00
NORTON, BRIAN L REVOCABLE TRUST	76LJ 30151280
STEPHEN MADSEN	76LJ 30110479
KIRK FAMILY LIVING TRUST	76LJ 30108889
BRITTANY SHANAHAN; MIKE SHANAHAN	76LJ 30049300
STEPHEN MADSEN	76LJ 109694 00
GERALD L EDMONDSON; KELLY JUMP EDMONDSON	76LJ 30021280
JON SCOTT; JULIE SCOTT	76LJ 40285 00
ANDREA HAEDER; PAUL D HAEDER	76LJ 30021304
BIGFORK COUNTY WATER & SEWER DIST	76LJ 30071153
RYAN WANTAJA; SARAH WANTAJA	76LJ 30164296
JAMI R BRAY	76LJ 30114863
DAVID D HAYES; DEBORAH K HAYES	76LJ 30028711
JOHN B CASEY; STEPHANIE CASEY	76LJ 30163717
BIG LAKE ENTERPRISES LLC	76LJ 30149121
<b>PUBLISHED: DAILY INTER LAKE</b> Legal land description of notice area: S2 Sec 8, SWSW Sec 9, E2E2 Sec 16, SENE Sec 18, and Sec 17 of T27N R20W Flathead County**	

\*If owner listed twice, only one notice sent.

\*\*Notice area: Notice sent to active and severed groundwater rights within a 0.75-mile radius from the proposed point of diversion.

**ENVIRONMENTAL ASSESSMENT**  
**For Routine Actions with Limited Environmental Impact**

**Part I. Proposed Action Description**

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**1. APPLICANT/CONTACT NAME AND ADDRESS:**

RJM Properties LLC  
1191 Majestic View Lane  
Kalispell, MT, 59901

**2. TYPE OF ACTION:**

Ground Water Application for Beneficial Water Use Permit No. 76LJ 30171747

**3. WATER SOURCE NAME:**

Ground Water (Flathead Valley Deep Alluvial Aquifer)

**4. LOCATION AFFECTED BY PROJECT:**

N2SWNE Section 17, Township 27N, Range 20W, Flathead County, Montana.

**5. NARRATIVE SUMMARY OF THE PROPOSED PROJECT, PURPOSE, ACTION TO BE TAKEN, AND BENEFITS:**

The Applicant proposes to divert water from a well drilled into Flathead Deep Alluvial Aquifer by means of a pump at a rate of 101.0 gallons per minute (GPM) up to 21.72 acre-feet (AF) per year. The Applicant proposes to use up to 2.24 acre-feet for multiple domestic for eight households and up to 19.48 acre-feet for irrigation of 10 acres of lawn and garden (1.25 acres per household). The lawn and garden will be irrigated from April 15<sup>th</sup> to October 15<sup>th</sup> and multiple domestic use will occur from January 1<sup>st</sup> to December 31<sup>st</sup> annually.

The proposed point of diversion is in the NWSWNE of Section 17, Township 27N, Range 20W, Flathead County (Figure 1). The place of use is the Majestic Meadow subdivision located in the N2SWNE of Section 17, Township 27N, Range 20W, Flathead County, Montana (Figure 1).

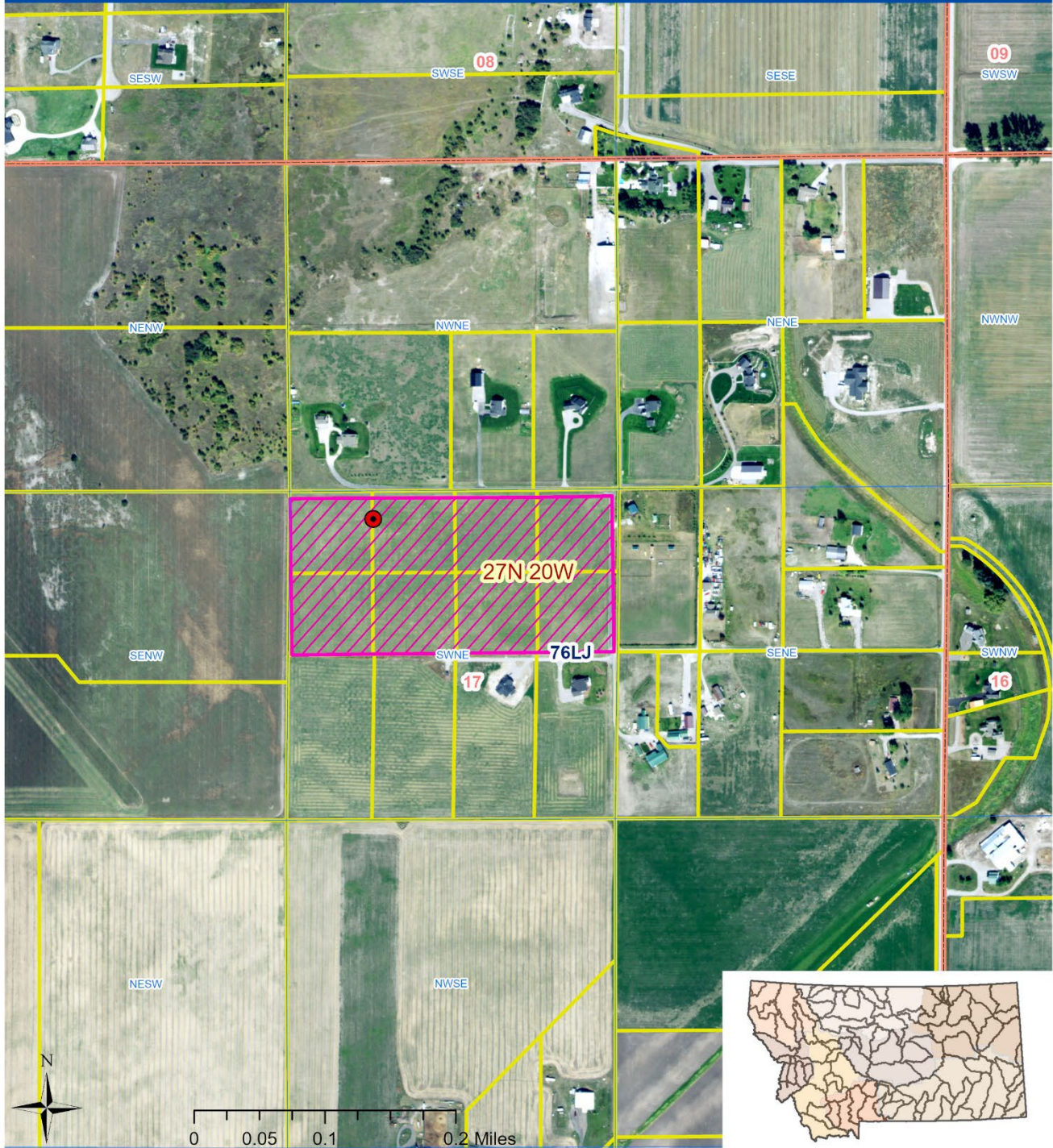
The project is in the Flathead River Basin (76LJ) in an area that is not subject to water right basin closures or controlled groundwater area restrictions.

The DNRC shall issue a water use permit if the Applicant proves the criteria in 85-2-311 MCA are met.

**6. AGENCIES CONSULTED DURING PREPARATION OF THE ENVIRONMENTAL ASSESSMENT:**

- U.S. Fish and Wildlife Service (USFWS): National Wetlands Inventory Wetlands Mapper
- Montana Natural Heritage Program: Endangered, Threatened Species, and Species of Special Concern
- Montana Department of Fish Wildlife & Parks (DFWP): Dewatered Stream Information
- Montana Department of Environmental Quality (MDEQ): Clean Water Act Information Center
- U.S. Natural Resource Conservation Service (NRCS): Web Soil Survey
- U.S. National Park Service (NPS) Water Rights Branch

# RJM Properties LLC Application No. 76LJ 30171747



Map Created: 3/12/2026  
 Author: Abigail Williams  
 Water Resource Specialist



USGS The National Map; National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; National Earth Data; U.S. Department of State HRU; NOAA National Centers for Environmental Information. Data refreshed October 27, 2025., Montana State Library

## Legend

- Township & Range
- Section
- Quarter Sections
- Parcels

- RJM Proposed Point of Diversion

- RJM Proposed Place of Use

**Figure 1.** Map of the proposed place of use and points of diversion.

## Part II. Environmental Review

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### 1. ENVIRONMENTAL IMPACT CHECKLIST:

#### PHYSICAL ENVIRONMENT

##### 1.1 WATER QUANTITY, QUALITY AND DISTRIBUTION

Water Quantity - Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.

The Applicant proposes to divert groundwater from a well that is approximately one mile northwest of Fennon Slough, which is hydrologically considered to be a part of Flathead River and 1.25 miles north of Flathead Lake. Fennon Slough (Flathead River) and Flathead Lake are not on the DFWP list of chronically or periodically dewatered streams.

*Determination:* No significant impact.

Water Quality - Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.

The Applicant proposes to divert and use groundwater. The nearest surface water sources to the proposed groundwater diversion are Fennon Slough (Flathead River) and Flathead Lake.

Flathead River: MDEQ Clean Water Act Information Center's 2020 Water Quality Information report lists the Flathead River as:

- i. Water Quality Category 3: Waters for which there is insufficient data to assess the use support of any applicable beneficial use, so no use support determinations have been made;
- ii. Use Class B-1: Waters classified as suitable for drinking, culinary, and food processing purposes after conventional treatment; bathing, swimming and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply;

Flathead Lake: MDEQ Clean Water Act Information Center's 2020 Water Quality Information report lists Flathead Lake as:

- i. Water Quality Category 5: Waters where one or more applicable beneficial uses have been assessed as being impaired or threatened, and a TLMD is required to address the factors causing the impairment or threat;
- ii. Use Class A-1: Waters classified as suitable for drinking, culinary and food processing purposes after conventional treatment for removal of naturally present impurities;
- iii. Flathead Lake is assessed as "Fully Supporting" of Agriculture, Drinking water, and Primary Contact Recreation. It is assessed that Flathead Lake is "Not Fully Supporting" of Aquatic Life due to Mercury, Polychlorinated Biphenyls (PCBs), Nitrogen, and Phosphorus. A TLMD has not been completed for the Mercury nor the Polychlorinated Biphenyls (PCBs) impairment. A TLMD was established or approved by EPA on March 31, 2002 for Nitrogen and Phosphorus with a Nutrient Management Plan.

It is not anticipated that the appropriation of groundwater for multiple domestic and lawn and garden irrigation will result in significant water quality impacts to the nearby surface water sources.

*Determination:* No significant impact.

Groundwater - Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.

The proposed well is completed in the Flathead Deep Alluvial Aquifer to a depth of 714.0 feet below ground surface (BGS). The Applicant performed a 24-hour constant-rate aquifer test on GWIC ID 331034 at an average flow rate of 101.0 GPM.

The Department determined the physically available volume of water in the source aquifer using aquifer properties derived from previous aquifer tests for previous permits in the vicinity of the proposed production well. The flow rate of 101.0 will be controlled by a variable frequency drive (VFD) with an output of 55 PSI.

Surface water depletion resulting from the Applicant's proposed well due to pumping from the Deep Aquifer will occur year-round to Flathead River and Flathead Lake. The Department conducted physical and legal availability analyses on the aquifer and the hydraulically connected surface water and found water is legally available in the source aquifer and the depleted surface water sources.

*Determination:* No significant impact.

**1.2 DIVERSION WORKS** - Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.

The Applicant will divert groundwater from the aquifer at a rate of 101.0 GPM up to 2.24 AF/year for multiple domestic use for eight households and up to 19.48 AF/year to irrigate 10 acres of lawn and garden with 1.25 acres apportioned per household. The Applicant proposes to divert water for multiple domestic use from January 1<sup>st</sup> to December 31<sup>st</sup> and for irrigation of lawn and garden from May 15<sup>th</sup> to October 15<sup>th</sup> annually. The Applicant will use a Grundfos SP90S100-9 in a 3-inch drop pipe extending 200 feet below ground surface that connects to two pressure tanks and a variable frequency drive set to an output pressure of 55 PSI. The two pressure tanks, VFD, and control panels are located in the pump house on Lot 2 of the Majestic Meadows Subdivision. After leaving the pressure tanks the water is diverted to Lots 1 through 8 of Majestic Meadow via a 4-inch PVC water main that has eight separate service connections.

The Department calculated a total dynamic head (TDH) of 306.62 feet using the Applicants supplied 150 feet pumping depth, friction losses for the system of 29.57 feet and the output pressure of 55PSI (equivalent to 127.5 feet). The pump curve supplied in the application confirms that at a TDH of 306.62 the pump can perform the requested flow rate.

The well is 714.0 feet deep BGS with a static water level of 5 feet BGS. The well is located 1 mile northwest of Flathead River (Fennon Slough) and 1.25 miles north of Flathead Lake. The depletions caused by this appropriation will not negatively impact the surface water sources water quality nor the aquatic environment.

*Determination:* No significant impact.

**1.3 UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES**

Endangered and Threatened Species - Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants, aquatic species, or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."

The Montana Natural Heritage Program website was reviewed to determine if there are any threatened or endangered fish, wildlife, plants, aquatic species, or any "species of special concern" in the project area that could be impacted by the proposed project. Seven animal species of concern (Table 1) were identified within the project

area. Of these species, the Grizzly Bear (*Ursus arctos*) is listed as threatened by the USFWS. This area is already developed. It is not anticipated that any species of concern will be impacted by the proposed project. The proposed project will not create any barriers to the migration or movement of wildlife.

Table 1. Species of Concern		
Species Group	Common Name	Scientific Name
Mammals	Grizzly Bear*	<i>Ursus arctos</i>
Birds	Bobolink	<i>Dolichonyx oryzivorus</i>
Birds	Brewer's Sparrow	<i>Spizella breweri</i>
Birds	Evening Grosbeak	<i>Coccothraustes vespertinus</i>
Birds	Great Blue Heron	<i>Ardea herodias</i>
Birds	Pileated Woodpecker	<i>Dryocopus pileatus</i>
Invertebrates	Oblique Ambersnail	<i>Oxyloma nuttallianum</i>

*Determination:* No significant impact.

Wetlands & Ponds - Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted. For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.

The proposed project is not located near any wetlands or ponds.

*Determination:* No significant impact

**1.4 GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE** - Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.

The proposed multiple domestic use and irrigation of lawn and garden will not negatively impact the soil quality, stability or moisture content in the project area. The project area is comprised of three soil types; 13.2 acres is comprised of Somers silt loam, 5.6 acres is comprised of Somers silty clay, and 3.8 acres is comprised of Tuffit-Somers silty lay loams. The Somers silt loam has a moderately high ability to transmit water. The Somers silty clay and Tuffit-Somers silty lay loam have a moderately low to moderately high ability to transmit water. Soils in this area are not typically susceptible to saline seep. It is not likely that the development of the subdivision or irrigation of lawn and garden will impact the soil quality, stability or moisture content.

*Determination:* No significant impact.

**1.5 VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS** - Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.

It is not anticipated that this project will impact the existing vegetative cover beyond what has been cleared for construction in the project area as the land was previously used for farming and was already cleared of naturally occurring vegetation. It is not anticipated that the issuance of a water use permit will contribute to the establishment of or spread of noxious weeds in the project area. Noxious weed prevention and control will be the responsibility of the landowners, who must follow local noxious weed regulations.

*Determination:* No significant impact.

**1.6 AIR QUALITY** - Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.

There will be no impact to air quality associated with issuance of the proposed permit for beneficial use of groundwater.

*Determination:* No significant impact.

- 1.7 HISTORICAL AND ARCHEOLOGICAL SITES** - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

*Determination:* N/A, project not located on State or Federal Lands.

- 1.8 DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY** - *Assess any other impacts on environmental resources of land, water, and energy not already addressed.*

All impacts to land, water, and energy have been identified and no further impacts are anticipated.

*Determination:* No significant impact.

#### **HUMAN ENVIRONMENT**

- 1.9 LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS** - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

The project is consistent with planned land uses.

*Determination:* No significant impact.

- 1.10 ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES** - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

The proposed project will not inhibit, alter, or impair access to present recreational opportunities in the area. The project is not expected to create any significant pollution, noise, or traffic congestion in the area that may alter the quality of recreational opportunities. The proposed place of use and diversion do not exist on land designated as wilderness.

*Determination:* No significant impact.

- 1.11 HUMAN HEALTH** - *Assess whether the proposed project impacts human health.*

This proposed use will not adversely impact human health.

*Determination:* No impact.

- 1.12 PRIVATE PROPERTY** - *Assess whether there are any government regulatory impacts on private property rights. If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

No government regulatory impacts on private property rights.

*Determination:* No impact.

- 1.13 OTHER HUMAN ENVIRONMENTAL ISSUES** - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

- (a) Cultural uniqueness and diversity? None identified.
- (b) Local and state tax base and tax revenues? None identified.
- (c) Existing land uses? None identified.
- (d) Quantity and distribution of employment? None identified.
- (e) Distribution and density of population and housing? None identified.
- (f) Demands for government services? None identified.
- (g) Industrial and commercial activity? None identified.
- (h) Utilities? None identified.
- (i) Transportation? None identified.
- (j) Safety? None identified.
- (k) Other appropriate social and economic circumstances? None identified.

**2. SECONDARY AND CUMULATIVE IMPACTS ON THE PHYSICAL ENVIRONMENT AND HUMAN POPULATION:**

Secondary Impacts: None identified.

Cumulative Impacts: None identified.

**3. DESCRIBE ANY MITIGATION/STIPULATION MEASURES:**

None.

**4. DESCRIPTION AND ANALYSIS OF REASONABLE ALTERNATIVES TO THE PROPOSED ACTION, INCLUDING THE NO ACTION ALTERNATIVE, IF AN ALTERNATIVE IS REASONABLY AVAILABLE AND PRUDENT TO CONSIDER:**

The only alternative to the proposed action would be the no action alternative. The no action alternative would not authorize the diversion of groundwater at this location.

**Part III. Conclusion**

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**1. PREFERRED ALTERNATIVE:**

Issue a water use permit if the Applicant proves the criteria in 85-2-311 MCA are met.

**2. COMMENTS AND RESPONSES:**

None.

**3. FINDING:**

*Based on the significance criteria evaluated in this EA, is an EIS required?* \_\_\_Yes \_\_\_X No

*If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:*

No significant impacts related to the proposed project have been identified.

**4. NAME OF PERSON(S) RESPONSIBLE FOR PREPARATION OF EA:**

Name: Abigail Williams

Title: Water Resource Specialist

Date: 05/04/2026



# Montana Fish, Wildlife & Parks

## FWP DEWATERING CONCERN AREAS

Revised, May 2005

The following is a list of Montana streams that support important fisheries or contribute to important fisheries (i.e., provide spawning and rearing habitats) that are significantly dewatered. Dewatering refers to a reduction in streamflow below the point where stream habitat is adequate for fish.

This is the third revision of the Dewatered Streams List compiled by FWP dated January 24, 1991 and last updated in May 2003. List entries and updates were provided by FWP regional fisheries biologists from field observations. Further revisions may be necessary as water use patterns change, and additional or more detailed information becomes available.

This revised list includes a total of 323 stream reaches on 314 streams, which are chronically dewatered, and 113 stream reaches on 109 streams, which are periodically dewatered. The reaches do not overlap between categories.

The two categories of dewatering are:

1. **Chronic dewatering** -- streams where dewatering is a significant problem in virtually all years; and
2. **Periodic dewatering** -- streams where dewatering is a significant problem only in drought or water-short years.

Most man-made dewatering occurs during the irrigation season (July-September). Although most dewatering is caused by irrigation withdrawals, a few of the listed waters are dewatered through dam regulation for agricultural and power production purposes or by natural causes.

Each listed stream shows the length (in miles) of the dewatered reach. For larger/longer streams, the boundaries of the dewatered reach (Point A - Point B) are given. For streams that have no reach boundaries given, the miles shown as dewatered are from the mouth upstream. All mileages are approximate.

The dewatered reaches shown are typical for the stream. However, the number of miles dewatered may vary from year to year depending upon the amount of water available in the stream system.

## CHRONIC DEWATERING

<u>STREAM AND REACH</u>	<u>MILES DEWATERED</u>
<b>Beaverhead-Red Rock River Drainage</b>	
Beaverhead River: West Side Canal – mouth	39
Big Sheep Creek: BLM Boundary - Red Rock River	3
Blacktail Deer Creek: Axes Canyon Rd - Beaverhead River	5.5
Horse Prairie Creek: Red Butte - Clark Canyon Reservoir	15
Junction Creek: I-15 - Red Rock River	4
Rattlesnake Creek: Dillon/Argenta Rd - mouth	7.5
Red Rock River: Dell-Briggs Ranch	<u>6</u>
Subtotal for Drainage	80.0
 <b>Big Hole River Drainage</b>	
Alder Creek	0.1
Big Hole River:	
Big Lake Creek - Swamp Creek	9
Glen Bridges - mouth	24.4
Birch Creek: Beaverhead/Willow Ditch - mouth	9.8
Governor Creek	5
Wise River: Wise River Ditch - mouth	<u>5</u>
Subtotal for Drainage	53.3
 <b>Bitterroot River Drainage</b>	
Baker Creek	1
Bass Creek	1
Bear Creek:	
North Channel	4
South Channel	4
Big Creek	3
Bitterroot River: Corvallis-Stevensville	17
Blodgett Creek	2
Burnt Fork Creek	5
Carlton Creek	5
Chaffin Creek	2
Eightmile Creek	3
Kootenai Creek	2
Lolo Creek	3
Lost Horse Creek	4
Mill Creek	3
Mill Creek (Trib. to Lolo Creek)	0.5
O'Brien Creek	1.5
Reimel Creek	1
Rock Creek	5
Skalkaho Creek	4
South Fork of Lolo Creek	0.5
Sweathouse Creek	2

**Dearborn River Drainage**

Dearborn River: Bean Lake Canal – mouth	44
Middle Fork Dearborn River	<u>4</u>
Subtotal for Drainage	48

**Flathead River Drainage**

Lost Creek: 4 miles Above Lore Lake - Stillwater River	7
Mount Creek: Welcome Springs - mouth	5
South Fork Flathead River: Hungry Horse Dam - mouth	5.3
Walker Creek: Entire Length	<u>7</u>
Subtotal for Drainage	24.3

**Flint Creek Drainage (Clark Fork)**

Cow Creek	3
Douglas Creek	2
Flint Creek: Georgetown Lake - mouth	42.4
Gird Creek	1
Henderson Creek: USFS Boundary - mouth	4
Lower Willow Creek: Reservoir - mouth	9.4
Marshall Creek: USFS Boundary - mouth	<u>5</u>
Subtotal for Drainage	66.8

**Gallatin River Drainage**

Baker Creek	10
Big Bear Creek	5
Bridger Creek	10
Gallatin River: Shedd's Bridge - Mouth	32.7
Hyalite (Middle) Creek	20
South Cottonwood Creek	<u>6</u>
Subtotal for Drainage	83.7

**Jefferson River Drainage**

Antelope Creek	7
Boulder River: Boulder - Cold Springs	36
Fish Creek	10
Jefferson River: Headwaters - mouth	84
Little Boulder River	10
North Willow Creek	9
Pipestone Creek	8
South Boulder River	10
South Willow Creek	8
Whitetail Creek	<u>24</u>
Subtotal for Drainage	206

**Judith River Drainage**

Cottonwood Creek: McMillan ditch to Big Spring Creek	17
Judith River: Ackley Lake diversion – Big Spring Creek	37
Ross Fork Creek	<u>10</u>
Subtotal for Drainage	64

## PERIODIC DEWATERING

<u>STREAM AND REACH</u>	<u>MILES DEWATERED</u>
<b>Beaverhead - Red Rock River Drainage</b>	
Beaverhead River: Clark Canyon Dam - West Side Canal	21
Big Beaver Creek	0.7
Blacktail Deer Creek: West Fork - Axes Canyon Rd.	19.8
Bloody Dick Creek (Tributary to Horse Prairie Cr.)	10
Grasshopper Creek:	
Polaris - Bannock	14
Frenzy Place Placer - mouth	6
Jones Creek: BLM boundary - mouth	1.5
Little Sheep Creek: Road crossing - mouth	7.5
Medicine Lodge Creek (Tributary to Horse Prairie Cr.): Ayers Cyn - mouth	16.8
Peet Creek: Jones Diversion - mouth	1.7
Sage Creek: Rock Island Ranch - mouth	11
Trail Creek (Tributary to Horse Prairie Cr.): Source - mouth	<u>7</u>
Subtotal for Drainage	117.0
 <b>Big Hole River Drainage</b>	
Big Hole River:	
Hamby Creek - Big Lake Creek	23.4
Swamp Creek - Glen Bridges	84.5
Big Lake Creek	7.5
Canyon Creek	6
Deep Creek	5.1
Divide Creek	9.5
Doolittle Creek	1.5
Fishtrap Creek	2.4
Francis Creek	7.7
Jerry Creek	3.1
Johnson Creek	3.7
Moose Creek	3.0
Mussigbrod Creek	9.4
North Fork Big Hole River	25
Pintlar Creek	10.8
Rock Creek	3
Rock Creek (Tributary to Big Lake Cr)	7
Ruby Creek	4.3
Sandhollow Creek	4.8
Steel Creek	8.6
Swamp Creek	17.4
Trapper Creek	6
Warm Springs Creek	9
Willow Creek	<u>5.5</u>
Subtotal for Drainage	268.2

**Bitterroot River Drainage**

Lolo Creek	<u>1</u>
Subtotal for Drainage	1

**Blackfoot River Drainage**

Arkansas Creek	2
Ashby Creek	2
Blackfoot River: Stream mile 84.9-54.1	30.8
Clearwater River	3.5
Elk Creek	3
Hoyt Creek	1
Nevada Creek: Stream mile 34.0-40.0	6
Shanley Creek	<u>1.6</u>
Subtotal for Drainage	49.9

**Dearborn River Drainage**

South Fork Dearborn River	<u>10</u>
Subtotal for Drainage	10

**Flathead River Drainage**

Ashley Creek: US Hwy. 2 Bridge – mouth	20
Blaine Creek: Above Lake Blaine - Lake Blaine	3
Bowser Spring Creek: Hwy 424 - Kalispell	8
Dayton Creek: Co. Line - mouth	10
Echo Creek: Sec. 27 - mouth	3
Evergreen Spring Creek	5
Garnier Creek: USFS - mouth	3
Lynch Creek: Sec. 12 - mouth	5
Meadow Creek (Big Fork): USFS - mouth	3
Ronan Creek: Lake Mary Ronan - mouth	5
Spring Creek: North of Kalispell	5
Trumbull Creek: USFS - Rose Crossing	<u>20</u>
Subtotal for Drainage	90

**Gallatin River Drainage**

Bozeman (Sourdough) Creek	8
Gallatin River: Gallatin Gateway - Shedd's Bridge	<u>5.3</u>
Subtotal for Drainage	13.3

**Jefferson River Drainage**

Hells Canyon Creek*	0.3
Willow Creek	<u>10</u>
Subtotal for Drainage	10.3

**Judith River Drainage**

Judith River: Utica to Ackley Lake diversion	<u>5</u>
Subtotal for Drainage	5

## Assessment Record Summary

Reporting Cycle: 2020

Assessment Record: MT76O001\_010

Status: Unassigned

### WATER INFORMATION

Status: Unassigned

**Reporting Cycle:** 2020  
**Assessment Unit:** MT76O001\_010  
**Name:** Flathead River  
**Location Description:** FLATHEAD RIVER, headwaters to Flathead Lake

Water Type:	Size (Miles/Acres)	Use Class:
RIVER	53.71 MILES	B-1

**Trophic Status:**

**Trophic Trend:**

**1 - Hydrologic Unit Code:** 17010208  
**2 - HUC Name:** Flathead Lake  
**3 - Watershed:** Pend Oreille  
**4 - Basin:** Columbia  
**5 - TMDL Planning Area:** Flathead - Stillwater  
**6 - Ecoregion:** Northern Rockies  
**6 - Ecoregion:** Canadian Rockies  
**7 - County:** Flathead County  
**8 - LAT/LONG AU Upstream:** Start: 48.467256 / -114.071261  
**9 - LAT/LONG AU Downstream:** End: 48.060975 / -114.128357

**Water Quality Category:** 3 - Waters for which there is insufficient data to assess the use support of any applicable beneficial use, so no use support determinations have been made.

## Assessment Record Summary

Reporting Cycle: 2020

Assessment Record: MT76O001\_010

Status: Unassigned

Beneficial Use Support Information					
Use Name	Fully Supporting	Not Fully Supporting	Threatened	Insufficient Information	Not Assessed
Aquatic Life					X
Agricultural					X
Drinking Water					X
Primary Contact Recreation					X

Assessment Information		
Use Name	Assessment Type	Assessment Confidence
NA		

Use Name	Assessment Methods
NA	

Impairment Information			
Use Name	Probable Causes	Probable Sources	TMDL Completed
NA			

## Assessment Record Summary

Reporting Cycle: 2020

Assessment Record: MT76O001\_010

Status: Unassigned

Use Name	Observed Effects
NA	

Delisting / Category Changes			
Cause	Reason for Change	Change Date	Comments
NA			

## Assessment Record Summary

Reporting Cycle: 2020

Assessment Record: MT76O003\_010

Status: Unassigned

### WATER INFORMATION

Status: Unassigned

**Reporting Cycle:** 2020

**Assessment Unit:** MT76O003\_010

**Name:** Flathead Lake

**Location Description:** FLATHEAD LAKE

<b>Water Type:</b>	<b>Size (Miles/Acres)</b>	<b>Use Class:</b>
FRESHWATER LAKE	57305 ACRES	A-1

**Trophic Status:** OLIGOTROPHIC

**Trophic Trend:** Unknown

**1 - Hydrologic Unit Code:** 17010208

**2 - HUC Name:** Flathead Lake

**3 - Watershed:** Pend Oreille

**4 - Basin:** Columbia

**5 - TMDL Planning Area:** Flathead Lake

**6 - Ecoregion:** Northern Rockies

**6 - Ecoregion:** Canadian Rockies

**7 - County:** Flathead County

**7 - County:** Lake County

**Water Quality Category:** 5 - Waters where one or more applicable beneficial uses have been assessed as being impaired or threatened, and a TMDL is required to address the factors causing the impairment or threat.

## Assessment Record Summary

Reporting Cycle: 2020

Assessment Record: MT76O003\_010

Status: Unassigned

Beneficial Use Support Information					
Use Name	Fully Supporting	Not Fully Supporting	Threatened	Insufficient Information	Not Assessed
Aquatic Life		X			
Agricultural	X				
Drinking Water	X				
Primary Contact Recreation	X				

Assessment Information		
Use Name	Assessment Type	Assessment Confidence
NA		

Use Name	Assessment Methods
NA	

Impairment Information			
Use Name	Probable Causes	Probable Sources	TMDL Completed
Aquatic Life	Mercury	Atmospheric Deposition - Nitrogen	N
		Impacts from Hydrostructure Flow Regulation/modification	
		Municipal Point Source Discharges	
		Silviculture Harvesting	
		Source Unknown	
	Polychlorinated Biphenyls (PCBs)	Dam or Impoundment	
		Unspecified Urban Stormwater	
		Atmospheric Deposition - Nitrogen	N
		Impacts from Hydrostructure Flow Regulation/modification	
		Municipal Point Source Discharges	
	Nitrogen, Total	Silviculture Harvesting	
		Source Unknown	
		Dam or Impoundment	
		Unspecified Urban Stormwater	
		Atmospheric Deposition - Nitrogen	Y
Phosphorus, Total	Municipal Point Source Discharges		
	Unspecified Urban Stormwater		
	Atmospheric Deposition - Nitrogen	Y	
	Municipal Point Source Discharges		
	Unspecified Urban Stormwater		

## Assessment Record Summary

Reporting Cycle: 2020

Assessment Record: MT76O003\_010

Status: Unassigned

Use Name	Observed Effects
NA	

Delisting / Category Changes			
Cause	Reason for Change	Change Date	Comments
Nitrogen, Total	TMDL Approved or established by EPA (4A)	03/31/2002	"Nutrient Management Plan and Total Maximum Daily Load for Flathead Lake, Montana", approved by EPA on March 31, 2002 addressed TMDLs for nitrogen and phosphorus and indirectly addresses 303(d) listings for dissolved oxygen and excess algal growth, which result from excess nutrients.
Phosphorus, Total	TMDL Approved or established by EPA (4A)	03/31/2002	"Nutrient Management Plan and Total Maximum Daily Load for Flathead Lake, Montana", approved by EPA on March 31, 2002 addressed TMDLs for nitrogen and phosphorus and indirectly addresses 303(d) listings for dissolved oxygen and excess algal growth, which result from excess nutrients.
Sedimentation/Siltation	Applicable WQS attained, according to new assessment method	11/21/2014	



## Montana SOC Occurrences Report

### SOC Occurrences with MT Status = Species of Concern

Report generated 4/22/2026 7:03:26 AM



	SO Count: 1	Obs Count: 1521	Earliest Obs: 1895	Recent Obs: 2025
<input type="checkbox"/> <b>Birds - Bobolink</b> ( <i>Dolichonyx oryzivorus</i> )				
	SO Count: 1	Obs Count: 1	Earliest Obs: 2022	Recent Obs: 2022
<input type="checkbox"/> <b>Birds - Brewer's Sparrow</b> ( <i>Spizella breweri</i> )				
	SO Count: 1	Obs Count: 1	Earliest Obs: 2016	Recent Obs: 2016
<input type="checkbox"/> <b>Birds - Evening Grosbeak</b> ( <i>Coccothraustes vespertinus</i> )				
	SO Count: 1	Obs Count: 1	Earliest Obs: 2024	Recent Obs: 2024
<input type="checkbox"/> <b>Birds - Great Blue Heron</b> ( <i>Ardea herodias</i> )				
	SO Count: 9	Obs Count: 26	Earliest Obs: 1978	Recent Obs: 2025
<input type="checkbox"/> <b>Birds - Pileated Woodpecker</b> ( <i>Dryocopus pileatus</i> )				
	SO Count: 1	Obs Count: 1	Earliest Obs: 2020	Recent Obs: 2020
<input type="checkbox"/> <b>Invertebrates - <i>Oxyloma nuttallianum</i></b> (Oblique Ambersnail)				
	SO Count: 1	Obs Count: 1	Earliest Obs: 1897	Recent Obs: 1900

**Citation for this report:**

Montana SOC Occurrences Report

SOC Occurrences with MT Status = Species of Concern

Within Lat/Long: (48.09907,-114.15298) to (48.10924,-114.17892)

Natural Heritage Map Viewer. Montana Natural Heritage Program.

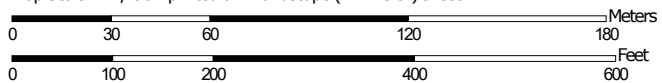
Retrieved on April 22, 2026, from <https://mtnhp.org/MapView/SORReport.aspx>

Soil Map—Upper Flathead Valley Area, Montana  
(76LJ 30171747)



Soil Map may not be valid at this scale.

Map Scale: 1:2,290 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84




**Natural Resources  
Conservation Service**

Web Soil Survey  
National Cooperative Soil Survey


4/22/2026  
Page 1 of 3


## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Upper Flathead Valley Area, Montana

Survey Area Data: Version 22, Aug 30, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 31, 2021—Oct 12, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sd	Somers silt loam, 0 to 3 percent slopes	13.2	58.5%
Sf	Somers silty clay, 0 to 4 percent slopes	5.6	24.8%
Th	Tuffit-Somers silty clay loams, 0 to 5 percent slopes	3.8	16.7%
<b>Totals for Area of Interest</b>		<b>22.5</b>	<b>100.0%</b>



## Upper Flathead Valley Area, Montana

### Sd—Somers silt loam, 0 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* 4vsf  
*Elevation:* 2,890 to 3,080 feet  
*Mean annual precipitation:* 15 to 18 inches  
*Mean annual air temperature:* 39 to 45 degrees F  
*Frost-free period:* 105 to 125 days  
*Farmland classification:* Prime farmland if irrigated

#### Map Unit Composition

*Somers and similar soils:* 90 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Somers

##### Setting

*Landform:* Terraces  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium

##### Typical profile

*Ap - 0 to 8 inches:* silt loam  
*Bw - 8 to 12 inches:* silty clay loam  
*Bk - 12 to 22 inches:* silty clay loam  
*BC - 22 to 30 inches:* stratified loam to silty clay loam  
*2C - 30 to 60 inches:* loamy fine sand

##### Properties and qualities

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.20 to 0.57 in/hr)  
*Depth to water table:* About 48 to 72 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 20 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 3.0 mmhos/cm)  
*Available water supply, 0 to 60 inches:* Moderate (about 7.9 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 2e  
*Land capability classification (nonirrigated):* 3e  
*Hydrologic Soil Group:* C



*Ecological site:* R044AP808MT - Upland Grassland Group  
*Hydric soil rating:* No

**Minor Components**

**Nonhydric**

*Percent of map unit:* 10 percent  
*Hydric soil rating:* No

**Data Source Information**

Soil Survey Area: Upper Flathead Valley Area, Montana  
Survey Area Data: Version 22, Aug 30, 2025



## Upper Flathead Valley Area, Montana

### Sf—Somers silty clay, 0 to 4 percent slopes

#### Map Unit Setting

*National map unit symbol:* 4vsh  
*Elevation:* 2,600 to 3,400 feet  
*Mean annual precipitation:* 15 to 18 inches  
*Mean annual air temperature:* 39 to 45 degrees F  
*Frost-free period:* 105 to 125 days  
*Farmland classification:* Prime farmland if irrigated

#### Map Unit Composition

*Somers and similar soils:* 90 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Somers

##### Setting

*Landform:* Terraces  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium

##### Typical profile

*Ap - 0 to 8 inches:* silty clay  
*Bw - 8 to 12 inches:* silty clay loam  
*Bk - 12 to 22 inches:* silty clay loam  
*BC - 22 to 30 inches:* stratified loam to silty clay loam  
*2C - 30 to 60 inches:* loamy fine sand

##### Properties and qualities

*Slope:* 0 to 4 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 48 to 72 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 20 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 3.0 mmhos/cm)  
*Available water supply, 0 to 60 inches:* Moderate (about 7.6 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 4e  
*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* C

*Ecological site:* R044AP808MT - Upland Grassland Group  
*Hydric soil rating:* No

**Minor Components**

**Nonhydric**

*Percent of map unit:* 10 percent  
*Hydric soil rating:* No

**Data Source Information**

Soil Survey Area: Upper Flathead Valley Area, Montana  
Survey Area Data: Version 22, Aug 30, 2025

## Upper Flathead Valley Area, Montana

### Th—Tuffit-Somers silty clay loams, 0 to 5 percent slopes

#### Map Unit Setting

*National map unit symbol:* 4vt0  
*Elevation:* 2,600 to 3,400 feet  
*Mean annual precipitation:* 15 to 19 inches  
*Mean annual air temperature:* 39 to 45 degrees F  
*Frost-free period:* 105 to 125 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Tuffit and similar soils:* 50 percent  
*Somers and similar soils:* 35 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Tuffit

##### Setting

*Landform:* Terraces  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium

##### Typical profile

*A - 0 to 4 inches:* silty clay loam  
*B<sub>tn</sub> - 4 to 12 inches:* silty clay  
*B<sub>kn</sub> - 12 to 29 inches:* silty clay loam  
*C - 29 to 60 inches:* stratified very fine sandy loam to silty clay loam

##### Properties and qualities

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (K<sub>sat</sub>):*  
Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 15 percent  
*Maximum salinity:* Moderately saline to strongly saline (8.0 to 32.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 30.0  
*Available water supply, 0 to 60 inches:* Moderate (about 7.0 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified



*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* C  
*Ecological site:* R044AP803MT - Saline-Sodic Grassland Group  
*Hydric soil rating:* No

## Description of Somers

### Setting

*Landform:* Terraces  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium

### Typical profile

*Ap - 0 to 8 inches:* silty clay loam  
*Bw - 8 to 12 inches:* silty clay loam  
*Bk - 12 to 22 inches:* silty clay loam  
*BC - 22 to 30 inches:* stratified loam to silty clay loam  
*2C - 30 to 60 inches:* loamy fine sand

### Properties and qualities

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.20 to 0.57 in/hr)  
*Depth to water table:* About 48 to 72 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 20 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 3.0 mmhos/cm)  
*Available water supply, 0 to 60 inches:* Moderate (about 7.8 inches)

### Interpretive groups

*Land capability classification (irrigated):* 2e  
*Land capability classification (nonirrigated):* 3e  
*Hydrologic Soil Group:* C  
*Ecological site:* R044AP808MT - Upland Grassland Group  
*Hydric soil rating:* No

## Minor Components

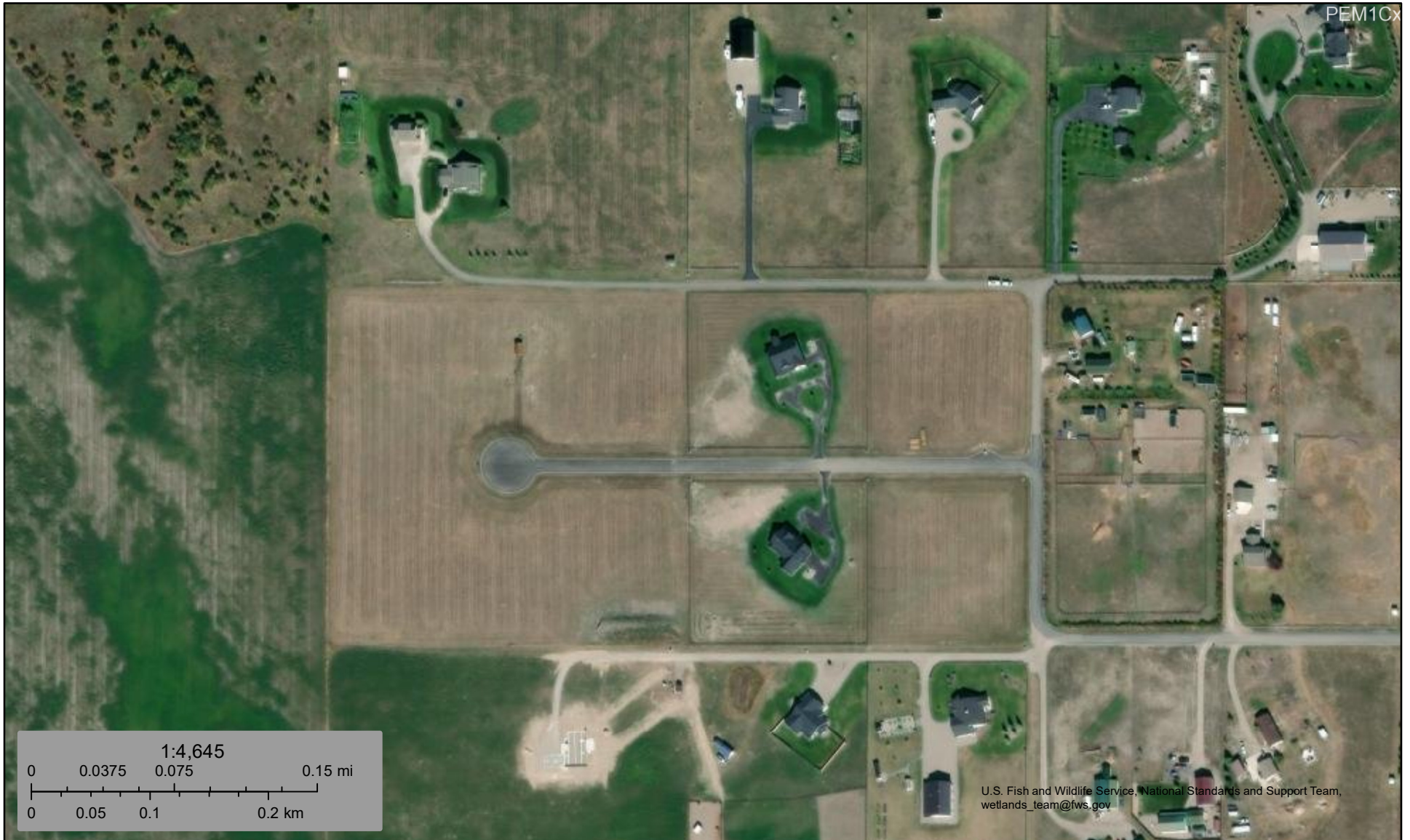
### Nonhydric

*Percent of map unit:* 15 percent  
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Upper Flathead Valley Area, Montana  
Survey Area Data: Version 22, Aug 30, 2025





PEM1Cx

U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands\_team@fws.gov

April 22, 2026

**Wetlands**

- |   |                                |   |                                   |   |          |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland       |  | Lake     |
|  | Estuarine and Marine Wetland   |  | Freshwater Forested/Shrub Wetland |  | Other    |
|   |                                |  | Freshwater Pond                   |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

## **Draft Preliminary Determinations**

- **Draft PD**
- **Draft PD cover letter**
- **Updated Draft PD**
- **Updated Draft PD cover letter**
- **Any correspondence with the applicant regarding the draft PDs**

# **Draft Preliminary Determinations**

THE MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

GOVERNOR GREG GIANFORTE



DNRC DIRECTOR AMANDA KASTER

Water Resources Division – Kalispell Regional Office  
655 Timberwolf Pkwy, Ste. 4  
Kalispell, MT 59901-1215  
(406) 752-2288  
DNRCKalispellWater@mt.gov

June 9, 2026

RJM PROPERTIES LLC  
1191 MAJESTIC VIEW LANE  
KALISPELL, MT, 59901

Dear Applicant,

The Notice of Errata sent out previously has been amended to the attached version. Please discard the original Notice of Errata sent out. The word DRAFT has been added to notice to provide clarity on the step we are at.

Please contact me at (406) 752-2735 or [Abigail.Williams@mt.gov](mailto:Abigail.Williams@mt.gov) if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Abigail Williams". The signature is written in a cursive, flowing style.

Abigail Williams  
Water Resource Specialist  
Kalispell Regional Office

*Cc via email:* Mikel Siemens, P.E, Core Water Consulting



**BEFORE THE DEPARTMENT OF  
NATURAL RESOURCES AND CONSERVATION  
OF THE STATE OF MONTANA**

\*\*\*\*\*

APPLICATION FOR BENEFICIAL WATER USE ) PERMIT NO. 76LJ 30171747 by RJM PROPERTIES ) LLC )	<b>NOTICE OF ERRATA DRAFT PRELIMINARY DETERMINATION TO GRANT IN MODIFIED FORM</b>
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\*\*\*\*\*

The following errors have been found in the DRAFT PRELIMINARY DETERMINATION TO GRANT IN MODIFIED FORM:

1. In the DRAFT PRELIMINARY DETERMINATION TO GRANT IN MODIFIED FORM, on page 25, Table 8, Legal Availability from the proposed POD to the SKQ Dam:

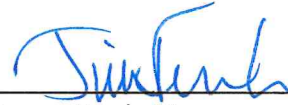
<b>Table 8: Legal Availability from the proposed POD to the SKQ Dam</b>					
<b>Month</b>	<b>Physically Available Monthly Flow (CFS)</b>	<b>Physically Available Monthly Volume (AF)</b>	<b>Existing Legal Demands within the AOPI (CFS)</b>	<b>Legally Available Monthly Flow (CFS)</b>	<b>Legally Available Monthly Volume (AF)</b>
January	10,459.0	641,957.0	0.1	10,380.1	637,130.0
February	9,214.3	510,841.3	0.1	9,133.1	506,338.5
March	7,834.5	480,881.6	0.1	7,748.1	475,578.0
April	14,602.0	867,347.5	5,265.0	9,223.1	547,851.5
May	23,989.5	1,472,475.0	5,285.0	18,561	1,139,259.0
June	30,837.6	1,831,752.0	5,285.0	25,401	1,508,804.6
July	18,168.1	1,115,159.2	5,285.0	12,731.0	781,413.4
August	11,564.1	709,806.0	5,285.0	6,127.0	376,060.0
September	11,370.0	675,375.6	5,265.0	5,957.3	353,860.7
October	12,569.7	771,525.1	5,265.0	7,184.1	440,959.4
November	8,646.6	513,610.4	0.1	8,556.1	508,231.7
December	9,918.7	608,812.3	0.1	9,837.1	603,800.6

Should Read:

<b>Table 8: Legal Availability from the proposed POD to the SKQ Dam</b>					
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b>Month</b>	<b>Physically Available Monthly Flow (CFS)</b>	<b>Physically Available Monthly Volume (AF)</b>	<b>Existing Legal Demands within the AOPI (CFS)</b>	<b>Legally Available Monthly Flow (CFS)</b>	<b>Legally Available Monthly Volume (AF)</b>
January	10,459.0	641,957.0	78.6	10,380.1	637,130.0
February	9,214.3	510,841.3	81.2	9,133.1	506,338.5
March	7,834.5	480,881.6	86.4	7,748.1	475,578.0
April	14,602.0	867,347.5	5,378.7	9,223.1	547,851.5
May	23,989.5	1,472,475.0	5,428.7	18,561	1,139,259.0
June	30,837.6	1,831,752.0	5,436.8	25,401	1,508,804.6
July	18,168.1	1,115,159.2	5,437.4	12,731.0	781,413.4
August	11,564.1	709,806.0	5,437.4	6,127.0	376,060.0
September	11,370.0	675,375.6	5,412.7	5,957.3	353,860.7
October	12,569.7	771,525.1	5,385.6	7,184.1	440,959.4
November	8,646.6	513,610.4	90.6	8,556.1	508,231.7
December	9,918.7	608,812.3	81.7	9,837.1	603,800.6

Please make these corrections to your copy.

Dated this 9<sup>th</sup> day of June 2026.



James Ferch, Manager  
Kalispell Regional Office  
Department of Natural Resources  
and Conservation

**CERTIFICATE OF SERVICE**

This certifies that a true and correct copy of the NOTICE OF ERRATA DRAFT PRELIMINARY DETERMINATION TO GRANT IN MODIFIED FORM was served upon all parties listed below on this 9<sup>th</sup> day of June 2026, by first class United States mail.

RJM PROPERTIES LLC  
1191 MAJESTIC VIEW LN  
KALISPELL MT 59901-1814  
\*\*\*\*\*

VIA EMAIL:  
CORE WATER CONSULTING  
MIKEL SIEMENS, PE



Kalispell Regional Office

6/9/2026

Date

THE MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

GOVERNOR GREG GIANFORTE



DNRC DIRECTOR AMANDA KASTER

Water Resources Division – Kalispell Regional Office  
655 Timberwolf Pkwy, Ste. 4  
Kalispell, MT 59901-1215  
(406) 752-2288  
DNRCKalispellWater@mt.gov

May 5, 2026

RJM Properties LLC  
1191 Majestic View Lane  
Kalispell, MT, 59901

**Subject:** Technical Analysis Report and Draft Preliminary Determination to Grant Beneficial Water Use Permit Application  
No. 76LJ 30171747

Dear Applicant,

The Department of Natural Resources and Conservation (Department or DNRC) has completed a preliminary review of your application. This review consists of an evaluation of the criteria for issuance of a permit authorization found in 85-2-311, MCA. The Department has preliminarily determined that the criteria can be met only with modifications to the original application, and this application should be granted in modified form. A copy of the Department-completed Technical Analyses Report and Draft Preliminary Determination to Grant in Modified Form is attached. Please note the Technical Analyses Report is a two-part publication, comprised of a Part A completed by Water Sciences Bureau staff, and a Part B completed by Kalispell Regional Office staff.

You have the opportunity to request an extension of time to submit additional information for the Department to consider in the decision, within 15 business days of the date of this letter. If no written request for an extension is received by May 27, 2026, the Department will prepare a notice of opportunity to provide public comment per §85-2-307(4), MCA.

Please contact me at (406) 752-2735 or [Abigail.Williams@mt.gov](mailto:Abigail.Williams@mt.gov) if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Abigail Williams".

Abigail Williams  
Water Resource Specialist  
Kalispell Regional Office

Encl.: Department-completed Technical Analyses Report and Draft Preliminary Determination to Grant Water Right Permit Application No. 76LJ 30171747

*Cc via email:* Mikel Siemens, P.E, Core Water Consulting



DNRC.MT.GOV

**BEFORE THE DEPARTMENT OF  
NATURAL RESOURCES AND CONSERVATION  
OF THE STATE OF MONTANA**

\* \* \* \* \*

APPLICATION FOR BENEFICIAL WATER USE PERMIT NO. 76LJ 30171747 BY RJM PROPERTIES LLC	) ) ) )	<b>DRAFT PRELIMINARY DETERMINATION TO GRANT IN MODIFIED FORM PERMIT</b>
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On September 8, 2025, RJM Properties LLC, Montana (Applicant) submitted Application for Beneficial Water Use Permit No. 76LJ 30171747 to the Kalispell Regional Office of the Department of Natural Resources and Conservation (Department or DNRC) for 101.15 gallons per minute (GPM) up to 21.72 acre-feet annually for multiple domestic use from January 1<sup>st</sup> to December 31<sup>st</sup> and lawn and garden irrigation from April 15<sup>th</sup> to October 15<sup>th</sup>. The Department published receipt of the application on its website on September 15, 2025. The Department sent the Applicant a deficiency letter under 85-2-302, Montana Code Annotated (MCA), dated October 20, 2025. The Applicant responded with information on December 5, 2025. The Application was deemed correct and complete as of January 5, 2026. The Department delivered the completed Technical Analyses on May 5, 2026. An Environmental Assessment for this application was completed on April 30, 2026.

**INFORMATION**

The Department considered the following information submitted by the Applicant, which is contained in the administrative record.

Application as filed:

- Application for Beneficial Water Use Permit, Form 600- GW
- Maps and Figures:
  - Site Vicinity Map, Dated August 26, 2025
  - Means of Diversion, Dated August 26, 2025
  - Pump House Diagram, Dated August 26, 2025
  - Well Details, Dated August 26, 2025

- Attachments
  - Supplemental Information for Beneficial Water Use Application
    - Appendix A: Figures
    - Appendix B: Plat Map
    - Appendix C: Diversion Details
    - Appendix D: Hydrogeologic Maps
    - Appendix E: Pump Test and Form 633
    - Appendix F: Proof of Possessory Interest
    - Appendix G: DNRC Approvals from expired preapplication
      - These approvals are not pertinent to the current Application.

Information received after Application Filed

- A letter from the Applicants consultant to the DNRC received December 5, 2025, requesting a variance from ARM 36.12.121 (3) (a), (b), (f), and (g).
- A letter from the Applicants consultant to the DNRC received December 5, 2025. This letter was in response to the Departments October 20, 2025, deficiency letter.
  - Attachments:
    - Amended Form 633
    - Form 653
    - Form 600-ATA

Information within the Department’s Possession/Knowledge

- Department completed Technical Analyses based on information provided in the Form 600 GW Application dated September 8, 2025.
- A letter to the Applicant dated December 30, 2025, granting variance on ARM 36.12.121.
- Mean monthly stream flow data from USGS Gaging Station No. 12363000 Flathead River at Columbia Falls, MT. Period of record: October 1951 – April 2025.
- Mean monthly streamflow data from USGS Gaging Station No. 12372000 Flathead River near Polson, MT. Period of record October 1938 – April 2025.
- List of existing water rights on the Flathead River from the initial point of depletion down to USGS Gaging Station No. 12372000 Fathead River near Polson MT.

- This list is divided into four reaches:
  - The reach from USGS Gaging Station No. 12363000 to the initial point of depletion of Fennon Slough (Flathead River).
  - The initial point of depletion on Fennon Slough (Flathead River) downstream to the Flathead Lake Inlet.
  - From the Inlet to Flathead Lake downstream to Séliš Ksanka Qlispé Dam
  - From the Séliš Ksanka Qlispé Dam downstream to USGS Gaging Station No. 12372000
- List of existing groundwater rights in the source aquifer that are expected to experience drawdown greater than 0.01 feet.
- The following information is not included in the administrative file for this application but is available upon request. Please contact the Kalispell Regional Office at 406-752-2288 to request copies of the following documents.
  - DNRC Technical Memorandum: Physical Availability of Surface Water With Gage Data, Dated November 1, 2019
  - DNRC Technical Memorandum: Net Surface Water Depletion from Ground Water Pumping, Dated July 16, 2018
  - Department Standard Practice for Determining Physical Availability of Surface Water
  - Department Standard Practice for Determining Area of Potential Impact

The Department has fully reviewed and considered the evidence and argument submitted in this application and preliminarily determines the following pursuant to the Montana Water Use Act (Title 85, chapter 2, part 3, MCA).

For the purposes of this document:

<b>Department</b> or <b>DNRC</b> means the Department of Natural Resources and Conservation	
<b>NRCS</b> means the Natural Resource Conservation Service	
<b>DEQ</b> means the Montana Department of Environmental Quality	
<b>GWIC ID</b> means Groundwater Information Center Identification	
<b>AF</b> means acre-feet	<b>AOPI</b> means Area of Potential Impact
<b>ARM</b> means Administrative Rules of Montana	<b>BGS</b> means below ground surface
<b>AU</b> means Animal Units	<b>CFS</b> means cubic feet per second
<b>BTC</b> means below top of casing	<b>GPD</b> means gallons per day
<b>FOF</b> means finding(s) of fact	<b>POD</b> means point of diversion
<b>GPM</b> means gallons per minute	<b>SWL</b> means static water level
<b>IWR</b> means Irrigation Water Requirements	<b>VFD</b> means variable frequency drive
<b>MCA</b> means Montana Code Annotated	<b>ZOI</b> means zone of influence
<b>TDH</b> means total dynamic head	<b>WSB</b> means the Water Sciences Bureau
<b>USDA</b> United States Department of Agriculture	

**PROPOSED APPROPRIATION**

**FINDINGS OF FACT**

1. The Applicant proposes to divert water from the Flathead Deep Alluvial Aquifer (hereafter referred to as the Deep Aquifer) by means of a well, identified by GWIC ID 331034, that is completed to 714.0 feet BGS with a static water level of 5.0 feet BGS. The Applicant requests to divert water at a flow rate of 101.15 GPM up to 21.72 AF/year annually for multiple domestic use for 8 households year-round (2.24 AF) and to irrigate 10.0 acres of lawn and garden from April 15<sup>th</sup> to October 15<sup>th</sup> (19.48 AF). The total annual consumed volume is 13.8 AF, with 13.6 AF being consumed by lawn and garden and 0.2 AF being consumed by multiple domestic uses.
2. The proposed point of diversion is in the NWSWNE of Section 17, Township 27N, Range 20W, Flathead County (Figure 1), and is located one mile northwest of Fennon Slough, which is hydrologically considered to be a part of the Flathead River, and 1.25 miles north of Flathead Lake. The production well is located on Lot 2 of the Majestic Meadow subdivision. The place of use is the Majestic Meadow subdivision located in the N2SWNE of Section 17, Township 27N, Range 20W, Flathead County, Montana (Figure 1).The POD is in Water Right Basin 76LJ (Flathead River, to and including Flathead Lake) in an area that is not subject to water right basin closures or controlled groundwater area restrictions.

3. The proposed system is a multiple-user water system which is subject to a Certificate of Subdivision Approval (COSA) from DEQ. There are no supplemental rights that will overlap or share the proposed place of use.

4. The application will be subject to the following condition to satisfy the adequacy of diversion and beneficial use criteria requirements:

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED IN-LINE FLOW METER AT A POINT IN THE DELIVERY LINE APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY JANUARY 31 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR UNTIL A FORM 617 PROJECT COMPLETION NOTICE IS SUBMITTED. FAILURE TO SUBMIT RECORDS MAY BE CAUSE FOR REVOCATION OF THE PERMIT. THE RECORDS MUST BE SENT TO THE KALISPELL REGIONAL WATER RESOURCES OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

# RJM Properties LLC Application No. 76LJ 30171747



Map Created: 3/12/2026  
 Author: Abigail Williams  
 Water Resource Specialist

USGS: The National Map, National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Database, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; National Earth Data; U.S. Department of State HDX; NOAA National Centers for Environmental Information. Data refreshed October 22, 2025, Montana State Library.

### Legend

- Township & Range
- Section
- Quarter Sections
- Parcels

- RJM Proposed Point of Diversion

- RJM Proposed Place of Use

**Figure 1:** Map of the Applicant's proposed point of diversion and place of use.

**§ 85-2-311, MCA, BENEFICIAL WATER USE PERMIT CRITERIA**

**GENERAL CONCLUSIONS OF LAW**

5. The Montana Constitution expressly recognizes in relevant part that:
- (1) All existing rights to the use of any waters for any useful or beneficial purpose are hereby recognized and confirmed.
  - (2) The use of all water that is now or may hereafter be appropriated for sale, rent, distribution, or other beneficial use . . . shall be held to be a public use.
  - (3) All surface, underground, flood, and atmospheric waters within the boundaries of the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided by law.

Mont. Const. Art. IX, § 3. While the Montana Constitution recognizes the need to protect senior appropriators, it also recognizes a policy to promote the development and use of the waters of the state by the public. This policy is further expressly recognized in the water policy adopted by the Legislature codified at § 85-2-102, MCA, which states in relevant part:

- (1) Pursuant to Article IX of the Montana constitution, the legislature declares that any use of water is a public use and that the waters within the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided in this chapter. . . .
- (3) It is the policy of this state and a purpose of this chapter to encourage the wise use of the state's water resources by making them available for appropriation consistent with this chapter and to provide for the wise utilization, development, and conservation of the waters of the state for the maximum benefit of its people with the least possible degradation of the natural aquatic ecosystems. In pursuit of this policy, the state encourages the development of facilities that store and conserve waters for beneficial use, for the maximization of the use of those waters in Montana . . .

6. Pursuant to § 85-2-302(1), MCA, except as provided in §§ 85-2-306 and 85-2-369, MCA, a person may not appropriate water or commence construction of diversion, impoundment, withdrawal, or related distribution works except by applying for and receiving a permit from the Department. *See* § 85-2-102(1), MCA. An Applicant in a beneficial water use permit proceeding must affirmatively prove all of the applicable criteria in § 85-2-311, MCA. Section § 85-2-311(1) states in relevant part:

- ... the department shall issue a permit if the Applicant proves by a preponderance of evidence that the following criteria are met:
  - (a) (I) there is water physically available at the proposed point of diversion in the

amount that the Applicant seeks to appropriate; and

(ii) water can reasonably be considered legally available during the period in which the Applicant seeks to appropriate, in the amount requested, based on the records of the department and other evidence provided to the department. Legal availability is determined using an analysis involving the following factors:

(A) identification of physical water availability;

(B) identification of existing legal demands on the source of supply throughout the area of potential impact by the proposed use; and

(C) analysis of the evidence on physical water availability and the existing legal demands, including but not limited to a comparison of the physical water supply at the proposed point of diversion with the existing legal demands on the supply of water.

(b) the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. In this subsection (1)(b), adverse effect must be determined based on a consideration of an Applicant's plan for the exercise of the permit that demonstrates that the Applicant's use of the water will be controlled so the water right of a prior appropriator will be satisfied;

(c) the proposed means of diversion, construction, and operation of the appropriation works are adequate;

(d) the proposed use of water is a beneficial use;

(e) the Applicant has a possessory interest or the written consent of the person with the possessory interest in the property where the water is to be put to beneficial use, or if the proposed use has a point of diversion, conveyance, or place of use on national forest system lands, the Applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water under the permit;

(f) the water quality of a prior appropriator will not be adversely affected;

(g) the proposed use will be substantially in accordance with the classification of water set for the source of supply pursuant to 75-5-301(1); and

(h) the ability of a discharge permit holder to satisfy effluent limitations of a permit issued in accordance with Title 75, chapter 5, part 4, will not be adversely affected.

(2) The Applicant is required to prove that the criteria in subsections (1)(f) through (1)(h) have been met only if a valid objection is filed. A valid objection must contain substantial credible information establishing to the satisfaction of the department that the criteria in subsection (1)(f), (1)(g), or (1)(h), as applicable, may not be met. For the criteria set forth in subsection (1)(g), only the department of environmental quality or a local water quality district established under Title 7, chapter 13, part 45, may file a valid objection.

To meet the preponderance of evidence standard, “the Applicant, in addition to other evidence demonstrating that the criteria of subsection (1) have been met, shall submit hydrologic or other evidence, including but not limited to water supply data, field reports, and other information developed by the Applicant, the department, the U.S. geological survey, or the U.S. natural resources conservation service and other specific field studies.” Section 85-2-311(5), MCA (emphasis added). The determination of whether an application has satisfied the § 85-2-311, MCA criteria is committed to the discretion of the Department. *Bostwick Properties, Inc. v. Montana Dept. of Natural Resources and Conservation*, 2009 MT 181, ¶ 21. The Department is required grant a permit only if the § 85-2-311, MCA, criteria are proven by the Applicant by a preponderance of the evidence. *Id.* A preponderance of evidence is “more probably than not.” *Hohenlohe v. DNRC*, 2010 MT 203, ¶¶ 33, 35, 357 Mont. 438, 240 P.3d 628.

7. Pursuant to § 85-2-312, MCA, the Department may condition permits as it deems necessary to meet the statutory criteria:

(1) (a) The department may issue a permit for less than the amount of water requested, but may not issue a permit for more water than is requested or than can be beneficially used without waste for the purpose stated in the application. The department may require modification of plans and specifications for the appropriation or related diversion or construction. The department may issue a permit subject to terms, conditions, restrictions, and limitations it considers necessary to satisfy the criteria listed in 85-2-311 and subject to subsection (1)(b), and it may issue temporary or seasonal permits. A permit must be issued subject to existing rights and any final determination of those rights made under this chapter.

*E.g., Montana Power Co. v. Carey* (1984), 211 Mont. 91, 96, 685 P.2d 336, 339 (requirement to grant applications as applied for, would result in, “uncontrolled development of a valuable natural resource” which “contradicts the spirit and purpose underlying the Water Use Act.”); *see also, In the Matter of Application for Beneficial Water Use Permit No. 65779-76M by Barbara L. Sowers* (DNRC Final Order 1988)(conditions in stipulations may be included if it further compliance with statutory criteria); *In the Matter of Application for Beneficial Water Use Permit No. 42M-80600 and Application for Change of Appropriation Water Right No. 42M-036242 by Donald H. Wyrick* (DNRC Final Order 1994); Admin. R. Mont. (ARM) 36.12.207.

8. The Montana Supreme Court further recognized in *Matter of Beneficial Water Use Permit Numbers 66459-76L, Ciotti: 64988-G76L, Starnner*, 278 Mont. 50, 60-61, 923 P.2d 1073, 1079, 1080 (1996), *superseded by legislation on another issue*:

Nothing in that section [85-2-313], however, relieves an Applicant of his burden to meet the statutory requirements of § 85-2-311, MCA, before DNRC may issue that provisional permit. Instead of resolving doubts in favor of appropriation, the Montana Water Use Act requires an Applicant to make explicit statutory showings that there are unappropriated waters in the source of supply, that the water rights of a prior appropriator will not be adversely affected, and that the proposed use will not unreasonably interfere with a planned use for which water has been reserved.

*See also, Wesmont Developers v. DNRC*, CDV-2009-823, First Judicial District Court, *Memorandum and Order* (2011). The Supreme Court likewise explained that:

.... unambiguous language of the legislature promotes the understanding that the Water Use Act was designed to protect senior water rights holders from encroachment by junior appropriators adversely affecting those senior rights.

*Montana Power Co.*, 211 Mont. at 97-98, 685 P.2d at 340; *see also* Mont. Const. art. IX §3(1).

9. An appropriation, diversion, impoundment, use, restraint, or attempted appropriation, diversion, impoundment, use, or restraint contrary to the provisions of § 85-2-311, MCA is invalid. An officer, agent, agency, or employee of the state may not knowingly permit, aid, or assist in any manner an unauthorized appropriation, diversion, impoundment, use, or other restraint. A person or corporation may not, directly or indirectly, personally or through an agent, officer, or employee, attempt to appropriate, divert, impound, use, or otherwise restrain or control waters within the boundaries of this state except in accordance with this § 85-2-311, MCA. Section 85-2-311(6), MCA.

10. The Department may take notice of judicially cognizable facts and generally recognized technical or scientific facts within the Department's specialized knowledge, as specifically identified in this document. ARM 36.12.221(4).

## PHYSICAL AVAILABILITY

### FINDINGS OF FACT

11. The Applicant proposes to divert groundwater from a well (GWIC ID 331034) at a rate of 101.15 GPM up to 2.24 AF/year for multiple domestic use for eight households and 19.48 AF/year for irrigation of 10.0 acres of lawn and garden, for a total volume of 21.72 AF/year. The multiple domestic use will occur from January 1<sup>st</sup> to December 31<sup>st</sup> and lawn and garden will be irrigated from April 15<sup>th</sup> to October 15<sup>th</sup>. The well is constructed with a 6-inch diameter steel casing with an open bottom and is 714.0 feet deep with a static water level of 5.0 feet BGS. The production well is drilled into a confined area of the Flathead Deep Aquifer.

### VARIANCES

12. The Applicant requested variances from the Aquifer Testing Requirements in ARM 36.12.121(3)(a), (f), and (g) on September 25, 2025. The requested variances were as follows:

- a. ARM 36.12.121(3)(a): requested because the flow rate during the test deviated +/- 5% from the average test rate;
  - a. DNRC WSB rationale for their recommendation to grant the requested variance:  
The flow rate anomalies were of such short duration that the changes in pumping rate would not affect WSB analysis and modeling efforts.
- b. ARM 36.12.121(3)(f): requested because although the observation well was located in the same aquifer as the production well, no significant response to pumping the production well was recorded in the observation well.
  - a. DNRC WSB rationale for their recommendation to grant the requested variance:  
in this instance, the flow rate or duration of the test may have been too low or short to cause observable drawdown in the observation well. Nearby aquifer tests completed prior to the subject well test have derived Storativity values that are sufficient for use in forward modeling of drawdown effects from the subject Production Well.
- c. ARM 36.12.121(3)(g): requested because the background water levels were only monitored for 19 hours prior to the aquifer test instead of the required 48 hours.

- a. DNRC WSB rationale for their recommendation to grant the requested variance:  
The 19 hours of background monitoring indicated that there was no significant water table trend, therefore the shortened background monitoring period would not affect analysis or modeling efforts.

The Department granted the requested variances due to rationale described above. The deviations from the rule and evaluation can be found in the WSB Aquifer Testing Addendum Review document dated December 18, 2025.

### AQUIFER TESTING

13. WSB Hydrologist Kim Bolhuis completed an analysis of the Applicant-submitted data from the constant-rate pumping test conducted on the proposed production well (GWIC ID 331034) on March 10, 2024. One observation well was utilized during the test, but it had independent uses occurring during the aquifer test, causing fluctuation in the water levels that were not attributed to the pumping in the production well. Additionally, the drawdown that was recorded in the observation well was not significant enough to attribute to the pumping in the production well. Therefore, the observation well data was not used for generation of aquifer properties.

14. Two solutions were used in modeling the production well; Theis (1935) fit early time data, but the Cooper-Jacob (1946) fit mid to late time data and is considered a better fit to the data given the hydrogeologic framework. Upon comparison of the two T values calculated using the Theis (1935) and Cooper-Jacob (1946) solutions for the production well, the WSB noted that the calculated T was lower than those traditionally seen in the area. Further, since the observation well data was unusable for evaluation of the Applicant-submitted data, the WSB calculated the geometric mean of the T and S values for the aquifer obtained from nearby aquifer tests to be used in the physical availability analysis. The calculated geometric mean from the nearby aquifer tests performed for previous applications (**Table 1**) was a T of 15,862 ft<sup>2</sup>/day and a S of 1.4X10<sup>-4</sup> for the aquifer and is to be used in forward modeling for Physical Availability. The Department finds this is a more accurate representation of the aquifers actual T in the area as it is derived from multiple well tests and better matches T values traditionally seen in the area.

Table 1: Nearby aquifer tests associated with previous water right applications.							
Water Right Number	Distance from Production Well (mi)	Volume (AF)	Rate (GPM)	Duration (hr)	Depth (ft BGS)	T (ft <sup>2</sup> /d)	S (-)
76LJ 30065601	1.3	42.84	60	25	301	17,200.0	3.3x10 <sup>-5</sup>
76LJ 30071153	0.6	607.90	485	168	717	35,000.0	3.6x10 <sup>-4</sup>
76LJ 30024283	1.3	49.10	65	24	640	28,946.0	2.6x10 <sup>-4</sup>
76LJ 30051928	1.2	209.17	313.1	72	760	5,278.0	3.0x10 <sup>-5</sup>
<b>Geometric Mean</b>						<b>15,862</b>	<b>1.4 x10<sup>-4</sup></b>

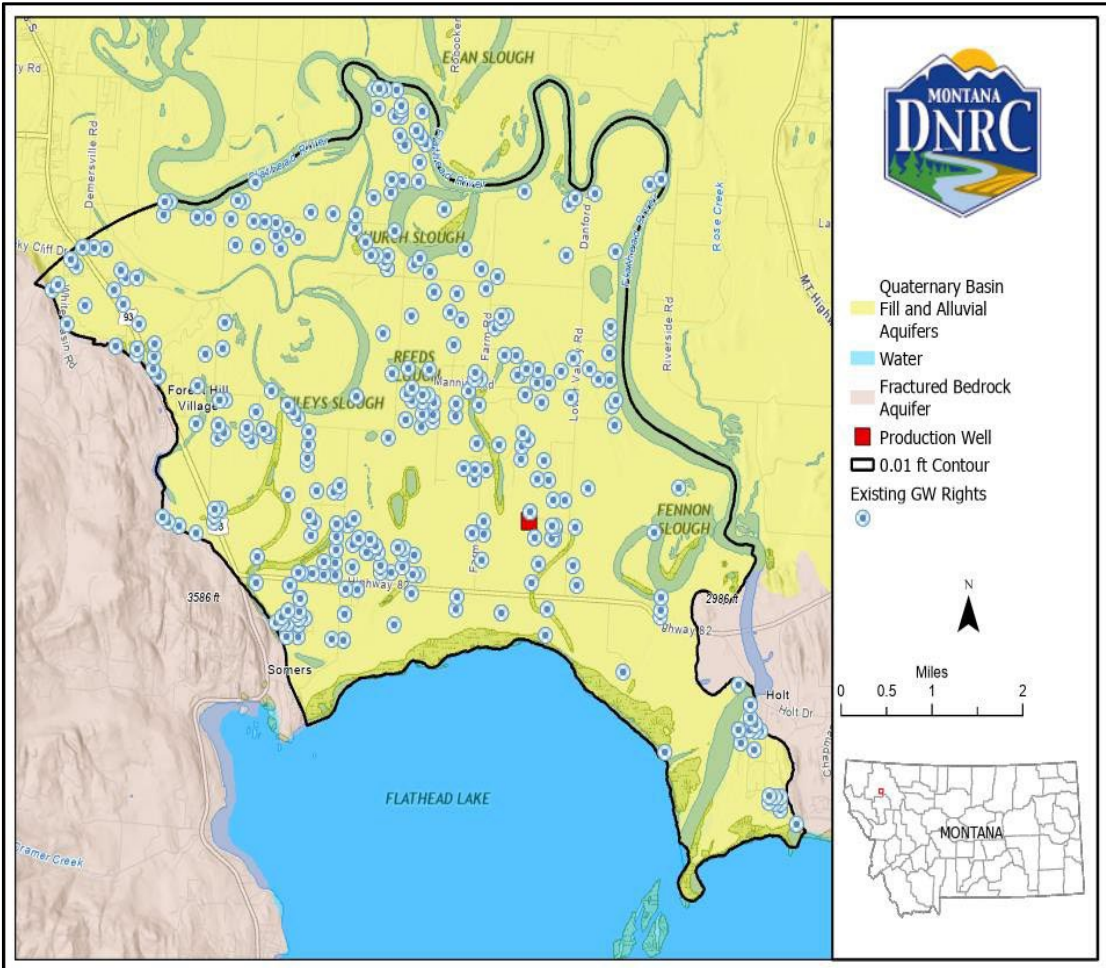


Figure 2: The 0.01-foot drawdown contour.

15. The Department evaluated the physical availability of the aquifer by calculating groundwater flux through a ZOI corresponding to the 0.01-foot drawdown contour (**Figure 2**). A distance drawdown plot was generated using the Theis (1935) confined solution, a constant pumping rate of 13.4 GPM for the period of diversion, a  $T = 15,862 \text{ ft}^2/\text{day}$ , and  $S = 1.4 \times 10^{-4}$ .

16. The estimated 0.01-foot contour would result in a ZOI that exceeds the boundaries of the Deep Aquifer, as such the ZOI was truncated to the edge of Flathead Lake and Flathead River and is constrained by the bedrock from the bounding mountains as shown in **Figure 2**. Due to the irregular shape of the ZOI, the width was measured at the widest point and equals 33,680 feet. The calculation for groundwater flux ( $Q$ ) through the delineated area is given by Equation 1 and is  $534,232 \text{ ft}^3/\text{day}$  or **4,476.0 AF/year**:

$Q = TWi$
where: T = Transmissivity = $15,862 \text{ ft}^2/\text{day}$ W = Width of Zone of Influence = 33,680 ft i = Groundwater Gradient (from Berglund et al, 2024 <sup>1</sup> ) = 0.001 ft/ft.

**Equation 1:** Groundwater Flux Calculation

17. Based on the calculated annual groundwater flux through the delineated ZOI of 4,476.0 AF/year, the Department finds that the amount of groundwater that the Applicant seeks to appropriate, 21.72 AF/year diverted at 101.15 GPM, is physically available in the aquifer at the proposed point of diversion during the proposed period of diversion.

### LEGAL AVAILABILITY

#### FINDINGS OF FACT

18. The Applicant proposes to divert groundwater from a well (GWIC ID 331034) at a rate of 101.15 GPM up to 2.24 AF/year for multiple domestic use for eight households and 19.48 AF/year for irrigation of 10.0 acres of lawn and garden, for a total volume of 21.72 AF/year. Legal availability for this application will be based on analyses of both the ZOI in the source aquifer and

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<sup>1</sup> Berglund, J., Bobst, A., and Gebriel, A., 2024, A groundwater flow model for the East Flathead Valley, Flathead County, Montana: Montana Bureau of Mines and Geology Report of Investigation 36, 110 p.  
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the AOPI of any potentially depleted surface water sources. The Flathead River and Flathead Lake were identified as the potentially depleted surface water sources which will be analyzed for legal availability.

GROUNDWATER

19. Legal availability of groundwater will be based on a comparison of the physically available water to the existing water rights (legal demands) within the ZOI. Physically available groundwater was evaluated by calculating groundwater flux through a ZOI corresponding to the 0.01-foot drawdown contour. The Department queried the existing groundwater legal demands within the ZOI and found 387 water rights. A list of these water rights is included in the application file and is available upon request. The Department calculated the sum of the water rights’ annual volumes (**Table 2**) which summed to a total legal demand on the source aquifer within the ZOI of 3,469.74 AF/year.

<b>Table 2: Summary of Groundwater Legal Demands</b>		
<b>Water Right Type</b>	<b>Number of Rights</b>	<b>Volume (AF)</b>
Exempt Notice	5	24.05
Ground Water Certificate	336	1,632.73
Provisional Permit	14	1,515.28
Statement of Claim	32	297.68
<b>Total Legal Demands</b>	<b>387</b>	<b>3,469.74</b>

20. The water rights in the source aquifer with unquantified volumes were quantified as follows:

- a. Statements of Claim with a stock use were quantified by multiplying the historically claimed number of animal units by the following conversion factor: 0.034 AF per day per AU (equivalent to 30.0 GPD per AU);
- b. Groundwater Certificates with unquantified volumes were assigned 10.0 AF. Groundwater Certificates issued with the verbiage "THIS RIGHT IS LIMITED TO THE ACTUAL AMOUNT USED UP TO 10 ACRE-FEET," were assigned 10.0 AF.

The Department used these methods because they lead to an overestimation of existing uses from the source, which the Department considers an appropriate method of assessing existing rights as it protects existing water users.

<b>Table 3: Legally Available in the Source Aquifer</b>		
<b>Physically Available Volume in the Source Aquifer (AF)</b>	<b>Existing Legal Demands within the ZOI (AF)</b>	<b>Legally Available Volume in the Source Aquifer (AF)</b>
4,476.0	3,469.74	1,006.26

21. The existing legal demands were subtracted from the physically available volume to determine the legally available volume of water in the ZOI in the source aquifer. The volume of water legally available in the source aquifer is 1,006.26 AF, as shown in **Table 3**.

**SURFACE WATER**

22. Flathead River and Flathead Lake are the surface water sources that are expected to be depleted by the proposed groundwater use. Net surface water depletion is equal to the consumed volume of the proposed groundwater use and is described as the calculated volume, rate, timing, and location of reductions to surface water that are offset by non-consumed water. The proposed point of diversion is located 1 mile northwest of Fennon Slough, which is hydrologically considered to be a part of the Flathead River, and 1.25 miles north of Flathead Lake.

23. Surface water depletion resulting from the Applicant’s proposed well pumping from the Deep Aquifer would primarily occur from propagation of drawdown through the source aquifer to Flathead River and Flathead Lake resulting in constant year-round rates of depletion. The year-round constant rates of depletion are shown in **Table 4**. The total consumed flow rate and volume for these depletions are 8.5 GPM and 13.8 AF respectively. To determine legal availability in the hydraulically connected sources, both physical and legal availability of the sources was evaluated for Flathead River and Flathead Lake.

**Table 4: Total consumed volume and net depletions to surface water for the Production Well**

Month	Lawn & Garden Consumed Volume (AF)	Domestic Consumed Volume (AF)	Total Consumed Volume (AF)	Flathead Lake Depletions (AF)	Flathead River Depletions (AF)	Flathead Lake Net Depletions (GPM)	Flathead River Net Depletions (GPM)
January	0	0.02	0.02	0.65	0.52	4.7	3.8
February	0	0.02	0.02	0.58	0.47	4.7	3.8
March	0	0.02	0.02	0.65	0.52	4.7	3.8
April	0.3	0.02	0.27	0.63	0.51	4.7	3.8
May	1.8	0.02	1.74	0.65	0.52	4.7	3.8
June	2.6	0.02	2.64	0.63	0.51	4.7	3.8
July	3.8	0.02	3.86	0.65	0.52	4.7	3.8
August	3.5	0.02	3.48	0.65	0.52	4.7	3.8
September	1.7	0.02	1.65	0.63	0.51	4.7	3.8
October	0	0.02	0.07	0.65	0.52	4.7	3.8
November	0	0.02	0.02	0.63	0.51	4.7	3.8
December	0	0.02	0.02	0.65	0.52	4.7	3.8
<b>Total</b>	<b>13.6</b>	<b>0.2</b>	<b>13.8</b>	<b>7.6</b>	<b>6.2</b>	<b>8.5</b>	

*Flathead River- Physical Availability*

24. The DNRC WSB determined that depletions to Flathead River begin in the E½NWSE Section 16, Township 27N, Range 20W, Flathead County, and extend downstream to the inlet of Flathead Lake in Section 34, Township 27N, Range 20W, Flathead County. The Department used the Flathead River at Columbia Falls, MT USGS Gaging Station No. 12363000 to quantify physically available monthly flow rates and volumes at the initial point of depletion during the period of diversion. USGS Gaging Station No. 12363000 is approximately 34 miles upstream of the initial point of depletion identified by WSB. The date range for the gage is October 1951 to April 2025, and the Department used the entire period of record.

25. Physically available monthly flow rates and volumes at the start of the depleted reach on Flathead River were quantified during the period of surface water depletion using the following method:

- a. The Department calculated median of the mean monthly flow rates in CFS for the Flathead River using USGS Gaging Station No. 12363000 records for each month of the period of depletion (**Table 5**, column B). Those flows were converted to monthly volumes in AF **Table 5**, column C) using the following equation found on the DNRC Water Calculation Guide: median of the mean monthly flow (CFS) × 1.98 (AF/day/1 CFS) × days per month = AF/month.
- b. The Department calculated the monthly flows appropriated by existing users upstream of the start of the depleted reach on the source (**Table 5**, column D) by:
  - i. Generating a list of existing water rights from USGS Gaging Station No. 12363000 to the initial point of surface depletion using the DNRC Water Rights Information System (WRIS) data (list is included in the application file and available upon request);
  - ii. Designating uses as occurring during their recorded periods of diversion;
  - iii. Assigning a single combined flow rate of 0.08 CFS to all livestock direct from source rights without a designated flow rate per Department adjudication standards (quantification of said water rights is not a re-adjudication or historical use analysis); and,
  - iv. Assuming that the flow rate of each existing right is continuously diverted throughout each month of the period of diversion. This assumption is necessary due to the difficulty of differentiating the distribution of appropriated volume over the period of diversion. This leads to an overestimation of existing uses from the source. The Department finds this an appropriate measure of assessing existing rights as it protects existing water users.
- c. Since the gage used is upstream of the depleted reach, the Department subtracted the flow rates of the existing rights between USGS Gaging Station No. 12363000 and the initial point of depletion (**Table 5**, column D) from the median of the mean monthly gage values (**Table 5**, column B) to determine physical availability at the initial point of depletion (**Table 5**, column E). Physically available monthly flows were then converted to monthly volumes (**Table 5**, column F).

<b>Table 5: Physical Availability at the Initial Point of Depletion on Flathead River</b>					
A	B	C	D	E	F
Month	Median of Mean Monthly Flow at Gage 12363000 (CFS)	Median of Mean Monthly Volume at Gage 12363000 (AF)	Existing Diverted Legal Demands between Gage No 12363000 to the Initial Point of Depletion (CFS)	Physically Available Monthly Flow (CFS)	Physically Available Monthly Volume (AF)
January	5,074.1	311,446.1	1.28	5,072.8	311,367.5
February	4,750.4	263,359.8	1.28	4,749.1	263,288.8
March	4,738.7	290,862.0	1.94	4,736.8	290,742.9
April	10,393.3	617,364.0	47.38	10,346.0	614,549.6
May	22,645.3	1,389,969.9	100.56	22,544.8	1,383,797.5
June	24,611.7	1,461,933.0	109.22	24,502.4	1,455,445.4
July	11,280.0	692,366.4	109.22	11,170.8	685,662.5
August	5,403.7	331,679.7	109.22	5,294.5	324,975.8
September	4,423.5	262,755.9	99.16	4,324.3	256,865.8
October	4,902.6	300,920.4	58.55	4,844.0	297,326.6
November	4,527.3	268,923.6	1.34	4,526.0	268,844.0
December	5,497.7	337,451.4	1.28	5,496.5	337,372.8

*Flathead River- Legal Availability*

26. The Department determined the AOPI for the Flathead River should extend from the initial point of depletion in the E½NWSE Section 16, Township 27N, Range 20W, Flathead County, downstream to the inlet of Flathead Lake in Section 34, Township 27N, Range 20W, Flathead County. The Department determined that the proposed use of groundwater will deplete Flathead River starting in the E½NWSE Section 16, Township 27N, Range 20W, Flathead County, thus reducing the total volume and flow in the Flathead River above Flathead Lake. There are a total of 47 water rights in the AOPI. The Department calculated the monthly flow rates and volumes of the water rights within the AOPI during the period of surface water depletion (year-round) using the following method:

- a. The Department quantified physically available monthly flow rates and volumes (**Table 6**, columns B-C) for the depleted reach of the Flathead River. The Department calculated the monthly flow rates appropriated by existing users (legal demands) on the source from the

initial point of depletion downstream to the Flathead Lake Inlet (**Table 6**, columns D-E) by:

- i. Generating a list of existing water rights on the Flathead River from the initial point of depletion downstream to the Flathead Lake Inlet. This list is available in the administrative file;
  - ii. Designating uses as occurring during their recorded periods of diversion;
  - iii. Assigning a single combined flow rate of 0.08 CFS to all livestock direct from source rights without a designated flow rate per Department adjudication standards (quantification of said water rights is not a re-adjudication or historical use analysis); and,
  - iv. Assuming that the flow rate of each existing right is continuously diverted throughout each month of its period of diversion. This assumption is necessary due to the difficulty of differentiating the distribution of appropriated volume over the period of diversion. This leads to an overestimation of legal demands on the physical volume of water. The Department finds this an appropriate measure of assessing existing rights as it protects existing water users.
- b. The Department subtracted out the flow rates of the existing legal demands (**Table 6**, column D) within the AOPI from the physically available water (**Table 6**, column B) to determine legally available flow and volume in the depleted reach (**Table 6**, columns F-G).

<b>Table 6: Legally Available Flows within the AOPI for Flathead River</b>					
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b>Month</b>	<b>Physically Available Monthly Flow (CFS)</b>	<b>Physically Available Monthly Volume (AF)</b>	<b>Existing Legal Demands within the AOPI (CFS)</b>	<b>Legally Available Monthly Flow (CFS)</b>	<b>Legally Available Monthly Volume (AF)</b>
January	5,072.8	311,367.5	3,501.3	1,571.5	96,459.0
February	4,749.1	263,288.8	3,501.3	1,247.8	69,177.9
March	4,736.8	290,742.9	3,501.9	1,234.8	75,793.9
April 1- 15	10,346.0	614,549.6	3,547.4	6,798.6	201,917.6
April 16-30	10,346.0	614,549.6	6,697.4	3,648.6	108,362.6
May	22,544.8	1,383,797.5	8,225.6	14,319.2	878,912.6
June	24,502.4	1,455,445.4	8,234.2	16,268.2	966,332.7
July 1- 15	11,170.8	685,662.5	8,234.2	2,936.6	93,030.2
July 16 - 31	11,170.8	685,662.5	5,511.2	5,659.6	168,088.9
Aug	5,294.5	324,975.8	3,609.2	1,685.3	103,441.9
Sep	4,324.3	256,865.8	3,599.2	725.2	43,075.7
Oct	4,844.0	297,326.6	3,558.6	1,285.5	78,902.8
Nov	4,526.0	268,844.0	3,501.3	1,024.7	60,864.4
Dec	5,496.5	337,372.8	3,501.3	1,995.2	122,464.3

*Flathead Lake- Physical Availability*

27. The DNRC WSB determined that the proposed use of groundwater will deplete Flathead Lake starting at a point in the S½SWNE of Section 20, Township 27N, Range 21W, Flathead County. In order to simplify its analysis, the Department evaluated physical availability for Flathead Lake starting at the inlet of Flathead Lake in Section 34, Township 27N, Range 20W, Flathead County. The Department used the Flathead River near Polson Montana USGS Gaging Station No. 12372000 to calculate physical availability as it is located approximately 35 miles downstream and is the closest gage to the depleted reach. The period of record for the gage is October 1938 to April 2025, and the Department used the entire period of record to quantify physically available monthly flow rates and volumes in the AOPI during the period of groundwater diversion and resulting year-round surface water depletion.

- a. The Department calculated median of the mean monthly flow rates in CFS for Flathead Lake using USGS Gaging Station No. 12372000 records for each month of the proposed

period of depletion (**Table 7**, column B). Those flows were converted to monthly volumes in AF (**Table 7**, column C).

- b. The Department calculated the monthly flows appropriated by existing users upstream of USGS Gaging Station No. 12372000 (**Table 7**, column D) by:
  - i. Generating a list of existing water rights from the Flathead Lake inlet down to USGS Gaging Station No. 12372000 (this list is contained in the administrative file and is available upon request);
  - ii. Designating uses as occurring during their recorded periods of diversion;
  - iii. Assigning a single combined flow rate of 0.08 CFS to all livestock direct from source rights without a designated flow rate per Department adjudication standards (quantification of said water rights is not a re-adjudication or historical use analysis); and,
  - iv. Assuming that the flow rate of each existing right is continuously diverted throughout each month of the period of diversion. This assumption is necessary due to the difficulty of differentiating the distribution of appropriated volume over the period of diversion. This leads to an overestimation of existing uses from the source. The Department finds this an appropriate measure of assessing existing rights as it protects existing water users.
- c. Since the gage used is downstream of the POD, the Department added in the flow rates of the existing diversionary water rights between USGS Gaging Station No. 12372000 and the Flathead Lake inlet (**Table 7**, column D) to the median of the mean monthly gage values (**Table 7**, column B) to determine physical availability at the initial point of depletion from Flathead Lake (**Table 7**, column E). Physically available monthly flows were then converted to monthly volumes (**Table 7**, column F).

Table 7: Physical Availability at the Flathead Lake Inlet					
A	B	C	D	E	F
Month	Median of the Mean Monthly Flow at Gage 12372000 (CFS)	Median of the Mean Monthly Volume at Gage 12372000 (AF)	Existing Diverted Legal Demands from the Flathead Lake Inlet to Gage 12372000 (CFS)	Physically Available Monthly Flow at the Flathead Lake Inlet (CFS)	Physically Available Monthly Volume at the Flathead Lake Inlet (AF)
January	10,380.0	637,124.4	78.7	10,458.7	641,956.8
February	9,133.0	506,333.5	81.3	9,214.3	510,841.3
March	7,748.0	475,572.2	86.5	7,834.5	480,881.6
April	9,223.0	547,846.2	5,378.8	14,601.8	867,347.5
May	18,560.0	1,139,212.8	5,429.5	23,989.5	1,472,474.9
June	25,400.0	1,508,760.0	5,437.6	30,837.6	1,831,751.7
July	12,730.0	781,367.4	5,438.1	18,168.1	1,115,159.2
August	6,126.0	376,013.9	5,438.1	11,564.1	709,805.7
September	5,956.5	353,816.1	5,413.5	11,370.0	675,375.6
October	7,184.0	440,953.9	5,385.7	12,569.7	771,525.1
November	8,556.0	508,226.4	90.6	8,646.6	513,610.4
December	9,837.0	603,795.1	81.7	9,918.7	608,812.3

Flathead Lake- Legal Availability

28. The Department determined that the proposed use of groundwater from the Applicant’s proposed production well will deplete Flathead Lake starting in the S½SWNE Section 20, Township 27N, Range 21W, Flathead County, thus reducing the total flow and volume in Flathead Lake from the inlet of Flathead Lake in Section 34, Township 27N, Range 20W, Flathead County, down to the Séliš Ksanka Q̄ispé (SKQ) Dam in Section 12, Township 22N, Range 21W, Lake County. There are 1,796 water rights within the Flathead Lake portion of the AOPI. The Department quantified legally available monthly flow rates and volumes within the AOPI during the period of surface water depletion (year-round) using the following method:

- a. The Department quantified physically available monthly flow rates and volumes (**Table 8**, columns B-C) for the Flathead Lake AOPI. The Department calculated the monthly flow rates appropriated by existing users (legal demands) on the source from the Flathead Lake Inlet downstream to the SKQ Dam (**Table 8**, columns D-E) by:

- i. Generating a list of existing water rights on the Flathead Lake from the Flathead Lake Inlet downstream to the SKQ Dam (this list is contained in the administrative file and is available upon request);
  - ii. Designating uses as occurring during their recorded periods of diversion;
  - iii. Assigning a single combined flow rate of 0.08 CFS to all livestock direct from source rights without a designated flow rate per Department adjudication standards (quantification of said water rights is not a re-adjudication or historical use analysis); and,
  - iv. Assuming that the flow rate of each existing right is continuously diverted throughout each month of its period of diversion. This assumption is necessary due to the difficulty of differentiating the distribution of appropriated volume over the period of diversion. This leads to an overestimation of legal demands on the physical volume of water. The Department finds this an appropriate measure of assessing existing rights as it protects existing water users.
- b. The Department subtracted out the flow rates of the existing legal demands (**Table 8**, column D-E) within the AOPI from the physically available water (**Table 8**, column B) to determine legally available flow and volume in the depleted reach (**Table 8**, columns F-G).

<b>Month</b>	<b>Physically Available Monthly Flow (CFS)</b>	<b>Physically Available Monthly Volume (AF)</b>	<b>Existing Legal Demands within the AOPI (CFS)</b>	<b>Legally Available Monthly Flow (CFS)</b>	<b>Legally Available Monthly Volume (AF)</b>
January	10,459.0	641,957.0	0.1	10,380.1	637,130.0
February	9,214.3	510,841.3	0.1	9,133.1	506,338.5
March	7,834.5	480,881.6	0.1	7,748.1	475,578.0
April	14,602.0	867,347.5	5,265.0	9,223.1	547,851.5
May	23,989.5	1,472,475.0	5,285.0	18,561	1,139,259.0
June	30,837.6	1,831,752.0	5,285.0	25,401	1,508,804.6
July	18,168.1	1,115,159.2	5,285.0	12,731.0	781,413.4
August	11,564.1	709,806.0	5,285.0	6,127.0	376,060.0
September	11,370.0	675,375.6	5,265.0	5,957.3	353,860.7
October	12,569.7	771,525.1	5,265.0	7,184.1	440,959.4
November	8,646.6	513,610.4	0.1	8,556.1	508,231.7
December	9,918.7	608,812.3	0.1	9,837.1	603,800.6

29. The Department finds that the requested 21.72 AF/year at a flow rate of 101.15 GPM is legally available in the aquifer based on the comparison of the flux through the ZOI to the volume of existing legal demands within the ZOI. Additionally, the Department finds that the 3.9 GPM (6.2 AF/year) and 4.8 GPM (7.6 AF/year) that the proposed groundwater appropriation will deplete from Flathead river and Flathead Lake, respectively, is legally available in those sources during the proposed period of diversion.

### **ADVERSE EFFECT**

#### **FINDINGS OF FACT**

30. The Applicant proposes to divert groundwater from a well (GWIC ID 331034) at a rate of 101.15 GPM up to 2.24 AF/year for multiple domestic use for eight households and 19.48 AF/year for irrigation of 10.0 acres of lawn and garden, for a total volume of 21.72 AF/year. The Applicant provided a plan showing they can regulate their water use to ensure senior water rights are satisfied during times of water shortage. The Applicant plans to:

- a. Initially reduce irrigation by 50 percent;
- b. Cease all irrigation;
- c. Initiate domestic water rationing to 50 percent during extreme shortage; and,

- d. Should a valid call from a senior water holder be requested, the owner will turn off the well pump and temporarily obtain their potable water from an alternative PWS source until the call is lifted.

**GROUNDWATER**

31. The Department used the proposed monthly pumping schedule (**Table 9**) and the annual diverted and consumed volume to evaluate potential impacts to existing water right users. The Theis (1935) solution, a T value equal to 15,862 ft<sup>2</sup>/day, S=1.4x10<sup>-4</sup>, and the monthly pumping schedule for a period of five years were used to model drawdown in the Deep Aquifer and the effect of the drawdown on existing wells and to calculate net depletions for hydraulically connected sources. Based on aquifer T and S, and using the proposed pumping schedule in **Table 9**, there are no water rights that will experience predicted drawdown equal to or greater than 1-foot, as such no groundwater users are expected to be adversely effected.

<b>Table 9: Assumed monthly pumping schedule for the Production Well</b>				
<b>Month</b>	<b>IWR, Creston (inches)</b>	<b>Lawn and Garden Irrigation Diverted Volume (AF)</b>	<b>Multiple Domestic Diverted Volume (AF)</b>	<b>Total Diverted Flow Rate (GPM)</b>
January	0.0	0.0	0.2	1.4
February	0.0	0.0	0.2	1.4
March	0.0	0.0	0.2	1.4
April	0.3	0.4	0.2	4.0
May	2.1	2.5	0.2	19.4
June	3.1	3.7	0.2	28.7
July	4.6	5.5	0.2	41.5
August	4.2	5	0.2	37.5
September	2	2.4	0.2	18.4
October	0.1	0.1	0.2	1.9
November	0.0	0.0	0.2	1.4
December	0.0	0.0	0.2	1.4
<b>Total</b>	<b>16.4</b>	<b>19.5</b>	<b>2.2</b>	---

32. Predicted theoretical drawdowns in **Table 11** for the proposed well are modeled for the period of diversion using the monthly pumping schedule in **Table 9**. The volume for domestic use and lawn and garden irrigation will be apportioned monthly throughout the period of diversion

based on the number of days in the month. The assumed monthly pumping schedule is shown in **Table 9**. The volume will be converted to flow rate using the following equation:

$$\text{Total Diverted Flow Rate (GPM)} = \frac{\text{Diverted Volume (AF)}}{\text{month}} \times \frac{325,851 \text{ gallons}}{\text{AF}} \times \frac{\text{month}}{\# \text{ days}} \times \frac{1 \text{ day}}{1,440 \text{ min}}$$

### SURFACE WATER

The Department found that the proposed 21.72 AF of diverted groundwater will result in a net depletion of 13.8 AF with depletions to Flathead River up to 6.2 AF and Flathead Lake up to 7.6 AF yearly. The Department found that the volume is legally available in those sources. As such the proposed appropriation of groundwater will not adversely affect the existing water right users on the depleted surface sources.

33. The Department finds there will be no adverse effects to senior surface water users nor groundwater users resulting from the Applicant's proposed diversion of 21.72 AF annually at a rate of 101.15 GPM. The Department considered the following to justify this finding:

- a. The Applicants plan to regulate water usage and plan to cease use for a valid call on the source;
- b. The Department's finding that water is legally available on the source aquifer;
- c. The Departments finding that water is legally available on in the hydraulically connected source, and;
- d. The analysis of drawdown in nearby wells completed in the source aquifer;

34. The Department finds that the proposed diverted volume of 21.72 AF and consumed volume of 13.8 AF annually at a flow rate of 101.15 GPM will not have an adverse effect on existing groundwater and surface water right holders.

### ADEQUATE MEANS OF DIVERSION

#### FINDINGS OF FACT

35. The Applicant proposes to divert groundwater from a well (GWIC ID 331034) at a rate of 101.15 GPM up to 2.24 AF/year for multiple domestic use for eight households and 19.48 AF/year for irrigation of 10.0 acres of lawn and garden, for a total volume of 21.72 AF/year.

WATER COLUMN (WELL ADEQUACY)

36. The Applicant’s production well (GWIC ID 331034) was tested with a 24-hour aquifer test at an average flow rate of 101.0 GPM. The Applicant will utilize a VFD and two pressure tanks to prevent water hammer and short cycling of the pump. The production well (GWIC ID 331034) was constructed on April 24, 2024, extending 714.0 feet BGS with a 6-inch diameter steel casing and completed with an open bottom. The static water level is 5.0 feet BGS.

37. WSB utilized two analysis solutions to evaluate the production well. The Theis (1935) solution fit the drawdown data well, but the predicted derivative curve did not closely match the observed drawdown. The Cooper-Jacob (1946) solution analysis was considered a better fit for the estimated derivative curve as it fit the mid to late time data better. The observed derivatives of the drawdown data stabilized at mid- to late-time, indicating that infinite-acting radial flow to the well was achieved during the aquifer test on the Production Well. The recommended T and S values to be used in forward modeling for the Adequacy of Diversion criterion are 3,432.8 ft<sup>2</sup>/day derived from the Production Well aquifer test analysis (**Table 10**), and 5.2 x 10<sup>-4</sup> derived from a nearby aquifer test conducted in 2022 by MBMG (Rose et al, 2022<sup>2</sup>) on a well of similar depth located 3,391 feet from the Production Well, respectively. These values represent the local aquifer properties immediately around the Production Well.

<b>Aquifer Test Phase</b>	<b>Test Length (hr)</b>	<b>Well (GWIC ID)</b>	<b>Analysis Solution</b>	<b>Transmissivity (ft<sup>2</sup>/day)</b>
Production Well, Pumping	24	331034	Cooper-Jacob (1946)	3,432.80
Production Well, Pumping	24	331034	Theis (1935)	3,312.9

Note: No storativity is given due to the analysis being conducted solely on the Production Well.

38. The WSB modeled the remaining available water column in the proposed well in AQTESOLV® using the monthly pumping schedule for the proposed well (**Table 9**), the T=3,432.8 ft<sup>2</sup>/day derived from the Production Well aquifer test analysis using the Cooper-Jacob (1946)

<sup>2</sup> Rose, J., Bobst, A., and Gebriel, A., 2022, Hydrogeologic investigation of the deep alluvial aquifer, Flathead Valley, Montana: Montana Bureau of Mines and Geology Report of Investigation 32, 44 p.  
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solution, and a S of  $5.2 \times 10^{-4}$ . The Applicant requests 21.72 AF/year. The requested lawn and garden volume of 19.48 AF was apportioned from April through October according to the monthly percent of the total net irrigation requirement calculated using climate data from the Creston Station in the USDA NRCS IWR software program. The 2.24 AF requested for multiple domestic use was apportioned from January through December based on the number of days in each month.

39. The total drawdown is the sum of interference drawdown and predicted drawdown, as shown in **Table 11**. Because only one well is proposed for the subdivision, no interference drawdown was modeled. Well loss is calculated by dividing the predicted theoretical maximum drawdown by a well efficiency value. Well efficiency is calculated by dividing the modeled maximum drawdown for the aquifer test by the maximum observed drawdown of the aquifer. The production well would experience 90.6 feet of drawdown after the first year, with a remaining water column of 611.1 feet.

<b>Table 11: Remaining available water column for the Production Well.</b>	
<b>Drawdown Estimate</b>	<b>Proposed Well</b>
Total Depth at Bottom of Perforated Interval (feet)	714
Pre-Test Static Water Level (feet BTC)	12.3
Available Drawdown Above Bottom of Well (feet)	701.8
Observed Drawdown of Aquifer Test (feet)	148.6
Modeled Drawdown Using Mean Aquifer Test Rate (feet)	4.2
Well Efficiency (%)	2.8
Predicted Theoretical Maximum Drawdown (feet)	2.6
Predicted Drawdown with Well Loss (feet)	90.6
Interference Drawdown (feet)	0
Total Drawdown (feet)	90.6
<b>Remaining Available Water Column (feet)</b>	<b>611.1</b>

**WATER SYSTEM DESIGN AND SPECIFICATIONS**

40. The Applicant proposes to divert water from the production well via a Grundfos SP90S100-9 submersible pump in a 3-inch drop pipe set at 200 feet BGS. The modeled remaining available water column will be 611.1 feet BGS (**Table 11**), leaving ample water column for the pump to function year-round. The submersible pump’s flow rate will be controlled by a VFD set to an output pressure of 55 PSI paired with two pressure tanks. The pump house, located on Majestic

Meadow Lot 2 south of the well, holds the pressure tanks, VFD, and control panels. After leaving the pressure tanks the water is diverted to Lots 1 through 8 of Majestic Meadow via a 4-inch PVC water main that has eight separate service connections. Branching from the service connections, the water will be conveyed via a 1 ¼ inch PVC to each household. No losses are expected with the conveyance through the closed-pipe system. A McCrometer totalizing flow meter will record flow rate and total volume for the diversion.

41. The maximum total dynamic head calculation was calculated using the well's aquifer test pumping depth of 150 feet BGS, Applicant-supplied friction loss calculations of 29.57 feet for the system, and the output/operating pressure of 55 PSI (equivalent to 127.05 feet) set by the VFD. The TDH of 306.62 feet compared to the Applicant supplied pump curve shows that the pump can produce 101.0 GPM at 306.62 feet of TDH. The VFD will control the pump to operate across a range of pumping conditions up to the maximum TDH calculated by the Applicant while maintaining a stable flow rate and an output of 55 PSI. The Applicant requested a flow rate of 101.15 GPM, however, the DNRC WSB found an average flow rate of 101.0 GPM during their assessment of the Applicant's aquifer test data Form 633. As such, the Department finds that the well will produce a flow rate of 101.0 GPM rather than the requested 101.15 GPM.

42. Due to the Applicant's requested flow rate exceeding the average aquifer test flow rate, the proposed permit will be subject to the following measurement reporting condition upon issuance to ensure the Applicant does not appropriate water at a flow rate greater than the permitted flow rate of 101.0 GPM:

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED IN-LINE FLOW METER AT A POINT IN THE DELIVERY LINE APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY JANUARY 31 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR UNTIL A FORM 617 PROJECT COMPLETION NOTICE IS SUBMITTED. FAILURE TO SUBMIT RECORDS MAY BE CAUSE FOR REVOCATION OF THE PERMIT. THE RECORDS MUST BE SENT TO THE KALISPELL REGIONAL WATER RESOURCES OFFICE. THE APPROPRIATOR SHALL

MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

43. The Department finds that the proposed means of diversion and conveyance are adequate to divert and convey a flow rate of 101.0 GPM, which is less than the requested flow rate of 101.15 GPM, and an annual volume of 21.72 AF. The Department finds that this permit application should be granted in modified form and subject to the measurement condition described in FOF 42 due to the finding that the requested flow rate is greater than the average flow rate recorded during the Applicant's aquifer test on the proposed production well.

### **BENEFICIAL USE**

#### **FINDINGS OF FACT**

44. The Applicant proposes to divert groundwater from a well (GWIC ID 331034) at a rate of 101.15 GPM up to 2.24 AF/year for multiple domestic use for eight households and 19.48 AF/year for irrigation of 10.0 acres of lawn and garden, for a total volume of 21.72 AF/year. However, as discussed in FOF 41, the DNRC finds a maximum flow rate 101.0 GPM.

45. The Applicant provided an estimate of the peak instantaneous demand of 22.0 GPM for multiple domestic and of 82.57 GPM for irrigation of lawn and garden. That peak flow rate for multiple domestic of 22.0 GPM is expected to occur during the daytime. The irrigation of the 10.0 acres of lawn and garden will occur during a 7-hour period overnight. The flow rate of 101.0 GPM will allow for irrigation to occur overnight and provide a buffer of approximately 18.43 GPM for non-peak nighttime domestic use. The Applicant will use a flow meter with totalizer to measure the water usage to ensure they operate within the permitted flow rate of 101.0 GPM.

46. The Applicant requests a volume of 2.24 AF for multiple domestic use for eight households from January 1<sup>st</sup> to December 31<sup>st</sup> annually. The Applicant used the DEQ standard of 0.28 AF per household to calculate their multiple domestic volume request (0.28 AF/household x 8.0 households = 2.24 AF). The Department finds that multiple domestic use is a beneficial use of water and that the requested volume of 2.24 AF is reasonable and adequate for the year-round multiple domestic purpose.

47. The Applicant requests 19.48 AF for irrigation of 10.0 acres of lawn and garden from April 15<sup>th</sup> to October 15<sup>th</sup>, with 1.25 acres being apportioned to each of the 8 lots in the subdivision.

The volume requested was calculated using the procedure described in the Department's Technical Memorandum titled DNRC Consumptive Use Methodology – Turf Grass (New Projects), dated March 23, 2010. The Applicant followed the methodology using the USDA NRCS IWR software, the Creston Weather Station (Station No. MT 242104), and a 70% sprinkler irrigation efficiency factor (per ARM 36.12.115(2)(e)) to identify the gross irrigation requirement in a dry year (80% chance) of 23.37 inches per acre per year, which is equivalent to 1.98 AF per acre per year (16.36 inches/acre net irrigation requirement ÷ 0.7 efficiency factor ÷ 12.0 inches/foot = 1.948 AF per acre.) The Applicant multiplied the gross irrigation requirement calculated from IWR by their proposed irrigated acreage to determine their requested volume of 19.48 (10 acres x 1.948 AF/acre = 19.48 AF/year).

48. The Applicant is requesting the USDA Natural Resources and Conservation Service Climatic Area III standard (ARM 36.12.112(iii)), within which the subdivision is located, to irrigate the lawn and garden from April 15<sup>th</sup> to October 15<sup>th</sup>.

49. Due to the Applicant's requested flow rate exceeding the average test flow rate, the proposed permit will be subject to the following measurement reporting condition upon issuance to ensure the Applicant does not appropriate water at a flow rate greater than the permitted flow rate of 101.0 GPM:

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED IN-LINE FLOW METER AT A POINT IN THE DELIVERY LINE APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY JANUARY 31 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR UNTIL A FORM 617 PROJECT COMPLETION NOTICE IS SUBMITTED. FAILURE TO SUBMIT RECORDS MAY BE CAUSE FOR REVOCATION OF THE PERMIT. THE RECORDS MUST BE SENT TO THE KALISPELL REGIONAL WATER RESOURCES OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

50. The Department finds the proposed water uses are beneficial, and that a flow rate of 101.0 GPM up to an annual volume of 21.72 AF are reasonably justified for the multiple domestic and lawn and garden purposes.

### **POSSESSORY INTEREST**

#### **FINDINGS OF FACT**

51. The Applicant signed the application form affirming that the Applicant has possessory interest or the written consent of the person with possessory interest, in the property where the water is to be put to beneficial use.

### **CONCLUSIONS OF LAW**

#### **PHYSICAL AVAILABILITY**

52. Pursuant to § 85-2-311(1)(a)(i), MCA, an Applicant must prove by a preponderance of the evidence that “there is water physically available at the proposed point of diversion in the amount that the Applicant seeks to appropriate.”

53. It is the Applicant’s burden to produce the required evidence. *In the Matter of Application for Beneficial Water Use Permit No. 27665-41I by Anson* (DNRC Final Order 1987) (Applicant produced no flow measurements or any other information to show the availability of water; permit denied); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005).

54. An Applicant must prove that at least in some years there is water physically available at the point of diversion in the amount the Applicant seeks to appropriate. *In the Matter of Application for Beneficial Water Use Permit No. 72662s76G by John Fee and Don Carlson* (DNRC Final Order 1990); *In the Matter of Application for Beneficial Water Use Permit No. 85184s76F by Wills Cattle Co. and Ed McLean* (DNRC Final Order 1994).

55. The Applicant has proven that water is physically available at the proposed point of diversion in the amount Applicant seeks to appropriate. Section 85-2-311(1)(a)(i), MCA. (FOF 11-17)

## LEGAL AVAILABILITY

56. Pursuant to § 85-2-311(1)(a), MCA, an Applicant must prove by a preponderance of the evidence that:

(ii) water can reasonably be considered legally available during the period in which the Applicant seeks to appropriate, in the amount requested, based on the records of the department and other evidence provided to the department. Legal availability is determined using an analysis involving the following factors:

(A) identification of physical water availability;

(B) identification of existing legal demands on the source of supply throughout the area of potential impact by the proposed use; and

(C) analysis of the evidence on physical water availability and the existing legal demands, including but not limited to a comparison of the physical water supply at the proposed point of diversion with the existing legal demands on the supply of water.

*E.g.*, ARM 36.12.101 and 36.12.120; *Montana Power Co.*, 211 Mont. 91, 685 P.2d 336 (Permit granted to include only early irrigation season because no water legally available in late irrigation season); *In the Matter of Application for Beneficial Water Use Permit No. 81705-g76F by Hanson* (DNRC Final Order 1992).

57. It is the Applicant's burden to present evidence to prove water can be reasonably considered legally available. *Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 7 (the legislature set out the criteria (§ 85-2-311, MCA) and placed the burden of proof squarely on the Applicant. The Supreme Court has instructed that those burdens are exacting.); *see also Matter of Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Royston* (1991), 249 Mont. 425, 816 P.2d 1054 (burden of proof on Applicant in a change proceeding to prove required criteria); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005) (it is the Applicant's burden to produce the required evidence.); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 by Utility Solutions, LLC* (DNRC Final Order 2007) (permit denied for failure to prove legal availability); *see also* ARM 36.12.1705.

58. Pursuant to *Montana Trout Unlimited v. DNRC*, 2006 MT 72, 331 Mont. 483, 133 P.3d 224, the Department recognizes the connectivity between surface water and ground water and the effect of pre-stream capture on surface water. *E.g.*, *Wesmont Developers v. DNRC*, CDV-2009-823, Montana First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 7-8; *In the Matter*

of Beneficial Water Use Permit Nos. 41H 30012025 and 41H 30013629 by Utility Solutions LLC (DNRC Final Order 2006) (mitigation of depletion required), *affirmed, Faust v. DNRC et al.*, Cause No. CDV-2006-886, Montana First Judicial District (2008); *see also Robert and Marlene Takle v. DNRC et al.*, Cause No. DV-92-323, Montana Fourth Judicial District for Ravalli County, *Opinion and Order* (June 23, 1994) (affirming DNRC denial of Applications for Beneficial Water Use Permit Nos. 76691-76H, 72842-76H, 76692-76H and 76070-76H; underground tributary flow cannot be taken to the detriment of other appropriators including surface appropriators and ground water appropriators must prove unappropriated surface water, *citing Smith v. Duff*, 39 Mont. 382, 102 P. 984 (1909), and *Perkins v. Kramer*, 148 Mont. 355, 423 P.2d 587 (1966)); *In the Matter of Beneficial Water Use Permit No. 80175-s76H by Tintzman* (DNRC Final Order 1993)(prior appropriators on a stream gain right to natural flows of all tributaries in so far as may be necessary to afford the amount of water to which they are entitled, *citing Loyning v. Rankin* (1946), 118 Mont. 235, 165 P.2d 1006; *Granite Ditch Co. v. Anderson* (1983), 204 Mont. 10, 662 P.2d 1312; *Beaverhead Canal Co. v. Dillon Electric Light & Power Co.* (1906), 34 Mont. 135, 85 P. 880); *In the Matter of Beneficial Water Use Permit No. 63997-42M by Joseph F. Crisafulli* (DNRC Final Order 1990) (since there is a relationship between surface flows and the ground water source proposed for appropriation, and since diversion by Applicant's well appears to influence surface flows, the ranking of the proposed appropriation in priority must be as against all rights to surface water as well as against all groundwater rights in the drainage).

59. Because the Applicant bears the burden of proof as to legal availability, the Applicant must prove that the proposed appropriation will not result in prestream capture or induced infiltration and cannot limit its analysis to ground water. Section 85-2-311(a)(ii), MCA. Absent such proof, the Applicant must analyze the legal availability of surface water in light of the proposed ground water appropriation. *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 By Utility Solutions LLC* (DNRC Final Order 2007) (permit denied); *In the Matter of Application for Beneficial Water Use Permit No. 76H-30028713 by Patricia Skergan and Jim Helmer* (DNRC Final Order 2009); *Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 5 ; *Wesmont Developers v. DNRC*, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 11-12.

60. Where a proposed ground water appropriation depletes surface water, Applicant must prove legal availability of amount of depletion of surface water throughout the period of diversion either through a mitigation /aquifer recharge plan to offset depletions or by analysis of the legal demands on, and availability of, water in the surface water source. *Robert and Marlene Takle v. DNRC*, Cause No. DV-92-323, Montana Fourth Judicial District for Ravalli County, *Opinion and Order* (June 23, 1994); *In the Matter of Beneficial Water Use Permit Nos. 41H 30012025 and 41H 30013629 by Utility Solutions LLC* (DNRC Final Order 2006) (permits granted), *affirmed*, *Faust v. DNRC et al.*, Cause No. CDV-2006-886, Montana First Judicial District (2008); *In the Matter of Application for Beneficial Water Use Permit 41H 30019215 by Utility Solutions LLC* (DNRC Final Order 2007 )(permit granted), *affirmed*, *Montana River Action Network et al. v. DNRC*, Cause No. CDV-2007-602, Montana First Judicial District (2008); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 by Utility Solutions LLC* (DNRC Final Order 2007) (permit denied for failure to analyze legal availability outside of irrigation season (where mitigation applied)); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30026244 by Utility Solutions LLC* (DNRC Final Order 2008); *In the Matter of Application for Beneficial Water Use Permit No. 76H-30028713 by Patricia Skergan and Jim Helmer* (DNRC Final Order 2009)(permit denied in part for failure to analyze legal availability for surface water depletion); *Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 5 (Court affirmed denial of permit in part for failure to prove legal availability of stream depletion to slough and Beaverhead River); *Wesmont Developers v. DNRC*, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 11-12 (“DNRC properly determined that Wesmont cannot be authorized to divert, either directly or indirectly, 205.09 acre-feet from the Bitterroot River without establishing that the water does not belong to a senior appropriator”; Applicant failed to analyze legal availability of surface water where projected surface water depletion from groundwater pumping); *In the Matter of Application for Beneficial Water Use Permit No. 76D-30045578 by GBCI Other Real Estate, LLC* (DNRC Final Order 2011) (in an open basin, Applicant for a new water right can show legal availability by using a mitigation/aquifer recharge plan or by showing that any depletion to surface water by groundwater pumping will not take water already appropriated; development next to Lake

Koocanusa will not take previously appropriated water). Applicant may use water right claims of potentially affected appropriators as a substitute for “historic beneficial use” in analyzing legal availability of surface water under § 85-2-360(5), MCA. *Royston, supra*.

61. Applicant has proven by a preponderance of the evidence that water can reasonably be considered legally available during the period in which the Applicant seeks to appropriate, in the amount requested, based on the records of the Department and other evidence provided to the Department. Section 85-2-311(1)(a)(ii), MCA. (FOF 18-29.)

#### ADVERSE EFFECT

62. Pursuant to § 85-2-311(1)(b), MCA, the Applicant bears the affirmative burden of proving by a preponderance of the evidence that the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. Analysis of adverse effect must be determined based on a consideration of an Applicant’s plan for the exercise of the permit that demonstrates that the Applicant’s use of the water will be controlled so the water right of a prior appropriator will be satisfied. *See Montana Power Co.*, 211 Mont. 91, 685 P.2d 336 (1984) (purpose of the Water Use Act is to protect senior appropriators from encroachment by junior users); *Bostwick Properties, Inc.*, ¶ 21.

63. An Applicant must analyze the full area of potential impact under the § 85-2-311, MCA criteria. *In the Matter of Beneficial Water Use Permit No. 76N-30010429 by Thompson River Lumber Company* (DNRC Final Order 2006). While § 85-2-361, MCA, limits the boundaries expressly required for compliance with the hydrogeologic assessment requirement, an Applicant is required to analyze the full area of potential impact for adverse effect in addition to the requirement of a hydrogeologic assessment. *Id.* ARM 36.12.120(5).

64. Applicant must prove that no prior appropriator will be adversely affected, not just the objectors. *Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, 4 (2011).

65. In analyzing adverse effect to other appropriators, an Applicant may use the water rights claims of potentially affected appropriators as evidence of their “historic beneficial use.” *See Matter of Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Royston*, 249 Mont. 425, 816 P.2d 1054 (1991).

66. It is the Applicant's burden to produce the required evidence. *E.g., Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, 7 (2011) (legislature has placed the burden of proof squarely on the Applicant); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005). The Department is required to grant a permit only if the § 85-2-311, MCA, criteria are proven by the Applicant by a preponderance of the evidence. *Bostwick Properties, Inc.*, ¶ 21.

67. Section 85-2-311 (1)(b) of the Water Use Act does not contemplate a de minimis level of adverse effect on prior appropriators. *Wesmont Developers v. DNRC*, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, 8 (2011).

68. The Applicant has proven by a preponderance of the evidence that the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. Section 85-2-311(1)(b), MCA. (FOF 30-34)

#### ADEQUATE DIVERSION

69. Pursuant to § 85-2-311(1)(c), MCA, an Applicant must demonstrate that the proposed means of diversion, construction, and operation of the appropriation works are adequate.

70. The adequate means of diversion statutory test merely codifies and encapsulates the case law notion of appropriation to the effect that the means of diversion must be reasonably effective, i.e., must not result in a waste of the resource. *In the Matter of Application for Beneficial Water Use Permit No. 33983s41Q by Hoyt* (DNRC Final Order 1981); § 85-2-312(1)(a), MCA.

71. Applicant has proven by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works can produce a flow rate of 101.0 GPM, which is adequate for the proposed beneficial use. Section 85-2-311(1)(c), MCA (FOF 35-43).

#### BENEFICIAL USE

72. Under § 85-2-311(1)(d), MCA, an Applicant must prove by a preponderance of the evidence the proposed use is a beneficial use.

73. An appropriator may appropriate water only for a beneficial use. See also, § 85-2-301 MCA. It is a fundamental premise of Montana water law that beneficial use is the basis, measure, and

limit of the use. *E.g., McDonald; Toohey v. Campbell* (1900), 24 Mont. 13, 60 P. 396. The amount of water under a water right is limited to the amount of water necessary to sustain the beneficial use. *E.g., Bitterroot River Protective Association v. Siebel, Order on Petition for Judicial Review*, Cause No. BDV-2002-519, Montana First Judicial District Court, Lewis and Clark County (2003), *affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518; *In The Matter Of Application For Beneficial Water Use Permit No. 43C 30007297 by Dee Deaterly* (DNRC Final Order), *affirmed other grounds, Dee Deaterly v. DNRC* , Cause No. 2007-186, Montana First Judicial District, *Order Nunc Pro Tunc on Petition for Judicial Review* (2009); *Worden v. Alexander* (1939), 108 Mont. 208, 90 P.2d 160; *Allen v. Petrick* (1924), 69 Mont. 373, 222 P. 451; *In the Matter of Application for Beneficial Water Use Permit No. 41S-105823 by French* (DNRC Final Order 2000).

74. Amount of water to be diverted must be shown precisely. *Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, 3 (2011) (citing *BRPA v. Siebel*, 2005 MT 60, and rejecting Applicant's argument that it be allowed to appropriate 800 acre-feet when a typical year would require 200-300 acre-feet).

75. It is the Applicant's burden to produce the required evidence. *Bostwick Properties, Inc. v. DNRC*, 2013 MT 48, ¶ 22, 369 Mont. 150, 296 P.3d 1154 ("issuance of the water permit itself does not become a clear, legal duty until [the applicant] proves, by a preponderance of the evidence, that the required criteria have been satisfied"); *Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 7; *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005); *see also Royston; Ciotti*.

76. Applicant proposes to use water for multiple domestic and lawn and garden which are recognized beneficial uses. Section 85-2-102(5), MCA. Applicant has proven by a preponderance of the evidence multiple domestic and lawn and garden is a beneficial use and that 21.72 AF of diverted volume and the permitted flow rate of 101.0 GPM is the amount needed to sustain the beneficial use. Section 85-2-311(1)(d), MCA. (FOF 44-50)

POSSESSORY INTEREST

77. Pursuant to § 85-2-311(1)(e), MCA, an Applicant must prove by a preponderance of the evidence that it has a possessory interest or the written consent of the person with the possessory interest in the property where the water is to be put to beneficial use, or if the proposed use has a point of diversion, conveyance, or place of use on national forest system lands, the Applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water under the permit.

78. Pursuant to ARM 36.12.1802:

(1) An Applicant or a representative shall sign the application affidavit to affirm the following:

(a) the statements on the application and all information submitted with the application are true and correct and

(b) except in cases of an instream flow application, or where the application is for sale, rental, distribution, or is a municipal use, or in any other context in which water is being supplied to another and it is clear that the ultimate user will not accept the supply without consenting to the use of water on the user's place of use, the Applicant has possessory interest in the property where the water is to be put to beneficial use or has the written consent of the person having the possessory interest.

(2) If a representative of the Applicant signs the application form affidavit, the representative shall state the relationship of the representative to the Applicant on the form, such as president of the corporation, and provide documentation that establishes the authority of the representative to sign the application, such as a copy of a power of attorney.

(3) The department may require a copy of the written consent of the person having the possessory interest.

79. The Applicant has proven by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. Section 85-2-311(1)(e), MCA. (FOF 51)

### **PRELIMINARY DETERMINATION**

Subject to the terms, analysis, and conditions in this Order, the Department preliminarily determines that this Application for Beneficial Water Use Permit No. 76LJ 30171747 should be granted in modified form.

The Department determines the Applicant may divert groundwater at a flow rate of 101.0 GPM up to 21.72 AF annually by means of a production well (GWIC ID 331034) drilled to a depth of 714.0 feet BGS, from January 1<sup>st</sup> to December 31<sup>st</sup> for multiple domestic use, and from April 15<sup>th</sup> to October 15<sup>th</sup> to irrigate lawn and garden. The Applicant may use up to 2.24 AF annually for multiple domestic use by eight households and up to 19.48 AF to irrigate 10.0 acres of lawn and garden. The point of diversion is in the NWSWNE of Section 17, Township 27N, Range 20W, Flathead County, Montana. The place of use is located in the N2SWNE of Section 17, Township 27N, Range 20W, Flathead County, Montana.

The provisional permit will be subject to the following condition upon issuance:

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED IN-LINE FLOW METER AT A POINT IN THE DELIVERY LINE APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY JANUARY 31 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR UNTIL A FORM 617 PROJECT COMPLETION NOTICE IS SUBMITTED. FAILURE TO SUBMIT RECORDS MAY BE CAUSE FOR REVOCATION OF THE PERMIT. THE RECORDS MUST BE SENT TO THE KALISPELL REGIONAL WATER RESOURCES OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

**NOTICE**

The Department will provide notice of opportunity for public comment on this application and the Department's Draft Preliminary Determination to Grant in Modified Form pursuant to § 85-2-307, MCA. The Department will set a deadline for public comments to this application pursuant to §§ 85-2-307, and -308, MCA. If this application receives public comment pursuant to § 85-2-307(4), the Department shall consider the public comments, respond to the public comments, and issue a preliminary determination to grant the application, grant the application in modified form, or deny the application. If no public comments are received pursuant to § 85-2-307(4), MCA, the Department's preliminary determination will be adopted as the final determination.

DATED this 5 day of May, 2026.



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James Ferch, Manager  
Kalispell Regional Office  
Montana Department of Natural Resources and  
Conservation

**CERTIFICATE OF SERVICE**

This certifies that a true and correct copy of the DRAFT PRELIMINARY DETERMINATION TO GRANT IN MODIFIED FORM was served upon all parties listed below on this 5 day of May, 2026, by first class United States mail.

RJM PROPERTIES LLC  
1191 MAJESTIC VIEW LN  
KALISPELL MT 59901-1814

\*\*\*\*\*

VIA EMAIL:  
CORE WATER CONSULTING  
MIKEL SIEMENS, PE



---

ABIGAIL WILLIAMS  
Kalispell Regional Office, (406) 752-2288



## Technical Analyses Report/ Scientific Credibility Review

- Departmental Technical Analyses Report/ Scientific Credibility Review
- Any correspondence relating to the Technical Analyses Report

# Technical Analyses Report / Scientific Credibility Review



## Groundwater Permit Technical Analyses Report - Part A

### Department of Natural Resources and Conservation (DNRC)

#### Water Resources Division

Kim Bolhuis, Groundwater Hydrologist, Water Sciences Bureau (WSB)

<b>Application No.</b>	76LJ 30171747	<b>Point of Diversion Legal Land Description</b>	Sec 17, Township 27 North, Range 20 West
<b>Applicant</b>	RJM Properties LLC		

### Overview

This report is Part A of a two-part publication which analyzes data submitted by the Applicant in support of the above-mentioned water right application. This report provides technical analyses as required under the Administrative Rules of Montana (ARM) 36.12.1303 in support of the water rights criteria assessment as required in §85-2-311, Montana Code Annotated (MCA). For applications in closed basins, this report fulfills the requirements of MCA 85-2-361.

This Groundwater Permit Technical Analyses Report – Part A contains the following sections:

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## 1.0 Executive Summary

### Application Details

The Applicant proposes to divert groundwater from one well, from January 1 through December 31 for multiple domestic use and from April 15 through October 15 for lawn and garden irrigation. The Applicant requests 2.24 acre-feet (AF) for the multiple domestic use and 19.48 AF for lawn and garden irrigation of 10.0 acres.

### Approved Variances from ARM 36.12.121

Variances for aquifer testing requirements ARM 36.12.121(3)(a)(b)(f)(g) were granted by the Kalispell Regional Office on December 26, 2024. The variances were recommended for granting as the departure from the listed requirements would not interfere with the successful analysis of the provided aquifer test data from the Production Well for aquifer characteristics.

### WSB Technical Findings

Based on information submitted, the WSB estimated aquifer properties, evaluated the production well(s) available water column, quantified the water available in the source aquifer, and evaluated potential impacts to existing groundwater and surface water rights. These technical analyses are in support of the following criteria assessment: adequacy of diversion, physical availability, and adverse effect. A summary of WSB findings described in subsequent sections are listed below.

### TECHNICAL ANALYSES FINDINGS

<b>AQUIFER TEST ANALYSIS</b>	Aquifer test analysis of the Production Well resulted in a Transmissivity (T) of 3,432.8 ft <sup>2</sup> /day using the Cooper-Jacob (1946) confined solution. No Storativity (S) was estimated.
<b>ADEQUACY OF DIVERSION</b>	Using the Theis solution, a T = 3,432.8 ft <sup>2</sup> /day from the aquifer test analysis on the Production Well, an S = 5.2 x 10 <sup>-4</sup> from Rose et al (2022), and the monthly pumping schedule identified in <b>Table 4</b> , the Production Well would experience 90.6 feet (ft) of drawdown after the first year, leaving approximately 611.1 ft of available water column above the open bottom of the well.
<b>PHYSICAL AVAILABILITY</b>	Physical availability was modeled using a T = 15,862 ft <sup>2</sup> /day and S = 1.4 x 10 <sup>-4</sup> , which are both the geometric mean T and S values from nearby aquifer tests. The model predicted the 0.01-foot drawdown contour, or zone of influence (ZOI), occurs 122,255 ft from the Applicant’s well. However, the radius of the ZOI exceeds the regional flow boundaries of the Deep Alluvial Aquifer, therefore, the ZOI was truncated by the Flathead River, Flathead Lake, and contacts with bordering bedrock. The width of the truncated ZOI is 33,680 ft. Groundwater flux through the



	ZOI is equal to 4,476 AF/year. There are 387 active groundwater rights completed within the ZOI that need to be evaluated as a legal demand.
<b>ADVERSE EFFECT (DRAWDOWN IN EXISTING WELLS)</b>	After five years, assuming the well is pumped according to the schedule identified in <b>Table 4</b> , zero groundwater rights in the source aquifer are predicted to experience drawdown equal to or greater than one foot ( <b>Appendix A</b> ).
<b>ADVERSE EFFECT (NET DEPLETION TO SURFACE WATER)</b>	The Flathead River and Flathead Lake are identified as being regionally hydraulically connected to the source aquifer. Monthly net depletions resulting from the proposed use of groundwater are normalized, as identified in <b>Table 1</b> . The starting point of net depletions is identified in <b>Figure 10</b> .

**Table 1:** Total consumed volume and net depletion to surface water for the Production Well.

Month	Lawn & Garden Consumed Volume (AF)	Domestic Consumed Volume (AF)	Total Consumed Volume (AF)	Flathead Lake Depletions (AF)	Flathead River Depletions (AF)	Flathead Lake Net Depletions (gpm)	Flathead River Net Depletions (gpm)
January	0.0	0.02	0.02	0.65	0.52	4.7	3.8
February	0.0	0.02	0.02	0.58	0.47	4.7	3.8
March	0.0	0.02	0.02	0.65	0.52	4.7	3.8
April	0.3	0.02	0.27	0.63	0.51	4.7	3.8
May	1.8	0.02	1.74	0.65	0.52	4.7	3.8
June	2.6	0.02	2.64	0.63	0.51	4.7	3.8
July	3.8	0.02	3.86	0.65	0.52	4.7	3.8
August	3.5	0.02	3.48	0.65	0.52	4.7	3.8
September	1.7	0.02	1.65	0.63	0.51	4.7	3.8
October	0.0	0.02	0.07	0.65	0.52	4.7	3.8
November	0.0	0.02	0.02	0.63	0.51	4.7	3.8
December	0.0	0.02	0.02	0.65	0.52	4.7	3.8
<b>Total</b>	<b>13.6</b>	<b>0.2</b>	<b>13.8</b>	<b>7.6</b>	<b>6.2</b>		

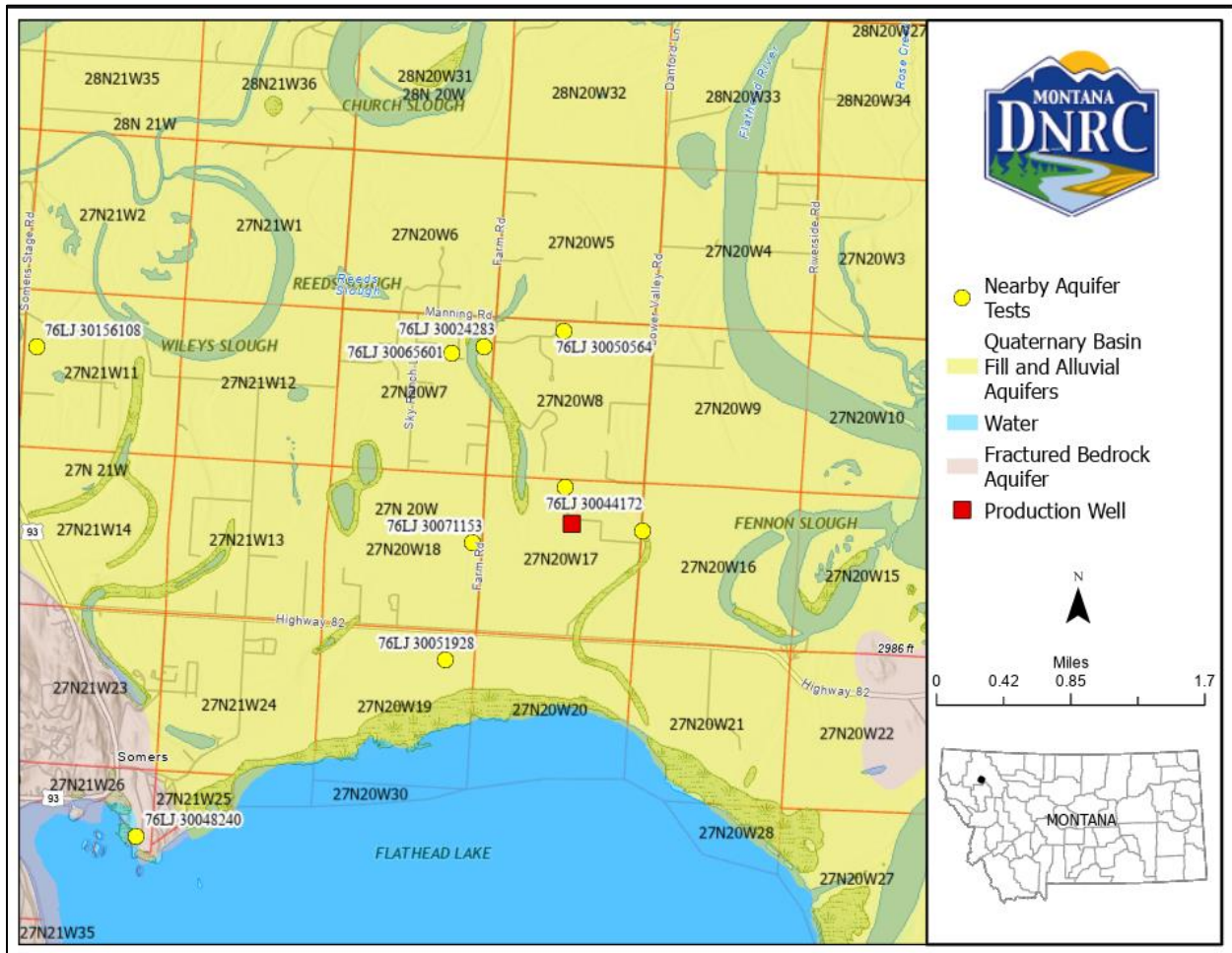
## 2.0 Hydrogeologic Setting

As identified in **Figure 1**, the Production Well (GWIC ID [331034](#)) is completed in a confined aquifer system (Rose et al, 2022). The Production Well is 714 ft deep below ground surface (bgs) and completed with an open-ended bottom.



The Flathead Valley, located in northwestern Montana, lies in the structural feature of the Rocky Mountain Trench. The Valley is bounded by the bedrock from the Salish Mountains to the West and the Swan Range to the East. Tertiary sediments, comprised of mudstone, sandstone, and conglomerate, outcrop in only a few areas around the Valley and are presumed to overlay the deep bedrock of the Valley (Smith, 2004a). The Montana Bureau of Mines and Geology (MBMG) completed a deep (1,600 foot) well in the tertiary sediments to confirm their presence below the Valley's aquifer system and to aquifer test the materials. The aquifer test on the Tertiary sediments resulted in very low storage and transmissivity values, indicating that the sediments do not contribute to groundwater flow in the Flathead Valley (Bobst et al, 2022). The Deep Alluvial Aquifer is the most prolific aquifer in the Flathead Valley and the majority of wells within the Valley draw water from the Deep Aquifer (Rose et al, 2022). The Deep Aquifer is comprised of coarse-grained gravels and sands with very little fine sediments (Smith, 2004a). The Deep Aquifer ranges from about 360 ft thick to 800 ft thick or greater (Bobst et al, 2022). Overlying the Deep Aquifer is a laterally discontinuous confining unit composed of lacustrine silts and clays with some thin strings of sand or gravel (Smith, 2004). The confining unit is thickest and most continuous near the area of the Applicant's well, with the thickness between 300 ft to 600 ft (Smith, 2004). Lastly, overlying the confining unit is the shallow alluvial aquifer. This shallow alluvium overlies most of the Valley and has few wells completed within it. It ranges in thickness from 200 ft thick in the center of the Valley to less than 50 ft thick at the margins (Smith, 2004).

Typically, the Deep Aquifer has a high transmissivity, ranging from 100 ft<sup>2</sup>/day to 100,000 ft<sup>2</sup>/day, with many wells showing a transmissivity around 30,000 ft<sup>2</sup>/day (Rose et al, 2022). Near the edges of the Flathead Valley, the confining unit is less laterally continuous, allowing for direct hydraulic connection between the Deep Aquifer and the shallow aquifer (Berglund et al, 2024; Rose et al, 2022). Groundwater flows from the margins of the valley toward the center to merge with the overall southern flow toward Flathead Lake. A groundwater model by Waren (1989) and work by LaFave et al. (2004) suggests that the Deep Aquifer responds as a single connected system and not as a group of separate aquifers. LaFave et al. (2004) and Berglund et al. (2023) conclude that large amounts of recharge enter the groundwater flow system from the margins of the valley adjacent to the Mission Mountain Range and Swan Mountain Range where the confining unit is absent or thin. In the area near the Production Well, the shallow aquifer is thin to non-existent (Smith, 2004) and the fine-grained lacustrine unit, ranging from 300 ft to 600 ft thick (Smith, 2004), largely inhibiting vertical flow between the aquifers.



**Figure 1:** Map of the Applicant's aquifer test location and other nearby aquifer tests.

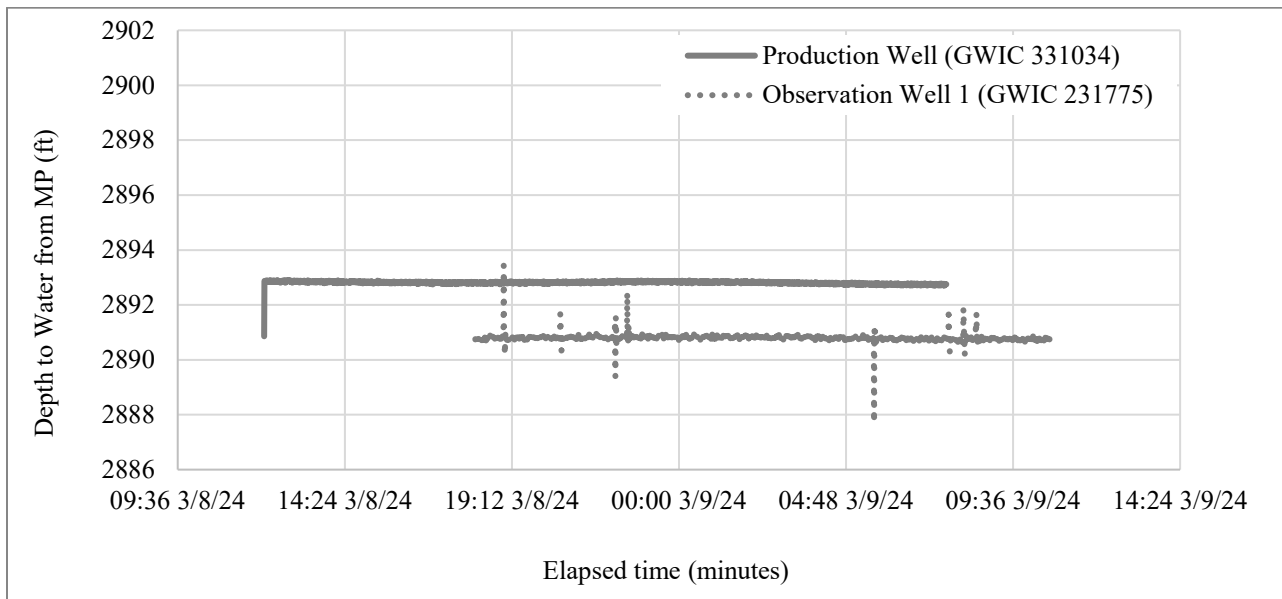
### 3.0 Aquifer Test Summary

#### Field Methods and Equipment

A 24-hour aquifer test was conducted on the Production Well, GWIC ID 331034. Water levels during the aquifer test were collected using In-Situ Level Logger datalogger in the Production Well and Observation Well (GWIC ID 231775). The Observation Well is 330 ft northeast of the Production Well and completed in the same source aquifer as the Production Well. The discharge was measured with a McCrometer 4" Flow Meter. A plot of drawdown and recovery data is provided in **Figure 3**.

#### Background Data

Background groundwater levels were monitored in the Production and Observation Wells for 19 hours starting on March 8, 2024, and ending on March 9, 2024. As identified in **Figure 2**, the Production and Observation Well background water levels had an increasing trend with a slope of  $9 \times 10^{-5}$  ft/ft, indicating a slightly increasing trend in water level over time.



**Figure 2:** Background data for Production and Observation Wells in the Deep Aquifer prior to pumping test (GWIC IDs labeled in legend).

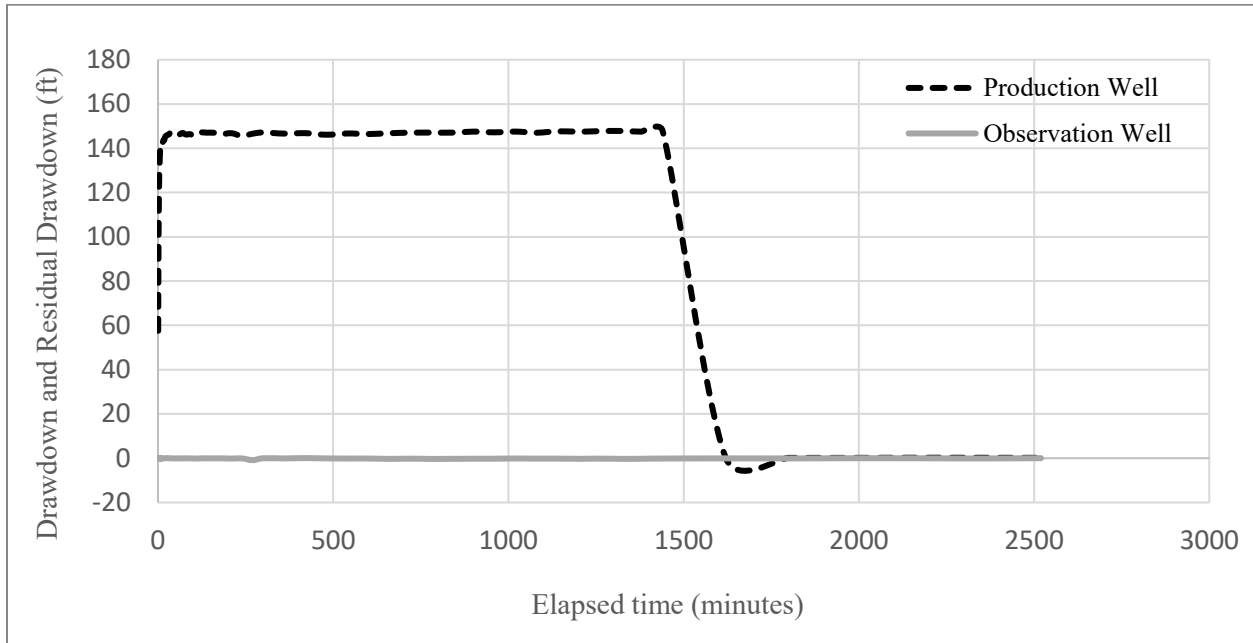
### Drawdown Data

The 24-hour aquifer test started on March 10, 2024, at 10:41 A.M. on the Production Well and is considered ( $t = 0$ ) for the computation of drawdown. The test started with a discharge of 144.0 gpm. After the first 10 minutes the rate was held constant for the remainder of the test at an average rate of 101.0 gpm. The maximum drawdown in the Production Well was 148.57 ft below the static water level (swl) of 12.25 ft below top of casing (btc) leaving approximately 553.18 ft of available water column above the bottom of the Production Well.

The Observation Well was pumped during the test for independent uses, which caused fluctuations in drawdown and recovery that were not associated with the aquifer test on the Production Well. Additionally, the drawdown observed in the Observation Well during testing was small, with a maximum drawdown of 0.16 ft below the top of the casing (btc). As such, the Observation Well data was not used to estimate aquifer properties

### Recovery Data

Recovery groundwater level data were monitored for 20 hours in the Production and Observation Wells from March 10, 2024, through March 11, 2024. At the end of the recovery period the Production and Observation Wells were 0.18 ft and 0.08 ft from pre-test static water levels, respectively.



**Figure 3:** Drawdown and recovery data for the 24-hour aquifer test on the Production Well and Observation Well.

## 4.0 Aquifer Test Analysis

### Methods

The DNRC utilized AQTESOLV® (HydroSOLVE, Inc., 2007) to analyze drawdown data from the aquifer test and obtain estimates of aquifer properties. Aquifer properties were used in forward modeling to evaluate the available water column in the well, quantity of water available in the source aquifer, and potential impacts to groundwater and surface water rights. AQTESOLV® is an analytical modeling software that uses image well theory and the principle of superposition to simulate aquifer stress tests. Drawdown data and measured flow rates from the aquifer test, and the spatial location of each well are input into the model. Using this compilation of data, aquifer properties including Transmissivity (T) and Storativity (S) are identified based on a best-fit visual and statistical match between the observed and theoretical drawdown data.

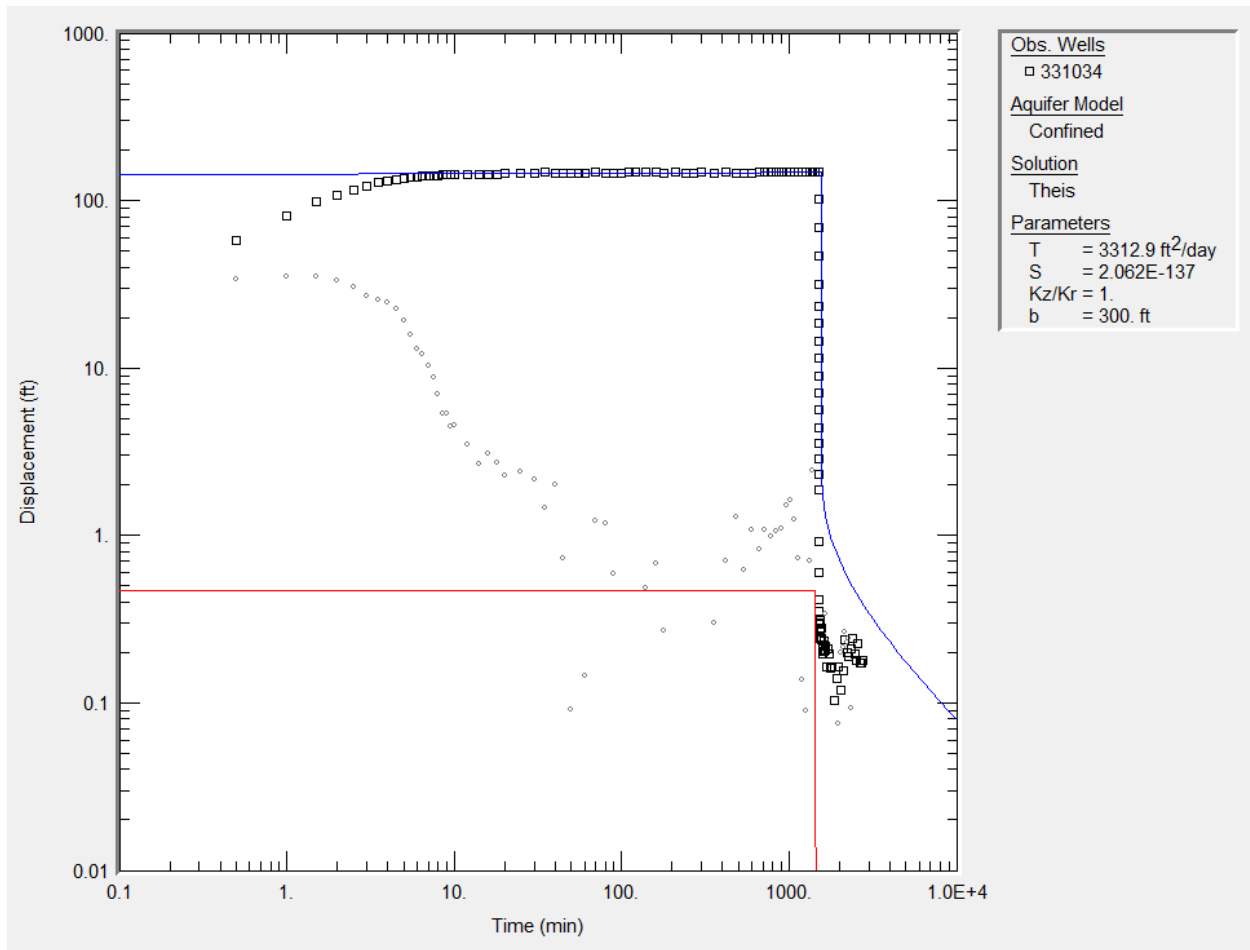
### Analyses

Analytical groundwater solutions were matched to Production Well drawdown data to generate estimates of aquifer properties for the source aquifer. As identified in **Figures 4 and 5**, theoretical AQTESOLV® predicted derivative (red line) were compared to the calculated derivative from the observed drawdown (black triangles) and predicted drawdown (blue line) compared to the observed drawdown (black squares).

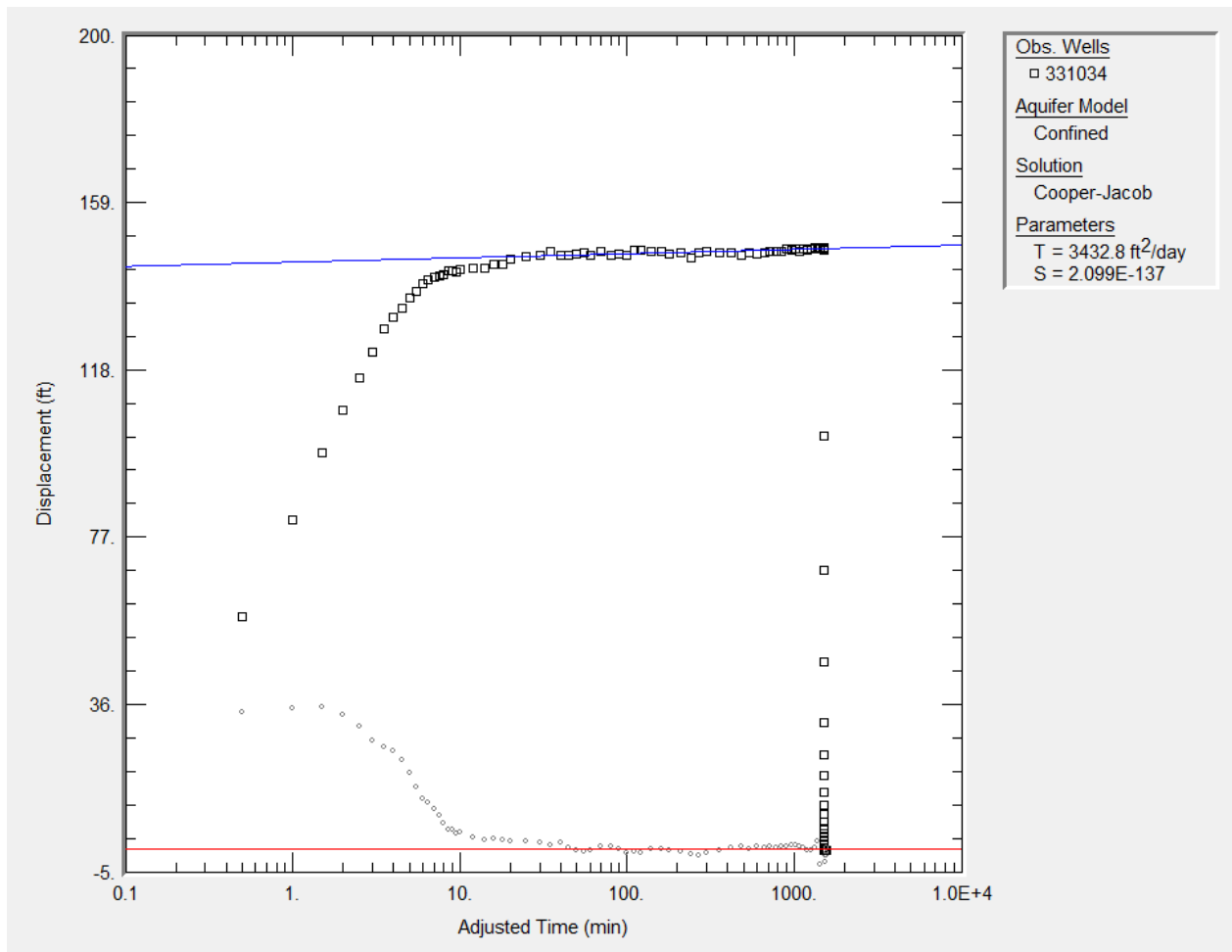
The Theis (1935) confined solution is illustrated in **Figure 4**. The solution is considered a good fit to the drawdown data; however, the predicted derivative curve does not closely match the observed derivatives of the drawdown data. **Figure 5** illustrates the Cooper-Jacob (1946)



confined solution fit to the mid- to late-time data from the 24-hr aquifer test. The solution is considered a better fit to the data given the hydrogeologic framework of the confined aquifer and the good fit of the estimated derivative curve to the observed derivatives of the drawdown data. The observed derivatives of the drawdown data stabilize at mid- to late-time, indicating that infinite-acting radial flow to the well was achieved during the aquifer test on the Production Well. Storativity cannot be estimated from an aquifer test analysis on pumping wells.



**Figure 4:** Theis (1935) confined drawdown and derivative analysis for the Production Well.



**Figure 5:** Cooper-Jacob (1946) drawdown and derivative analysis for the Production Well.

**Table 2:** Aquifer test synopsis for Production Well. No storativity is given due to the analysis being conducted solely on the Production Well.

Aquifer Test Phase	Test Length (hr)	Well (GWIC ID)	Analysis Solution	Transmissivity (ft <sup>2</sup> /day)
Production Well, Pumping	24	331034	Cooper-Jacob (1946)	3,432.8
Production Well, Pumping	24	331034	Theis (1935)	3312.9

**Aquifer Property Comparison**

An analysis of aquifer tests in the Deep Alluvial Aquifer by Rose et al. (2022) provides a T range of 36 ft<sup>2</sup>/day to 98,172 ft<sup>2</sup>/day and S range of 10<sup>-6</sup> to 0.39. Nearby aquifer properties derived from



aquifer tests for water right applications within two miles of Application No. 76LJ 30171747 are shown in **Table 3**.

**Table 3:** Nearby aquifer tests associated with water right applications. Note: T = Transmissivity. S = Storativity. All wells are completed in the Deep Alluvial Aquifer.

Water Right Number	Distance from Production Well (mi)	Volume (AF)	Rate (gpm)	Duration (hr)	Depth (ft bgs)	T (ft <sup>2</sup> /d)	S (-)
76LJ 30065601	1.3	42.84	60	25	301	17,200	3.3x10 <sup>-5</sup>
76LJ 30071153	0.6	607.9	485	168	717 (BFF1)	35,000	3.6x10 <sup>-4</sup>
76LJ 30024283	1.3	49.1	65	24	640	28,946	2.6x10 <sup>-4</sup>
76LJ 30051928	1.2	209.17	313.1	72	760	5,278	3.0x10 <sup>-5</sup>
<b>Geometric Mean</b>						<b>15,862</b>	<b>1.4 x10<sup>-4</sup></b>

The recommended T and S values to be used in forward modeling the criterion for Adequacy of Diversion are 3,432.8 ft<sup>2</sup>/day, from the Production Well aquifer test analysis, and 5.2 x 10<sup>-4</sup> derived from a nearby aquifer test conducted in 2022 by MBMG (Rose et al, 2022) on a well of similar depth located 3,391 ft from the Production Well. These values represent the local aquifer properties immediately around the Production Well.

The recommended aquifer T and S values to be used in forward modeling of the criteria Physical Availability and Adverse Effect are 15,862 ft<sup>2</sup>/day and 1.4 x 10<sup>-4</sup>, respectively. These values are the geometric mean T and S values identified in **Table 3** and are more representative of regional aquifer characteristics.

### 5.0 Adequacy of Diversion Analysis

An evaluation of the potentially available water column remaining in the Production Well is modeled using T = 3,432.8 ft<sup>2</sup>/day from the Cooper-Jacob (1946) solution to the Production Well analysis and S = 5.2 x 10<sup>-4</sup> from Rose et al (2022). Predicted theoretical drawdown for the proposed well is modeled for the period of diversion using the monthly pumping schedule identified in **Table 4**. The Applicant requests 21.6 AF, of which 19.48 AF was apportioned from April through October according to the monthly percent of the total net irrigation requirement calculated for the Creston Station listed in the Irrigation Water Requirement (IWR) program



(NRCS, 2003). 2.24 AF of multiple domestic volume was apportioned January through December based on days in the month.

**Table 4:** Assumed monthly pumping schedule for the Production Well.

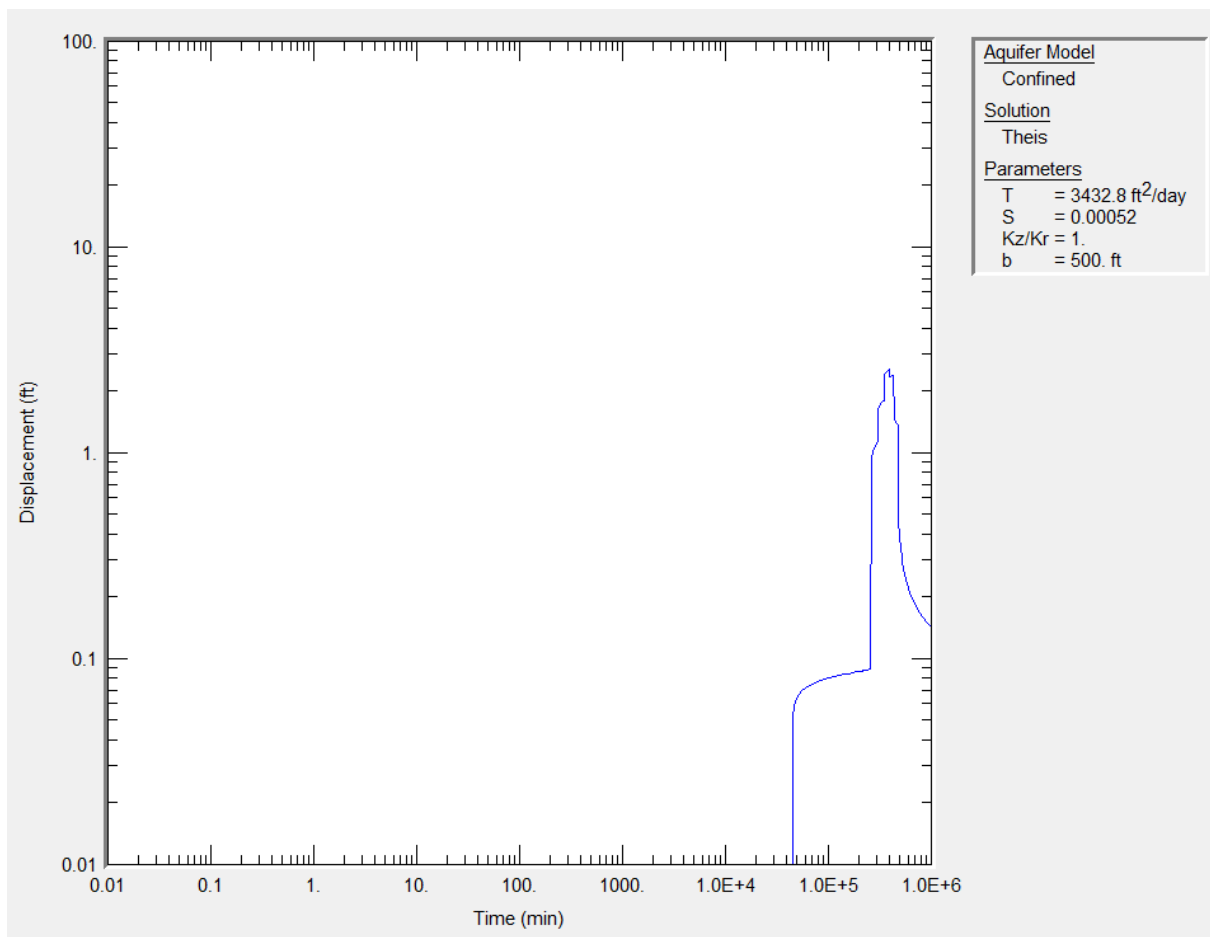
Month	IWR, Creston (in)	Lawn and Garden Irrigation Diverted Volume (AF)	Multiple Domestic Diverted Volume (AF)	Total Diverted Flow Rate (gpm)
January	0.0	0.0	0.2	1.4
February	0.0	0.0	0.2	1.4
March	0.0	0.0	0.2	1.4
April	0.3	0.4	0.2	4.0
May	2.1	2.5	0.2	19.4
June	3.1	3.7	0.2	28.7
July	4.6	5.5	0.2	41.5
August	4.2	5.0	0.2	37.5
September	2.0	2.4	0.2	18.4
October	0.1	0.1	0.2	1.9
November	0.0	0.0	0.2	1.4
December	0.0	0.0	0.2	1.4
<b>Total</b>	<b>16.4</b>	<b>19.5</b>	<b>2.2</b>	

As identified in **Table 5**, total drawdown is the sum of interference drawdown and predicted drawdown with well loss. Only one well is proposed, as such no interference drawdown was calculated. Well loss is calculated by dividing the predicted theoretical maximum drawdown by a well efficiency value. Well efficiency is calculated by dividing the modeled maximum drawdown for the aquifer test by the maximum observed drawdown of the aquifer test. The aquifer adjacent to the proposed well would experience a predicted total drawdown of 90.6 ft at the end of the first year (**Figure 6**). The remaining available water column for the proposed well is 611.1 ft and is equal to the available drawdown above the bottom of the well minus total drawdown.



**Table 5:** Remaining available water column for the Production Well.

Drawdown Estimate	Proposed Well
Total Depth at Bottom of Perforated Interval (feet)	714.0
Pre-Test Static Water Level (feet btc)	12.3
Available Drawdown Above Bottom of Well (feet)	701.8
Observed Drawdown of Aquifer Test (feet)	148.6
Modeled Drawdown Using Mean Aquifer Test Rate (feet)	4.2
Well Efficiency (%)	2.8
Predicted Theoretical Maximum Drawdown (feet)	2.6
Predicted Drawdown with Well Loss (feet)	90.6
Interference Drawdown (feet)	0.0
Total Drawdown (feet)	90.6
<b>Remaining Available Water Column (feet)</b>	<b>611.1</b>



**Figure 6:** Theis (1935) drawdown plot at the end of the first year of the assumed monthly pumping schedule.



## 6.0 Physical Availability Analysis

An evaluation of groundwater availability in the source aquifer for the purpose of evaluating physical and legal availability was done by calculating groundwater flux through a zone of influence (ZOI) corresponding to the 0.01-foot drawdown contour. A distance-drawdown plot was generated using the Theis (1935) confined solution, a constant pumping rate of 13.4 gpm for the period of diversion, a  $T = 15,862 \text{ ft}^2/\text{day}$ , and  $S = 1.4 \times 10^{-4}$ . The normalized pumping rate required to produce the requested annual volume is 13.4 gpm. According to **Figure 7**, the 0.01-foot drawdown contour occurs 248,311 ft from the Applicant's well.

The 0.01-foot contour estimated from **Figure 7** would result in a ZOI that far exceeds the boundaries of the Deep Alluvial Aquifer. Instead, the 0.01-foot drawdown contour was truncated, as identified in **Figure 8**, to the edge of Flathead Lake and to the Flathead River. Additionally, the drawdown contour is further truncated by the bedrock from the bounding mountain blocks, illustrated in **Figure 8**. The direction of groundwater flow is predominantly to the south (Lafave, 2004, Rose et al, 2022), as such the width of the ZOI that is perpendicular to groundwater flow equals 33,680 ft. Given the irregular shape of the ZOI, the width was measured at the widest point in order to give a conservative measurement of flux. [Appendix A](#) is a list of the 387 groundwater rights in the Flathead Valley that need to be evaluated as a legal demand. The calculation for groundwater flux (Q) through the delineated area is given by Eq. 1 and is  $534,232 \text{ ft}^3/\text{day}$  or 4,476 AF/year:

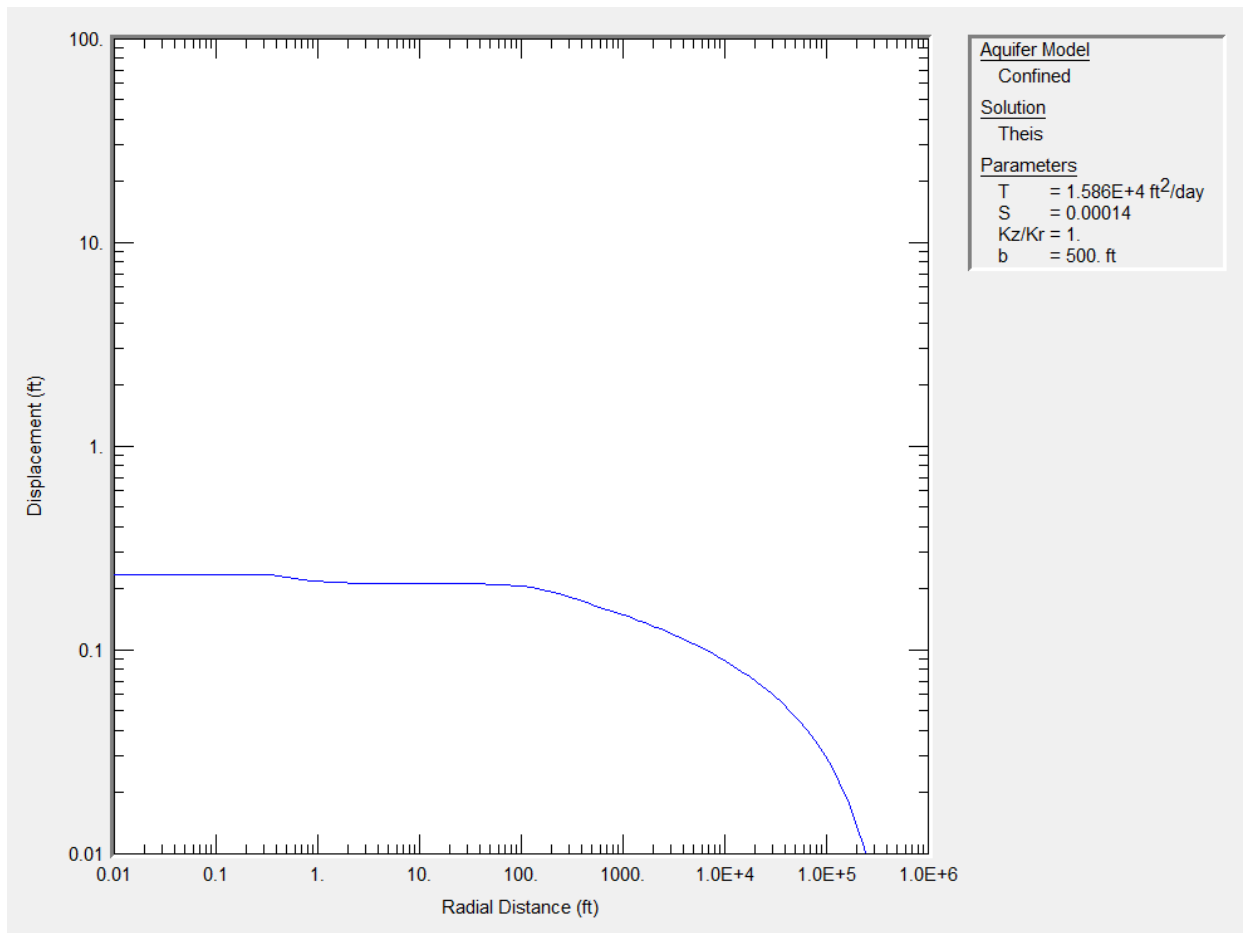
$$Q = TWi$$

where:

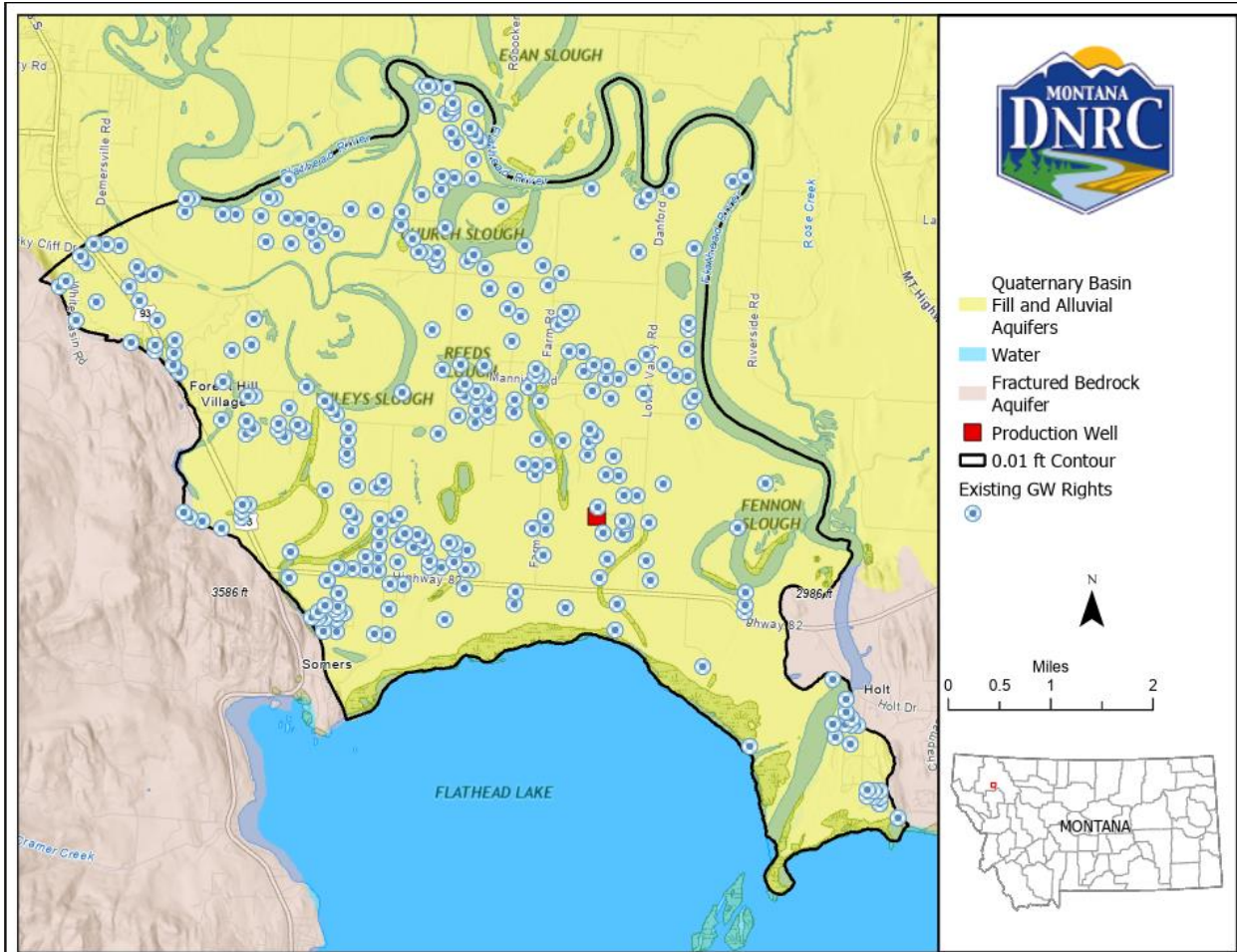
T = Transmissivity =  $15,862 \text{ ft}^2/\text{day}$

W = Width of Zone of Influence = 33,680 ft

i = Groundwater Gradient (from Berglund et al, 2024) = 0.001 ft/ft.



**Figure 7:** Theis (1935) distance-drawdown plot for one year of pumping proposed well at 13.4 gpm showing the 0.01-foot contour for physical availability analysis.



**Figure 8:** 0.01-foot drawdown contour interval Permit No. 76LJ 30171747.

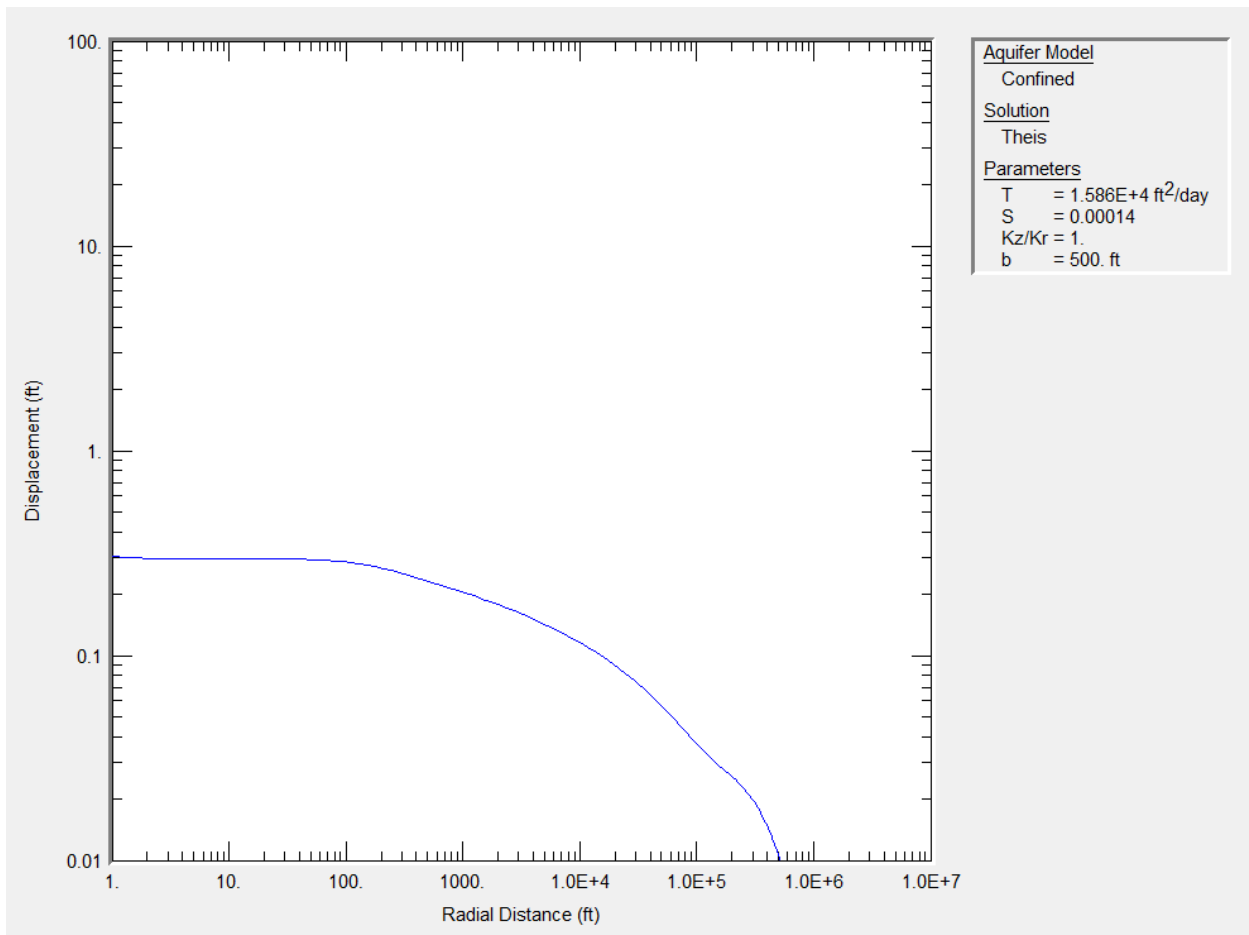
## 7.0 Adverse Effect Analysis

Using the Applicant’s proposed pump schedule and associated annual volume, potential impacts to existing water rights is evaluated by modeling drawdown in nearby wells and net depletions to surface water(s).

### 7.1 Groundwater - Drawdown in Existing Wells

The drawdown in existing Deep Aquifer wells was modeled for proposed conditions using the following inputs: Neuman-Witherspoon (1969) solution, a T value equal to 15,862 ft<sup>2</sup>/day, S= 1.4x10<sup>-4</sup>, and the monthly pumping schedule identified in **Table 4** for a period of five years. The drawdown is the largest at the end of the fifth July using the proposed pumping schedule.

As identified in **Figure 9**, the maximum modeled drawdown is 0.31 ft at the end of the fifth year, as such zero water rights are predicted to experience drawdown equal to or greater than one foot.



**Figure 9:** Theis (1935) distance-drawdown plot at the end of July of the fifth year of the assumed monthly pumping schedule.

## 7.2 Surface Water - Net Depletion

Net depletion is equal to consumption for a proposed groundwater use and is described as the calculated volume, rate, timing, and location of reductions to surface water that are offset by return flows (non-consumed water). Net depletion is evaluated by 1.) quantifying the consumed volume associated with the proposed use; 2.) identifying hydraulically connected surface waters; and 3.) calculating the monthly rate and timing of net depletions to affected surface water(s).

### 1. Consumed Volume

Consumed groundwater does not return to the source aquifer. Consumed volume depends on the proposed use and its associated percentage of known consumption. Depletion is assumed to be equivalent to consumption on an annual basis unless return flows do not accrete to the potentially affected surface water.

Monthly consumption for irrigation can be calculated using irrigation efficiency values or the net irrigation requirement calculated using the USDA Natural Resources Conservation Service (NRCS) IWR program with inputs consistent with DNRC consumptive use rules in ARM 36.12.1902.



Monthly consumption for irrigation of turf grass (lawns) is based on the net irrigation requirement from IWR with the following inputs for pasture grass and sprinkler irrigation:

- dry year
- have IWR re-calculate start and end date using default temperature
- 1-inch net irrigation application
- 0.25-inches of carryover moisture at the beginning and end of growing season.

Consumption for domestic or institutional purposes listed in **Table 6** are based on the results of studies by Kimsey and Flood (1987), Vanslyke and Simpson (1974), and Paul, Poeter, and Laws (2007).

**Table 6:** Percent consumption for domestic use by wastewater disposal/treatment method.

Wastewater Treatment/Disposal	Consumed
Individual drainfields	10%
Central treatment facility with minimal consumption	5%
Evaporation basin or land application	100%

For the subject application, the proposed use includes lawn and garden irrigation and multiple domestic (individual drainfields) purposes. Following DNRC standards, annual net irrigation water requirement for turf grass is estimated to be 16.4 in based on the Creston Station listed in the IWR program (NRCS, 2003). Irrigation consumed volume for 10 irrigated acres is equal to 13.6 AF. Multiple domestic use would be 10% consumptive, as such 0.2 AF would be consumed. A total of 13.8 AF will be consumed (**Table 1**).

## 2. Hydraulically Connected Surface Water(s)

Net depletions to surface water depend on propagation of drawdown to locations where surface water is hydraulically connected to groundwater, the hydraulic properties of an aquifer, and is not a function of groundwater flow rate or direction (Theis, 1938; Leake, 2011). Hydraulic connection depends on the depth to groundwater beneath the beds of surface waters and can vary along a reach and with time of year. Drawdown from pumping can propagate through the entire thickness of the confining layer to overlying aquifers or surface waters (Konikow and Neuzil, 2007).

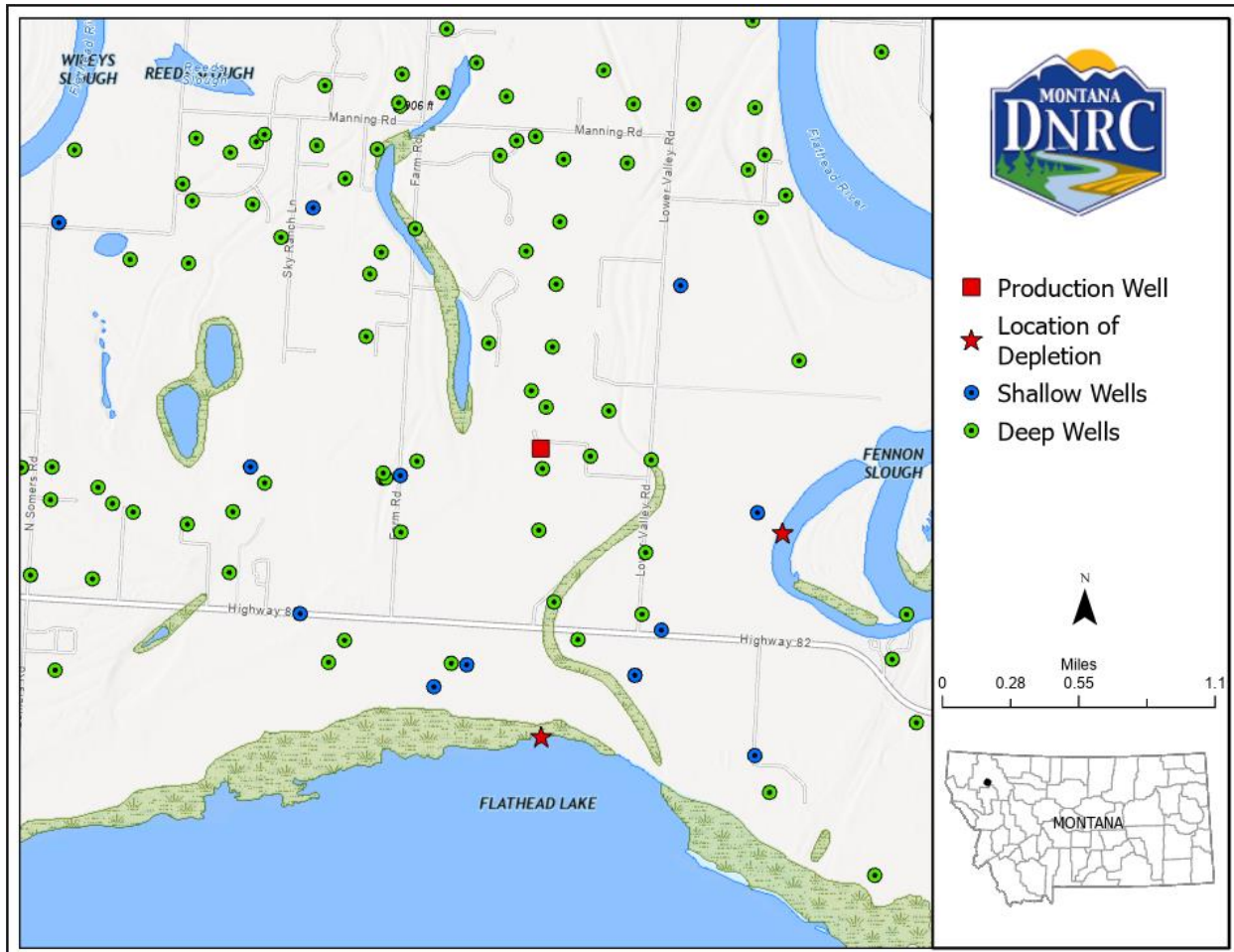
Per DNRC (2018) hydraulic connection of individual stream reaches to ground water is evaluated by comparing streambed elevations to static ground water elevations measured in wells less than 50 ft deep and within 1,000 ft of surface water or from published water table maps. Surface water within that area is considered hydraulically connected to the unconfined aquifer if static ground water elevations are above or within 10 ft of the elevation of the stream bed.

The surface water sources considered for depletions are the Flathead River and Flathead Lake and Ashley Creek (**Figure 10**). The source aquifer for the Production Well is the Deep Alluvial Aquifer of the Flathead Valley, separated from the shallow alluvial aquifer and surface waters by



a thick (greater than 200 ft), continuous lacustrine layer composed of silts, clays, and fine sands (Rose, 2022; Lafave, 2004; Smith, 2004). Rose et al (2022) indicates that the area near the Applicant's well shows an upward gradient from the Deep Alluvial Aquifer. This finding is supported and illustrated in **Figure 10**, where wells completed in the Deep Alluvial Aquifer (green dots) have static water levels of 13 ft bgs or less, compared to shallow aquifer wells (blue dots) that are less than 50 ft deep bgs and have static water levels of 10 ft bgs or less. The similar static water levels reported for these deep and shallow wells are indicative of an upward gradient, suggesting regional discharge from the Deep Alluvial Aquifer to the Flathead River and Flathead Lake, agreeing with Rose et al (2022). The propagation of drawdown, and therefore net depletions, would be normalized over time as net depletions from drawdown propagate through the lacustrine layer.

Ashley Creek appears to be largely disconnected from the Deep Alluvial Aquifer as it flows over the Flathead Valley, evidenced by a thick and continuous confining unit and a shallow alluvial aquifer that is less than 100 ft thick (Smith, 2004). The confining unit in the area of Ashley Creek as it flows away from the Salish Mountains and farther into the Flathead Valley often directly overlies bedrock at the valley margin and thickens towards the center of the valley (Smith, 2004). Ashley Creek is hydraulically connected to the shallow alluvial aquifer within the ZOI, shown by groundwater wells GWIC IDs 176905 and 80850. The presence of bedrock and the confining unit would preclude a regional connection between the shallow alluvial aquifer and the Deep Alluvial Aquifer in this area, and therefore preclude a connection between Ashley Creek and the Deep Alluvial Aquifer.



**Figure 10:** Location of net depletion Permit Application No. 76LJ 30171747. The green points, labeled Deep Wells, indicate wells that are completed in the Deep Alluvial Aquifer but have shallow (<15 ft btc) static water levels. The blue points, labeled Shallow Aquifer Wells, are wells that are completed to a depth of 50 ft deep or less and have static water levels of 10 ft btc or less. The green areas on the map are wetlands.

### 3. Rate and Timing of Depletions

Evaluations of the rate and timing of depletions caused by pumping are based on the basic concept that groundwater pumping eventually is offset by an equivalent increase in recharge or decrease in discharge (Theis, 1940; Leake et al., 2008), a process defined as capture by Lohman (1972). Capture occurs as drawdown propagates to surface water and areas of phreatophyte vegetation (areas of groundwater discharge) that takes water directly from groundwater. In the absence of credible evidence to the contrary, capture of ET by phreatophytes is neglected and net depletion is assumed to equal total capture. This assumption is justified because published estimates for conditions common in Montana alluvial valleys indicate capture of ET generally is less than 10 percent of total capture (Xunhong, 2006). Capture of ET in ephemeral drainages may be significant and will be evaluated on an application-by-application basis.



The rate and timing of net depletion caused by pumping may be modeled using a variety of analytical and numerical models selected to fit site-specific conditions and needs. Simple models including the Alluvial Water Accounting System (AWAS) and the Well Pumping Depletion Model (WPDM) typically are used by DNRC to model depletions to one source with simple aquifer boundaries. Adjustments may be made for more complex conditions or multiple sources using methods like those described by Contor (2011), analytical models by Hunt (2003) and Butler et al. (2001) or a superposition numerical groundwater flow model.

Modeling is not necessary in some situations such as where a proposed use is constant year-round because of the depth to the source aquifer and the distance to potentially affected stream reaches. Modeling of depletions can be simplified if the proposed place of use is located the same relative distance from the potentially affected surface water as the proposed wells and all non-consumed water infiltrates the source aquifer and returns to the potentially affected surface water as return flows. Under those simplifying assumptions, depletion can be modeled based on withdrawal of the monthly consumed amounts. Otherwise, depletion by the full withdrawals and return flows need to be modeled separately with net depletion calculated as depletion minus return flows.

The proposed use is year-round with most of the consumed volume occurring during the irrigation season. However, the Production Well is completed within the Deep Aquifer, and therefore the timing of net depletions would be constant year-round. Following the inverse distance weighted method described in DNRC (2019) and Section 3.2 of a guidance document developed by the Province of British Columbia (2016), the Flathead River and Flathead Lake are assigned 45% and 55% of depletions, respectively. Depletions to the Flathead River and Flathead Lake, identified in **Table 1**, would be 6.2 AF and 7.6 AF annually, respectively. The rate of net depletions to the Flathead River and Flathead Lake would be between 3.9 gpm and 4.8 gpm, respectively.



## Review

This document has been reviewed on February 6, 2026 in accordance with Category 7 of [DNRC's Water Sciences Bureau Minimum Standards of Review](#), Version 2, February 2024.

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## Appendix A: Groundwater Rights within Area of Potential Impact

Water Right Number	Water Right Owner(s)
76LJ 30047082	ALICIA M HOLLIS; DANIEL HOLLIS
76LJ 30029988	MILL CREEK HOMEOWNERS ASSOCIATION
76LJ 30114011	JILL L MEADE; MICHAEL MEADE
76LJ 30164421	TRAILS END ASSET MANAGEMENT LLC
76LJ 60265 00	TRAILS END ASSET MANAGEMENT LLC
76LJ 23498 00	DONALD E DEMARS
76LJ 61939 00	ROCKY MOUNTAIN RECREATIONAL COMMUNITIES
76LJ 40645 00	CROP HAIL MANAGEMENT INC
76LJ 1187 00	ROCKY MOUNTAIN RECREATIONAL COMMUNITIES
76LJ 30147635	DIANE H NICHOLS; JAMES K NICHOLS
76LJ 30121028	ELTON O BRENDSEL; MAYDA E BRENDSEL
76LJ 30118424	LORNA J STEEVES; TIMOTHY C STEEVES
76LJ 30119459	PANISSIDI, STEPHEN AND KAREN FAMILY TRUST
76LJ 67900 00	WRIGHT, RUTH W REVOCABLE LIVING TRUST
76LJ 78557 00	DOUGLAS P STOBER
76LJ 106725 00	CRAIG B FRY
76LJ 109416 00	CHERIE T HANSEN
76LJ 14855 00	CHERIE T HANSEN
76LJ 30120684	ROBERT D KEENAN; SUSAN T KEENAN
76LJ 46118 00	MAYPORT HARBOR HOMEOWNERS ASSN
76LJ 61044 00	MARY D BOWD; WILLIAM G BOWD
76LJ 30044075	LESLIE R GUZOWSKI
76LJ 108307 00	JEANETTE O BRIEN; MICHAEL O O BRIEN
76LJ 54392 00	MARY D BOWD; WILLIAM G BOWD
76LJ 164767 00	HENRY OLDENBURG
76LJ 30103410	RUSTY HENDRICKSON
76LJ 30113020	DAVID L KURFESS; LINDA KELLEY KURFESS
76LJ 30113021	DAVID L KURFESS; LINDA KELLEY KURFESS
76LJ 70085 00	VALERIE A GOSS
76LJ 164726 00	SOMERS SCHOOL DISTRICT #29
76LJ 73023 00	JUDITH D PALMER
76LJ 81572 00	JUDITH D PALMER
76LJ 47794 00	RANDY D MORKEN; ROBERTA A MORKEN; STACEE A MORKEN; DAVID C STRASDIN; LESLIE A SVETICH
76LJ 30109427	DAVID L KURFESS; LINDA KELLEY KURFESS
76LJ 36892 00	AL FISCHER; MANIALLA FISCHER
76LJ 30046421	JOHN HELKE
76LJ 89245 00	BULS, MEGAN M FAMILY TRUST
76LJ 59336 00	ROBERT R KINKEL; TABITHA L KINKEL



76LJ 65055 00	LARALEE K ATCHLEY; SCOTT E ATCHLEY
76LJ 30134492	MAUREEN C JOUSKEY
76LJ 26947 00	NEIL E DOTEN
76LJ 30104490	GAYLE MASON; STEPHEN L MASON
76LJ 30152510	BRENDA M OST; ROBERT E OST
76LJ 106754 00	TRINITY J SANDLIN
76LJ 30042041	DAVID D BRADLEY; MICHELE E BRADLEY
76LJ 32861 00	GERALD H BREVIK; LINDA E BREVIK
76LJ 90142 00	JAMES H EASTMAN; NANCY R EASTMAN
76LJ 8860 00	BRYANT BACH; JENNIFER BACH
76LJ 54395 00	JONATHAN D ALLEN
76LJ 30014949	DAVID A PHILIPS
76LJ 29522 00	DAVID A PHILIPS
76LJ 29523 00	DAVID A PHILIPS
76LJ 30050713	LARALEE K ATCHLEY
76LJ 30005288	MICHAEL HOSKINS; STEPHANIE HOSKINS
76LJ 30108257	GERALD H BREVIK; LINDA E BREVIK
76LJ 30051928	KLEINHANS FARM ESTATES LLC
76LJ 64246 00	JOE M MORKEN
76LJ 32707 00	TAMMY M HANSEN
76LJ 30020682	KIRA POWELL; RORY TRIMBO
76LJ 30016493	JACOBS, JOSHUA & TREINA FAM REV INTER-VIVOS TRUST
76LJ 103256 00	AMY E HILLEBOE
76LJ 88574 00	TAMMY M HANSEN
76LJ 11484 00	EKLUND, SCOTT M & CARRIE L LIVING TRUST
76LJ 103255 00	AMY E HILLEBOE
76LJ 69731 00	AMY E HILLEBOE
76LJ 101213 00	JACOBS, JOSHUA & TREINA FAM REV INTER-VIVOS TRUST
76LJ 30108256	DEBRA A SAVIK; LON L SAVIK
76LJ 30108255	CHRISTINA BREVIK; MARK S BREVIK
76LJ 46495 00	LINDSAY WHEELER; SETH WHEELER
76LJ 101165 00	MICHELE M REYES
76LJ 30066671	TREWEEK, ELOISE S REVOCABLE INTER VIVOS TRUST
76LJ 31241 00	GUSTAV J VERCRUYSSSEN
76LJ 22953 00	JOHN A LEVY; DEBORAH S YARBOROUGH
76LJ 109325 00	LYLE STAPLETON
76LJ 30018831	LANDIS, RAYMOND FAMILY TRUST
76LJ 40471 00	BRANDON MIDDLETON; PAULA K MIDDLETON
76LJ 30029187	BETSY L SMITH; GREGORY W SMITH
76LJ 75021 00	CAROL A ASK; LAWRENCE H ASK
76LJ 30013204	GL SUNSHINE TRUST
76LJ 95184 00	GL SUNSHINE TRUST
76LJ 95903 00	LESTER L GUGLER; NORA LOU GUGLER
76LJ 30069002	35 LINCOLN LLC
76LJ 30044062	KENNETH A MADSEN; RITA L MADSEN
76LJ 108153 00	WTI GROUP LLC
76LJ 50017 00	IDA E NELSON



76LJ 50016 00	BRUCE A NELSON; JUANITA M NELSON
76LJ 85330 00	BRENDA CLARK; JOE CLARK
76LJ 30007983	BRUCE A NELSON; JUANITA M NELSON
76LJ 30106799	HARD ROCK HOLDINGS LLC
76LJ 30027762	BRATT FAMILY TRUST
76LJ 95857 00	DAVID J THOMAS
76LJ 65679 00	JOHN R BURGESS; SHARON L BURGESS
76LJ 69743 00	CLARK, LEVI WILLIAM SPECIAL NEEDS TRUST
76LJ 30108963	SHAWN C KRAUSS
76LJ 30005489	MICHAEL J BOWERMAN; SARETTA O BOWERMAN; DAVID GRIFFITH; MARGARET GRIFFITH
76LJ 30162489	JACK A BOWERMAN; MARGIE S BOWERMAN
76LJ 91058 00	DANIEL B BOON; JAN M BOON
76LJ 95221 00	STEFAN VON TRAPP
76LJ 30020924	CLAIRE W SHAFFER; GREGORY R SHAFFER
76LJ 30136071	TAMARA L GARRISON; WILLIAM A GARRISON
76LJ 30105765	SUE A COBIANCO; THOMAS J COBIANCO
76LJ 30021080	DEBRA A BIRKS; PHILLIP D BIRKS; CATHLYN S SULLIVAN; JAIME S SULLIVAN
76LJ 30161678	CATHLYN S SULLIVAN; JAIME S SULLIVAN
76LJ 58548 00	JASON A MESSER; MANDY M POTTS-MESSER
76LJ 91055 00	GRETA C CARSTEN; TERENCE N CARSTEN; JASON A MESSER; MANDY M POTTS-MESSER
76LJ 94471 00	CLAIRE W SHAFFER; GREGORY R SHAFFER
76LJ 88660 00	DONALD F PANGBURN
76LJ 30155914	JUANITA PATRICK; SEAN PATRICK
76LJ 30045966	HOLTHOUSE, EDWARD J REVOCABLE TRUST; HOLTHOUSE, JUDITH M REVOCABLE TRUST
76LJ 30045115	JAMES E MATHIASON; PEGGY L MATHIASON
76LJ 4214 00	PAUL F BEARD; CAROL BEATTY; MARSHALL BEATTY; CAROL MITCH; KARL OEHRMAN
76LJ 30020354	SCHABEL FAMILY TRUST
76LJ 30029424	BRUYER ARNIE & CAROL REVOCABLE TRUST
76LJ 30028711	DAVID D HAYES; DEBORAH K HAYES
76LJ 30114863	JAMI R BRAY
76LJ 30049300	BRITTANY SHANAHAN; MIKE SHANAHAN
76LJ 30052526	PAUL BEARD
76LJ 30062874	CAROL MITCH; KARL OEHRMAN
76LJ 30117698	CHRISTINE ZIMMERMAN; WAYNE ZIMMERMAN
76LJ 30153176	LANA L GARDNER; MICHAEL G GARDNER
76LJ 30004335	ALETHEIA FELLOWSHIP
76LJ 30112077	DALE L OLSON
76LJ 109694 00	STEPHEN MADSEN
76LJ 30071153	BIGFORK COUNTY WATER & SEWER DIST
76LJ 105458 00	BIGFORK COUNTY WATER & SEWER DIST
76LJ 30008715	ALTENBURG FAMILY LLC
76LJ 30103882	SOWERWINE FARM LLC
76LJ 30103881	SOWERWINE FARM LLC
76LJ 30020631	MILTON A CLAROS



76LJ 30021280	GERALD L EDMONDSON; KELLY JUMP EDMONDSON
76LJ 30022141	DEBRA BARNETT; SOMEDAY ADVENTURES LLC
76LJ 30021304	DAVID R WHITLOW
76LJ 113108 00	SADIE HUTTER; JERRY SULLIVAN
76LJ 40307 00	PACIFIC POWER & LIGHT CO
76LJ 103234 00	FLATHEAD ELECTRIC COOPERATIVE INC
76LJ 64199 00	CHRISTINE A OSLER; RYAN OSLER
76LJ 30112093	RURAL OPPORTUNITIES PROJECT
76LJ 54213 00	RURAL OPPORTUNITIES PROJECT
76LJ 30158608	BRIAN HEBERT; KRISTI HEBERT
76LJ 30023769	SAMANTHA GASH; DAVID C GILDER
76LJ 164732 00	LARRY E ANDERSON; WENDY S ANDERSON
76LJ 30110479	STEPHEN MADSEN
76LJ 99743 00	LORETTA TUNSTALL; GARY VASSALLO
76LJ 30072712	LAYNE MASSIE
76LJ 148712 00	BOXCAR HOLDINGS LLC; GEORGE E SHRYOCK; JOHN E SHRYOCK
76LJ 30163952	DAVID C MILLS; STEPHANIE D MILLS
76LJ 30164296	RYAN WANTAJA; SARAH WANTAJA
76LJ 30164294	GWENDOLYN J NORTON; ROBERT E NORTON
76LJ 30046292	RYAN WANTAJA
76LJ 30163620	RODNEY MACFARLANE; TIA MACFARLANE
76LJ 30163717	JOHN B CASEY; STEPHANIE CASEY
76LJ 4393 00	CYNTHIA M CAUDILL; RICKY J CAUDILL
76LJ 30106242	WOOD PROPERTIES LLC
76LJ 98272 00	SANDRA BLAYDEN; CHRIS W SORENSEN
76LJ 30151280	NORTON, BRIAN L REVOCABLE TRUST
76LJ 67752 00	LAKESIDE COUNTY WATER AND SEWER DISTRICT
76LJ 75018 00	LEAHY FAMILY TRUST
76LJ 30003520	ALEXANDRA KOLOSOV; LYUDMILA KOLOSOV
76LJ 30048432	1359 LARKIN LLC
76LJ 40285 00	JON SCOTT; JULIE SCOTT
76LJ 30072952	BRENDA WOLL; PETE WOLL
76LJ 30229 00	JULIE GARDNER; TRACY A GARDNER; DENISE INCORONATO; ISSAC P INCORONATO; RONALD D INCORONATO
76LJ 30012464	ROY D THAGGARD; VITA H THAGGARD
76LJ 30016472	BERRY, ED & VAL FAMILY TRUST
76LJ 30121800	SHANNON SCHLOTHAUER
76LJ 30122024	EMILIE DEMPSEY; TANNER DEMPSEY
76LJ 30149121	BIG LAKE ENTERPRISES LLC
76LJ 30131334	JANELLE EK; THOMAS EK
76LJ 30154129	KAY FAMILY TRUST
76LJ 30155961	GARRETT EDINGER; TASHINA JONES
76LJ 30108889	KIRK FAMILY LIVING TRUST
76LJ 30063775	BRIAN MCKOY; CHELSEA MCKOY
76LJ 30108115	BRADLEY W SHULL; KATHRYN L SHULL
76LJ 30152509	ANDREA UNDERHILL; LUKE UNDERHILL
76LJ 30152508	JONATHAN F MAHRT; KIRSTIN D MAHRT



76LJ 30020644	CHRISTINA FARRIER; JOHN FARRIER
76LJ 97213 00	ABIGAIL MCDIVITT; BRIAN MCDIVITT
76LJ 30102828	JKGATES FAMLY TRUST
76LJ 97282 00	JULIE F HEATON; RUSSELL V HEATON
76LJ 106776 00	SOMERS MEADOWS
76LJ 30102731	DEBRA SOUKUP
76LJ 112956 00	ANN M DRISKELL; JAMES T DRISKELL
76LJ 113031 00	STANLEY V BUCKLAND; VIRGINIA R BUCKLAND
76LJ 30006545	DONNA L EARLEY; FRED D EARLEY
76LJ 30154490	LAURA L HINES; STEVEN S HINES
76LJ 55814 00	C JEAN HUNTSMAN
76LJ 30119742	BARBARA R LAKE
76LJ 30052206	MILES LEARN; TINA LEARN
76LJ 30162289	CINDY L BASNETT; JEFFERY B BASNETT
76LJ 30162287	RYAN L HUNTSMAN
76LJ 30162301	RICHARD D HUNTSMAN
76LJ 30162152	DANIEL W TIPTON; JENNIFER M TIPTON
76LJ 111233 00	MATTHEW A MONEN
76LJ 30125763	EDWARD S EK; MARY E EK
76LJ 93108 00	CHAD M SMITH; MELISSA K SMITH
76LJ 30163669	SCOTT A HARRISON
76LJ 34966 00	JAMES A HOLLENSTEINER
76LJ 11799 00	TAMARA I FLOTRE; TIMOTHY W FLOTRE; HOMETOWN ESTATES LLC
76LJ 30107349	DENISE NISSON; DOUGLASS NISSON
76LJ 30113200	TRAVIS W BRUYER
76LJ 30071115	THOMAS D MANZ
76LJ 30017300	ALAN V NELSON; NEDDA L NELSON
76LJ 30117108	BERNSTEIN, LESLIE LIVING TRUST
76LJ 65001 00	SCHNIEDERS, WILLIAM H FAMILY TRUST
76LJ 30064479	WILLIAM C PAULLIN
76LJ 30064209	SKY RANCH WATER ASSOCIATION CO
76LJ 30026281	CARLISLE, FRANK AND CLAUDIA LIVING TRUST
76LJ 30018369	GRACIE M HAMMER; MATTHEW D HAMMER
76LJ 30162266	ALEX SCHLEGEL
76LJ 75397 00	ROBBINS, DEAN A REVOCABLE TRUST
76LJ 30124206	JASON WOJCIECHOWSKI
76LJ 62064 00	HD FAMILY IRREVOCABLE TRUST
76LJ 30113178	ORI LIVING TRUST
76LJ 30024283	SKY RANCH ADDITION
76LJ 64258 00	ROBBINS, DEAN A REVOCABLE TRUST
76LJ 30029478	ROBBINS, DEAN A REVOCABLE TRUST
76LJ 30008735	JOSHUA S GWYNN; STACY R GWYNN
76LJ 30048395	MEGAN PETERSEN; RYAN PETERSEN
76LJ 30047945	DALE ARNST; MARYANN ARNST
76LJ 30051865	CORNE FAMILY TRUST
76LJ 30156108	BEVERLY-ELAINE ETZLER
76LJ 36810 00	JBR LLC



76LJ 30016103	CRAIG D FAIRCLOUGH; DEBORAH C FAIRCLOUGH
76LJ 55840 00	DARLENE K LOWERY
76LJ 30123723	FICKEN, FLORINE J TRUST; FICKEN, HENRY L TRUST
76LJ 30123736	FICKEN, FLORINE J TRUST; FICKEN, HENRY L TRUST
76LJ 30123722	FICKEN, FLORINE J TRUST; FICKEN, HENRY L TRUST
76LJ 30123721	FICKEN, FLORINE J TRUST; FICKEN, HENRY L TRUST
76LJ 30066925	DARIEN I VANCE; MARK A VANCE
76LJ 30024063	CAROLE A MIELKE; MILTON A MIELKE
76LJ 30050564	PHEASANT HAVEN HOMEOWNERS ASSN INC
76LJ 26952 00	BROSTEN FARMS LLC
76LJ 30064296	ALYSSA LASSINGER; BRETT LASSINGER
76LJ 30158997	JASMANN, SUSAN FAMILY REVOC INTER VIVOS TRUST
76LJ 30158998	THOMAS M BASS
76LJ 30159000	THOMAS M BASS
76LJ 67272 00	JASON MAHLEN; LEE ANNE MAHLEN
76LJ 30065868	DAWN M ANDERSON; RICKEY J ANDERSON
76LJ 30104947	DARRECK A BUCHER; KAIELLEN BUCHER
76LJ 30013861	RONALD A GAYLORD; TERESA A GAYLORD
76LJ 30020490	LINDSEY 2004 TRUST
76LJ 30026965	DOUGLAS H WHITE; TERESA M WHITE
76LJ 40151 00	MARY L WARNER
76LJ 30041718	JEFF R WISHER
76LJ 72099 00	HUBBARD, THOMAS FAMILY TRUST
76LJ 30013828	ANNIE F MARRINAN
76LJ 30051319	CORINNE DAKEN; KIRT DAKEN
76LJ 35701 00	LOWELL C FREDERICK
76LJ 26686 00	PAUL J BERGER; WILD WEST MOTORS
76LJ 73517 00	CAROL J OBERNDORFER; KENNETH W OBERNDORFER
76LJ 30010242	SHAUN SIMONSON
76LJ 30047907	JOAN BAUMAN; JOHN MCPHERSON
76LJ 30007843	CUMMINGS, SUSAN O'CONNELL LIVING TRUST
76LJ 30044993	GARY S FRIBERG
76LJ 30164470	CATHERINE CAMPBELL
76LJ 30110582	MONTANA PROPERTIES INC
76LJ 30065601	SKYVIEW DEVELOPMENT LLC
76LJ 30005597	HOLLI GEMBALA; RANDY GEMBALA
76LJ 100410 00	JOSEPH F DALEY; WARREN DREW; JKM HOLDINGS LLC; GRAHAM P MATTHEWS; MONTANA WEST DEVELOPMENT LLC; JOHN L MULFORD; THOMAS J MULFORD; PATRICK OMER; GORDON W ZUEHLSORFF; IRENE P ZUEHLSORFF
76LJ 43889 00	MONTANA MOTOR POOL LLC
76LJ 30150627	KAYLA WARBURTON; TYLER C WARBURTON
76LJ 30125642	DANFORD LIVING TRUST
76LJ 74515 00	SABEY, DAVID A AND SANDRA L LIVING TRUST
76LJ 76970 00	CATES INVESTMENTS LLC
76LJ 30067930	BISHOP FAMILY TRUST
76LJ 30067932	BRANDY A HEINO; BRIAN W HEINO
76LJ 30107219	PATRICIA A COLLINS; THOMAS M COLLINS



76LJ 30046420	BERNADETTE NICKOL
76LJ 103996 00	WEBER, MINDY S REVOCABLE TRUST
76LJ 87688 00	OURSLAND, JAMES P TRUST
76LJ 30153336	WILD WEST PLUMBING, HEATING & DRAIN SERVICE LLC
76LJ 30002127	CRAIG S JOHNSON; JESSICA L JOHNSON
76LJ 30126956	SANDERS, DARLENE FAMILY TRUST
76LJ 30126955	SANDERS, DARLENE FAMILY TRUST
76LJ 90130 00	WILLIAM S BEYER
76LJ 89166 00	MARJORIE O GARDNER; WILLIAM A GARDNER
76LJ 56452 00	CATES INVESTMENTS LLC
76LJ 32549 00	BERNADINE OCONNELL
76LJ 30658 00	MICHAEL B BLAIR; SUSAN R BLAIR; RAGAN FAMILY II LLC
76LJ 30067706	MICHAEL B BLAIR; SUSAN R BLAIR
76LJ 30049729	MONTANA US 93 LLC
76LJ 50593 00	BIG SKY INDUSTRIAL PARK LLC; FARM INDUSTRIAL INC
76LJ 30126958	SANDERS, DARLENE FAMILY TRUST
76LJ 30126957	SANDERS, DARLENE FAMILY TRUST
76LJ 77443 00	DEBRA PARKINSON; ROBERT PARKINSON
76LJ 30020764	JOHN M GOROSKI
76LJ 30027408	CLEMENTA CAZAN; TRAIAN GERMAN
76LJ 30026349	DAVID L FRAME; PATRICIA S FRAME
76LJ 30148556	CUMMINGS, SUSAN O'CONNELL LIVING TRUST
76LJ 78105 00	FARM BOYS LLC; DAVID L FRAME; PATRICIA S FRAME; DEBRA PARKINSON; ROBERT PARKINSON
76LJ 30023185	BRAATEN FAMILY TRUST
76LJ 87571 00	MTKS PROPERTY LLC
76LJ 30163853	CLARK D KRANTZ
76LJ 30029915	FAYE M USKOSKI; RODNEY W USKOSKI
76LJ 30008957	RAIME J MOORE; TRAVIS J MOORE; FAYE M USKOSKI; RODNEY W USKOSKI
76LJ 77464 00	EVA M BRABENDER; WILLIAM E BRABENDER; WILLIS L BRABENDER; BARBARA H HUNT
76LJ 30071070	JACKI E USKOSKI; JERRID C USKOSKI
76LJ 63087 00	KYLE MILLER; SARAH MILLER
76LJ 109432 00	GIA THIEN GROUP LLC
76LJ 99842 00	JEFFREY S CUTHBERTSON; KIMBERLY A CUTHBERTSON
76LJ 74461 00	EMILY R HEINKE; BRYCE R HENKE
76LJ 30013689	RICHARD L CARPENTER; KALISPELL LIVESTOCK AUCTION
76LJ 51658 00	RICHARD W SIDERIUS
76LJ 76894 00	SNYDER, THOMAS & ATSUKO FAMILY LIVING TRUST
76LJ 57497 00	PLUMMER PROPERTIES LLC
76LJ 148676 00	211 AUCTION RD LLC
76LJ 30158822	TIMOTHY R BIRK
76LJ 30109437	MELANIE L CROSS; ANDREW J HURST
76LJ 59424 00	MELANIE L CROSS; ANDREW J HURST
76LJ 30149043	RANDY SCHMEUSSER
76LJ 30123664	MELANIE L CROSS; ANDREW J HURST
76LJ 77416 00	SARA A CLARK; MICHAEL C ST JEAN



76LJ 30072842	MARK D SETHRE; THERESA M SETHRE
76LJ 30064943	CRAIG L CHRISTOPHERSEN
76LJ 30119150	CRAIG L CHRISTOPHERSEN; JULIE A STETTER
76LJ 30014555	ROCKY CLIFF HOMEOWNERS ASSOCIATION
76LJ 30030158	FRANK J WIEFERICH; REXANNE WIEFERICH
76LJ 30048692	JULIA R HAUPT; ROBERT A HAUPT
76LJ 30112792	ARLYS A MOSER; JEFFREY L MOSER
76LJ 84110 00	O'CONNELL FARMS LIMITED PARTNERSHIP
76LJ 30148904	JAKE OYLER; KATIE OYLER
76LJ 30148903	JAKE OYLER; KATIE OYLER
76LJ 30012940	BROSTEN FARMS LLC
76LJ 30013802	JULIE A BIRK; TIMOTHY R BIRK
76LJ 30027293	KALISPELL, CITY OF
76LJ 30072750	DANIEL L HEMBD
76LJ 27417 00	MONTANA VENTURES PARTNERS
76LJ 124167 00	BN FLANAGIN REVOCABLE TRUST
76LJ 97230 00	BENEDICT MITCHELL TRUST
76LJ 30015903	MICHAEL P LUCHETTA
76LJ 30018802	TERI D BEATTY
76LJ 30163770	JASON D BEATTY
76LJ 30011033	1460 LOWER VALLEY RD LLC
76LJ 30013394	BRIAN J SCHMUTZ; CONNIE J SCHMUTZ
76LJ 93139 00	MOSER, JEFFREY L AND ARLYS A REVOCABLE TRUST
76LJ 88568 00	BRIAN M BROWN; TERESA M MCALLISTER
76LJ 30155316	BRIAN M BROWN; TERESA M MCALLISTER
76LJ 83818 00	ROBERT K STREIT; SANDRA K STREIT
76LJ 115147 00	DENNIS KRABILL; REBECCA KRABILL
76LJ 31472 00	MARY E HOLMAN
76LJ 30012670	JOY TRUNK
76LJ 147166 00	MOUNTAIN TRAVELER RANCH LLC
76LJ 55783 00	BRUCE H LOUDEN; CARRIE B LOUDEN; JANICE B LOUDEN; JOSHUA B LOUDEN
76LJ 70994 00	SENEY, DORIS B REVOCABLE LIVING TRUST
76LJ 122969 00	SENEY, DORIS B REVOCABLE LIVING TRUST
76LJ 30016298	LYNDA FRIED; TY FRIED
76LJ 30022894	ASHLEY HJORT; TRAVIS HJORT
76LJ 30103352	ASHLEY HJORT; TRAVIS HJORT
76LJ 71002 00	BRUCE H LOUDEN; KENNETH D LOUDEN
76LJ 30067678	RIVER PARK AT ASHLEY CREEK HOMEOWNERS ASSN INC
76LJ 9465 00	LOUDEN RIVERSIDE FARMS
76LJ 42567 00	BENJAMIN W LOUDEN
76LJ 30125643	DANFORD LIVING TRUST
76LJ 50030 00	CARMEN K PARKER; DON D PARKER
76LJ 50031 00	CARMEN K PARKER; DON D PARKER
76LJ 63061 00	CARMEN K PARKER; DON D PARKER
76LJ 106717 00	KELCY B BERRY; MARK A TUDAHL
76LJ 77460 00	WILLIAM G FREY
76LJ 113540 00	DANFORD LIVING TRUST



76LJ 30070687	ERICK R MOY; JAMI L MOY
76LJ 114572 00	O'CONNELL FARMS LIMITED PARTNERSHIP
76LJ 30149286	DENNIS F CARVER
76LJ 30158117	DALEN M IVERSON; KEVIN J IVERSON; ROXANNA G IVERSON
76LJ 111075 00	BRUCE H LOUDEN; KENNETH D LOUDEN
76LJ 85773 00	KELLIE FENDER; QUINTIN FENDER
76LJ 84221 00	PLOCKI FAMILY TRUST
76LJ 30156011	MITCHEL STEINBERG; STEINBERG, SUSAN K FAMILY REV INTER-VIVOS TRUST
76LJ 30156005	BROWN, PV REVOCABLE TRUST
76LJ 30020338	BAER LIVING TRUST
76LJ 30102804	JANELL I PLUMMER; JEREMY J PLUMMER
76LJ 30149399	ERIC M BROOKS; SHANNON B BROOKS
76LJ 111193 00	LINDA JACKSON; VERDELL JACKSON
76LJ 111191 00	LINDA JACKSON; VERDELL JACKSON
76LJ 30102780	LINDA JACKSON; VERDELL JACKSON
76LJ 30010881	JANELL I PLUMMER; JEREMY J PLUMMER
76LJ 30102802	CHERYL ANDERSON; SID J ANDERSON
76LJ 30045088	JUSTIN T BURT; MELANIE C BURT
76LJ 60191 00	LINDA JACKSON; VERDELL JACKSON
76LJ 111130 00	KELLER, BYRON C REVOCABLE TRUST; KELLER, NATALIE M REVOCABLE TRUST
76LJ 30066926	JEFFREY R PEDERSEN
76LJ 73605 00	ELMER M SIELER
76LJ 30111876	GARY R BRAY
76LJ 30047420	CRAIG WHITE; JAMIE WHITE
76LJ 114639 00	CRAIG WHITE; JAMIE WHITE
76LJ 30046696	OKESON, SCOTT L & KIMBERLY A FAMILY TRUST
76LJ 111076 00	KELLER, BYRON C REVOCABLE TRUST; KELLER, NATALIE M REVOCABLE TRUST
76LJ 33637 00	HOLLY CAVENDER; JOHN J CAVENDER
76LJ 31973 00	VICKI A ISBELL; GEORGE R MICHELS
76LJ 48868 00	USA (SMALL BUSINESS ADMINISTRATION)
76LJ 30164284	VOGT, DARCY S QUALIFIED MARITAL TRUST



**Groundwater Permit Technical Analyses Report- Part B**  
**Department of Natural Resources and Conservation (DNRC/ Department)**  
**Water Resources Division**

Abigail Williams, Water Resource Specialist, Kalispell Regional Office

Applicant	RJM Properties LLC
Application No.	76LJ 30171747
Proposed Point of Diversion	NWSWNE of Section 17, Township 27N, Range 20W, Flathead County, Montana.

**Overview**

This report is Part B of a two-part publication which analyzes data submitted by the Applicant in support of the above-mentioned water right application. This report provides technical analyses as required under the Administrative Rules of Montana (ARM) 36.12.1303 in support of the water rights criteria assessment as required in § 85-2-311, Montana Code Annotated (MCA). This Groundwater Permit Technical Analyses Report – Part B contains the following sections:

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**Variances** .....2

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**2.0 Surface Water Analysis of Depleted Surface Water** .....5

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## Variations

The Applicant requested variations from the following ARM requirements on September 8, 2025:

- i. ARM 36.12.121(3)(a) – Pumping must be maintained throughout the duration of the test. The rate may not depart from the average pumping rate by more than 5%.
  - a. The Department granted a variance from ARM 36.12.121(3)(a) because the DNRC Water Sciences Bureau (WSB) determined the deviations from the flow rate that were greater than 5% were short enough in duration that they would not affect the WSB’s analysis or modeling efforts.
- ii. ARM 36.12.121(3)(b) – The average pumping rate must be equal to or greater than the proposed flow rate if the application is for one well or if the total proposed rate for multiple wells can be obtained from a single well.
  - a. The Department determined that the Applicant’s request for a variance from this requirement was not warranted because the Applicant’s requested flow rate (101.0 GPM) is equal to the average pumping rate that was maintained during the aquifer test.
- iii. ARM 36.12.121(3)(f) – One or more observation wells must be completed in the same source aquifer as the proposed production well and close enough to the production well so that drawdown is measurable and far enough that well hydraulics do not affect the observation well.
  - a. The Applicant monitored the aquifer during their 24-hour aquifer test using an observation well that was appropriate to potentially record an aquifer response to pumping of the production well. The WSB determined that the Applicant’s observation well data was not usable for modeling aquifer properties because the observation well did not record a significant response to the pumping of the production well despite being completed an appropriate distance from, and in the same source aquifer as, the production well. However, the WSB found that the production well data was sufficient for modeling aquifer transmissivity, while a value from a nearby test (Rose et al, 2021) could be used for storativity. Therefore, the Department granted a variance from ARM 36.12.121(3)(f).
- iv. ARM 36.12.121(3)(g) – Background groundwater levels in the production well and observation well(s) must be monitored at frequent intervals for at least two days (48 hours) prior to beginning the aquifer test according to Form No. 633.



- a. The Department granted a variance from ARM 36.12.121(3)(g) because although the Applicant only monitored background groundwater levels for 19 hours prior to the beginning of the aquifer test, the background monitoring indicated no significant water table trend. The WSB determined that this shortened background groundwater level monitoring period would not affect their modeling or analysis efforts.

### 1.0 Application Details

The Applicant proposes to divert groundwater from January 1<sup>st</sup> to December 31<sup>st</sup> from the Flathead Deep Aquifer at a flow rate of 101.0 gallons per minute (GPM) up to 21.72 acre-feet (AF) of volume annually using a well (GWIC ID No. 331034). The applicant proposes to divert up to 2.24 AF of water per year for multiple domestic use from January 1<sup>st</sup> to December 31<sup>st</sup> (8 households) and up to 19.48 AF of water per year for irrigation of 10.0 acres of lawn and garden from April 15<sup>th</sup> to October 15<sup>th</sup>. The proposed point of diversion and places of use are presented in Table 1 and Figure 1.

**Table 1: Summary of the proposed use**

Source	Flow Rate (GPM)	Diverted Volume (AF)	Consumed Volume (AF)	Purpose	Period of Diversion	Place of Use	Point of Diversion
Groundwater: Flathead Deep Aquifer – Well (GWIC ID No. 331034)	101	2.24	0.2	Multiple Domestic (8 households)	01/01-12/31	N½SWNE of Section 17, Township 27N, Range 20W, Flathead County, Montana	NWSWNE of Section 17, Township 27N, Range 20W, Flathead County, Montana
		19.48	13.6	Lawn & Garden (10.0 acres)	04/15-10/15		
Total	101	21.72	13.8				

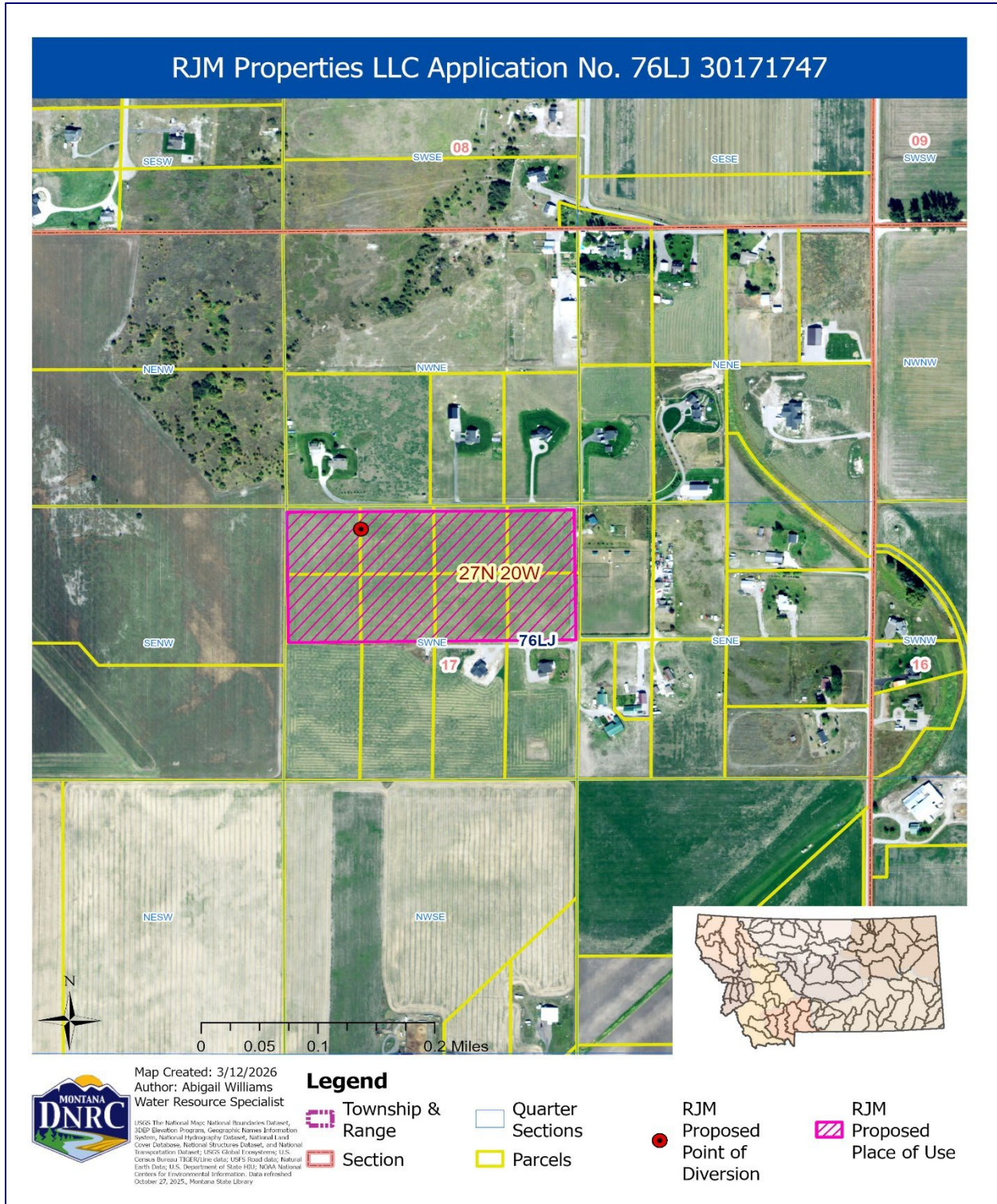


Figure 1: Map of the Applicant's proposed POD on the source and proposed place of use.



## 2.0 Surface Water Analysis of Depleted Surface Water

### 2.1 Source Description – Flathead River

*Part A of the Technical Analyses Report includes the Groundwater Analysis, which describes the methodologies used to identify the depleted surface water source and the location of net depletions on said source.*

**Depleted Source of Water:** Flathead River

**Depleted Source Type:** Perennial River

**Location of Depletions:** Flathead River, E½NWSE Section 16, Township 27N, Range 20W, Flathead County.

#### 2.1.1 Method of Estimation

**Gage Name:** Flathead River at Columbia Falls, MT

**Gage Number:** USGS Gaging Station No. 12363000

**Period of Record:** October 1951 to April 2025

**Why this gage is considered an appropriate data source:** USGS Gaging Station No. 12363000 is located approximately 34 miles upstream of the location of depletion (LOD) and is the nearest gage to the depleted reach of the Flathead River. The date range includes the entire period of record for this gage.

#### 2.1.2 Monthly Flow Rate and Volume

**Methodology:**

Physical availability of Flathead River water at the LOD will be quantified monthly. Department practice for physical availability analyses where the gage used is upstream of the LOD is to subtract the monthly flow rates of existing water rights between the gage and the LOD from the median of the mean monthly flows at the gage. The DNRC used the method below to quantify physically available monthly flows and volumes at the LOD during the proposed period of diversion:

1. The Department calculated median of the mean monthly flow rates in cubic feet per second (CFS) for the Flathead River using USGS Gaging Station No. 12363000 records for each month of the period of depletion (Table 2, column B). Those flows were converted to monthly volumes in AF (Table 2, column C) using the following equation found on DNRC Water Calculation Guide: median of the mean monthly flow (CFS) × 1.98 (AF/day/1 CFS) × days per month = AF/month.



2. The Department calculated the monthly flows appropriated by existing users upstream of the LOD on the source (Table 2, column D) by:
  - i. Generating a list of existing water rights from USGS Gaging Station No. 12363000 to the initial point of surface depletion using the DNRC Water Rights Information System (WRIS) data (list is included in the application file and available upon request);
  - ii. Designating uses as occurring during their claimed or permitted periods of diversion;
  - iii. Assigning a single combined flow rate of 0.08 CFS to all livestock direct from source rights without a designated flow rate (per DNRC adjudication standards); and,
  - iv. Assuming that the flow rate of each existing right is continuously diverted throughout each month of the period of diversion. This assumption is necessary due to the difficulty of differentiating the distribution of appropriated volume over the period of diversion. This leads to an overestimation of existing uses from the source. The Department finds this an appropriate measure of assessing existing rights as it protects existing water users.
  
3. Since the gage used is upstream of the LOD, the Department subtracted the flow rates of the existing rights between USGS Gaging Station No. 12363000 and the initial point of depletion (Table 2, column D) from the median of the mean monthly gage values (Table 2, column B) to determine physical availability at the LOD (Table 2, column E). Physically available monthly flows were then converted to monthly volumes (Table 2, column F).



**Table 2: Physical Availability at the Location of Depletion**

A	B	C	D	E	F
Month	Median of Mean Flow at Gaging Station No. 12363000 (CFS)	Median of Mean Flow at Gaging Station No. 12363000 (AF)	Existing Diverted Legal Demands between Gaging Station No. 12363000 to the LOD (CFS)	Physically Available Water (CFS)	Physically Available Water (AF)
Jan	5,074.1	311,446.1	1.28	5,072.8	311,367.5
Feb	4,750.4	263,359.8	1.28	4,749.1	263,288.8
Mar	4,738.7	290,862.0	1.94	4,736.8	290,742.9
Apr	10,393.3	617,364.0	47.38	10,346.0	614,549.6
May	22,645.3	1,389,969.9	100.56	22,544.8	1,383,797.5
Jun	24,611.7	1,461,933.0	109.22	24,502.4	1,455,445.4
Jul	11,280.0	692,366.4	109.22	11,170.8	685,662.5
Aug	5,403.7	331,679.7	109.22	5,294.5	324,975.8
Sep	4,423.5	262,755.9	99.16	4,324.3	256,865.8
Oct	4,902.6	300,920.4	58.55	4,844.0	297,326.6
Nov	4,527.3	268,923.6	1.34	4,526.0	268,844.0
Dec	5,497.7	337,451.4	1.28	5,496.5	337,372.8

## 2.2 Source Description – Flathead Lake

Part A of the Technical Analyses Report includes the Groundwater Analysis, which describes the methodologies used to identify the depleted surface water source and the location of net depletions on said source.

**Depleted Source of Water:** Flathead River (Flathead Lake)

**Depleted Source Type:** Perennial River / Lake System

**Location of Depletions:** Flathead River (Flathead Lake), S2SWNE Section 20, Township 27N, Range 21W. Flathead County.

### 2.2.1 Method of Estimation

**Gage Name:** Flathead River near Polson MT

**Gage Number:** USGS Gaging Station No. 12372000

**Period of Record:** October 1938 to April 2025



**Why this gage is considered an appropriate data source:** USGS Gaging Station No. 12372000 is located approximately 35 miles downstream of the LOD and is the nearest gage to the depleted reach. The date range used from this gage includes the entire period of record.

## 2.2.2 Monthly Flow Rate and Volume

### Methodology:

Physical availability of Flathead Lake water at the LOD will be quantified monthly. Department practice for physical availability analyses where the gage used is downstream of the LOD is to add the monthly flow rates of existing water rights between the gage and the LOD to the median of the mean monthly flows at the gage. The DNRC used the method below to quantify physically available monthly flows and volumes at the LOD during the proposed period of diversion:

1. The Department calculated median of the mean monthly flow rates in cubic feet per second (CFS) for the Flathead River (Flathead Lake) using USGS Gaging Station No. 12372000 records for each month of the period of depletion (Table 3, column B). Those flows were converted to monthly volumes in AF (Table 3, column C) using the following equation found on DNRC Water Calculation Guide: median of the mean monthly flow (CFS)  $\times$  1.98 (AF/day/1 CFS)  $\times$  days per month = AF/month.
2. The Department calculated the monthly flows appropriated by existing users upstream of the gage on the source (Table 3, column D) by:
  - i. Generating a list of existing water rights from the Flathead Lake inlet to USGS Gaging Station No. 12372000 using the DNRC Water Rights Information System (WRIS) data (list is included in the application file and available upon request);
  - ii. Designating uses as occurring during their claimed or permitted periods of diversion;
  - v. Assigning a single combined flow rate of 0.08 CFS to all livestock direct from source rights without a designated flow rate (per DNRC adjudication standards); and,
  - iii. Assuming that the flow rate of each existing right is continuously diverted throughout each month of the period of diversion. This assumption is necessary due to the difficulty of differentiating the distribution of appropriated volume over the period of diversion. This leads to an overestimation of existing uses from the source. The Department finds this an appropriate measure of assessing existing rights as it protects existing water users.
3. Since the gage used is downstream of the LOD, the Department added in the flow rates of the existing rights between USGS Gaging Station No. 12372000 and the Flathead Lake inlet



(Table 3, column D) to the median of the mean monthly gage values (Table 3, column B) to determine physical availability at the LOD (Table 3, column E). Physically available monthly flows were then converted to monthly volumes (Table 3, column F).

**Table 3: Physical Availability at the Initial Point of Depletion on Flathead Lake**

A	B	C	D	E	F
Month	Median of the Mean Monthly Flows at Gage 12372000 (CFS)	Median of the Mean Monthly Volume at Gage 12372000 (AF)	Existing Water Rights from the Flathead Lake Inlet to SKQ Dam (CFS)	Physically Available Water (CFS)	Physically Available Water (AF)
January	10,380.0	637,124.4	78.7	10,458.7	641,956.8
February	9,133.0	506,333.5	81.3	9,214.3	510,841.3
March	7,748.0	475,572.2	86.5	7,834.5	480,881.6
April	9,223.0	547,846.2	5,378.8	14,601.8	867,347.5
May	18,560.0	1,139,212.8	5,429.5	23,989.5	1,472,474.9
June	25,400.0	1,508,760.0	5,437.6	30,837.6	1,831,751.7
July	12,730.0	781,367.4	5,438.1	18,168.1	1,115,159.2
August	6,126.0	376,013.9	5,438.1	11,564.1	709,805.7
September	5,956.5	353,816.1	5,413.5	11,370.0	675,375.6
October	7,184.0	440,953.9	5,385.7	12,569.7	771,525.1
November	8,556.0	508,226.4	90.6	8,646.6	513,610.4
December	9,837.0	603,795.1	81.7	9,918.7	608,812.3

### 3.0 Area of Potential Impact Analysis

#### 3.1 Area of Potential Impact Analysis of Groundwater

The Area of Potential Impact (AOPI) for groundwater is considered to be the Zone of Influence (ZOI), or 0.01-foot drawdown contour surrounding the point of diversion. The determination of the Zone of Influence for this application is described in Part A of this report. The groundwater ZOI list of water rights includes active and severed water rights within the ZOI that are either completed in the source aquifer or have an unknown well depth. Groundwater rights within the ZOI are listed in **Appendix A of Part A** of this report.



## 3.2 Area of Potential Impact Analysis of Depleted Surface Water

### **The surface water Area of Potential Impact for this application is:**

The AOPI of the depleted source begins on the Flathead River in the E½NWSE Section 16, Township 27N, Range 20W, Flathead County and extends to the Seli’š Ksanka Qlispe’ (SKQ) Dam in Section 12, Township 27N, Range 21W, Lake County. This AOPI includes the Flathead River and Flathead Lake, which will be evaluated separately for the legal analysis. There are a total of 47 water rights from the initial location of depletion on Fennon Slough, which is considered by the Department to be part of the main stem of the Flathead River, in the E½NWSE Section 16, Township 27N, Range 20W, to the inlet of the Flathead lake in Section 34, Township 27N, Range 20W. There are a total of 1,796 water rights from the inlet of Flathead Lake to the SKQ Dam in Section 12, Township 22N, Range 21W, Lake County. A list of all water rights within the AOPI can be found in **Appendix B**.

### **Why this is an appropriate Area of Potential Impact:**

The proposed groundwater appropriation results in the manifestation of depletion to both sources. The AOPI encompasses both depleted sources.

The initial location of depletion on the Flathead River resulting from this groundwater appropriation manifests in the E½NWSE Section 16, Township 27N, Range 20W, Flathead County, a point in Fennon Slough, which the Department views as part of the of Flathead River. This point was chosen as the upstream extent of the AOPI because this is the initial location of depletion of the Flathead River and any depletions to the river will affect users between this point and the inlet to Flathead Lake.

The initial point of depletion of Flathead Lake manifests in the S½SE Section 20, Township 27N, Range 21W. The appropriation of groundwater will result in the depletion of the lake, affecting all users on the lake. SKQ Dam was chosen as the downstream extent of the AOPI because it is the control structure for water discharging from Flathead Lake. Depletion of water from Flathead Lake will reduce the total flow and volume of water discharging from the lake (passing over or through the dam).

### **Methodology:**

The Department considered the source characteristics of the Flathead River system (including Flathead Lake) and the Seli’š Ksanka Qlispe’ Dam, which controls the flow of water discharging from Flathead Lake when determining an appropriate AOPI.



## Review

This document has been reviewed by the Department on March 23, 2026.

## References

- Department Standard Practice for Determining Physical Availability of Surface Water.
- DNRC Technical Memorandum: Physical Availability of Surface Water with Gage Data (Elison, Mann, Dolan, Heffner, Brickl, November 1, 2019).
- Department Standard Practice for Determining Area of Potential Impact



## **Appendix A: Groundwater Rights in the Zone of Influence**

See Groundwater Permit Technical Analyses Report - Part A, Appendix A for the list of groundwater rights in the ZOI.

## **Appendix B: Water Rights within the Surface Water Area of Potential Impact**

Due to its length, this list has been provided with this report as an Excel spreadsheet. Additionally, the list is contained in the administrative file and is available upon request.

## Variance Information

- Variance Request Form
- WSB Variance Sheet
- Approval or Denial of Variance Request

# Variance Information

GOVERNOR GREG GIANFORTE



DNRC DIRECTOR AMANDA KASTER

**Water Resources Division**

*Kalispell Regional Office*

655 Timberwolf Pkwy Ste 4  
Kalispell MT 59901-1215  
phone: 406-752-2288

December 30, 2025

Core Water Consulting

[mikel@corewaterconsulting.com](mailto:mikel@corewaterconsulting.com)

RE: Granted Variance for Application No. 76LJ 30171747 - RJM Properties LLC

Dear Ms. Siemens,

The Applicant (through its consultant) requested a variance from the aquifer testing requirements for the subject-line permit application.

Variances from the following rules are needed for the aquifer test conducted on the well.

- ARM 36.12.121(3)(a) involves pumping rate departures from the average flow rate during the test
- ARM 36.12.121(3)(f) involves certain requirements for observation wells
- ARM 36.12.121(3)(g) involves certain requirement for background water level observations

The Department grants variances of aquifer testing from the ARM noted directly above.

In addition, a variance from ARM 36.12.121(3)(b) was requested but it was also noted that a variance was no longer needed. The department concurs that a variance is not needed for 36.12.121(3)(b) for this application.

Sincerely,

A handwritten signature in blue ink that reads "Jim Ferch".

Jim Ferch

Kalispell Water Resources Regional Manager

[jferch@mt.gov](mailto:jferch@mt.gov)

406-752-2706





## ARM 36.12.121 - Aquifer Testing Addendum (ATA) - Review

Department of Natural Resources and Conservation (DNRC)  
 Water Sciences Bureau (WSB)

<b>Applicant</b>	RJM Properties LLC		
<b>Pre-Application/Application No.</b>	76LJ 30171747	<b>Date Sent to RO</b>	12/18/2025
<b>Regional Office (RO)</b>	Kalispell	<b>WSB Staff Name</b>	Kim Bolhuis, Groundwater Hydrologist

This checklist identifies any deficiencies that would require a variance pertinent to Administrative Rules of Montana (ARM) 36.12.121. **Table 1** lists deficiencies that would require a variance, the recommended action and the rationale describing why the variance request could be considered appropriate. If the requirements of ARM 36.12.121 are satisfied for each item, the box will be checked next to that item indicating such.

**Table 1:** Deficiencies identified, recommended action and rationale from WSB.

<input type="checkbox"/> No Deficiencies Identified			
Test Duration	Variance (ARM) (R=Requested; A=Additional)	Recommend Granting Variance Request	Rationale:
24-hr	3(a) <input checked="" type="checkbox"/> R <input type="checkbox"/> A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Rate departed from the average by more than +/- 5% during the test. The anomalies were short and did not endure for significant amounts of time during the test. The change in pumping rates will not affect analysis or modeling efforts by WSB.
24-hr	3(f) <input checked="" type="checkbox"/> R <input type="checkbox"/> A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	An observation well was used to monitor this 24-hr test that was completed in the same aquifer as the production well and was close enough (330 ft away) to potentially record an aquifer response to pumping. However, the observation well did not show a significant response to pumping, in addition to being pumped during the 24-hr test on the production well. The data is not usable for modeling of aquifer properties. However, the production well data is sufficient for modeling aquifer transmissivity, and a textbook value or value from a nearby test will be used for storativity.
24-hr	3(g) <input checked="" type="checkbox"/> R <input type="checkbox"/> A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Background levels were not recorded for a total of 48 hours prior to the aquifer test. They were recorded for approximately 19 hours prior to the test. The 19 hours of background monitoring showed no significant trend (slope was $6 \times 10^{-5}$ ft/ft). The background monitoring indicates that the water table trend is insignificant and will not affect modeling or analysis efforts.
Choose an item.	Choose an item. <input type="checkbox"/> R <input type="checkbox"/> A	<input type="checkbox"/> Yes <input type="checkbox"/> No	



**36.12.121(2): Minimum information that must be submitted with applications, check if provided:**

- (a) Map with labeled location of production and observation wells; and
- (b)  NA Well logs of the production and observation wells; and
- (c)  NA Form No. 633, in electronic format, with *all* information and data provided.

**36.12.121 (3): Minimum testing procedures are as follows, check if met:**

- (a)  NA Pumping must be maintained throughout the duration of the test. The rate may not depart from the average pumping rate by more than +/- 5%.
- (b)  NA The average pumping rate must be equal to or greater than the proposed flow rate if the application is for one well or if the total proposed rate for multiple wells can be obtained from a single well.
- (c)  NA The proposed pumping rate may be demonstrated by testing multiple wells as long as (e) is met by one well and the remaining flow rate is demonstrated by eight-hour drawdown and yield tests on additional production wells under (e)(ii) and e(iii).
- (d)  NA Pumping rate must be measured with a reliable measuring device and recorded with clock time according to the schedule on Form No. 633.
- (e)  NA Minimum duration of pumping during an aquifer test must be 24 hours for a proposed pumping rate and volume equal to or less than 150 GPM or 50 AF, or 72 hours for a proposed pumping rate and volume greater than 150 GPM or 50 AF.
- (e)(i)  NA At a minimum an eight-hour drawdown and yield test is required on all new production wells.
- (e)(ii)  NA In addition to (e), if more than one new production well is proposed, at a minimum an eight-hour drawdown and yield test is required on all subsequent new production wells.
- (e)(iii)  NA The testing procedures for a minimum eight-hour drawdown and yield test performed on any production well must follow (a), (d), and (h).
- (f)  NA One or more observation wells must be completed in the same source aquifer as the proposed production well and close enough to the production well so that drawdown is measurable and far enough that well hydraulics do not affect the observation well.
- (g)  NA Background groundwater levels in the production well and observation well(s) must be monitored at frequent intervals for at least two days prior to beginning the aquifer test according to the Form No. 633.



(h)  NA Groundwater levels in the production and/or observation well(s) must be reported with 0.01-foot precision according to the schedule specified on Form No. 633.



# VARIANCE REQUEST

ARM 36.12.123  
Form No. 653 (Revised 08/2025)

For Department Use Only

## INSTRUCTIONS

Use this form to request a variance from the requirements of ARM 36.12.121 or 36.12.1702, as provided for in ARM 36.12.123.

Submit this completed form to the appropriate regional office by the deadline established during the preapplication meeting or, if a preapplication meeting is not held, include this request with your filed application or as part of a deficiency response.

Application # \_\_\_\_\_ Basin \_\_\_\_\_  
Received Date \_\_\_\_\_  
Received By \_\_\_\_\_

**Applicant Name** RJM Properties LLC, c/o Rod Macfarlane

Mailing Address 1191 Majestic View Lane

City Kalispell State MT Zip 59901

Home Phone 406-261-6652 Other Phone \_\_\_\_\_

Email: rod\_macfarlane@yahoo.com

**Representative Name** (if other than Applicant) Mikel Siemens, PE; Core Water Consulting Inc.

Representative is Consultant  Representative is Attorney  Representative is Other (describe) \_\_\_\_\_

Mailing Address 490 E Montana Street, Suite 2

City Kalispell State MT Zip 59901

Home Phone 406-890-2073 Other Phone \_\_\_\_\_

Email: mikel@corewaterconsulting.com

**Identify from which section(s) of ARM 36.12.121 or 36.12.1702 you are requesting a variance. Refer to the rule for a full list of requirements in these sections.**

- ARM 36.12.121 Aquifer Testing Requirements
  - (2)(a) map with labeled location of production and observation wells
  - (2)(b) well logs of the production and observation wells
  - (2)(c) Form No. 633, in electronic format, with all information and data provided
  - (3)(a) pumping rate may not depart from the average pumping rate by more than +/- 5%
  - (3)(b) average pumping rate equal to or greater than the proposed flow rate if the application is for one well or if the total proposed rate for multiple wells can be obtained from a single well
  - (3)(c) proposed pumping rate may be demonstrated by testing multiple wells as long as (e) is met by one well and the remaining flow rate is demonstrated by eight-hour drawdown and yield tests on additional production wells under (e)(i)(i)
  - (3)(d) pumping rate must be measured with a reliable measuring device and recorded with clock time according to the schedule on Form No. 633
  - (3)(e) minimum duration of pumping during an aquifer test must be 24 hours for a proposed pumping rate and volume equal to or less than 150 GPM or 50 AF, or 72 hours for a proposed pumping rate and volume greater than 150 GPM or 50 AF
    - (3)(e)(i) at a minimum an eight-hour drawdown and yield test is required on all new production wells
    - (3)(e)(ii) In addition to (e), if more than one new production well is proposed, at a minimum an eight-hour drawdown and yield test is required on all subsequent new production wells
    - (3)(e)(iii) the testing procedures for a minimum eight-hour drawdown and yield test performed on any production well must follow (a), (d), and (h)
  - (3)(f) one or more observation wells must be completed in the same source aquifer as the proposed production well and close enough to the production well so that drawdown is measurable and far enough that well hydraulics do not affect the observation well
  - (3)(g) background groundwater levels in the production well and observation well(s) must be monitored at frequent intervals for at least two days prior to beginning the aquifer test according to the Form No. 633
  - (3)(h) groundwater levels in the production and/or observation well(s) must be reported with 0.01-foot precision according to the schedule specified on Form No. 633





## Processing Materials

- Work copies of applicant-submitted information
- Deficiency letter
- Deficiency response
- Correct & complete determination
- Any correspondence with the applicant after application receipt and prior to sending the Draft PD

# Processing Materials

THE MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

GOVERNOR GREG GIANFORTE



DNRC DIRECTOR AMANDA KASTER

Water Resources Division – Kalispell Regional Office  
655 Timberwolf Pkwy, Ste. 4  
Kalispell, MT 59901-1215  
(406) 752-2288  
DNRCKalispellWater@mt.gov

1/5/2026

RJM Properties LLC  
1191 Majestic View Lane  
Kalispell, MT, 59901

**Subject: Correct and Complete Application for Beneficial Water Use Permit No. 76LJ 30171747**

Dear Applicant,

The Department of Natural Resources and Conservation (Department) has determined that your application is correct and complete pursuant to ARM 36.12.1601. Please remember that correct and complete **does not mean that your application will be granted**. The purpose of this letter is to indicate that the Department has enough information to analyze your water right application.

The Department will issue a Draft Preliminary Determination document and Technical Analyses within 120 days of the date of this letter per §85-2-307(2)(b), MCA.

Following issuance of the Draft Preliminary Determination, you (Applicant) will have 15 business days to request an extension of time to submit additional information, if desired pursuant to §85-2-307(3)(a), MCA.

If no extension of time is requested and the Draft Preliminary Determination decision is to grant your application or grant your application in modified form, the Department will prepare a notice of opportunity to provide public comment, per §85-2-307(4)(a), MCA.

If no extension of time is requested and the Draft Preliminary Determination decision is to deny your application, the Department will adopt the Draft Preliminary Determination as the final determination per §85-2-307(3)(d)(ii), MCA.

If you have any questions or concerns about the application process, please contact me.

Best,

A handwritten signature in cursive script, appearing to read "Abigail Williams".

Abigail Williams

Water Resource Specialist

Kalispell Regional Water Resources Office

CC via email: Mikel Siemens, Core Water Consulting



December 5, 2025

Abigail Williams, Water Resource Specialist  
Montana Dept of Natural Resources and Conservation  
655 Timberwolf Pkwy, Ste 4  
Kalispell, MT 59901

RE: GW Permit Application 76LJ 30171747  
RJM Properties LLC, 1191 Majestic View Ln.  
in Section 17, Township 27 North, Range 20 West, Flathead County, Montana

Dear Ms. Williams:

A deficiency letter was received from DNRC regarding the application for beneficial water use permit (76LJ 30171747) on October 21, 2025. Responses are provided below for clarification.

For ease of reference comments have been summarized in italics, followed by the response.

*1. Form 600 – Question 20 and Supplemental Report Pg 2*

*Q20: Describe the proposed location of the point(s) diversion to the nearest ¼ ¼ ¼ Section. Label each POD with the POD ID number used on the project map (question 17).*

Response: The POD is in the NW1/4, SW1/4, NE1/4 of Section 17, T27N, R20W. The location information on page 2 of the supplemental was incorrect. The POD is located on Lot 2 of the subdivision. The correct POD is identified on Figure 1 Vicinity Map (attached). Thank you for noticing the discrepancy.

*2. Variances were not requested at the time the Application was submitted. Please provide forms 633, 653, and 600-ATA for DNRC review.*

Response: Form 633 was emailed to Travis Wilson following application submittal on September 8, 2025. Variances were previously approved for the pump test and were attached in the supplemental report. The prior application, 76LJ 30164921, timeframe expired but the ATA includes reasons for the variances approval. Form 653 and 600-ATA are enclosed, and an amended Form 633 will be emailed.

*3. Form 600 – Question 18 and Supplemental Report*

*1. The response on the application was requesting 2.24 AF for multiple domestic, 19.48 AF for lawn and garden, with a total requested volume of 21.72 AF. On page one of the supplemental report in the introduction section a volume of 21.63 acre-feet/year (AF/year) was requested.*

Response: The volume listed in the introduction to the supplemental report was incorrect. The total volume of 21.72 AF is requested.

*2. Flow rate requested at 105 on the application but the supplemental report states multiple GPM rates:*

*Page 3 – “pumping at a rate of 101 GPM after a 24 hour period”*

*Page 4 – a GPM of 104.79 was listed*

*Page 24 – In the printout of Form 633 a flow rate of 101.12 is recorded*

*Page 25 – The data graphed states an average sustainable flow of 101.15 GPM*

*Page 30 & 32 – Graphs note calculations done on “average sustainable flow rate” of 101.27 GPM*

Response: The flow rate requested is the average sustained flow over the pump test period at 101.15 gpm. There were numerous other similar numbers. Thank you for asking for direct clarification on the final intended application flow rate. The Form 600 Page 4 has been amended to reflect 101.15 gpm, along with the drawdown graph which relied upon the average totalized flow rate over the test period.

As stated, “A peak domestic flow rate of 22.22 gpm for the eight residences. Lawn and garden irrigation is intended overnight, to minimize evaporation during the day. A 7-hour irrigation period demands a flow rate of 82.57 gpm”. The homeowners association will monitor the irrigation practices to ensure proper distribution for domestic purposes during the daytime.

The pump test was targeting a diversion rate of 100 gpm and ultimate average rate was 101.15 gpm over the 24-hour period obtained from the totalizer flow records. The information tab on Form 633 has been amended to the average flow rate for the entire test.

***The volume being requested is 21.72 AF and the flow rate requested is 101.15 gpm.***

*4. The Applicant is stated as Rod McFarlane in the Application and supporting document, but Tina McFarlane signed the Application. The evidence provided in Appendix G (Proof of Possessory Interest) for Tina and Rod McFarlane does not meet the requirement for ARM 36.12.1802(2).*

Response: Rodney Macfarlane is the member of RJM Properties LLC with Tia Macfarlane as the registered agent. The permit would be issued to RJM Properties LLC, not Rodney Macfarlane specifically, so Tia Macfarlane (as the registered agent) has the power to sign the application on behalf of RJM Properties. The power of attorney document is attached.



Please reach out if you have any further questions or concerns.

Best regards,

Mikel Siemens, P.E.  
*Environmental Engineer*

Attached:

Figure 1. Vicinity Map

Page 4 of Form 600

Drawdown Graph with Average Sustained Flow Rate of 101.15 gpm

ATA Review Document from Old Application (76LJ 30164921)

Secretary of State Website Business Search

RJM Properties LLC Power of Attorney

Enclosed:

Amended Form 633 (correcting Flow Rate 1<sup>st</sup> tab)

Form 653

Form 600-ATA



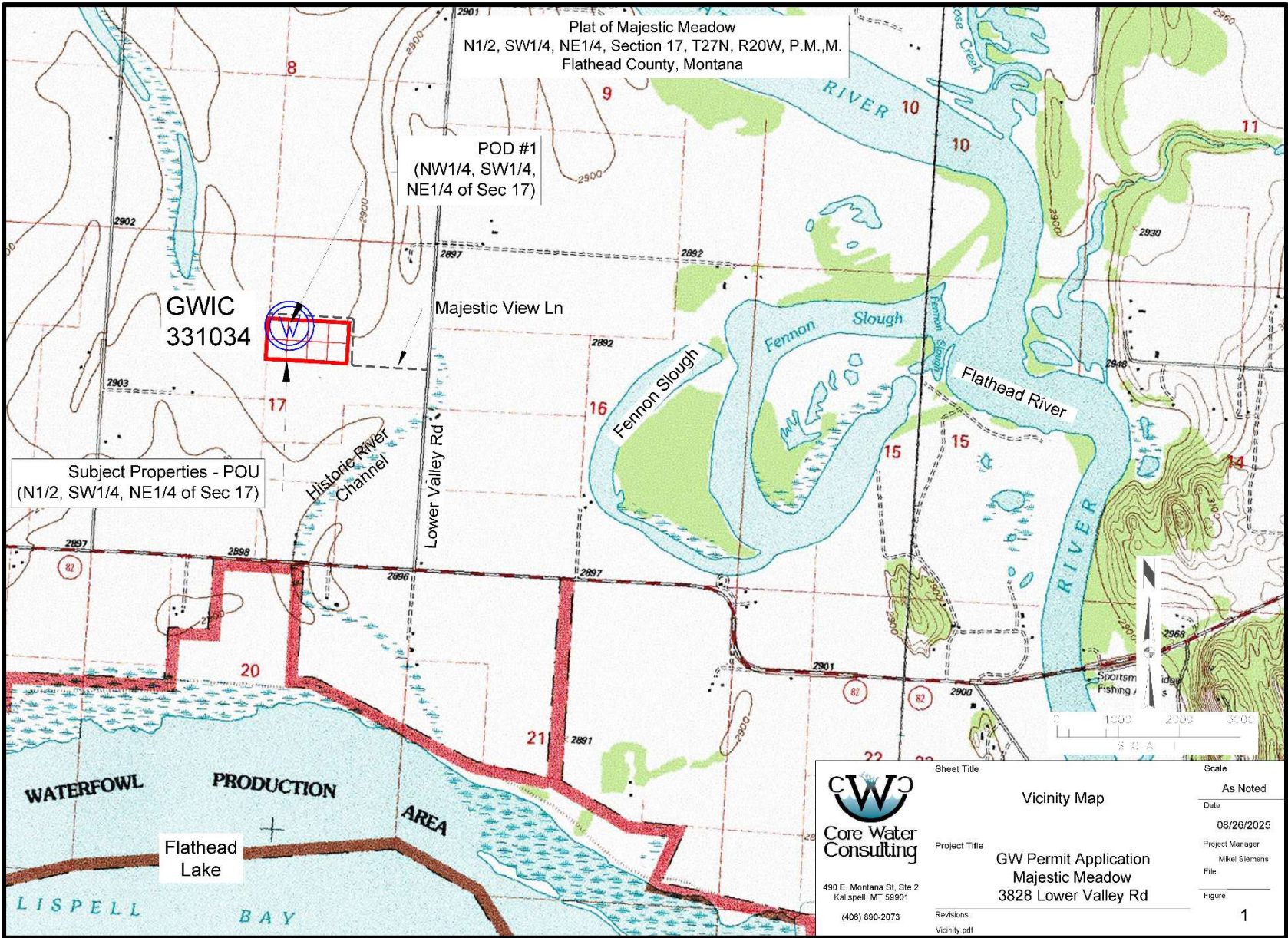


Figure 1. Vicinity Map

**PURPOSE AND DIVERSION INFORMATION**

14.  Y  N Is the proposed use temporary?

14.a. If yes, when will the appropriation cease? \_\_\_\_\_

15. Is the proposed source surface water or groundwater? Groundwater

16. What is the source name? GWIC 331034

17.  S Attach a map utilizing an aerial photograph or topographic map that shows the following: section corners; township and range; north arrow; scale bar; all proposed points of diversion labeled with a unique Point of Diversion (POD) ID number and, if applicable, GWIC number; all proposed places of use; all proposed conveyance facilities and or routes; all proposed places of storage labeled with a unique Storage ID number; and places of use (POU) for all overlapping water rights. More than one map may be submitted, if necessary to clearly convey all required information.

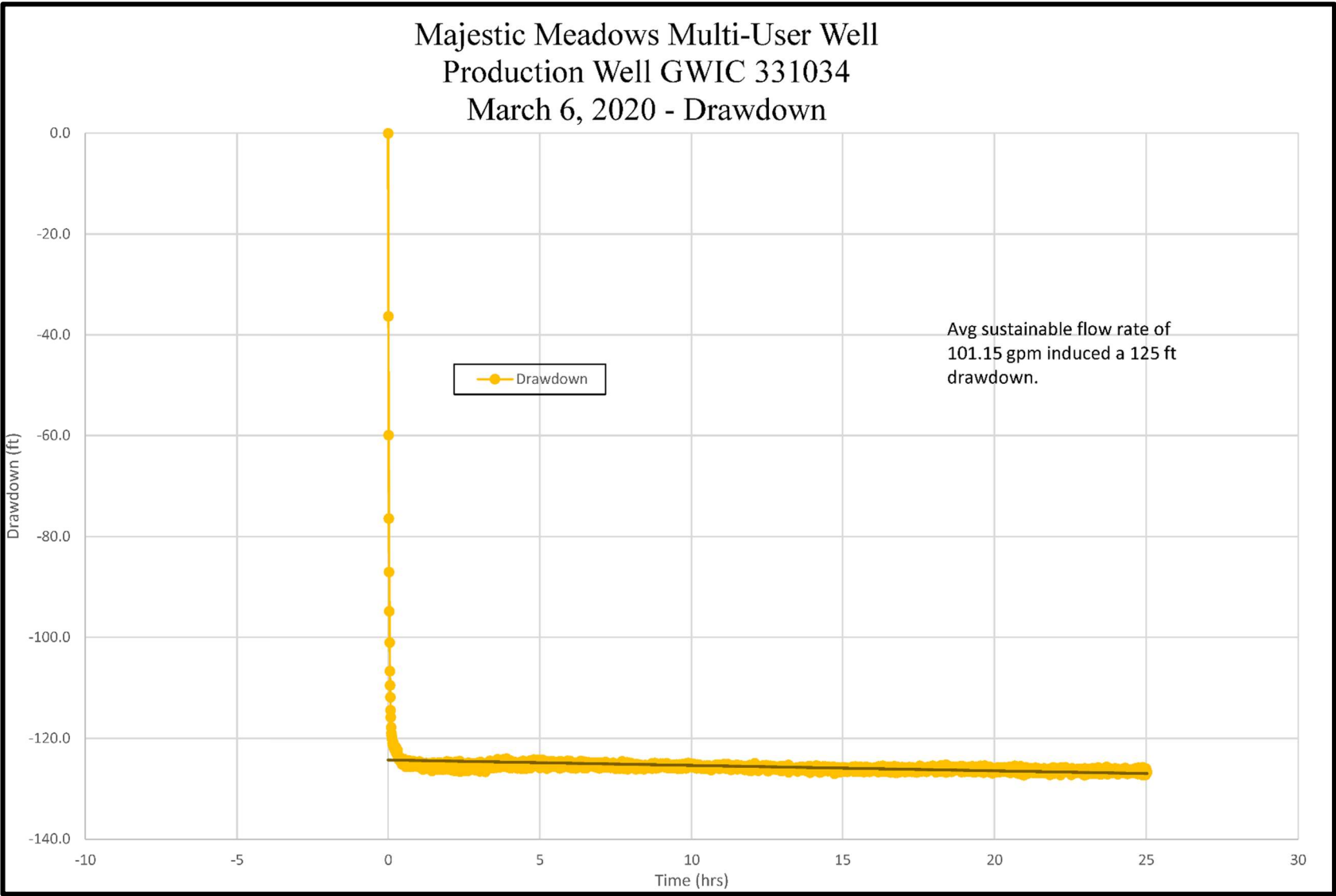
18. Fill out the table below. Means of diversion for surface water includes headgate, pump, dam, and others. Means of diversion for groundwater includes well, developed spring, pit pond, and others.

Purpose	Means of Diversion	Acres Irrigated (if appl.)	Period of Diversion (Month/Day - Month/Day)	Period of Use (Month/Day - Month/Day)	Flow Rate	Volume (Acre-Feet)
					<input checked="" type="checkbox"/> GPM <input type="checkbox"/> CFS	
Domestic	Well		01/01-12/31	01/01-12/31	22.00 (day)	2.24
Lawn & Garden	Well	10	04/15-10/15	04/15-10/15	82.57 (night)	19.48
Total Flow Rate and Volume Required					101.15	21.72

19.  Y  N Does the proposed use include on or more of the following purposes: domestic, multiple domestic, stock, or irrigation? If yes, fill out the following table, where applicable.

Purpose	Requested Information	Response
Domestic or multiple domestic	Number of dwellings	8
Stock	Number of animal units	
Irrigation	Method of irrigation type (sprinkler or flood) and subtype (if flood: level border, graded border, furrow, contour ditch, or other; if sprinkler: center pivot, wheel line, or other)	Lawn and garden irrigation (sprinkler)
Irrigation (flood only)	Design slope	





Drawdown Graph with Average Sustained Flow Rate of 101.15 gpm

## ATA Review Document from Old Application (76LJ 30164921)



ARM 36.12.121-ATA-Review  
Application No: 76LJ 30164921  
Kalispell Regional Office  
County

### ARM 36.12.121 - Aquifer Testing Addendum (ATA) - Review

Department of Natural Resources and Conservation (DNRC)  
Water Sciences Bureau (WSB)

<b>Applicant</b>	RJM Real Estate		
<b>Pre-Application/Application No.</b>	76LJ 30164921	<b>Date Sent to RO</b>	12/10/2024
<b>Regional Office (RO)</b>	Kalispell	<b>WSB Staff Name</b>	Kim Bolhuis, Groundwater Hydrologist

This checklist identifies any deficiencies that would require a variance pertinent to Administrative Rules of Montana (ARM) 36.12.121. **Table 1** lists deficiencies that would require a variance, the recommended action and the rationale describing why the variance request could be considered appropriate. If the requirements of ARM 36.12.121 are satisfied for each item, the box will be checked next to that item indicating such.

**Table 1:** Deficiencies identified, recommended action and rationale from WSB.

<input type="checkbox"/> No Deficiencies Identified			
Test Duration	Variance (ARM) (R=Requested; A=Additional)	Recommend Granting Variance Request	Rationale:
24-hr	3(a) <input type="checkbox"/> R <input checked="" type="checkbox"/> A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Rate departed from the average by more than +/- 5% during the test. The anomalies were short and did not endure for significant amounts of time during the test. The change in pumping rates will not affect analysis or modeling efforts by WSB.
24-hr	2(b) <input type="checkbox"/> R <input checked="" type="checkbox"/> A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The average pumping rate was not maintained at or above 105 gpm, which is the requested rate. The average pumping rate through the duration of the test was 101.5 gpm. The 24-hr aquifer test clearly demonstrates that well/pump/aquifer cannot sustain pumping at 105 gpm. This departure from ARM 36.12.121 would affect modeling efforts since the requested flow rate and therefore volume cannot be achieved. A flow rate of 101 gpm would be recommended as that has been proven sufficient by the aquifer test data.
24-hr	3(f) <input type="checkbox"/> R <input checked="" type="checkbox"/> A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	An observation well was used to monitor this 24-hr test that was completed in the same aquifer as the production well and was close enough (330 ft away) to potentially record an aquifer response to pumping. However, the observation well did not show a significant response to pumping, in addition to being pumped during the 24-hr test on the production well. The data is not usable for modeling of aquifer properties. However, the production well data is sufficient for modeling aquifer transmissivity, and a textbook value or value from a nearby test will be used for storativity.
24-hr	3(g) <input type="checkbox"/> R <input checked="" type="checkbox"/> A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Background levels were not recorded for a total of 48 hours prior to the aquifer test. They were recorded for approximately 19





			hours prior to the test. The 19 hours of background monitoring showed no significant trend (slope was $6 \times 10^{-5}$ ft/ft). The background monitoring indicates that the water table trend is insignificant and will not affect modeling or analysis efforts.
Choose an item.	Choose an item. <input type="checkbox"/> R <input type="checkbox"/> A	<input type="checkbox"/> Yes <input type="checkbox"/> No	

**36.12.121(2): Minimum information that must be submitted with applications, check if provided:**

- (a) Map with labeled location of production and observation wells; and
- (b)  NA Well logs of the production and observation wells; and
- (c)  NA Form No. 633, in electronic format, with *all* information and data provided.

**36.12.121 (3): Minimum testing procedures are as follows, check if met:**

- (a)  NA Pumping must be maintained throughout the duration of the test. The rate may not depart from the average pumping rate by more than +/- 5%.
- (b)  NA The average pumping rate must be equal to or greater than the proposed flow rate if the application is for one well or if the total proposed rate for multiple wells can be obtained from a single well.
- (c)  NA The proposed pumping rate may be demonstrated by testing multiple wells as long as (e) is met by one well and the remaining flow rate is demonstrated by eight-hour drawdown and yield tests on additional production wells under (e)(ii) and e(iii).
- (d)  NA Pumping rate must be measured with a reliable measuring device and recorded with clock time according to the schedule on Form No. 633.
- (e)  NA Minimum duration of pumping during an aquifer test must be 24 hours for a proposed pumping rate and volume equal to or less than 150 GPM or 50 AF, or 72 hours for a proposed pumping rate and volume greater than 150 GPM or 50 AF.
- (e)(i)  NA At a minimum an eight-hour drawdown and yield test is required on all new production wells.
- (e)(ii)  NA In addition to (e), if more than one new production well is proposed, at a minimum an eight-hour drawdown and yield test is required on all subsequent new production wells.
- (e)(iii)  NA The testing procedures for a minimum eight-hour drawdown and yield test performed on any production well must follow (a), (d), and (h).





- (f)**  **NA** One or more observation wells must be completed in the same source aquifer as the proposed production well and close enough to the production well so that drawdown is measurable and far enough that well hydraulics do not affect the observation well.
- (g)**  **NA** Background groundwater levels in the production well and observation well(s) must be monitored at frequent intervals for at least two days prior to beginning the aquifer test according to the Form No. 633.
- (h)**  **NA** Groundwater levels in the production and/or observation well(s) must be reported with 0.01-foot precision according to the schedule specified on Form No. 633.



# Secretary of State Website Business Search



**STATE OF MONTANA**  
 SECRETARY OF STATE  
 2025 ANNUAL REPORT

STATE OF MONTANA  
**-FILED-**  
 SECRETARY OF STATE  
 File Number: 16371952  
 Date Filed: 1/3/2025 6:10:28 AM

B1346-0971 01/03/2025 6:10 AM Received by MT Secretary of State Christi Jacobsen

<b>Business Type</b>									
Business Type	Domestic Limited Liability Company								
Business Sub-Type	Limited Liability Company								
<b>Business Name</b>									
Annual Report Year	2025								
Name of Business Entity	RJM Properties LLC								
Montana File Number	C1296743								
Country of Organization	United States								
State of Organization	Montana								
Business Purpose	Building apartments								
<b>Business Mailing Address of Principal Office</b>									
Address	1191 MAJESTIC VIEW LANE KALISPELL, MT 59901								
<b>Business Physical Address of Principal Office</b>									
Address	1191 MAJESTIC VIEW LANE KALISPELL, MT 59901								
<b>The registered agent on record is:</b>									
Registered Agent	Tia Macfarlane Non-Commercial Registered Agent Agent Number RA1296804 Email Address tia.macfarlane13@gmail.com Website Physical Address 1191 MAJESTIC VIEW LN KALISPELL, MT 59901-1814 Mailing Address 1191 MAJESTIC VIEW LN KALISPELL, MT 59901-1814								
<b>LLC Management</b>									
LLC Managed By	Members								
<b>Members</b>									
<table border="1"> <thead> <tr> <th>Name Of Individual Or Business Entity</th> <th>Business Mailing Address</th> <th>Email Address</th> <th>Active Registered Entity</th> </tr> </thead> <tbody> <tr> <td>Rodney Macfarlane</td> <td>1191 MAJESTIC VIEW LANE KALISPELL, MT 59901</td> <td>tia.macfarlane13@gmail.com</td> <td></td> </tr> </tbody> </table>		Name Of Individual Or Business Entity	Business Mailing Address	Email Address	Active Registered Entity	Rodney Macfarlane	1191 MAJESTIC VIEW LANE KALISPELL, MT 59901	tia.macfarlane13@gmail.com	
Name Of Individual Or Business Entity	Business Mailing Address	Email Address	Active Registered Entity						
Rodney Macfarlane	1191 MAJESTIC VIEW LANE KALISPELL, MT 59901	tia.macfarlane13@gmail.com							
<b>Declarations</b>									
<input checked="" type="checkbox"/> I confirm I have reviewed the information set forth in this Annual Report and that all information is correct and factual.									
<input checked="" type="checkbox"/> I have been authorized by the business entity to file this document online.									
<input checked="" type="checkbox"/> I, HEREBY SWEAR AND/OR AFFIRM, under penalty of law, including criminal prosecution, that the facts contained in this document are true. I certify that I am signing this document as the person(s) whose signature is required, or as an agent of the person(s) whose signature is required, who has authorized me to place his/her signature on this document.									



B1346-0972 01/03/2025 6:10 AM Received by MT Secretary of State Christi Jacobsen

Signature		
<i>Self</i>	<i>Macfarlane</i>	<i>01/03/2025</i>
Signer's Capacity	Sign Here	Date
Position	Manager/Member	
Daytime Contact		
Phone Number	(406) 261-6652	
Email	jdogginger@gmail.com	



RJM Properties LLC Power of Attorney

General Power of Attorney Form

1A Return to:  
Tia Macfarlane  
PO Box 2514  
Kahsput, MT 59903

2014 015808  
Page 1 of 1  
Fees: \$17.00  
8/15/2014 2:16 PM

Paula Robinson, Notary Public for MT by NC

Page 1 of 1

**GENERAL POWER OF ATTORNEY**

BE IT KNOWN, that Rodney John Macfarlane has made and appointed, and by these presents does make and appoint Tia Marie Macfarlane true and lawful attorney for him/her and in his/her name, place and stead, giving and granting to said attorney, general, full and unlimited power and authority to do and perform all and every act and thing whatsoever requisite necessary to be done in and about the premises as fully, to all intents and purposes, as could be done if personally present, with full power of substitution and revocation, hereby ratifying and confirming all that said attorney shall lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 24 day of July, 2013.

Signed, sealed and delivered in the presence of:

[Signature]  
Witness

[Signature]  
Witness

State of ND )  
County of Mckenzie ) ss.

The foregoing instrument was acknowledged by me this 24 day of July, 2013 by: Rodney Macfarlane who is/are personally known by me or who has/have produced: MT DL 0100419884103 as identification and who did not take an oath.

Morgan Kerber (SEAL)  
Notary Public  
State of ND

My Commission Expires: NOV 6, 2018

MORGAN KERBER  
Notary Public  
State of North Dakota  
My Commission Expires Nov. 6, 2018

7/22/2013

<http://www.delafe.com/form/frmgpowr.htm>





# VARIANCE REQUEST

ARM 36.12.123  
Form No. 653 (Revised 08/2025)

For Department Use Only

## INSTRUCTIONS

Use this form to request a variance from the requirements of ARM 36.12.121 or 36.12.1702, as provided for in ARM 36.12.123.

Submit this completed form to the appropriate regional office by the deadline established during the preapplication meeting or, if a preapplication meeting is not held, include this request with your filed application or as part of a deficiency response.

Application # \_\_\_\_\_ Basin \_\_\_\_\_  
Received Date \_\_\_\_\_  
Received By \_\_\_\_\_

**Applicant Name** RJM Properties LLC, c/o Rod Macfarlane

Mailing Address 1191 Majestic View Lane

City Kalispell State MT Zip 59901

Home Phone 406-261-6652 Other Phone \_\_\_\_\_

Email: rod\_macfarlane@yahoo.com

**Representative Name** (if other than Applicant) Mikel Siemens, PE; Core Water Consulting Inc.

Representative is Consultant  Representative is Attorney  Representative is Other (describe) \_\_\_\_\_

Mailing Address 490 E Montana Street, Suite 2

City Kalispell State MT Zip 59901

Home Phone 406-890-2073 Other Phone \_\_\_\_\_

Email: mikel@corewaterconsulting.com

**Identify from which section(s) of ARM 36.12.121 or 36.12.1702 you are requesting a variance. Refer to the rule for a full list of requirements in these sections.**

- ARM 36.12.121 Aquifer Testing Requirements
  - (2)(a) map with labeled location of production and observation wells
  - (2)(b) well logs of the production and observation wells
  - (2)(c) Form No. 633, in electronic format, with all information and data provided
  - (3)(a) pumping rate may not depart from the average pumping rate by more than +/- 5%
  - (3)(b) average pumping rate equal to or greater than the proposed flow rate if the application is for one well or if the total proposed rate for multiple wells can be obtained from a single well
  - (3)(c) proposed pumping rate may be demonstrated by testing multiple wells as long as (e) is met by one well and the remaining flow rate is demonstrated by eight-hour drawdown and yield tests on additional production wells under (e)(i)(i)
  - (3)(d) pumping rate must be measured with a reliable measuring device and recorded with clock time according to the schedule on Form No. 633
  - (3)(e) minimum duration of pumping during an aquifer test must be 24 hours for a proposed pumping rate and volume equal to or less than 150 GPM or 50 AF, or 72 hours for a proposed pumping rate and volume greater than 150 GPM or 50 AF
    - (3)(e)(i) at a minimum an eight-hour drawdown and yield test is required on all new production wells
    - (3)(e)(ii) In addition to (e), if more than one new production well is proposed, at a minimum an eight-hour drawdown and yield test is required on all subsequent new production wells
    - (3)(e)(iii) the testing procedures for a minimum eight-hour drawdown and yield test performed on any production well must follow (a), (d), and (h)
  - (3)(f) one or more observation wells must be completed in the same source aquifer as the proposed production well and close enough to the production well so that drawdown is measurable and far enough that well hydraulics do not affect the observation well
  - (3)(g) background groundwater levels in the production well and observation well(s) must be monitored at frequent intervals for at least two days prior to beginning the aquifer test according to the Form No. 633
  - (3)(h) groundwater levels in the production and/or observation well(s) must be reported with 0.01-foot precision according to the schedule specified on Form No. 633







APPLICATION FOR BENEFICIAL WATER USE PERMIT OR APPLICATION TO CHANGE A WATER RIGHT AQUIFER TESTING ADDENDUM

ARM 36.12.121

Complete this addendum if the source of water for a Beneficial Water Use Permit or Water Right Change application is groundwater. Do not use this form if the source is a developed spring. Check the box denoting the information is attached or data was collected following minimum testing procedures. On a separate document, address the required information. Attachments must be labeled as shown in the sections below (i.e., ATA.3.a).

Section 1. Attachments must make specific reference to the section item shown.

VARIANCE INFORMATION:

ATA.1.a [X] The Applicant submitted a variance request per ARM 36.12.123 for a variance from the requirements of ARM 36.12.121 and has provided a copy of the written request.

Section 2. Attachments must make specific reference to the section item shown.

MINIMUM INFORMATION THAT MUST BE SUBMITTED WITH APPLICATIONS:

- ATA.2.a [X] Provide a map with labeled location of production and observation wells.
ATA.2.b [X] Provide well logs of production and observation wells.
ATA.2.c [X] Provide Form No. 633, in electronic format, with all information and data provided.
ATA.2.d [X] Provide a description of testing methods and quality of the aquifer test and data.

Section 3. Attachments must make specific reference to the section item shown.

MINIMUM TESTING PROCEDURES:

For any of the following, if the answer is "NO" or "NA", provide information explaining why on a separate attachment.

- ATA.3.a YES[X] NO[] NA[] Pumping was maintained throughout the duration of the test and the rate did not depart from the average pumping rate by more than 5%.
ATA.3.b YES[X] NO[] NA[] The average pumping rate is equal to or greater than the proposed flow rate if the application is for one well or if the total proposed rate for multiple wells can be obtained from a single well.
ATA.3.c YES[] NO[] NA[X] The proposed pumping rate was demonstrated by testing multiple wells, and 3.e was met by one well and the remaining flow rate demonstrated by eight-hour drawdown and yield tests on additional production wells under 3.e.ii and 3.e.iii.
ATA.3.d YES[X] NO[] NA[] The pumping rate was measured with a reliable measuring device and recorded with clock time according to the schedule on Form No. 633.



- ATA.3.e** YES  NO  NA  The duration of pumping during an aquifer test was at least 24 hours for a proposed pumping rate and volume equal to or less than 150 gpm or 50 acre-feet, or at least 72 hours for a proposed pumping rate and volume greater than 150 gpm or 50 acre-feet.
- i. If a variance from 3.e was granted, at a minimum, eight-hour drawdown and yield tests were completed on all new production wells.
  - ii. In addition to 3.e, if more than one new production well is proposed, at a minimum, eight-hour drawdown and yield tests were completed on all subsequent new production wells.
  - iii. The testing procedures for a minimum eight-hour drawdown and yield test performed on any production well followed 3.a, 3.d, and 3.h.
- ATA.3.f** YES  NO  NA  One or more observation wells were completed in the same source aquifer as the proposed production well and close enough to the production well so that drawdown is measurable and far enough away so that well hydraulics do not affect the observation well.
- ATA.3.g** YES  NO  NA  Background groundwater levels in the production well and observation well(s) were monitored at frequent intervals for at least two days prior to beginning the aquifer test according to Form No. 633.
- ATA.3.h** YES  NO  NA  Water levels in the production well and observation well(s) were reported with 0.01-foot precision according to the schedule specified on Form No. 633 (8-hour drawdown and yield test only need to provide water levels for drawdown; no background and recovery data are necessary).





Water Resources Division – Kalispell Regional Office  
655 Timberwolf Pkwy, Ste. 4  
Kalispell, MT 59901-1215  
(406) 752-2288  
DNRCKalispellWater@mt.gov

October 20, 2025

RJM Properties LLC  
1191 Majestic View Lane  
Kalispell, MT, 59901

Subject: Deficiency letter for Beneficial Water Use Permit No. 76LJ 30171747.

Dear Applicant,

The Department of Natural Resources and Conservation (DNRC or Department) has begun reviewing your application. This letter is to notify you of the deficiencies in your application as required in ARM 36.12.1501(1) and §85-2-302(5)(b), MCA. An Applicant is required to submit substantial and credible information addressing the rules and statutes that are relative to your application. You must provide the information specified below for your application to be considered correct and complete. “Correct and complete” means all of the information provided is substantial and credible and provides all of the information as required by applicable rules and statutes. The application as submitted contains deficiencies in the following section(s):

**POINT(S) OF DIVERSION- ARM 36.12.110**

Form 600 - Question 20 and Supplemental Report Pg 2

*Q20: Describe the proposed location of the point(s) diversion to the nearest  $\frac{1}{4}$   $\frac{1}{4}$   $\frac{1}{4}$  Section. Label each POD with the POD ID number used on the project map (question 17)*

On the application it is stated the POD is in the NW  $\frac{1}{4}$  SW  $\frac{1}{4}$  NE  $\frac{1}{4}$ . On page 2 of supporting documents, it is stated POD#1 is located at NE  $\frac{1}{4}$  SW  $\frac{1}{4}$  NE  $\frac{1}{4}$ .

Please confirm where the POD is located.

**PHYSICAL GROUNDWATER AVAILABILITY- ARM 36.12.1703**

Variances were not requested at the time the Application was submitted. Please provide forms 633, 653 and 600-ATA for DNRC review.



## **BENEFICIAL USE- ARM 36.12.1801**

Form 600 – Question 18 and Supplemental Report

Q18: *Fill out the table below. Means of diversion for surface water included headgate, pump, dam, and others. Means of diversion for groundwater includes well, developed spring, pit pond, and others.*

1. The response on the application was requesting 2.24 AF for multiple domestic. 19.48 AF for lawn and garden with a total volume requested of 21.72 AF.  
On page one of the supplemental report in the introduction section a volume of 21.63 acre-feet/year (AF/year) was requested.
2. Flow rate requested at 105 on the application but the supplemental report states multiple GPM rates:  
Page 3 - "pumping at a rate of 101 GPM after 24 hour period"  
Page 4 - a GPM of 104.79 was listed  
Page 24 – In the printout of Form 633 a flow rate of 101.12 GPM is recorded  
Page 25 – The data graphed states an average sustainable flow of 101.15 GPM  
Pages 30 & 32 – Graphs note calculations done on "average sustainable flow rate" of 101.27 GPM

Please confirm what volume is being requested.

Please confirm the flow rate and ensure the well is able to produce the requested flow rate.

## **AFFIDAVIT AND CERTIFICATION**

The Applicant is stated as Rod McFarlane in the Application and supporting document, but Tina McFarlane signed the Application.

The evidence provided in Appendix G (Proof of Possessory Interest) for Tina and Rod McFarlane does not meet the requirement for ARM 36.12.1802(2).

As stated above, the information submitted to address the rules and statutes listed in this deficiency letter must be substantial credible information to be acceptable at the correct and complete determination. §§85-2-102 (9) and (26), MCA.

Please submit the information specified above to the Kalispell Regional Office by February 17, 2026. This is the only deficiency letter that will be sent. An application not corrected or completed within 120 days from the date of this letter is terminated per ARM 36.12.1501(2) and §85-2-302(6)(a), MCA.

Please let me know if you have any questions.



Sincerely,

*Abigail Williams*  
Abigail Williams

Water Resource Specialist

406-752-2735

Abigail.Williams@MT.gov

cc: Mikel Siemens

490 E Montana Street, Suite 2

Kalispell, MT, 59901

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**IMPORTANT NOTICE:** This will be the final opportunity for you to provide the required information to the Department. If all of the requested information in this letter is not postmarked or submitted within 120 days of this letter, the application will be terminated within 30 days and the application fee will not be refunded.



## Variance Information

- Variance Request Form
- WSB Variance Sheet
- Approval or Denial of Variance Request

# Variance Information

GOVERNOR GREG GIANFORTE



DNRC DIRECTOR AMANDA KASTER

**Water Resources Division**

*Kalispell Regional Office*

655 Timberwolf Pkwy Ste 4  
Kalispell MT 59901-1215  
phone: 406-752-2288

December 30, 2025

Core Water Consulting

[mikel@corewaterconsulting.com](mailto:mikel@corewaterconsulting.com)

RE: Granted Variance for Application No. 76LJ 30171747 - RJM Properties LLC

Dear Ms. Siemens,

The Applicant (through its consultant) requested a variance from the aquifer testing requirements for the subject-line permit application.

Variances from the following rules are needed for the aquifer test conducted on the well.

- ARM 36.12.121(3)(a) involves pumping rate departures from the average flow rate during the test
- ARM 36.12.121(3)(f) involves certain requirements for observation wells
- ARM 36.12.121(3)(g) involves certain requirement for background water level observations

The Department grants variances of aquifer testing from the ARM noted directly above.

In addition, a variance from ARM 36.12.121(3)(b) was requested but it was also noted that a variance was no longer needed. The department concurs that a variance is not needed for 36.12.121(3)(b) for this application.

Sincerely,

A handwritten signature in blue ink that reads "Jim Ferch".

Jim Ferch

Kalispell Water Resources Regional Manager

[jferch@mt.gov](mailto:jferch@mt.gov)

406-752-2706





## ARM 36.12.121 - Aquifer Testing Addendum (ATA) - Review

Department of Natural Resources and Conservation (DNRC)  
 Water Sciences Bureau (WSB)

<b>Applicant</b>	RJM Properties LLC		
<b>Pre-Application/Application No.</b>	76LJ 30171747	<b>Date Sent to RO</b>	12/18/2025
<b>Regional Office (RO)</b>	Kalispell	<b>WSB Staff Name</b>	Kim Bolhuis, Groundwater Hydrologist

This checklist identifies any deficiencies that would require a variance pertinent to Administrative Rules of Montana (ARM) 36.12.121. **Table 1** lists deficiencies that would require a variance, the recommended action and the rationale describing why the variance request could be considered appropriate. If the requirements of ARM 36.12.121 are satisfied for each item, the box will be checked next to that item indicating such.

**Table 1:** Deficiencies identified, recommended action and rationale from WSB.

<input type="checkbox"/> No Deficiencies Identified			
Test Duration	Variance (ARM) (R=Requested; A=Additional)	Recommend Granting Variance Request	Rationale:
24-hr	3(a) <input checked="" type="checkbox"/> R <input type="checkbox"/> A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Rate departed from the average by more than +/- 5% during the test. The anomalies were short and did not endure for significant amounts of time during the test. The change in pumping rates will not affect analysis or modeling efforts by WSB.
24-hr	3(f) <input checked="" type="checkbox"/> R <input type="checkbox"/> A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	An observation well was used to monitor this 24-hr test that was completed in the same aquifer as the production well and was close enough (330 ft away) to potentially record an aquifer response to pumping. However, the observation well did not show a significant response to pumping, in addition to being pumped during the 24-hr test on the production well. The data is not usable for modeling of aquifer properties. However, the production well data is sufficient for modeling aquifer transmissivity, and a textbook value or value from a nearby test will be used for storativity.
24-hr	3(g) <input checked="" type="checkbox"/> R <input type="checkbox"/> A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Background levels were not recorded for a total of 48 hours prior to the aquifer test. They were recorded for approximately 19 hours prior to the test. The 19 hours of background monitoring showed no significant trend (slope was $6 \times 10^{-5}$ ft/ft). The background monitoring indicates that the water table trend is insignificant and will not affect modeling or analysis efforts.
Choose an item.	Choose an item. <input type="checkbox"/> R <input type="checkbox"/> A	<input type="checkbox"/> Yes <input type="checkbox"/> No	



**36.12.121(2): Minimum information that must be submitted with applications, check if provided:**

- (a) Map with labeled location of production and observation wells; and
- (b)  NA Well logs of the production and observation wells; and
- (c)  NA Form No. 633, in electronic format, with *all* information and data provided.

**36.12.121 (3): Minimum testing procedures are as follows, check if met:**

- (a)  NA Pumping must be maintained throughout the duration of the test. The rate may not depart from the average pumping rate by more than +/- 5%.
- (b)  NA The average pumping rate must be equal to or greater than the proposed flow rate if the application is for one well or if the total proposed rate for multiple wells can be obtained from a single well.
- (c)  NA The proposed pumping rate may be demonstrated by testing multiple wells as long as (e) is met by one well and the remaining flow rate is demonstrated by eight-hour drawdown and yield tests on additional production wells under (e)(ii) and e(iii).
- (d)  NA Pumping rate must be measured with a reliable measuring device and recorded with clock time according to the schedule on Form No. 633.
- (e)  NA Minimum duration of pumping during an aquifer test must be 24 hours for a proposed pumping rate and volume equal to or less than 150 GPM or 50 AF, or 72 hours for a proposed pumping rate and volume greater than 150 GPM or 50 AF.
- (e)(i)  NA At a minimum an eight-hour drawdown and yield test is required on all new production wells.
- (e)(ii)  NA In addition to (e), if more than one new production well is proposed, at a minimum an eight-hour drawdown and yield test is required on all subsequent new production wells.
- (e)(iii)  NA The testing procedures for a minimum eight-hour drawdown and yield test performed on any production well must follow (a), (d), and (h).
- (f)  NA One or more observation wells must be completed in the same source aquifer as the proposed production well and close enough to the production well so that drawdown is measurable and far enough that well hydraulics do not affect the observation well.
- (g)  NA Background groundwater levels in the production well and observation well(s) must be monitored at frequent intervals for at least two days prior to beginning the aquifer test according to the Form No. 633.



(h)  NA Groundwater levels in the production and/or observation well(s) must be reported with 0.01-foot precision according to the schedule specified on Form No. 633.



# VARIANCE REQUEST

ARM 36.12.123  
Form No. 653 (Revised 08/2025)

For Department Use Only

## INSTRUCTIONS

Use this form to request a variance from the requirements of ARM 36.12.121 or 36.12.1702, as provided for in ARM 36.12.123.

Submit this completed form to the appropriate regional office by the deadline established during the preapplication meeting or, if a preapplication meeting is not held, include this request with your filed application or as part of a deficiency response.

Application # \_\_\_\_\_ Basin \_\_\_\_\_  
Received Date \_\_\_\_\_  
Received By \_\_\_\_\_

**Applicant Name** RJM Properties LLC, c/o Rod Macfarlane

Mailing Address 1191 Majestic View Lane

City Kalispell State MT Zip 59901

Home Phone 406-261-6652 Other Phone \_\_\_\_\_

Email: rod\_macfarlane@yahoo.com

**Representative Name** (if other than Applicant) Mikel Siemens, PE; Core Water Consulting Inc.

Representative is Consultant  Representative is Attorney  Representative is Other (describe) \_\_\_\_\_

Mailing Address 490 E Montana Street, Suite 2

City Kalispell State MT Zip 59901

Home Phone 406-890-2073 Other Phone \_\_\_\_\_

Email: mikel@corewaterconsulting.com

**Identify from which section(s) of ARM 36.12.121 or 36.12.1702 you are requesting a variance. Refer to the rule for a full list of requirements in these sections.**

- ARM 36.12.121 Aquifer Testing Requirements
  - (2)(a) map with labeled location of production and observation wells
  - (2)(b) well logs of the production and observation wells
  - (2)(c) Form No. 633, in electronic format, with all information and data provided
  - (3)(a) pumping rate may not depart from the average pumping rate by more than +/- 5%
  - (3)(b) average pumping rate equal to or greater than the proposed flow rate if the application is for one well or if the total proposed rate for multiple wells can be obtained from a single well
  - (3)(c) proposed pumping rate may be demonstrated by testing multiple wells as long as (e) is met by one well and the remaining flow rate is demonstrated by eight-hour drawdown and yield tests on additional production wells under (e)(i)(i)
  - (3)(d) pumping rate must be measured with a reliable measuring device and recorded with clock time according to the schedule on Form No. 633
  - (3)(e) minimum duration of pumping during an aquifer test must be 24 hours for a proposed pumping rate and volume equal to or less than 150 GPM or 50 AF, or 72 hours for a proposed pumping rate and volume greater than 150 GPM or 50 AF
    - (3)(e)(i) at a minimum an eight-hour drawdown and yield test is required on all new production wells
    - (3)(e)(ii) In addition to (e), if more than one new production well is proposed, at a minimum an eight-hour drawdown and yield test is required on all subsequent new production wells
    - (3)(e)(iii) the testing procedures for a minimum eight-hour drawdown and yield test performed on any production well must follow (a), (d), and (h)
  - (3)(f) one or more observation wells must be completed in the same source aquifer as the proposed production well and close enough to the production well so that drawdown is measurable and far enough that well hydraulics do not affect the observation well
  - (3)(g) background groundwater levels in the production well and observation well(s) must be monitored at frequent intervals for at least two days prior to beginning the aquifer test according to the Form No. 633
  - (3)(h) groundwater levels in the production and/or observation well(s) must be reported with 0.01-foot precision according to the schedule specified on Form No. 633





## Application Materials

- Work Copy
- Application
- Any information submitted with Application including maps

# Application Materials



**APPLICATION FOR  
BENEFICIAL WATER USE  
PERMIT**  
§ 85-2-302, MCA

Form No. 600 (02/2025)

For Department Use Only  
**RECEIVED**  
DNRC Water Resources

SEP 08 2025

Kallispell Unit

**FILING FEE**

**\$2900/\$1600 – Inside a Basin Closure Area, Controlled Groundwater Area or Compact Closure; without/with filing fee reduction.**

**\$2500/\$1200 – Outside a Basin Closure Area; Controlled Groundwater Area or Compact Closure; without/with filing fee reduction.**

**INFORMATION**

An application will be eligible for a filing fee reduction and expedited timelines if the applicant completes a preapplication meeting with the Department (ARM 36.12.1302(1)), which includes submitting any follow-up information identified by the Department (ARM 36.12.1302(3)(c)) and receiving either Department-completed technical analyses or Department review of applicant-submitted technical analyses (ARM 36.12.1302(4) and (5)). An application for the proposed project also must be submitted within 180 days of delivery of Department technical analyses or scientific credibility review and no element on the submitted application can be changed from the completed preapplication meeting form (ARM 36.12.1302(6)). If application is eligible for a filing fee reduction, \$500 paid for Form 600P-B will be credited toward filing fees shown above.

Application # 30171747 Basin 76 LW  
Priority Date 9/8/25 Time 15:11 AM/PM  
Rec'd By LP  
Fee Rec'd \$ 2500-00 Check # 1422  
Deposit Receipt # KLW2604244  
Payor Inline Company LLC  
Refund \$ \_\_\_\_\_ Date \_\_\_\_\_

**Applicant Information: Add more as necessary.**

Applicant Name RJM Properties LLC c/o Rod Macfarlane  
Mailing Address 1191 Majestic View Lane City Kallispell State MT Zip 59901  
Phone Numbers: Home \_\_\_\_\_ Work \_\_\_\_\_ Cell \_\_\_\_\_  
Email Address rod\_macfarlane@yahoo.com

Applicant Name \_\_\_\_\_  
Mailing Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Phone Numbers: Home \_\_\_\_\_ Work \_\_\_\_\_ Cell \_\_\_\_\_  
Email Address \_\_\_\_\_

Applicant Name \_\_\_\_\_  
Mailing Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Phone Numbers: Home \_\_\_\_\_ Work \_\_\_\_\_ Cell \_\_\_\_\_  
Email Address \_\_\_\_\_

**Contact/Representative Information: Add more as necessary.**

Contact/Representative is:  Applicant  Consultant  Attorney  Other  
Contact/Representative Name Mikel Siemens, PE; Core Water Consulting  
Mailing Address 490 E Montana Street, Suite 2 City Kallispell State MT Zip 59901  
Phone Numbers: Home \_\_\_\_\_ Work 406-890-2073 Cell 406-261-0216  
Email Address mikel@corewaterconsulting.com

**NOTE:** If a contact person is identified as an attorney, all communication will be sent only to the attorney unless the attorney provides written instruction to the contrary (ARM 36.12.122(2)). If a contact person is identified as a consultant, employee, or lessee, the individual filing the water right form or objection form will receive all correspondences, and a copy may be sent to the contact person (ARM 36.12.122(3)).



Answer every question and applicable follow-up questions. Use the checkboxes to denote yes ("Y"), no ("N"), or not applicable ("NA"). Questions that require items to be submitted to the Department have a submitted ("S") checkbox, which is marked when the required item is attached to the Application. Label all submitted items with the question number for which they were submitted. Narrative responses that are larger than the space provided can be answered in an attachment. If an attachment is used, specify "see attachment" on this form, and label the attachment with the question number. Constrain narrative responses to the specific question as is asked on the form; do not respond to multiple questions in one narrative. Responses in the form of a table may be entered into the table provided on this form or in an attachment. If an attachment is used, the table must have the exact headings found on this form, and "see attachment" must be entered as a response to the relevant question. Clearly label all units in tables and narrative responses.

## **PREAPPLICATION AND TECHNICAL ANALYSES INFORMATION**

1.  Y  N Do you elect for Department technical analyses to be used for criteria assessment?
2.  Y  N Did you have a preapplication meeting AND complete a Permit Preapplication Meeting Form Part A and Part B (Form 600P-A and 600P-B)?

### **IF QUESTION 2 IS NO, answer 2.a and 2.b:**

- 2.a.  S Submit the Technical Analyses Addendum (Form 600-TAA).
- 2.b.  S  NA Submit the technical analyses, if you elected in question 1 for Applicant technical analyses to be used for criteria assessment. Select "NA" if you elected for Departmental technical analyses.

### **IF QUESTION 2 IS YES, answer 2.c, 2.d, and 2.e:**

- 2.c.  Y  N Has any element of the project described in this application changed from the mandatory elements of the project described in the completed form 600P? **If yes:**

2.c.i. Please explain.

A pre-application meeting was held, however, the final application (Form 600) was not submitted by the DNRC deadline. The applicant chose to not have another pre-application meeting and to submit the application for an expedited timeline. DNRC completed the technical analysis which is still valid until January 15, 2026.

- 2.c.ii.  S Submit the Technical Analyses Addendum (Form 600-TAA).

- 2.d.  Y  N Are the technical analyses to be used for criteria assessment exactly the same as those completed during the preapplication process? **If no:**

2.d.i. Please explain.

The expire pre-app and the TAA were completed at 101 gpm, which is being increased to 105 gpm, and the volume had less than 1 AF increase. So with these increases, a new DNRC TA may be required.

- 2.d.ii.  S Submit the Technical Analyses Addendum (Form 600-TAA).

- 2.e.  Y  N Did you elect in Question 1 for Department technical analyses to be used for criteria assessment? **If no:**

2.e.i.  S Submit the technical analyses.



## **APPLICATION ADDENDA AND REVIEW**

3.  **S**  **NA** If your application is for groundwater, not surface water, and one or more of your points of diversion are in a Basin Closure Area, then submit the Basin Closure Area Addendum (Form 600-BCA).
4.  **S**  **NA** If your application is for groundwater and one or more points of diversion are in a Basin Closure Area, then your project must have a Hydrogeologic Report that conforms with MCA 85-2-361 to comply with the requirements of § 85-2-360, MCA. A Hydrogeologic Report Addendum (Form 600-HRA) or Department Technical Analyses may be used to meet these requirements. Please mark the box below that best applies, then select "S" if submitting a Hydrogeologic Report or "NA" if one is not required. This question does not apply to surface water points of diversion in a Basin Closure Area.
- If you elected to conduct Technical Analyses, you must submit the Hydrogeologic Report Addendum (Form 600-HRA).
  - If you elected for DNRC to conduct Technical Analyses but did not have a preapplication meeting AND complete a Form 600P Permit Preapplication Meeting Form (or changes have occurred since the completed Form 600P), you must submit the Hydrogeologic Report Addendum (Form 600-HRA).
  - If you elected for DNRC to conduct Technical Analyses, had a preapplication meeting, completed a Form 600P, and the Technical Analyses remain unchanged since the preapplication meeting, you do not need to submit Form 600-HRA because the Department's Technical Analyses meet the report requirements of § 85-2-360 and § 85-2-361, MCA.
5.  **S**  **NA** If the project is for one or more groundwater points of diversion located in a Controlled Groundwater Area, then submit the Controlled Groundwater Area Addendum (Form 600-CGWA).
6.  **S**  **NA** If the project involves an appropriation that is greater than 5.5 CFS and 4,000 acre-feet, then submit a Criteria Addendum Application for Beneficial Water Use Permit for Appropriations Greater than 5.5 CFS and 4,000 AC-FT (Form 600-B).
7.  **S**  **NA** If the project involves out-of-state water use, then submit the Out-of-State Use Addendum (Form 600/606-OSA).
8.  **S**  **NA** If you require mitigation water to meet the criteria of issuance, then submit a Mitigation Purpose Addendum (Form 600/606-MIT).
9.  **S**  **NA** If the proposed purposes include marketing or selling water, (not marketing for mitigation/aquifer recharge), then submit the Marketing Purpose Addendum (Form 600/606-WMA).
10.  **S**  **NA** If the project involves one or more places of storage, then submit a Permit Storage Addendum (Form 600-SA). This does not include reservoirs, pits, pit-dams, or ponds with a capacity less than 0.1 AF; water tanks; or cisterns (ARM 36.12.113(6)).
11.  **S**  **NA** If the project is in designated sage grouse habitat, then submit a review letter from the Montana Sage Grouse Habitat Conservation Program.
12.  **S**  **NA** If the project includes a point of diversion and/or place of use on State of Montana Trust Land, submit documentation of consent from the DNRC Trust Lands Management Division.
13.  **S**  **NA** You must provide a written notice of the application to each owner of an appropriation right sharing a point of diversion or means of conveyance (e.g., canal, ditch, flume, pipeline, or constructed waterway) pursuant to §85-2-302(4)(c), MCA. Submit a copy of this notice and the recipient list.



**PURPOSE AND DIVERSION INFORMATION**

14.  Y  N Is the proposed use temporary?

14.a. If yes, when will the appropriation cease? \_\_\_\_\_

15. Is the proposed source surface water or groundwater? Groundwater

16. What is the source name? GWIC 331034

17.  S Attach a map utilizing an aerial photograph or topographic map that shows the following: section corners; township and range; north arrow; scale bar; all proposed points of diversion labeled with a unique Point of Diversion (POD) ID number and, if applicable, GWIC number; all proposed places of use; all proposed conveyance facilities and or routes; all proposed places of storage labeled with a unique Storage ID number; and places of use (POU) for all overlapping water rights. More than one map may be submitted, if necessary to clearly convey all required information.

18. Fill out the table below. Means of diversion for surface water includes headgate, pump, dam, and others. Means of diversion for groundwater includes well, developed spring, pit pond, and others.

Purpose	Means of Diversion	Acres Irrigated (if appl.)	Period of Diversion (Month/Day - Month/Day)	Period of Use (Month/Day - Month/Day)	Flow Rate <input checked="" type="checkbox"/> GPM <input type="checkbox"/> CFS	Volume (Acre-Feet)
Domestic	Well		01/01-12/31	01/01-12/31	22.00	2.24
Lawn & Garden	Well	10	04/15-10/15	04/15-10/15	82.57	19.48
Total Flow Rate and Volume Required					105	21.72

19.  Y  N Does the proposed use include on or more of the following purposes: domestic, multiple domestic, stock, or irrigation? If yes, fill out the following table, where applicable.

Purpose	Requested Information	Response
Domestic or multiple domestic	Number of dwellings	8
Stock	Number of animal units	
Irrigation	Method of irrigation type (sprinkler or flood) and subtype (if flood: level border, graded border, furrow, contour ditch, or other; if sprinkler: center pivot, wheel line, or other)	Lawn and garden irrigation (sprinkler)
Irrigation (flood only)	Design slope	





**SUPPLEMENTAL AND OVERLAPPING WATER RIGHTS**

23.  Y  N Will other water rights supplement or overlap the place of use to contribute to the purpose(s)?

23.a. If yes, summarize how the supplemental and proposed water rights will be operated as a whole to serve the purpose(s).

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24. For each supplemental or overlapping water right, please list the water right number, typical period of diversion and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed to the shared place of use.

Water Right #	Average Period of Diversion	Average Period of Use	Flow Rate	Volume Contributed

25.  Y  N Will this application supplement contract water from a Federal Project, ditch company, or other source?

25.a. If yes, explain.

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**ADVERSE EFFECT**

26. Explain how you can control your diversion in response to a call being made.

Reduce frequency hertz on VFD Control to limit peak production on the pump.

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27. Describe any plans you have for ensuring existing water rights will be satisfied during times of water shortage.

Reduce to domestic use only if needed. See supplemental report for more information.

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28.  Y  N Are you aware of any calls that have been made on the source of supply or, if groundwater, on nearby surface water sources?

28.a. If yes, explain.

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29.  Y  N Does a water commissioner distribute water or oversee water distribution on your proposed source?

29.a. If yes, list the source(s).

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30.  Y  N Do other water rights share any of the proposed points of diversion?

30.a. If yes, describe how the proposed project will not adversely affect these water rights.

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31.  Y  N Do other water rights share any conveyance infrastructure associated with the proposed project?

31.a. If yes, describe how the proposed project will not adversely affect these water rights.

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**ADEQUATE MEANS OF DIVERSION AND OPERATION**

32.  **S** Submit a diagram of how you will operate your system from all proposed points of diversion to all proposed places of use.

33. Describe specific information about the capacity of all proposed diversionary structures. This may include, where applicable: pump curves and total dynamic head calculations, headgate design specifications, and dike or dam height and length.

The diversion system includes 3-inch galvanized iron drop pipe length of 200 feet. The well will have a Grundfos SP90S100-9 submersible pump controlled by a variable frequency drive (VFD). The pumphouse will have two Flexcon FT266 pressure tanks which in combination with the VFD will prevent water hammer and short cycling of the pump. The pressure tanks and circuitry will be in the pump control house on Lot 2 near the well. See the supplemental report for additional information.

34. Describe the size, materials, capacity, and configuration of infrastructure to convey water from all proposed points of diversion to all proposed places of use. This may include but is not limited to, pipelines and ditches. Include a description of any losses related to the proposed conveyance. Ditch conveyance losses may be estimated numerous ways, which include a ditch loss rate or Department standard methods.

From the well, a 2-inch PVC pipe will convey water to the pump house with a McCrometer totalizing flow meter. Two Flexcon pressure tanks will be installed to ensure adequate flow and prevent water hammering. From the pumphouse, a 4-inch PVC C900 water main will convey to the eight lots with separate service connections. Friction analysis is included in the supplemental report.

35. Describe how the proposed diversion and conveyance infrastructure can provide the required flow and volume, for the purposes plus any conveyance losses and storage, throughout the proposed period of diversion.

See supplemental report for additional details.



36. Provide a plan of operations, which includes specific information about how water is delivered within the place of use. This may include, where applicable, the range of flow rates needed for a pivot. Water will divert year-round for domestic use and from April 15th to October 15th for lawn and garden irrigation. See supplemental report for additional details. Irrigation will occur overnight for a seven-hour period.

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37.  Y  N Does the proposed conveyance require easements?

37.a. If yes, explain.

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38.  Y  N Do you own the land where all proposed points of diversion are located?

38.a.  S If no, submit documentation to show you have the right to use all points of diversion located on each property you do not own. This may include, but is not limited to, a well agreement, an easement, or permission of the party that owns the property where the proposed point(s) of diversion are located.

39.  Y  N Will your system be designed to discharge water from the project?

IF YES,

39.a. Explain the wastewater disposal method.

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39.b.  Y  N  NA Have the necessary permits been obtained to comply with §§ 75-5-410 and 85-2-364, MCA?

40.  Y  N Do you have any plans to measure your diversion and use?

40.a. If yes, describe the plan and the type of measurements you will take.

Pump house will be equipped with totalizing flow meter to measure flow periodically with minimum monthly volume records.

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41.  Y  N Is the means of diversion for any proposed point of diversion a well?

IF YES,

41.a.  Y  N Have all wells been drilled?

41.b. For all wells that have been drilled, what is the name of the well driller and, if available, what is their license number?

William (Joe) Davis - Davis Brothers Drilling, WWC-651

41.c.  Y  N For all wells yet to be drilled, will a licensed well driller construct the wells?

41.d.  S  NA Submit any well logs not yet submitted to the Department.

**BENEFICIAL USE**

42.  Y  N Does the Department have a volume, period of diversion, or period of use standard for the purposes for which water is proposed? Department standards can be found in the DNRC Water Calculation Guide, ARM 36.12.112, and ARM 36.12.115.

42.a.  Y  N If yes, do all proposed beneficial uses fall within Department standards?

42.b. If no Department standard exists, or if any proposed beneficial use falls outside of Department standards, explain how the requested flow rate and volume are reasonable for the purpose.

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43.  Y  N Will your proposed project be subject to DEQ requirements for a public water supply (PWS) system or Certificate of Subdivision Approval (COSA)?

44.  Y  N Are you proposing to use surface water for in-house domestic use?

44.a.  Y  N If yes, does a COSA exist for the proposed place of use?

44.a.i.  S  NA If yes, please submit the COSA.

44.a.ii.  Y  N If no, have you researched or consulted with DEQ regarding their requirements?



**POSSESSORY INTEREST**

45.  Y  N Do you meet one of the exceptions to possessory interest requirements, pursuant to ARM 36.12.1802? Exceptions include cases where the application is for sale, rental, distribution, or is a municipal use, or in any other context in which water is being supplied to another and it is clear that the ultimate user will not accept the supply without consenting to the use of water on the user's place of use.

45.a. If yes, explain.

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46.  Y  N  NA Do you own all proposed places of use? Mark "NA" if you meet one of the exceptions to the possessory interest requirement.

IF NO,

46.a.  S Explain and submit documentation that shows you either have possessory interest or written permission of the parties with possessory interest of the place of use.

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46.b.  Y  N Would you like the water right to be appurtenant to the land? Please note that if your water right is not appurtenant to land it will not transfer by default with the conveyance of the property, pursuant to § 85-2-403, MCA.

46.b.i. If no, explain.

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**PROPOSED COMPLETION PERIOD**

47. How much time will be needed to complete this project and to submit to the DNRC a Project Completion Notice (Form 617)? 15 years

48. Please describe why this amount of time is needed to complete this project.

A 15-year period will be needed to put all the water to beneficial use. The time requested is to allow the developer to sell the lots and then for the individual lot owners to develop the property residences and put the water to beneficial use.



**AFFIDAVIT & CERTIFICATION**

Read carefully before you sign and review with legal counsel if you have any questions. All owners (or trustees) must sign the form. *\*\*If the owner is a business or trust, include the title of the representative(s) signing the form (i.e., president, trustee, managing partner, etc.) and provide documentation that establishes the authority of the representative to sign the application.*

I affirm the information provided for this application is to the best of my knowledge true and correct. If a preapplication meeting form was submitted, I am aware that my application for this project will not qualify for a discounted filing fee and expedited timelines if upon submittal of the application to the Department, I changed any element of the proposed application from the preapplication meeting form and follow-up materials (ARM 36.12.1302(6)(a)).

I affirm I have possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use, unless this application meets an exception to the possessory interest requirements in ARM 36.12.1802(1)(b).

I understand that making a false statement under oath or affirmation in this application and official proceedings throughout the examination of my application may subject me to prosecution under § 45-7-202, MCA, a misdemeanor punishable by a jail term not to exceed 6 months or a fine not to exceed \$500, or both. I have read this Affidavit and understand the terms and conditions.

I declare under penalty of perjury and under the laws of the state of Montana that the foregoing is true and correct.

Printed Name Tia MacFarlane

Applicant Signature [Signature] Date: 9-3-25

Printed Name \_\_\_\_\_

Applicant Signature \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name \_\_\_\_\_

Applicant Signature \_\_\_\_\_ Date: \_\_\_\_\_





September 8, 2025

Kalispell Water Resources Regional Office  
655 Timberwolf Parkway, Suite 4  
Kalispell, MT 59901-1215

RE: Provisional Permit Ground Water for RJM Properties, LLC in Kalispell, MT

Dear Water Right Specialists:

Enclosed are materials for Provisional Permit water right with an expired pre-application submission date. A DNRC Technical Analysis was completed, but an increase in flow rate is requested to 105 gpm instead of 101 gpm, with a minor increase in water volume also.

Enclosed is the Form 600, Form 600 TAA and Supplemental Report to expand upon the permit criteria.

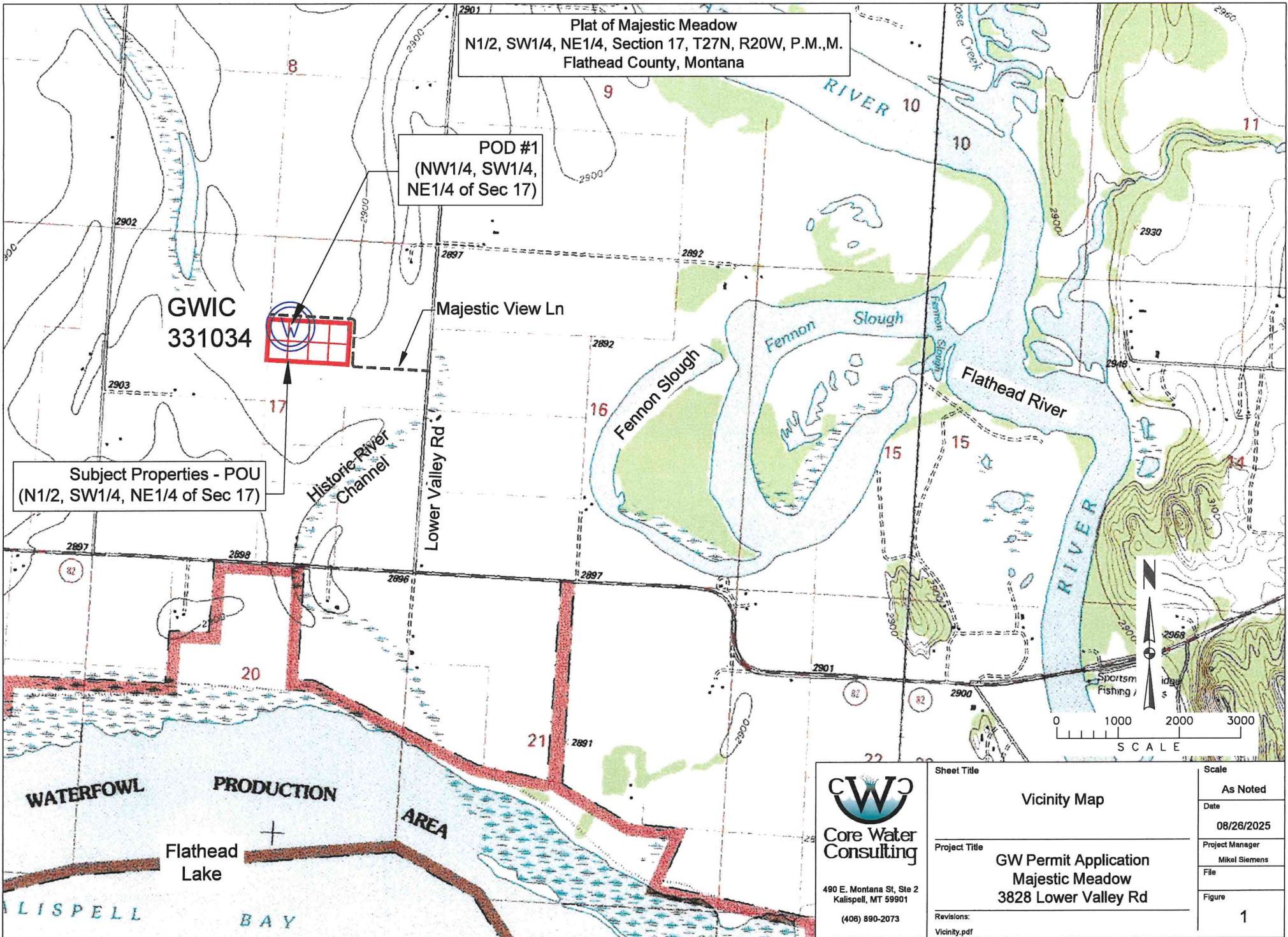
Best regards,

A handwritten signature in blue ink, appearing to read 'Mikel Siemens', is written over the 'Best regards,' text.

Mikel Siemens, P.E.  
*Environmental Engineer*

Enclosed:

- \$2500 Check #1422 from Inline Company, LLC to DNRC
- Figure 1. Vicinity Map
- Figure 2. Means of Diversion
- Figure 3. Pump House
- Figure 4. Well Detail
- Form 600
- Form 600 – TAA



Plat of Majestic Meadow  
 N1/2, SW1/4, NE1/4, Section 17, T27N, R20W, P.M., M.  
 Flathead County, Montana

POD #1  
 (NW1/4, SW1/4,  
 NE1/4 of Sec 17)

GWIC  
 331034

Subject Properties - POU  
 (N1/2, SW1/4, NE1/4 of Sec 17)

Historic River  
 Channel

Majestic View Ln

Lower Valley Rd

Fennon Slough

Fennon Slough

Flathead River

WATERFOWL PRODUCTION AREA

Flathead Lake

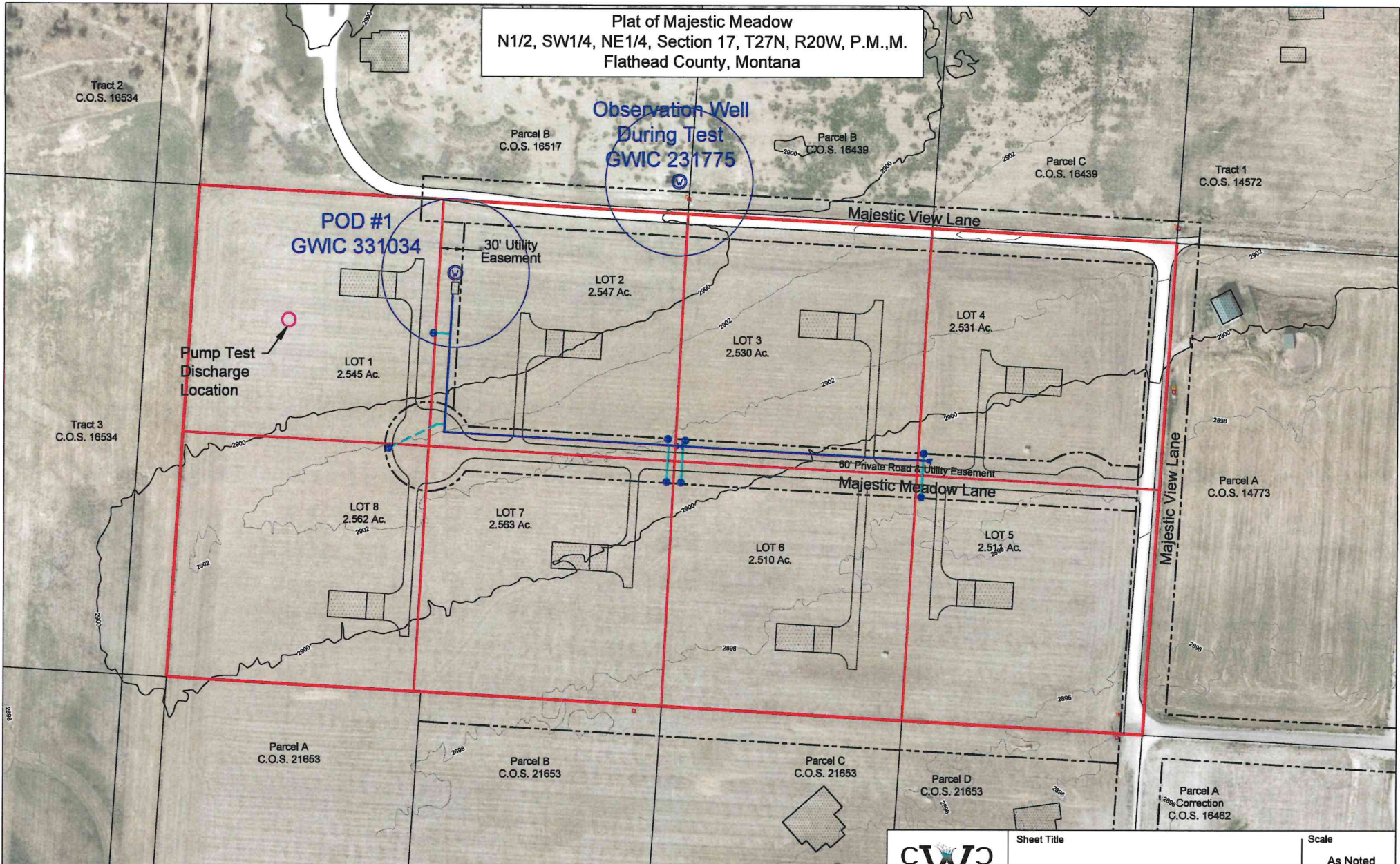
AREA



490 E. Montana St, Ste 2  
 Kalispell, MT 59901  
 (406) 890-2073

Sheet Title	Vicinity Map	Scale	As Noted
Date	08/26/2025	Project Manager	Mikel Siemens
Project Title	GW Permit Application Majestic Meadow 3828 Lower Valley Rd	File	
Revisions:	Vicinity.pdf	Figure	1

Plat of Majestic Meadow  
 N1/2, SW1/4, NE1/4, Section 17, T27N, R20W, P.M.,M.  
 Flathead County, Montana

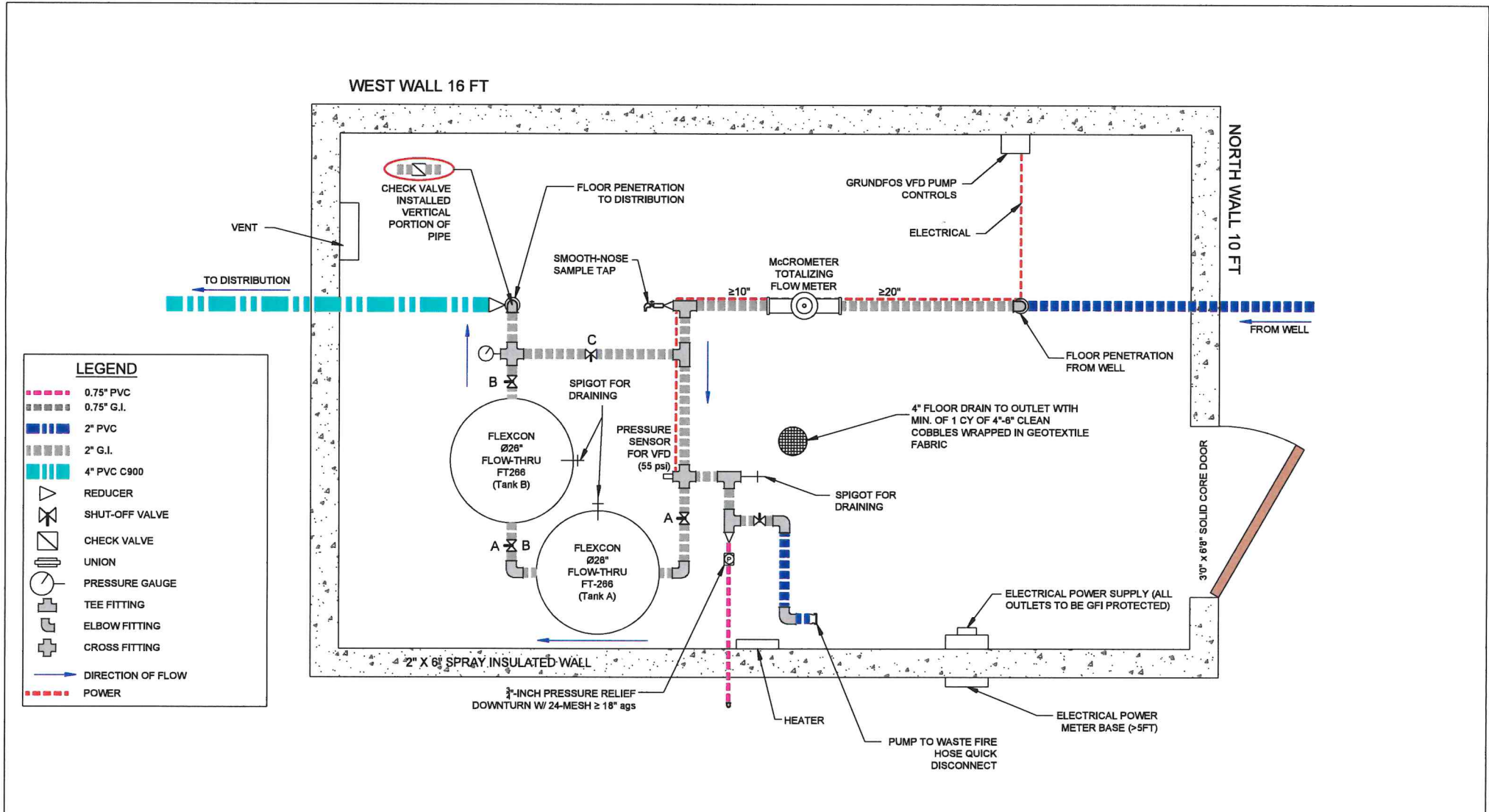


LEGEND	
	Well Locations
	Water Line (4" PVC C900)
	Service Connection
	Subject Property Line
	Easements
	Shut Off Valves

**CWC**  
 Core Water Consulting  
 490 E. Montana St. Ste 2  
 Kalispell, MT 59901  
 (406) 890-2073

Sheet Title	Means of Diversion
Project Title	GW Permit Application Majestic Meadow 3828 Lower Valley Rd
Revisions:	Vicinity.pdf

Scale	As Noted
Date	08/26/2025
Project Manager	Mikel Siemens
File	
Figure	2



**Note:**  
 During pressure tank maintenance, valves are modified so the system can still operate with one pressure tank online.

- Tank A is offline, then Valves A & A closed and C open
- Tank B is offline, the Valves B & B closed and C open

System should normally operate with valve C closed and water flows pressure tanks. Pressure tanks will be labeled with maximum DEQ service pressure of 83.3 psi.

Pump to be Grundfos 4" Tri-Seal High-Capacity 10-HP Pump (Model 90S100-9) 105 GPM @ 297.16 TDH

<p>Core Water Consulting</p> <p>490 E. Montana St, Ste 2 Kalispell, MT 59901 (406) 890-2073</p>	Sheet Title <p align="center"><b>Pump House</b></p>	Scale <p align="center">Not to Scale</p>
	Project Title <p align="center"><b>GW Permit Application Majestic Meadow 3828 Lower Valley Rd</b></p>	Date <p align="center">08/26/2025</p>
Revisions: PH-Plan.pdf	Project Manager Mikel Siemens	File Figure <p align="center">3</p>







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**GROUNDWATER APPLICATION FOR  
BENEFICIAL WATER USE PERMIT  
SUPPLEMENTAL INFORMATION  
FOR  
MAJESTIC MEADOW**

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**IN THE N1/2, SW1/4, NE1/4 OF  
SECTION 17, T27N, R20W, P.M.,M.  
FLATHEAD COUNTY, MONTANA**

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Prepared for:  
**RJM Properties LLC**  
Rod Macfarlane, Representative  
1191 Majestic View Lane  
Kalispell, MT 59901

September 8, 2025

Prepared by:  
Core Water Consulting

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Components in this report are provided to supplement Form 600 for a Groundwater Provisional Permit. Not all sections for the DNRC form require supplemental descriptions.

## **INTRODUCTION**

Majestic Meadow is a subdivision which received approval from Montana Department of Environmental Quality but requires a Provision Permit water right for increased flow rate and volume. The existing multiuser water supply well, POD#1, provides water for the subdivision at 35 gpm with minimal lawn sprinkling. A Provisional Permit for multiple domestic and lawn and garden irrigation water at a flow rate of 105 gpm and volume of 21.63 acre-feet/year (AF/year) is desired so each of the eight lots can irrigate 1.25 acre per parcel.

## **PHYSICAL CONDITIONS**

The Majestic Meadow Subdivision is in the lower Flathead Valley northeast of Somers and northwest of Bigfork, MT. The valley is bounded to the north by the Whitefish Mountains, the West by the Salish mountain range, the south by Flathead Lake, and the East by the Swan Mountain Range. The subdivision resides about 3 miles east of the Salish mountain range and 1.0 mile north of Flathead Lake. The average elevation of the subdivision is about 2900 feet above mean sea level. The climate at the site is closest to the Creston NCDC Coop Station #242104, which has a mean annual precipitation of 19.61 inches between 1949 and 2005.

### **Geology**

The area surrounding the Flathead Valley is dominated by Upper Pleistocene Glacial Till and Precambrian Belt Supergroup Rocks, and this is assumed to underlay the valley fill. The site itself falls within the Alluvium of Modern Channels and Floodplains from the Holocene (Qal). This alluvium is characterized by sand and silt, with minor components of pebbles and clay. Thickness averages 30 feet but can reach 90 feet. Groundwater in this alluvium is commonly found near the land surfaces and produces significant quantities of water (**Appendix D**). Majestic Meadow is situated on Quaternary age-deposits, significantly above the Belt bedrock. The Quaternary-age deposits are generally made up of till and glacial lake sediments (confining units) and glacial outwash deposits. The glacial sediments were deposited during the glacial advance lasting from approximately 2 Ma to 15,000-20,000 years ago and the subsequent retreat up to present time (LaFave, Smith, and Patton, 2004).

### **Hydrogeology**

The multiuser well intercepts the top of the deep alluvial aquifer in the Flathead Valley; the Flathead River flows north to south, two miles to the east and Flathead Lake is one mile south. Between the Flathead River and the property is a historical river meander, Fennon Slough, which is connected to the river and the shallow aquifer. The groundwater well has numerous clay layers between the shallow aquifer and the deep aquifer, so the water pumped from the well is not the shallow water source. In addition to Fennon Slough, a historical river channel exists which has not observed flowing water in the channel. There are no known surface water rights on the feature.

The Flathead Valley contains several aquifers varying by depth including shallow, intermediate, and a deep alluvial aquifer. Near Majestic Meadow, the deep alluvial aquifer is close to the 600 below ground surface contour (Smith, 2004). The site rests between the 2891 and 2890 ft water level contours pertaining to the shallow aquifer (Konizeski, 1968). Previous studies of the



hydrogeology of the Kalispell Valley area have been completed by Konizeski, Brietkrietz, and McMurtrey (1968), Uthman, Warren, and Corbett (2000), and LaFave and others (2004).

**1. PURPOSE AND DIVERSION INFORMATION**

The following information is provided in support of the Application for Beneficial Water Use Permit submitted on behalf of RJM Properties LLC. The water right being applied is for annual and perpetual water usage for the subdivision. The beneficial uses include multiple domestic and lawn and garden irrigation. The subdivision boundaries are defined by the Plat for Majestic Meadow, approved by Flathead County Commissioners on February 12, 2025. A pre-application meeting was held on November 26, 2024 and a technical analysis by DNRC was received on January 15, 2025. A variance for the aquifer testing requirements was approved by DNRC on December 26, 2024 (**Appendix G**). The application was not submitted by July 14, 2025 and a new pre-application meeting was not held; thus Form 600 is being filed without the filing fee reduction.

The Plat of Majestic Meadow has been approved as multiuser well Majestic Meadow Water Supply (MMWS), EQ#22-2027, and subdivision Certificate of Subdivision Approval (COSA) per EQ#22-2608 for eight lots being served at 35 gpm, which provides limited irrigation. The goal is to expand the flow rate to 105 gpm with the Provisional Permit for both domestic and lawn and garden irrigation for the eight parcels. The MMWS system was designed to provide peak domestic demand simultaneously with average irrigation that occurs over a seven-hour period overnight for the parcels. The maximum proposed irrigated area is 10 acres or 1.25 acre per lot. The total volume demand is 2.24 AF for multiple domestic and 19.48 AF for the associated lawn and garden irrigation.

**2. POINTS OF DIVERSION**

MMWS has one point of diversion (POD#1), located at NE1/4, SW1/4, NE1/4 of Section 17, Township 27 North, Range 20 West – 3.0 miles east of Somers, Montana. The well is located on Lot 2 (Figure 2 in **Appendix A**). The MMWS well is a 6-inch cased well with perforations (open bottom) at 714-ft.

**Table 1. Diversion Summary**

Purpose for Water	Means of Diversion	Acres Irrigated	Period of Diversion	Period of Use	Flow Rate (GPM)	Volume AF
Multiple Domestic	Pump	N/A	01/01 - 12/31	01/01 - 12/31	22	2.24
Irrigation Lawn Garden	Pump	10	04/15 - 10/15	04/15 - 10/15	82.57	19.48

**3. PLACE OF USE**

The place of use encompasses eight lots, with one service connect for each lot that has one residence and 1.25-acres of lawn and garden irrigation for a total of 10 acres.

**Table 2. Place of Use**

Acres	Lot	1/4	1/4	1/4	Sec	Twp	Rge	Geocode
20.299	1 - 8	N2	SW	NE	17	27N	20W	Parent Parcel 07-3835-17-1-04-20-0000



#### 4. SUPPLEMENTAL WATER RIGHTS

The lots do not have water rights for the development, so this application does not include any prior approved supplemental water rights. At the time of submission, all the lots are retained by the owner and the houses within the subdivision are not occupied.

#### 5. ADVERSE EFFECT

The owner will implement and properly regulate the volume diverted during times of water shortage. The owner proposes implementing the following steps:

- 1) Initially reduce irrigation by 50 percent;
- 2) Cease irrigation;
- 3) Initiate domestic water rationing to 50 percent during extreme shortage; and
- 4) Should a valid call from a senior water holder be requested, the owner will turn off the well pump and temporarily obtain their potable water from an alternative PWS source until the call is lifted.

#### 6. ADEQUATE DIVERSION MEANS AND OPERATION

A submersible pump hung within the 6-inch well will divert through 3-inch drop pipe set at 200 feet bgs. The proposed pump is Grundfos SP90S100-9 (10 horsepower with 9 stages) pump controlled with variable frequency drive (VFD) control panel; set at constant pressure discharge from the pumphouse at 55 psi. The pumphouse has two Flexcon FT266 pressure tanks, which in combination with the VFD, prevents water hammer and short cycling of the pump. The pressure tanks and control panel will be in a pump house on Lot 2 south of the well.

From the pressure tank, water is diverted to Lots 1 - 8 of Majestic Meadow in a 4-inch water main with eight separate service connections. The individual service lines will be 1-1/4-inch diameter in size. No additional storage is required.

Pump house plans include a McCrometer totalizing flow meter to record total flow for the diversion. Periodic measurements will be collected and stored within the pump house. From the totalizer readings, the annual water volume can be computed for the Provisional Permit Notice of Completion.

The well was drilled by William Davis (Davis Drilling from Eureka, Montana) on February 22, 2024. The static water level is approximately 12 feet below top of casing (btoc). The pumping water level was 150 feet btoc while pumping at a rate of 101 gpm after 24-hour period.

The elevation and service pressure requirements are summarized below:

System peak elevation:	2902 feet
Ground elevation well:	2899 feet
Pumping water elevation:	2747 feet (150 ft bgs)
Pump house pressure (55 psi):	115.5 feet

Based upon the William and Hazen Equation with a C (roughness) coefficient of 140 for the galvanized and 150 for PVC/HDPE, following is a summary table of the estimated total dynamic head during peak demands:



**Table 3. Transmission Friction Losses**

Component	Pipe Length (ft)	C (Roughness)	Flow, q (gpm)	Diameter (in)	Friction (ft)
Drop pipe	200	150	105	3	5.15
Well to Pump House (horizontal)	20	150	105	2	3.70
Miscellaneous pump house fittings	50	150	105	2	9.26
Pump House to Main	887	150	105	4	5.63
Service line fittings	50	150	13.1	1.25	1.94
Service line	100	150	13.1	1.25	3.89
Subtotal					5.83

The worst- case maximum flow for the peak evaluation was assessed for the northern distribution line at 887 feet.

A pump curve for the Grundfos SP90S100-9 is provided in **Appendix C** which shows that the pump is capable of supplying 105 gpm at 297.16-feet of total dynamic head with a service pressure of 55 psi to the residences.

The eight lots are expected to divert 250 gpd. The daily average is 1.39 gpm. A system peaking factor of 8 is selected for the subdivision since it has a few lots. Peaking factors range from 1 – 10, with municipalities assigned a 2.3. A peak domestic flow rate of 22.22 gpm for the eight residences. Lawn and garden irrigation is intended overnight, to minimize evaporation during the day. A 7-hour irrigation period demands a flow rate of 82.57 gpm. If the domestic demand and irrigation demand occurred simultaneously, the system flow rate would be 104.79 gpm. The Homeowners Association will monitor the irrigation practices to ensure property ability to provide water for domestic and irrigation within the permitted flow rate.

## 7. BENEFICIAL USE

Groundwater beneficial use will occur January 1 to December 31 for domestic, with irrigation between April 15 through October 15, per DNRC standards. Domestic use was calculated based upon 8 residences at an average flow of 250 gpd, which amounts to a volume of 2.24 AF/year based on the DNRC Water Calculation Guide.

The water volume necessary to irrigate was established based upon the Creston hydrologic dataset Station No MT 242104 based upon the Irrigation Water Requirements (IWR) software developed by the USDA Natural Resources and Conservation Service (NRCS). The subdivision lies within climatic area III, which has a typical irrigation period from April 15<sup>th</sup> through October 15<sup>th</sup>. DNRC has a memorandum titled DNRC Consumptive Use Methodology – Turf Grass March 23, 2010 which standardizes the method for analyzing the irrigation requirement.



The constraints per the memo for IWR pasture grass as representing turf grass:

- Dry year estimates;
- Irrigation start and end dates rely upon a temperature of 45 degree F for the grow dates;
- Use the default 1.0" net irrigation application; and
- Apply 0.25" carryover moisture for both the beginning and end of season.

Model results indicate a net irrigation requirement of 16.36" based upon the dry year analysis, see **Appendix C**.

Sprinkler irrigation is planned at 1.25 acres of lawn and garden for each lot, for total area of 10 acres across the 20 acre subdivision. **Table 4** displays the irrigation demand that incorporate the IWR sprinkler demand for the system. The covenants for the subdivision suggest that irrigation should occur in the evenings between 10 p.m. and 5 a.m. or a seven-hour period. Peak demand for irrigation is established for the seven-hour period.

**Table 4. Irrigation at 1.25-acre per lot**

Irrigation		
Net Lawn & Garden (dry year 80%)	16.36	inches
Beg Grow Season	15-Apr	
End Grow Season	15-Oct	
Length Grow Season	183	days
Acres Irrigation	10	acres
Season Volume	19.48	AF/season
	34,679	gpd
Average Rate Irrigation for 7 hrs	82.57	gpm

This irrigation volume lies below the DNRC standard for lawn and garden irrigation (2.5 AF/acre) at 1.948 AF/acre.

Based upon domestic and lawn sprinkler irrigation a flow rate of 105 gpm has beneficial diversion purposes for the Provisional Permit groundwater application that align with the proposed diversion equipment for the well.

## 9. POSSESSORY INTEREST

RJM Properties LLC holds possessory interest in this property, with Rod Macfarlane as representative. Proof of possessory interest is provided in **Appendix F**.

## 10. PROPOSED COMPLETION PERIOD

Real estate in 2025 has seen a decline in sales, so the period for all eight lots to be sold, developed, and water maximized could be numerous years. A 15-year period will be needed to put all the water to beneficial use. The time requested is to allow the developer to sell the lots and then for the individual lot owners to develop the property residences and put the water to beneficial use.



## **11. AFFIDAVIT & CERTIFICATION**

RJM Properties LLC is held by Rod Macfarlane, the registered agent for the company. The affidavit and certification for the Provisional Permit application was signed by Rod Macfarlane, representative for RJM Properties LLC. The subdivision and lot ownership remain under his management for the water system until numerous lots are sold and then the water rights would be transferred to the Homeowners Association. That transfer has not occurred.



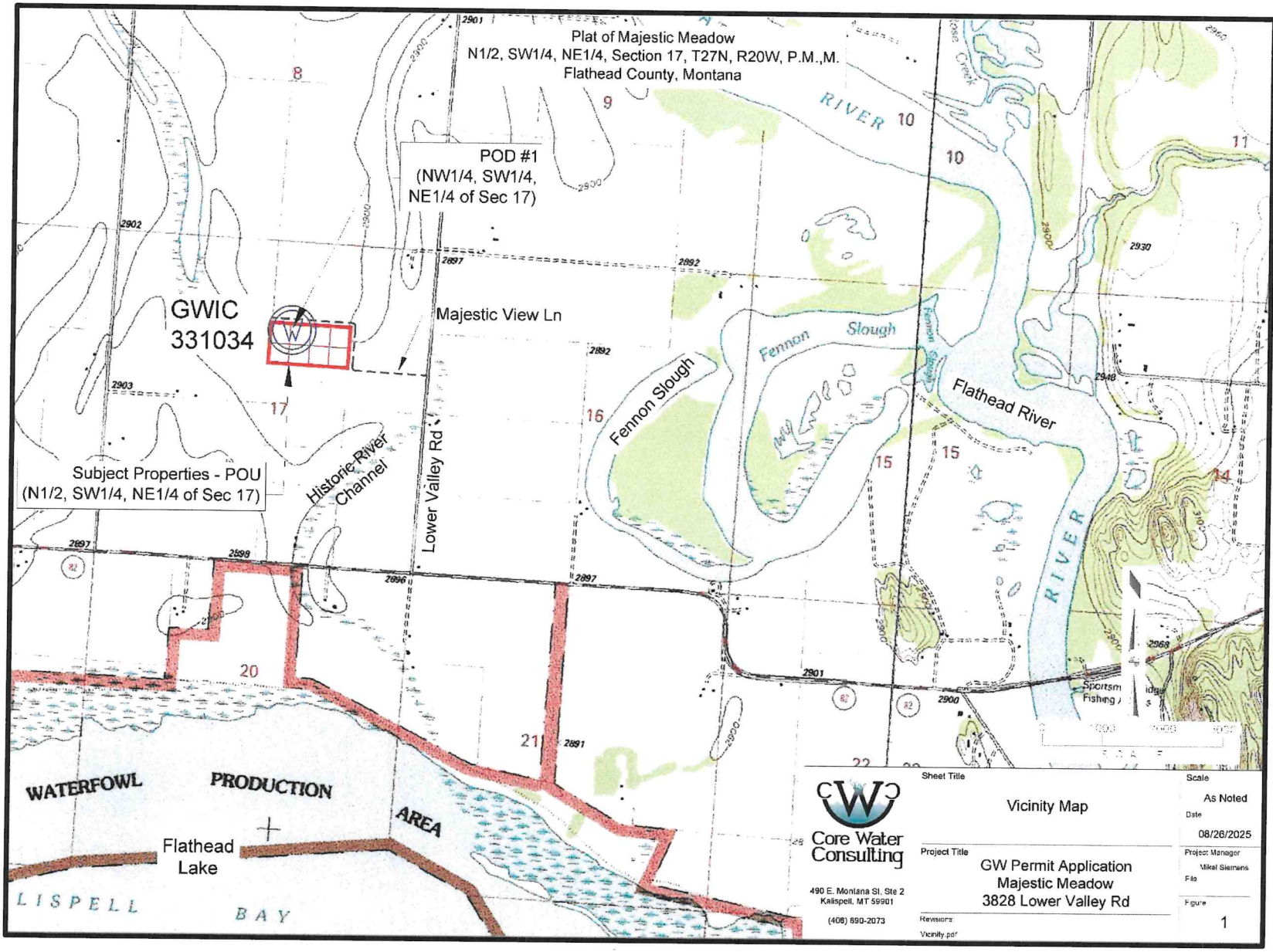
## REFERENCES

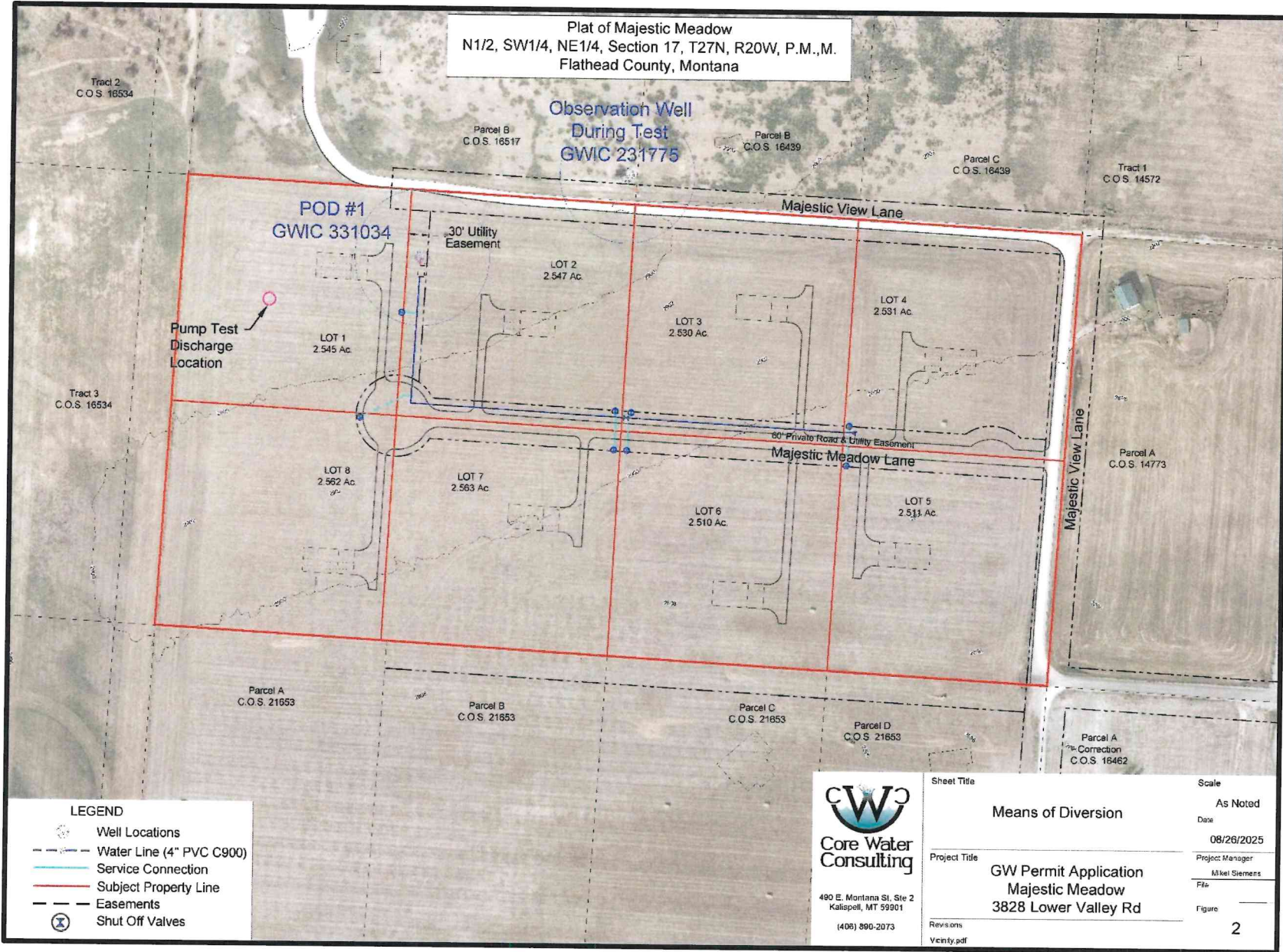
- LaFave et al, December 2004, Ground-Water Assessment Atlas No. 2, Ground-Water Resources of the Flathead Lake Area: Flathead, Lake, Missoula, and Sanders Counties, Montana, Part A – Descriptive Overview and Water-Quality Data.
- Konizeski, et al, 1968, Geology and Groundwater Resources of the Kalispell Valley, Northwestern, Montana, Bulletin 68, Plate 5: Contours on the Water Table in the Sand Aquifer, Montana Bureau of Mines and Geology, Butte, Montana.
- Smith, Larry N., December 2004, Surficial Geologic Map of the upper Flathead River valley (Kalispell valley) Area, Flathead County, Northwestern Montana, Ground Water Assessment Atlas No. 2, Part B, Map 6.



APPENDIX A. FIGURES

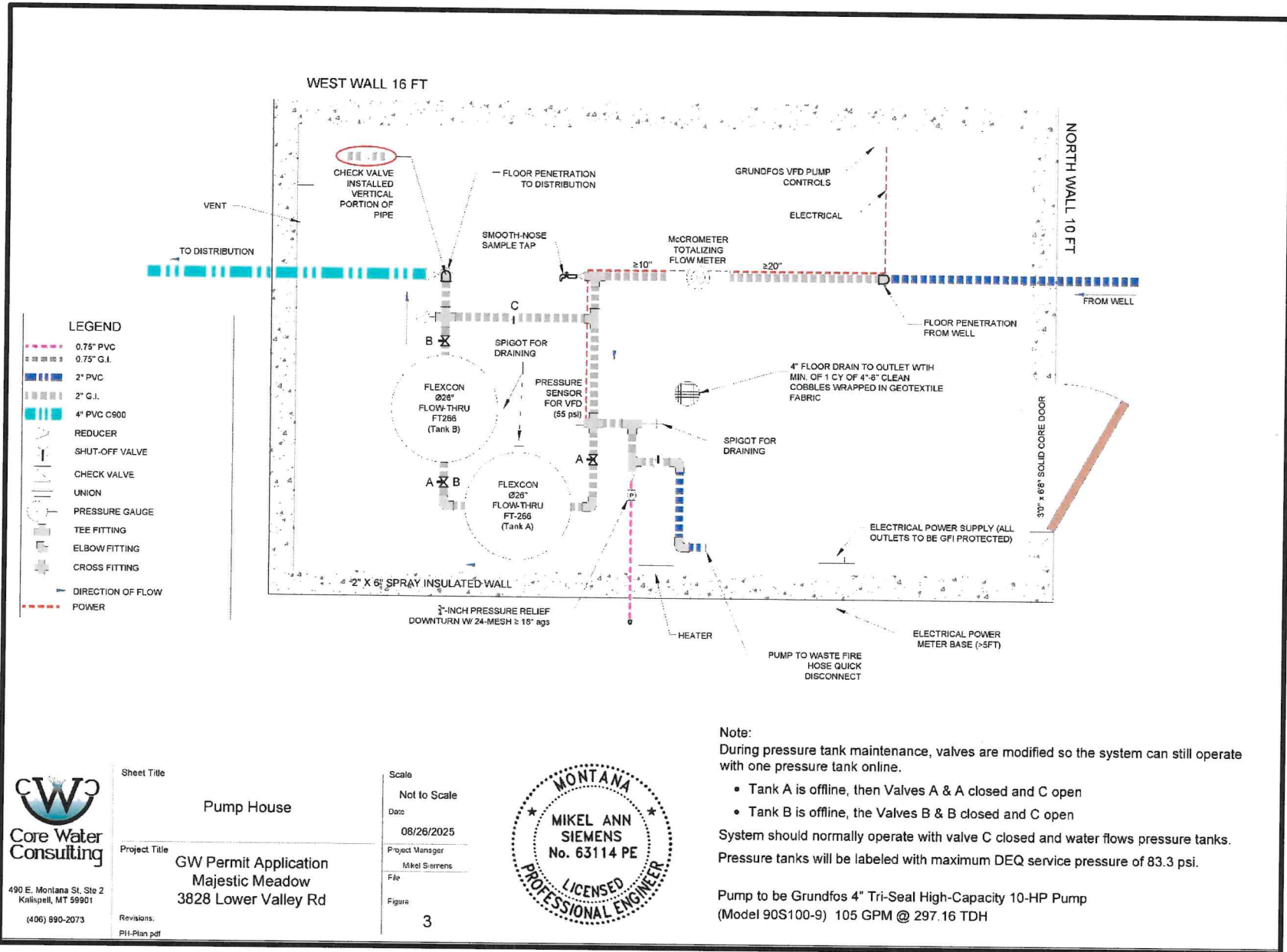
Figure 1. Vicinity Map





**Figure 2. Means of Diversion**

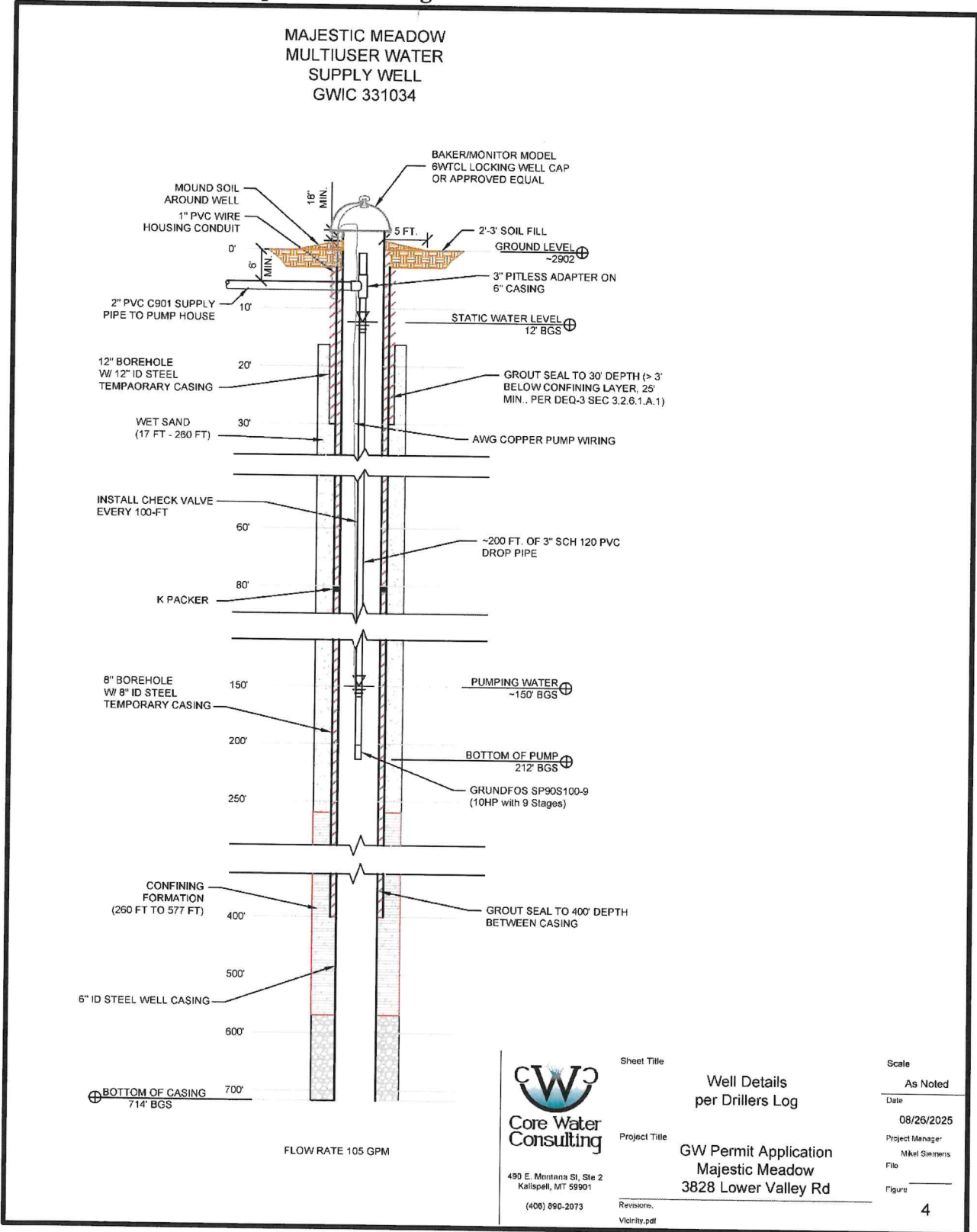
Figure 3. Pump House



Sheet Title	Pump House	Scale	Not to Scale
Project Title	GW Permit Application Majestic Meadow 3828 Lower Valley Rd	Date	08/26/2025
Revisions:		Project Manager	Mikel Siemens
PH-Plan.pdf		File	
		Figure	3



**Figure 4. Well Details per Drillers Log**







# IWR Summary Report

## Irrigation Water Requirements Crop Data Summary

Job: <b>Majestic Meadows</b>	Crop: <b>Pasture (grass)</b>
Location: <b>1191 Majestic View Ln, Kalispell</b>	County: <b>Flathead, MT</b>
By: <b>C. Teska</b>	Date: <b>08/06/25</b>
Weather Station: <b>CRESTON</b>	Sta No: <b>MT2104</b>
Latitude: <b>4811</b> Longitude: <b>11408</b>	Elevation: <b>2940</b> feet above sea level
Computation Method: <b>Blaney Criddle (TR21)</b>	Net irrigation application: <b>1</b> inches
Crop Curve: <b>Blaney Criddle Perennial Crop</b>	Estimated carryover moisture used at season:
Begin Growth: <b>4/15</b> End Growth: <b>10/15</b>	Begin: <b>0.25</b> inches      End: <b>0.25</b> inches

Month	Total Monthly ET (3) inches	Dry Year 80% Chance (1)		Normal Year 50% Chance (1)		Average Daily ETc inches	Peak Daily ETPk inches
		Effective Precipitation inches	Net Irrigation Requirements inches (2)	Effective Precipitation inches	Net Irrigation Requirements inches (2)		
January	0.00	0.00	0.00	0.00	0.00	0.00	
February	0.00	0.00	0.00	0.00	0.00	0.00	
March	0.00	0.00	0.00	0.00	0.00	0.00	
April	0.87	0.31	0.30	0.40	0.22	0.05	
May	3.05	0.97	2.07	1.24	1.80	0.10	0.11
June	4.30	1.16	3.14	1.48	2.82	0.14	0.17
July	5.43	0.81	4.61	1.04	4.38	0.18	0.21
August	4.81	0.66	4.15	0.84	3.97	0.16	0.19
September	2.58	0.62	1.96	0.79	1.78	0.08	0.10
October	0.59	0.22	0.12	0.28	0.06	0.04	
November	0.00	0.00	0.00	0.00	0.00	0.00	
December	0.00	0.00	0.00	0.00	0.00	0.00	
<b>TOTAL</b>	<b>21.62</b>	<b>4.76</b>	<b>16.36</b>	<b>6.08</b>	<b>15.04</b>		

(1) For 80 percent occurrence, growing season effective precipitation will be equaled or exceeded 8 out of 10 years. For 50 percent chance occurrence, effective precipitation will be equaled or exceeded 1 out of 2 years.

(2) Net irrigation requirements is adjusted for carryover moisture used at the beginning of the season and carryover moisture used at the end of the growing season.

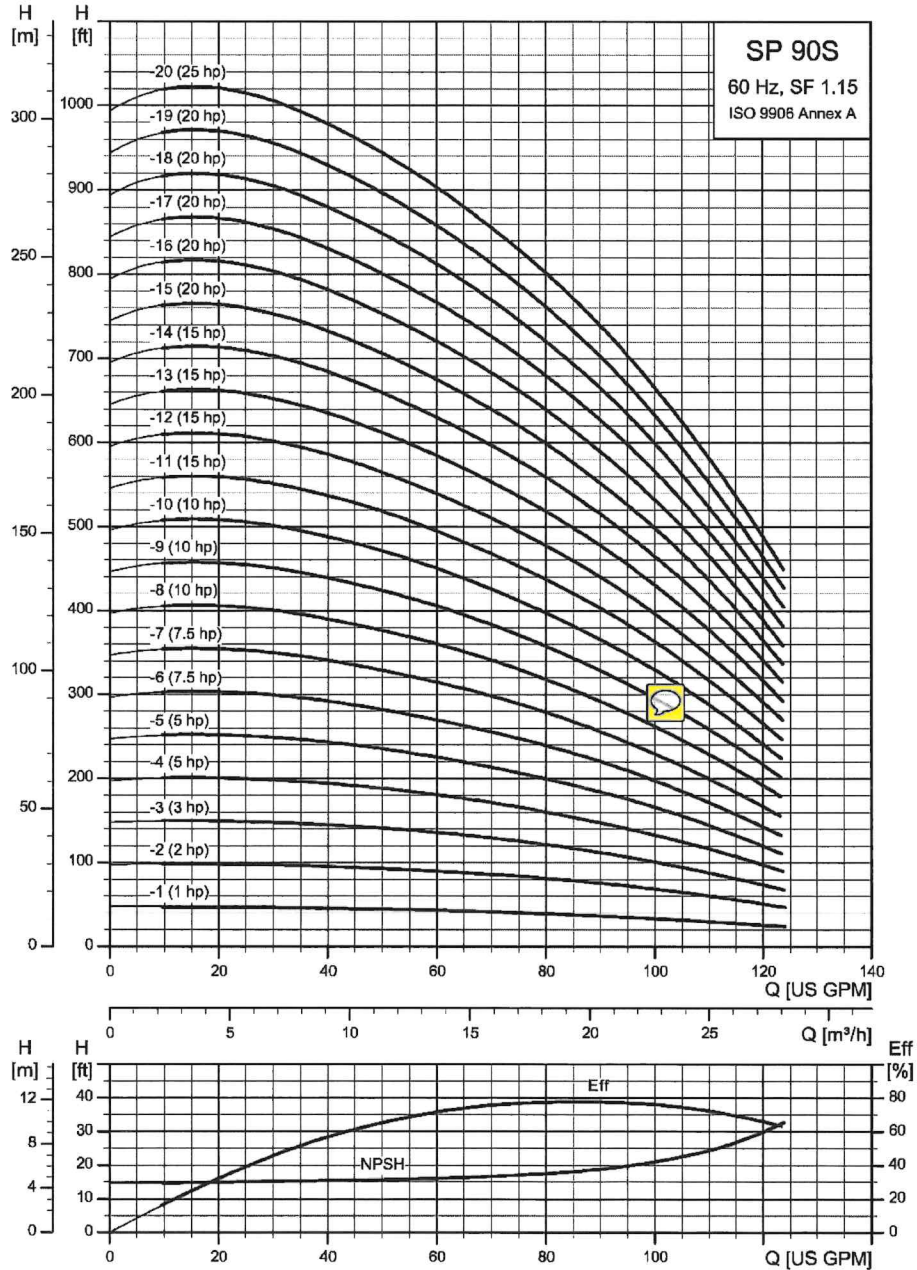
(3) ET Evapotranspiration) is adjusted upwards 10% per 1000 meters above sea level.

Date: 8/6/2025



Curve charts and technical data

6" and larger wells  
SP 90S (90 gpm)

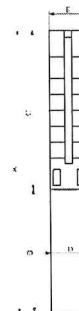


TM094241



SP 90S (90 gpm) pump with 4" motors

Pump model	Nom. head [ft]	Motor			Dimensions [in (mm)]					Net weight (complete) [lb]	90S	
		Ph	Volts [V]	[Hp]	[rpm]	A	B	C	D			E
<b>90S - Motor diameter 4-inch, 3-wire motor, 60 Hz, rated flow rate 90 gpm (3" NPT)</b>												
90S10-1	42	1	230	1	■	3519	25.00 (634)	12.17 (309)	12.80 (325)	3.75 (95)	5.28 (134)	32.2
		3	230	1	■	3516	28.62 (727)	15.83 (402)	12.80 (325)	3.75 (95)	5.28 (134)	40.2
		3	460	1	■	3516	2.62 (727)	15.83 (402)	12.80 (325)	3.75 (95)	5.28 (134)	40.2
90S20-2	87	1	230	2	●	3500	34.72 (882)	19.57 (497)	15.16 (385)	3.75 (95)	5.28 (134)	53.1
		3	230	2	●	3491	31.57 (802)	16.42 (417)	15.16 (385)	3.75 (95)	5.28 (134)	45.4
		3	460	2	●	3517	31.57 (802)	16.42 (417)	15.16 (385)	3.75 (95)	5.28 (134)	45.4
90S30-3	135	1	230	3	●	3520	40.28 (1023)	22.72 (577)	17.56 (446)	3.75 (95)	5.28 (134)	64.9
		3	230	3	●	3531	35.55 (903)	17.99 (457)	17.56 (446)	3.75 (95)	5.28 (134)	51.7
		3	460	3	●	3530	35.55 (903)	17.99 (457)	17.56 (446)	3.75 (95)	5.28 (134)	52.8
90S50-4	170	1	230	5	●	3482	46.58 (1183)	26.66 (677)	19.93 (506)	3.75 (95)	5.28 (134)	79.0
		3	230	5	●	3502	42.63 (1083)	22.68 (577)	19.93 (506)	3.75 (95)	5.28 (134)	68.0
		3	460	5	●	3500	42.63 (1083)	22.68 (577)	19.93 (506)	3.75 (95)	5.28 (134)	68.0
90S50-5	215	3	230	5	●	3510	45.03 (1144)	22.68 (577)	22.33 (567)	3.75 (95)	5.28 (134)	71.0
		3	460	5	●	3510	45.03 (1144)	22.68 (577)	22.33 (567)	3.75 (95)	5.28 (134)	71.0
90S75-6	256	3	230	7.5	●	3490	51.33 (1304)	26.65 (677)	24.69 (627)	3.75 (95)	5.28 (134)	85.0
		3	460	7.5	●	3490	51.33 (1304)	26.65 (677)	24.69 (627)	3.75 (95)	5.28 (134)	85.0
90S75-7	301	3	460	7.5	●	3503	53.74 (1365)	26.65 (677)	27.09 (688)	3.75 (95)	5.28 (134)	88.1
90S100-8	342	3	460	10	●	3488	60.03 (1525)	30.59 (777)	29.45 (748)	3.75 (95)	5.28 (134)	99.9
90S100-9	382	3	460	10	●	3472	62.41 (1585)	30.59 (777)	31.86 (809)	3.75 (95)	5.28 (134)	102.9



E = Maximum diameter of pump including cable guard and motor

Notes:

Control box is required for 3-wire, single-phase applications. Data does not include control box.  
Performance conforms to ISO 9906, 1999 (E) Annex A. Minimum submergence is 5 ft (1.5 m).

- MS402 motor
- MS4000C motor



# C900 PVC Water Main

## C900 PVC PRESSURE PIPE

### 4"-12" SPECIFICATION DATA

Diamond (C900) PVC Pipe (4" through 12") is made of 12454 compound per ASTM D1784, in accordance with the dimensional, chemical, and physical requirements of AWWA C900.

Diamond (C900) PVC Pipe bears the mark of NSF, International (NSF), the listing of Underwriters Laboratory, Inc. (UL), and (DR14 & DR18) bears the listing of Factory Mutual(FM). Some factory locations produce C900 bearing the mark of the Canadian Standards Association (CSA) and NSF14.

Diamond (C900) PVC Pipe utilizes a gasket, per ASTM F477, to seal the integral bell socket to the spigot of the next joint (which conforms to the requirements of ASTM D3139.) Each male end is beveled to facilitate joint assembly, and the spigot is referenced marked to ensure proper insertion depth. Diamond furnished lubricant is to be used in the joining process. Specialty gaskets may be available upon request.

### PHYSICAL PROPERTIES OF PVC 12454:

Property	ASTM Test	Minimum
Specific Gravity	D792	1.40
Tensile Strength, psi	D638	7,000
Tensile Modulus, psi	D638	400,000
IZOD Impact Strength	D256	.65ft.-lb./in.

#### SHORT FORM Specification for Diamond C900 PVC Water Pipe

Diamond C900 PVC Water Pipe shall be made of compounds conforming to ASTM D1784 with a cell classification of 12454. Diamond C900 shall meet all the dimensional, chemical, and physical requirements as outlined in AWWA C900 and will be supplied in 20 and 22 foot laying lengths. Joints shall meet the requirements of ASTM D3139 and shall be formed using Rieber Technology. Gaskets shall meet the requirements of ASTM F477.

Potable water pipe shall be manufactured from National Sanitation Foundation (NSF) approved compounds.

### C900™

AWWA C900 SPECIFICATION DATA. SUPPLIED IN 20 AND 22 FOOT LAYING LENGTHS.

Nominal Pipe Size in. (mm)	A Outside Dia. inches	B Bell Dia. inches	D Assembly Mark 1 inches *	E Assembly Mark 2 inches *	t		
					C900 DR-14 305 psi Min Wall Inches	C900 DR-18 235 psi Min Wall Inches	C900 DR-25 165 psi Min Wall Inches
4" (100)	4.800	6-1/2"	4-1/4"	5-1/4"	0.343	0.267	0.192
6" (150)	6.900	9-1/4"	4-5/8"	5-5/8"	0.493	0.383	0.276
8" (200)	9.050	11-3/4"	5-1/8"	6-1/8"	0.646	0.503	0.362
10" (250)	11.100	14-1/4"	5-3/4"	6-3/4"	0.793	0.617	0.444
12" (300)	13.200	16-3/4"	6-1/8"	7-1/8"	0.943	0.733	0.528

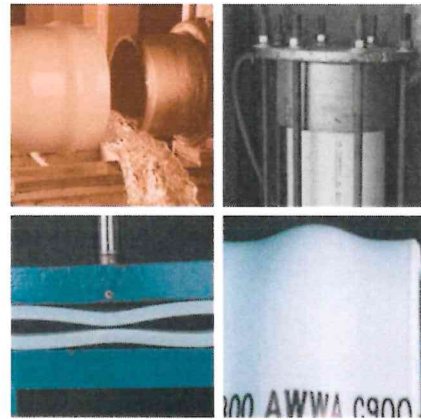
Prices are subject to a firm policy of "Price in effect at time of shipment on regular purchases"

\*Possession of this page does not constitute an offer of sale"

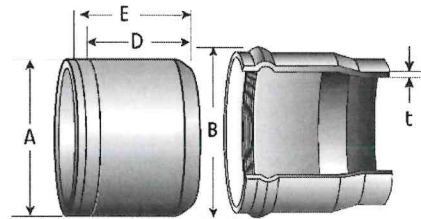
\*Tolerance of +/- 1/4" allowed

### EXTREME TESTING CONDITIONS

C900 PVC pressure pipe, available in pressure ratings for a wide range of water transfer applications (Available in sizes from 4" through 12")



### RIEBER JOINT ILLUSTRATION



dpcpipe.com | 1-800-PVC-PIPE



Flexcon Pressure Tanks



VFD TANK SIZING



Model	Tank Gallon	Connection Inches	10 GPM	20 GPM	30 GPM	40 GPM	50 GPM	60 GPM	70GPM	80 GPM	90 GPM	100 GPM
			20% RATED FLOW GPM									
			2 GPM	4 GPM	6 GPM	8 GPM	10 GPM	12 GPM	14 GPM	16 GPM	18 GPM	20 GPM
FT8	2.1	1	X									
FT18	4.5	1	X	X								
FT18S	4.5	1	X	X								
FT35	9	1	X	X	X	X						
FT35S	9	1	X	X	X	X						
FTC15	15	1.25	X	X	X	X	X	X	X			
FT66	20	1.25	X	X	X	X	X	X	X	X	X	X
FTC22	22	1.25	X	X	X	X	X	X	X	X	X	X
FTC38SQ	38	1.25	X	X	X	X	X	X	X	X	X	X
FT144	44	1.25	X	X	X	X	X	X	X	X	X	X
FTC50	50	1.25	X	X	X	X	X	X	X	X	X	X
FT266	85	2	X	X	X	X	X	X	X	X	X	X

Pre Charge Calculator

Cut-In PSI	20	30	40	50	60	70	80	90	100
Set Precharge 70%	14	21	28	35	42	49	56	63	70
Set Precharge 80%	16	24	32	40	48	56	64	72	80
Set Precharge 90%	18	27	36	45	54	63	72	81	90



VFD TANK SIZING



Model	Tank Gallon	Connection Inches	10 GPM	20 GPM	30 GPM	40 GPM	50 GPM	60 GPM	70GPM	80 GPM	90 GPM	100 GPM
			20% RATED FLOW GPM									
			2 GPM	4 GPM	6 GPM	8 GPM	10 GPM	12 GPM	14 GPM	16 GPM	18 GPM	20 GPM
FT8	2.1	1	X									
FT18	4.5	1	X	X								
FT18S	4.5	1	X	X								
FT35	9	1	X	X	X	X						
FT35S	9	1	X	X	X	X						
FTC15	15	1.25	X	X	X	X	X	X	X			
FT66	20	1.25	X	X	X	X	X	X	X	X	X	X
FTC22	22	1.25	X	X	X	X	X	X	X	X	X	X
FTC38SQ	38	1.25	X	X	X	X	X	X	X	X	X	X
FT144	44	1.25	X	X	X	X	X	X	X	X	X	X
FTC50	50	1.25	X	X	X	X	X	X	X	X	X	X
FT266	85	2	X	X	X	X	X	X	X	X	X	X

Pre Charge Calculator

Cut-In PSI	20	30	40	50	60	70	80	90	100
Set Precharge 70%	14	21	28	35	42	49	56	63	70
Set Precharge 80%	16	24	32	40	48	56	64	72	80
Set Precharge 90%	18	27	36	45	54	63	72	81	90



# REVOLUTIONARY FLOW-THRU DESIGN GUARANTEES THE FRESHEST WATER QUALITY POSSIBLE.

[ FLOW-THRU, BECAUSE MOVING WATER DOESN'T STAGNATE ]

©2014 Flexcon Industries

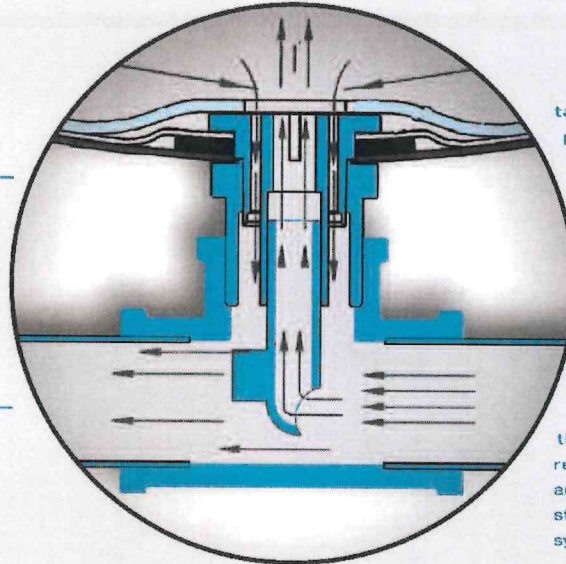
Patented waternane flushes water through the tank eliminating the possibility of stagnant water.

Flow-Thru technology assures total recirculation of the tank's water content.

16 gauge solid steel tank, finished with highest quality urethane paint.

Flow-Thru tanks are also available in a light weight weather proof composite shell.

100% High pressure helium tested. Backed by a 5 year warranty.



Flexcon Patented Flow-Thru Water Connection

All Flexcon Flow-Thru well tanks feature our exclusive patented Flow-Thru technology. This assures your system will provide the freshest water quality possible — simply unattainable with non-Flow-Thru tanks.

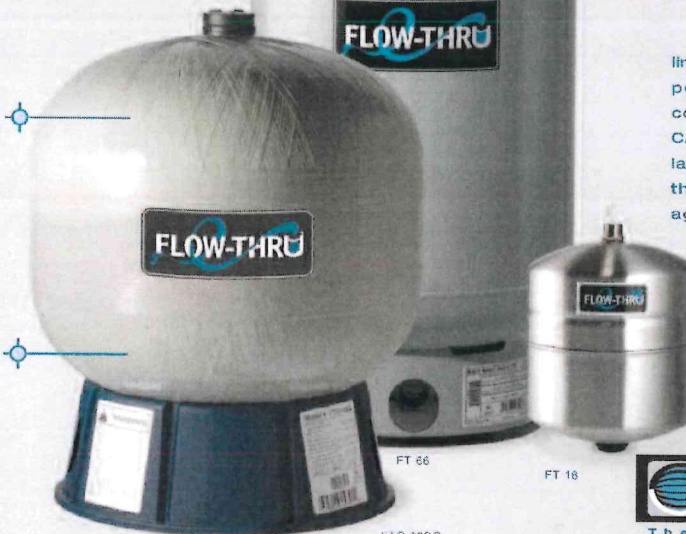
The Flow-Thru connection diverts system water into, and more importantly out of the tank while the pump is running. This constant flushing action assures that the water in the tank remains as fresh as possible and eliminates the possibility of stagnant water during normal system operation.

FT 18S includes 2 mounting feet and a stand for mounting a CPWS control box. Can be mounted in a vertical or horizontal position.



Flexcon's steel and new line of composite tanks incorporate CAD-2 our patented controlled action diaphragm. CAD-2's steel clench ring regulates movement and prevents the diaphragm from rubbing against the tank wall. It has made Flexcon tanks the Industry leader.

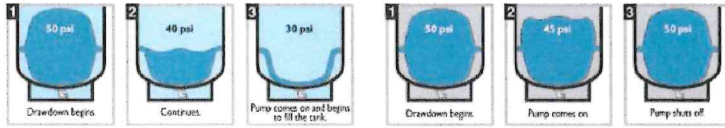
Flow-Thru is the ideal solution for constant pressure water system installers seeking to store water without the risk of stagnation.



FT 66

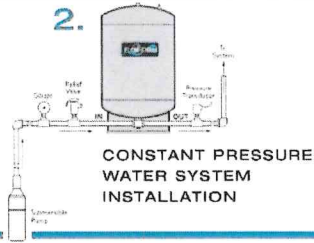
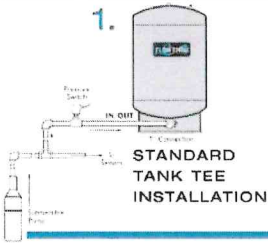
FT 18





Standard water systems operate with a 20 PSI differential between cut-in and cut-out, the water in the tank is flushed out and replenished every pump cycle, thus greatly reducing the risk of stagnant water in the tank.

Newer constant pressure water systems bring the pump up to speed very quickly by operating on much lower differential pressures, as little as 2-5 PSI. This means stored water is never fully exchanged, only diluted with new system water. This creates the possibility of stagnant water remaining in the pressure tank for extended periods.



**FLOW-THRU TANKS ARE AVAILABLE IN STEEL, STAINLESS, COMPOSITE**

**DIMENSIONS & CAPACITIES, STEEL**

Model	Total Tank Volume		A Height/Length		B Diameter		C Connection	Total Weight	
	gal	liters	in	cm	in	cm		lbs	kilos
FT 35	9	32	18.90	48.10	12.5	31.80	1" NPT	15.4	7.0
FT 35S	9	32	18.90	48.10	12.5	31.80	1" NPT	15.4	7.0
FT 66	20	80	29.00	73.66	16.0	40.64	1 1/4" NPT	36.0	16.4
FT 144	44	170	36.25	92.07	21.0	53.34	1 1/4" NPT	68.0	30.9
FT 266	85	325	44.50	113.03	26.0	66.04	2" NPT	122.0	55.5

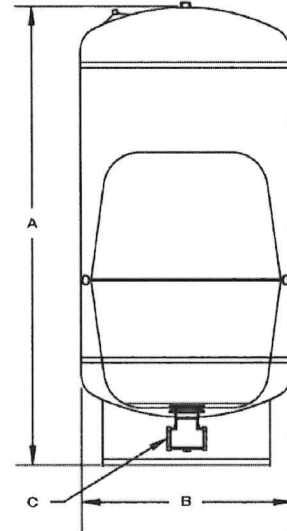
**DIMENSIONS & CAPACITIES, STAINLESS**

Model	Total Tank Volume		A Height/Length		B Diameter		C Connection	Total Weight	
	gal	liters	in	cm	in	cm		lbs	kilos
FT 8	2.1	8	12.0	30.00	8	20.00	1" NPT	5.0	2.3
FT 18	4.5	18	14.5	37.00	11	28.00	1" NPT	10.0	4.6
FT 18S	4.5	18	14.5	37.00	11	28.00	1" NPT	12.0	6.9

**DIMENSIONS & CAPACITIES, COMPOSITE**

Model	Total Tank Volume		A Height/Length		B Diameter		C Connection	Total Weight	
	gal	liters	in	cm	in	cm		lbs	kilos
FTC 15	15	56.8	25.60	64.0	16.5	41.9	1 1/4" sch 80	19.0	8.6
FTC 22	22	83.0	33.10	84.1	16.5	41.9	1 1/4" sch 80	24.0	10.9
FTC 38SQ	38	143.8	29.75	74.7	24.2	61.5	1 1/4" sch 80	35.0	15.9
FTC 50	50	189.3	42.90	109.0	21.4	54.4	1 1/4" sch 80	41.0	18.6

Maximum working pressure 125 psig. Maximum working temperature, internal & external 140° F. Tank pre-charge 38 psig.



**QUICK SIZING CHART, STEEL, STAINLESS, COMPOSITE**

Model	Total Tank Volume		Total Drawdown*			
	gal	liters	50 psi (.23)		60 psi (.24)	
	gal	liters	gal	liters	gal	liters
FT 8	2.1	8.0	.48	1.84	.50	1.92
FT 18(S)	4.5	18.0	1.03	4.14	1.08	4.32
FT 35(S)	9.0	32.0	2.07	7.36	2.16	7.68
FTC 15	15.0	56.8	3.45	13.10	3.60	13.63
FT 66	20.0	80.0	4.60	18.40	4.80	19.20
FTC 22	22.0	83.0	5.06	19.09	5.28	19.92
FTC 38SQ	38.0	143.8	8.74	33.07	9.12	34.51
FT 144	44.0	170.0	10.12	39.10	10.56	40.80
FTC 50	50.0	189.3	11.5	43.54	12.00	45.43
FT 266	85.0	325.0	19.55	74.75	20.40	78.00

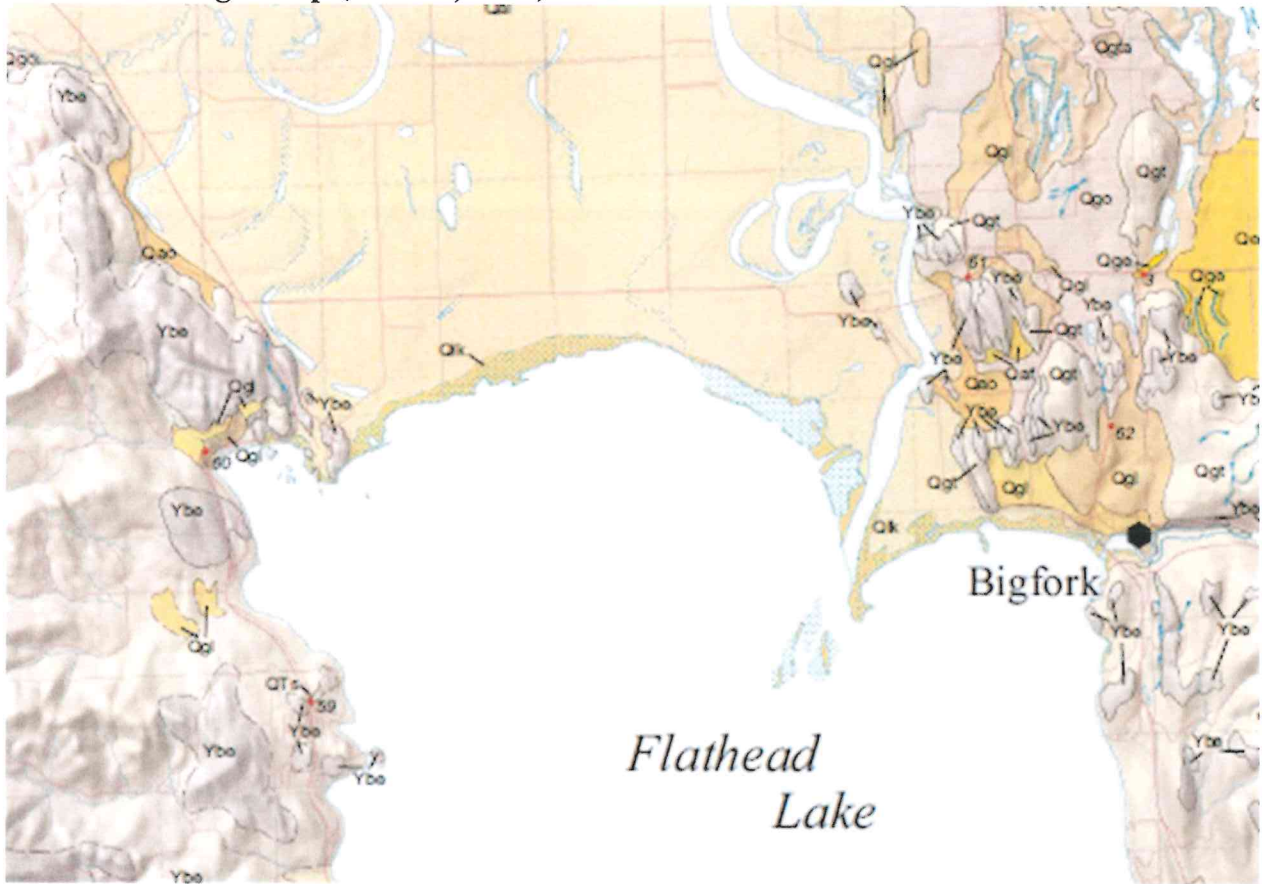
\*Based on precharge set at 70% of set point of constant pressure controller. Drawdown can be affected by many factors, including temperature, pressure, and elevation.

> [www.flexconind.com](http://www.flexconind.com)  
 > 781-986-2424  
 > 300 Pond Street  
 > Randolph, MA 02368



**APPENDIX D. HYDROGEOLOGIC MAPS**

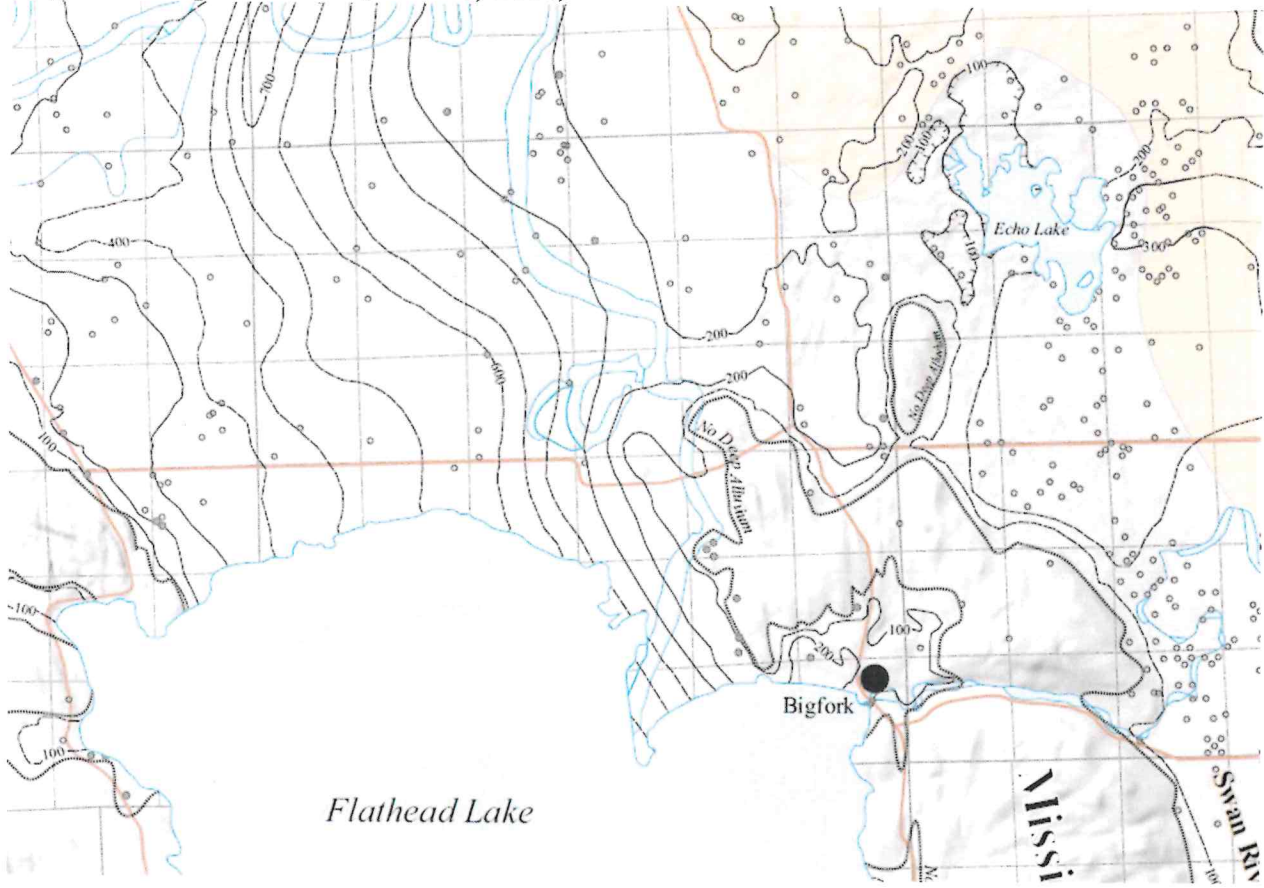
**Surficial Geologic Map (LaFave, 2004)**

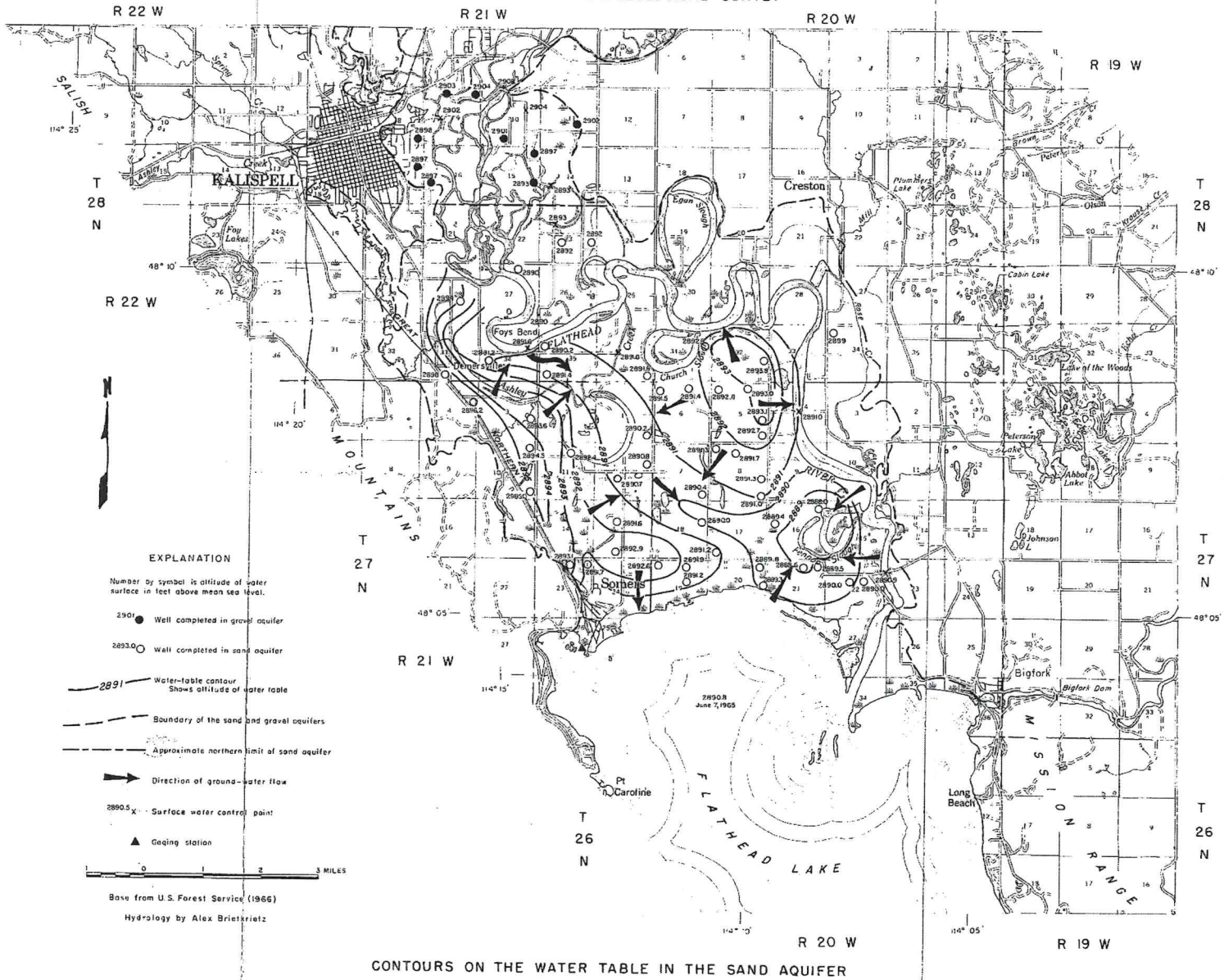


**Qal** ALLUVIUM OF MODERN CHANNELS AND FLOODPLAINS (Holocene) - Light to medium brown and grayish brown sand and silt, and lesser amounts of pebbles, cobbles, and clay along active stream valleys and areas of sheetwash; contains minor amount of colluvium along the bases of steep slopes; thicknesses average 30 feet, but reach 90 feet in paleochannels south and southeast of Kalispell; ground water commonly near land surface; produces significant quantities of water.



**Depth to Deep Alluvium (LaFave, 2004)**



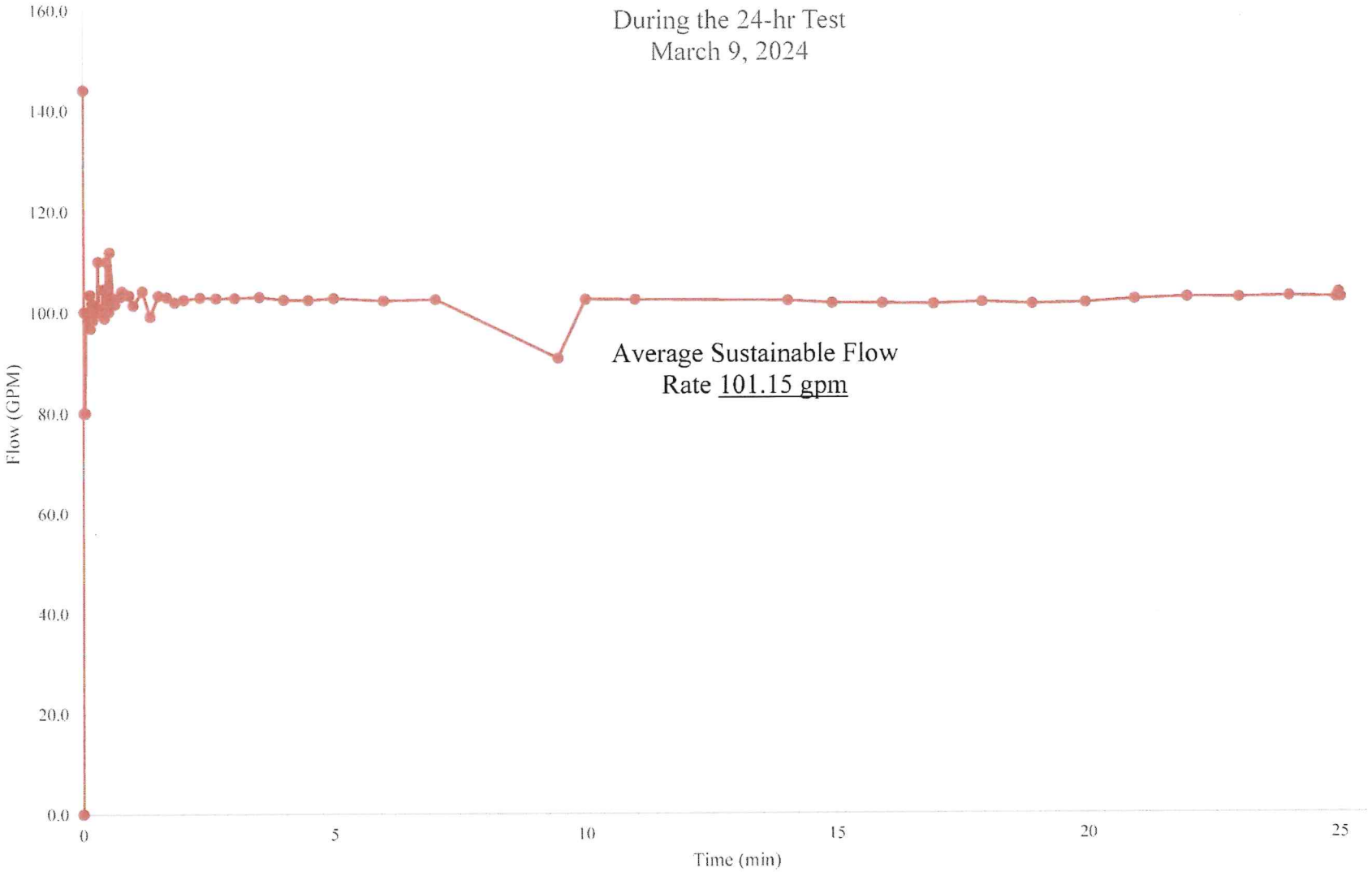


DNRC/DEQ Form No. 633 Revised 2/2024		Form No. 633 Aquifer Test Data						
<b>Grey Cells Require User Input</b>								
Water-Right Applicant:	In-Line Company LLC				DNRC Application #:	DEQ Application #: 22-2027		
Applicant Address:	1191 Majestic View Lane, Kalispell, MT				County:	Flathead		
Test Site Location:	SW 1/4	NE 1/4	Section:	17	Township (#, N/S):	27N	Range (#, E/W):	20W
Date(s) Aquifer Test Conducted (MM/YY - MM/YY):	3/6/20			Test Type:	Drawdown and Yield			
Person(s) Conducting Test:	Mikel Siemens, PE; Core Water Consulting, Inc			Company Conducting Test:	Core Water Consulting			
Production Well ID:	Multiuser Well Majestic Meadow			Pumping Rates (gpm):	101.12			
Production Well GWIC ID:	GWIC 331034	Depth (feet):	714	Diameter (inches):	6	Perf. Zone(s):	Open Bottom	
Production Well GPS Coordinates:	Latitude:	48.105787	Longitude:	-114.168564	Datum:	NAD 83		
Author of Technical Report:								
Observation Well ID(s)	GWIC ID(s)	GPS Coordinates		Depth	Diameter	Perforated Zone(s) (feet)	Distance from Test Well (feet)	Bearing from Test Well (degrees)
Wantaja	231775	Latitude	Longitude	(feet)	(inches)	656-676	1,992	??
Specify Water-Level Monitoring Equipment:	Electronic pressure transducer/data logger				Vented Logger:	YES		
Specify Monitoring Equipment Model:	In-Situ Level logger							

Production Well Water-Level Data	Aquifer Test Time Data	Discharge Information
Static Water Level (swl) to 0.01 ft: 12.25	Pumping Start Date/Time (MM/DD/YY HH:MM) 3/9/24 10:41	Specify method of discharge conveyance, distance and direction of the discharge point from the pumping well:  Discharge to be measured several times per hour during the first 3 hours of pumping and thereafter several times per hour if discharge fluctuates and requires frequent adjustment. Otherwise, hourly measurements if discharge remains constant and requires little or no adjustment. Discharge must be reported in gallons per minute (gpm) if using flow meter; in cumulative gallons if using
Date/Time (MM/DD/YY HH:MM) Measured: 3/09/20 10:41	Pumping End Date/Time (MM/DD/YY HH:MM) 3/10/24 12:42	
How swl Measured: Avg Flow Alop	Recovery End Date/Time (MM/DD/YY HH:MM) 3/11/24 8:46	
Measurement Point (MP) ID: Top of Casing	Aquifer-Test Duration:	Specify Discharge Measurement Equipment: McCrometer 4" Flow Meter (Reading X 10) gpm.
MP elevation (feet): 2903.0	Pumping (HH:MM) 26:01	
How MP Measured: Google Earth	Recovery (HH:MM) 20:04	
	Pumping (total minutes) 1561	
	Recovery (total minutes) 1204	
Notes:		



Multiuser Well - Majestic Meadow  
GWIC 328460 Constant Flow Rate  
During the 24-hr Test  
March 9, 2024



Measured Discharge						
Aquifer Test Discharge Data						
Date/Time (MM/DD/YY HH:MM)	Elapsed time (minutes)	Average discharge (gallons per minute)	Deviation from average measured discharge (percent)*	Totalizer Readings (gallons)	Totalizer discharge (gallons per minute)*	Deviation from average totalizer discharge (percent)*
3/9/24 10:41 AM	0.42			327790.00		
3/9/24 10:41 AM	0.92	144.0	-26.7%	327830.00	80.0	-20.80%
3/9/24 10:42 AM	1.4	109.09	-5.6%	327880.00	100.0	-1.00%
3/9/24 10:42 AM	1.9	105.88	-4.2%	327930.00	100.0	-1.00%
3/9/24 10:43 AM	2.4	104.35	-3.3%	327980.00	100.0	-1.00%
3/9/24 10:43 AM	2.9	103.45	-19.5%	328020.00	80.0	-20.80%
3/9/24 10:44 AM	3.4	99.43	0.5%	328070.00	100.0	-1.00%
3/9/24 10:44 AM	3.9	99.51	0.4%	328120.00	100.0	-1.00%
3/9/24 10:45 AM	4.4	99.57	0.4%	328170.00	100.0	-1.00%
3/9/24 10:45 AM	4.9	99.62	0.3%	328220.00	100.0	-1.00%
3/9/24 10:46 AM	5.4	99.66	0.3%	328270.00	100.0	-1.00%
3/9/24 10:46 AM	5.9	99.69	0.3%	328320.00	100.0	-1.00%
3/9/24 10:47 AM	6.4	99.72	0.3%	328370.00	100.0	-1.00%
3/9/24 10:47 AM	6.9	99.74	0.2%	328420.00	100.0	-1.00%
3/9/24 10:48 AM	7.4	99.76	0.2%	328470.00	100.0	-1.00%
3/9/24 10:48 AM	7.9	99.78	0.2%	328520.00	100.0	-1.00%
3/9/24 10:49 AM	8.4	99.79	3.4%	328570.00	103.4	2.41%
3/9/24 10:49 AM	8.9	100.00	-3.0%	328620.00	96.8	-4.19%
3/9/24 10:50 AM	9.4	99.81	0.2%	328670.00	100.0	-1.00%
3/9/24 10:50 AM	9.9	99.82	0.2%	328720.00	100.0	-1.00%
3/9/24 10:51 AM	10.9	99.83	1.7%	328820.00	101.7	0.68%
3/9/24 10:52 AM	11.9	100.00	-1.5%	328920.00	98.4	-2.62%
3/9/24 10:53 AM	12.4	99.86	0.1%	328970.00	100.0	-1.00%
3/9/24 10:53 AM	12.9	99.87	0.1%	329020.00	100.0	-1.00%
3/9/24 10:54 AM	13.4	99.87	0.1%	329070.00	100.0	-1.00%
3/9/24 10:54 AM	13.9	99.88	0.1%	329120.00	100.0	-1.00%
3/9/24 10:55 AM	14.4	99.88	0.1%	329170.00	100.0	-1.00%
3/9/24 10:55 AM	14.9	99.88	0.1%	329220.00	100.0	-1.00%
3/9/24 10:56 AM	15.9	99.89	0.1%	329320.00	100.0	-1.00%
3/9/24 10:57 AM	16.9	99.90	0.1%	329420.00	100.0	-1.00%
3/9/24 10:58 AM	17.9	99.90	9.5%	329530.00	110.0	8.90%
3/9/24 10:59 AM	18.9	100.47	-0.4%	329630.00	100.0	-1.00%
3/9/24 11:00 AM	19.9	100.44	-0.4%	329730.00	100.0	-1.00%
3/9/24 11:01 AM	20.9	100.42	-0.4%	329830.00	100.0	-1.00%
3/9/24 11:02 AM	21.9	100.40	-0.4%	329930.00	100.0	-1.00%
3/9/24 11:05 AM	24.5	100.38	3.7%	330200.00	104.5	3.47%
3/9/24 11:01 AM	25.9	100.82	-1.9%	330340.00	98.8	-2.16%
3/9/24 11:01 AM	26.9	100.71	-0.7%	330440.00	100.0	-1.00%
3/9/24 11:01 AM	27.9	100.68	8.9%	330550.00	110.0	8.90%
3/9/24 11:09 AM	28.9	101.01	-1.0%	330650.00	100.0	-1.00%
3/9/24 11:10 AM	29.9	100.98	-0.9%	330750.00	100.0	-1.00%
3/9/24 11:11 AM	30.9	100.95	-0.9%	330850.00	100.0	-1.00%
3/9/24 11:12 AM	31.9	100.92	10.5%	330960.00	111.9	10.75%
3/9/24 11:16 AM	35.9	101.25	1.1%	331370.00	102.5	1.48%
3/9/24 11:19 AM	38.1	101.39	0.1%	331590.00	101.5	0.52%
3/9/24 11:20 AM	39.9	101.40	1.2%	331780.00	102.7	1.68%
3/9/24 11:25 AM	44.8	101.46	1.4%	332280.00	103.1	2.06%
3/9/24 11:27 AM	46.4	101.64	2.3%	332450.00	104.1	3.04%
3/9/24 11:31 AM	50.1	101.72	1.7%	332830.00	103.6	2.60%
3/9/24 11:36 AM	55.1	101.86	1.3%	333350.00	103.3	2.28%
3/9/24 11:41 AM	60.1	102.00	-0.6%	333860.00	101.3	0.31%
3/9/24 11:52 AM	71.1	101.94	1.8%	335000.00	104.1	3.07%
3/9/24 12:01 AM	80.2	102.27	-2.8%	335900.00	99.1	-1.91%
3/9/24 12:10 AM	90.0	101.91	1.2%	336910.00	103.2	2.20%
3/9/24 12:21 AM	100.2	102.06	0.8%	337960.00	102.9	1.91%
3/9/24 12:30 AM	109.8	102.15	-0.2%	338940.00	101.9	0.89%
3/9/24 12:41 AM	120.2	102.13	0.2%	340010.00	102.4	1.37%
3/9/2024 13:00:53 PM	140.0	102.15	0.6%	342040.00	102.9	1.84%
3/9/2024 13:19:56 PM	158.9	102.25	0.4%	343990.00	102.7	1.69%
3/9/2024 13:42:25 PM	181.4	102.31	0.4%	346300.00	102.7	1.72%
3/9/2024 14:11:39 PM	210.7	102.36	0.5%	349310.00	103.0	1.94%
3/9/2024 14:40:51 PM	239.9	102.44	0.0%	352300.00	102.4	1.37%
3/9/2024 15:10:16 PM	269.3	102.44	-0.1%	355310.00	102.3	1.30%
3/9/2024 15:40:27 PM	299.5	102.43	0.2%	358410.00	102.7	1.68%
3/9/2024 16:40:03 PM	359.1	102.45	-0.2%	364500.00	102.2	1.16%
3/9/2024 17:42:01 PM	421.0	102.41	0.1%	370850.00	102.5	1.45%
3/9/2024 20:08:16 PM	567.3	102.42	-8.7%	384130.00	90.8	-10.10%
3/9/2024 20:41:15 PM	600.3	99.42	2.9%	387510.00	102.5	1.45%
3/9/2024 21:40:42 PM	659.7	99.59	2.6%	393600.00	102.4	1.41%
3/10/24 12:42 AM	842.0	99.85	1.8%	412230.00	102.2	1.18%
3/10/24 1:35 AM	895.0	100.36	1.3%	417620.00	101.7	0.68%
3/10/24 2:35 AM	954.9	100.44	1.1%	423710.00	101.6	0.62%
3/10/24 3:37 AM	1016.2	100.51	0.9%	429930.00	101.5	0.48%
3/10/24 4:34 AM	1073.9	100.57	1.2%	435810.00	101.9	0.86%
3/10/24 5:34 AM	1133.6	100.64	0.8%	441870.00	101.5	0.49%
3/10/24 6:38 AM	1197.0	100.69	1.0%	448320.00	101.7	0.72%
3/10/24 7:36 AM	1255.7	100.74	1.6%	454330.00	102.4	1.42%
3/10/24 8:39 AM	1318.3	100.82	1.9%	460770.00	102.8	1.79%
3/10/24 9:41 AM	1380.0	100.92	1.7%	467110.00	102.8	1.73%
3/10/24 10:41 AM	1440.0	101.00	1.9%	473290.00	103.0	1.97%
3/10/24 11:37 AM	1496.2	101.08	1.6%	479060.00	102.8	1.73%
3/10/24 11:39 AM	1498.9	101.15	2.5%	479340.00	103.7	2.67%
3/10/24 11:42 AM	1501.3	101.15	1.6%	479590.00	102.7	1.71%
		101.1534576				



## Drawdown Production Well

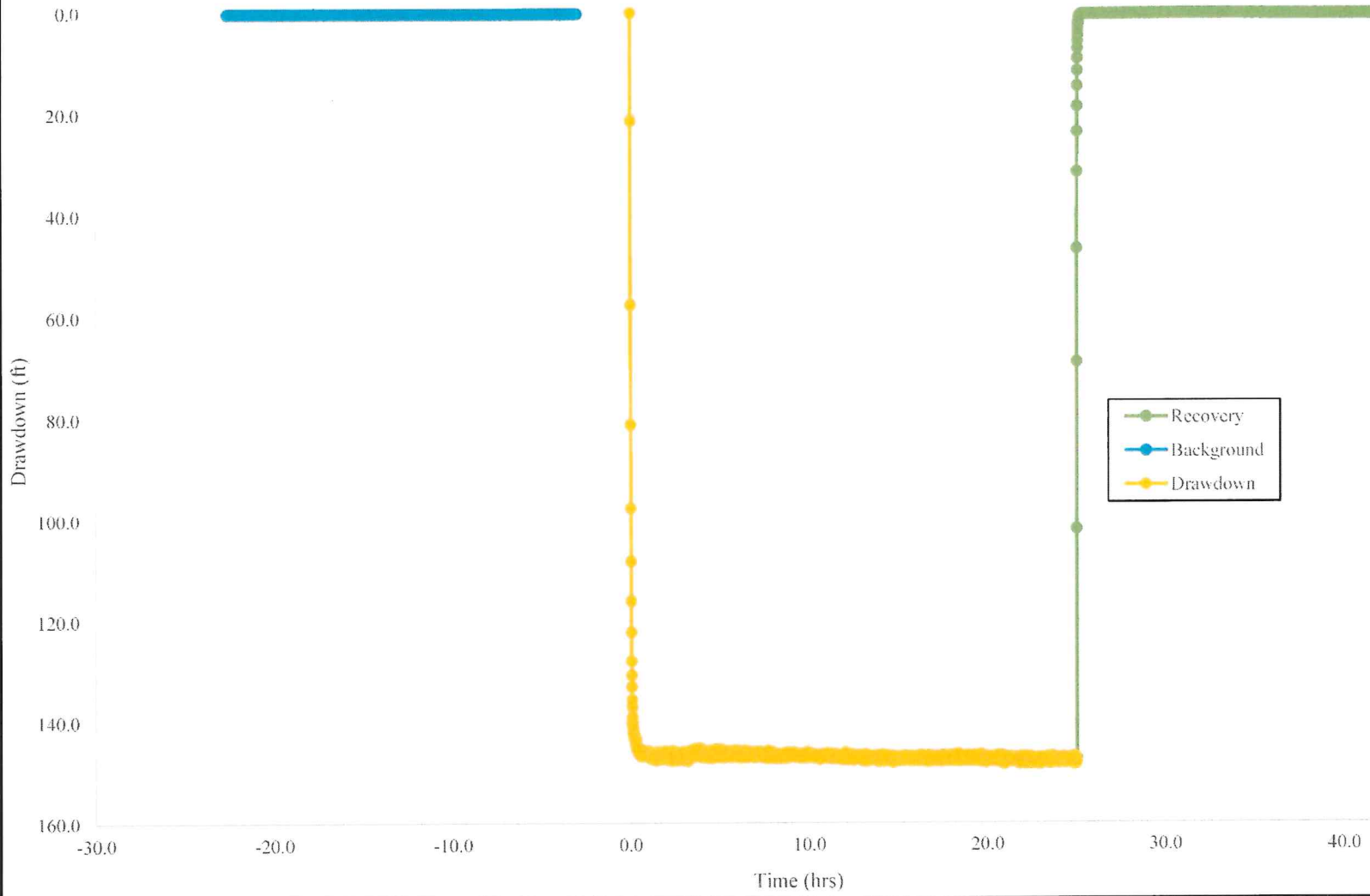
Drawdown Phase of Aquifer Test					Grey Cells Require User Input
Drawdown Data for Production Well					
Date/Time (MM/DD/YY HH:MM)	Time Increment	Elapsed time (minutes)	Drawdown from MP (to 0.01 foot)	Drawdown (to 0.01 foot)*	Test Comments
3/9/24 10:41 AM	30 seconds	0.0	33.53	21.28	
3/9/24 10:41 AM		0.5	69.81	57.56	
3/9/24 10:42 AM		1.0	93.39	81.14	
3/9/24 10:42 AM		1.5	109.90	97.65	
3/9/24 10:43 AM		2.0	120.50	108.25	
3/9/24 10:43 AM		2.5	128.31	116.06	
3/9/24 10:44 AM		3.0	134.52	122.27	
3/9/24 10:44 AM		3.5	140.20	127.95	
3/9/24 10:45 AM		4.0	143.02	130.77	
3/9/24 10:45 AM		4.5	145.36	133.11	
3/9/24 10:46 AM		5.0	147.94	135.69	
3/9/24 10:46 AM		5.5	149.34	137.09	
3/9/24 10:47 AM		6.0	151.31	139.06	
3/9/24 10:47 AM		6.5	152.44	140.19	
3/9/24 10:48 AM		7.0	152.94	140.69	
3/9/24 10:48 AM		7.5	153.27	141.02	
3/9/24 10:49 AM		8.0	153.62	141.37	
3/9/24 10:49 AM		8.5	154.46	142.21	
3/9/24 10:50 AM		9.0	154.66	142.41	
3/9/24 10:50 AM		9.5	154.22	141.97	
3/9/24 10:51 AM		10.0	154.91	142.66	
3/9/24 10:51 AM		10.5	154.29	142.04	
3/9/24 10:52 AM		11.0	155.15	142.90	
3/9/24 10:52 AM		11.5	155.44	143.19	
3/9/24 10:53 AM		12.0	155.04	142.79	
3/9/24 10:53 AM		12.5	155.30	143.05	
3/9/24 10:54 AM		13.0	155.35	143.10	
3/9/24 10:54 AM		13.5	155.81	143.56	
3/9/24 10:55 AM		14.0	155.14	142.89	
3/9/24 10:55 AM		14.5	155.11	142.86	
3/9/24 10:56 AM		15.0	156.03	143.78	
3/9/24 10:56 AM		15.5	155.25	143.00	
3/9/24 10:57 AM		16.0	156.03	143.78	
3/9/24 10:57 AM		16.5	156.46	144.21	
3/9/24 10:58 AM		17.0	156.04	143.79	
3/9/24 10:58 AM		17.5	155.98	143.73	
3/9/24 10:59 AM		18.0	156.01	143.76	
3/9/24 10:59 AM		18.5	155.82	143.57	
3/9/24 11:00 AM		19.0	156.55	144.30	
3/9/24 11:00 AM		19.5	157.16	144.91	
3/9/24 11:01 AM		20.0	157.25	145.00	
3/9/24 11:01 AM		20.5	157.54	145.29	
3/9/24 11:02 AM		21.0	157.49	145.24	
3/9/24 11:02 AM		21.5	157.07	144.82	
3/9/24 11:03 AM		22.0	157.70	145.45	
3/9/24 11:03 AM		22.5	157.30	145.05	
3/9/24 11:04 AM		23.0	157.75	145.50	
3/9/24 11:04 AM		23.5	157.42	145.17	
3/9/24 11:05 AM		24.0	157.29	145.04	
3/9/24 11:05 AM		24.5	157.65	145.40	
3/9/24 11:06 AM		25.0	158.13	145.88	



3/10/24 11:14 AM	1473.0	160.03	147.78
3/10/24 11:14 AM	1473.5	159.81	147.56
3/10/24 11:15 AM	1474.0	160.30	148.05
3/10/24 11:15 AM	1474.5	159.62	147.37
3/10/24 11:16 AM	1475.0	159.73	147.48
3/10/24 11:16 AM	1475.5	160.30	148.05
3/10/24 11:17 AM	1476.0	160.16	147.91
3/10/24 11:17 AM	1476.5	159.73	147.48
3/10/24 11:18 AM	1477.0	159.65	147.40
3/10/24 11:18 AM	1477.5	160.06	147.81
3/10/24 11:19 AM	1478.0	160.14	147.89
3/10/24 11:19 AM	1478.5	159.44	147.19
3/10/24 11:20 AM	1479.0	159.72	147.47
3/10/24 11:20 AM	1479.5	160.33	148.08
3/10/24 11:21 AM	1480.0	159.79	147.54
3/10/24 11:21 AM	1480.5	159.62	147.37
3/10/24 11:22 AM	1481.0	160.14	147.89
3/10/24 11:22 AM	1481.5	160.51	148.26
3/10/24 11:23 AM	1482.0	159.59	147.34
3/10/24 11:23 AM	1482.5	159.90	147.65
3/10/24 11:24 AM	1483.0	160.56	148.31
3/10/24 11:24 AM	1483.5	160.25	148.00
3/10/24 11:25 AM	1484.0	159.33	147.08
3/10/24 11:25 AM	1484.5	159.69	147.44
3/10/24 11:26 AM	1485.0	160.13	147.88
3/10/24 11:26 AM	1485.5	159.83	147.58
3/10/24 11:27 AM	1486.0	159.37	147.12
3/10/24 11:27 AM	1486.5	159.82	147.57
3/10/24 11:28 AM	1487.0	160.46	148.21
3/10/24 11:28 AM	1487.5	159.66	147.41
3/10/24 11:29 AM	1488.0	159.66	147.41
3/10/24 11:29 AM	1488.5	160.37	148.12
3/10/24 11:30 AM	1489.0	160.34	148.09
3/10/24 11:30 AM	1489.5	159.67	147.42
3/10/24 11:31 AM	1490.0	160.00	147.75
3/10/24 11:31 AM	1490.5	160.28	148.03
3/10/24 11:32 AM	1491.0	159.96	147.71
3/10/24 11:32 AM	1491.5	159.38	147.13
3/10/24 11:33 AM	1492.0	160.36	148.11
3/10/24 11:33 AM	1492.5	160.79	148.54
3/10/24 11:34 AM	1493.0	159.24	146.99
3/10/24 11:34 AM	1493.5	160.02	147.77
3/10/24 11:35 AM	1494.0	160.50	148.25
3/10/24 11:35 AM	1494.5	159.99	147.74
3/10/24 11:36 AM	1495.0	159.72	147.47
3/10/24 11:36 AM	1495.5	160.09	147.84
3/10/24 11:37 AM	1496.0	160.14	147.89
3/10/24 11:37 AM	1496.5	160.15	147.90
3/10/24 11:38 AM	1497.0	160.60	148.35
3/10/24 11:38 AM	1497.5	160.56	148.31
3/10/24 11:39 AM	1498.0	160.55	148.30
3/10/24 11:39 AM	1498.5	160.74	148.49
3/10/24 11:40 AM	1499.0	160.44	148.19
3/10/24 11:40 AM	1499.5	159.50	147.25
3/10/24 11:41 AM	1500.0	159.71	147.46
3/10/24 11:41 AM	1500.5	159.92	147.67
3/10/24 11:42 AM	1501.0	160.31	148.06
3/10/24 11:42 AM	1501.5	160.15	147.90



Multiuser Well Majestic Meadow  
Production Well GWIC 331034  
March 9, 2024 - Pump Test



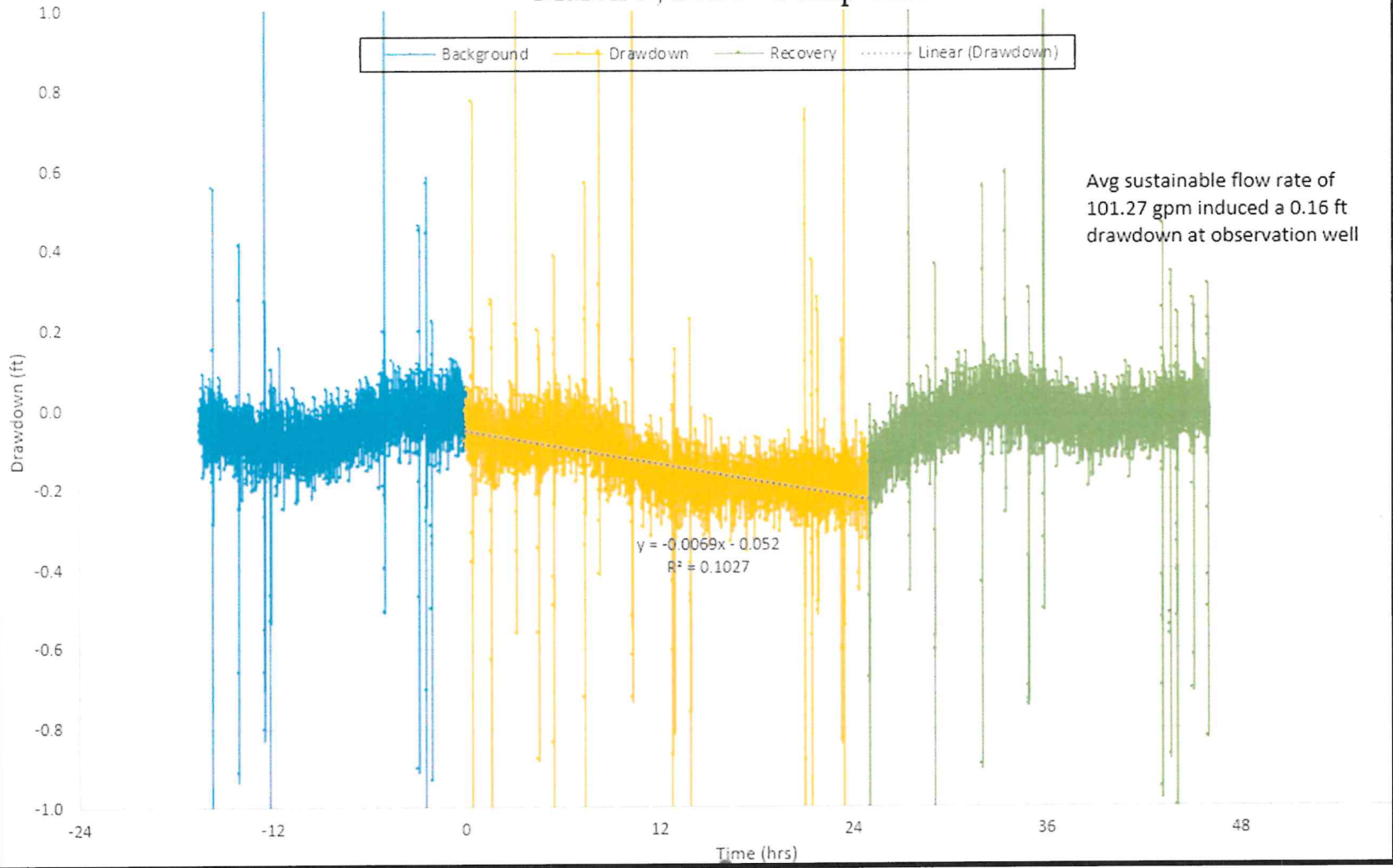


Majestic Meadows Multi-User Well  
Production Well GWIC 331034  
March 6, 2020 - Recovery

Recovery



### Majestic Meadow Multi-User Well Observation Well GWIC 296293 March 9, 2024 - Pump Test



Drawdown Phase of Aquifer Test	
Grey Cells Require User Input	
Observation Well 1 Water-Level Data	
Static Water Level (swl) to 0.01 ft:	12.25
Date/Time Measured:	3/10/24 11:43 AM
How swl Measured:	Average Flow Atop
Measurement Point (MP) ID:	Top of Casing
MP Elevation (feet):	2903
How MP Measured:	Google Earth

**Drawdown Data for Observation Well 1**

Date/Time (MM/DD/YY HH:MM)	Time Increment	Elapsed time (minutes)	Depth to water from MP (to 0.01 foot)	Drawdown (to 0.01 foot)*	Test comments
3/9/2024 10:41	30 seconds	0	12.17	-0.08	
3/9/2024 10:41		0.5	12.23	-0.02	Observation well was being pump
3/9/2024 10:42		1	12.22	-0.03	Individual cycles cause drawdown, which
3/9/2024 10:42		1.5	12.28	0.03	also causes rebound when pumping ceases
3/9/2024 10:43		2	12.24	-0.01	General Trend shows 0.16-ft drawdown
3/9/2024 10:43		2.5	12.17	-0.08	Due to 101.27 gpm diversion
3/9/2024 10:44		3	91.10	-0.06	
3/9/2024 10:44		3.5	91.14	-0.02	
3/9/2024 10:45		4	91.11	-0.05	
3/9/2024 10:45		4.5	91.18	0.02	
3/9/2024 10:46		5	91.08	-0.08	
3/9/2024 10:46		5.5	91.17	0.01	
3/9/2024 10:47		6	91.14	-0.02	
3/9/2024 10:47		6.5	91.10	-0.01	
3/9/2024 10:48		7	91.21	-0.06	
3/9/2024 10:48		7.5	91.04	-0.09	
3/9/2024 10:49		8	91.04	0.05	
3/9/2024 10:49		8.5	91.16	-0.09	
3/9/2024 10:50		9	91.22	-0.12	
3/9/2024 10:50		9.5	91.09	-0.08	
3/9/2024 10:51		10	91.10	-0.12	
3/9/2024 10:51		10.5	91.07	-0.13	
3/9/2024 10:52		11	91.13	0.00	
3/9/2024 10:52		11.5	91.11	-0.03	
3/9/2024 10:53		12	91.08	0.06	
3/9/2024 10:53		12.5	91.10	-0.09	
3/9/2024 10:54		13	91.13	-0.07	
3/9/2024 10:54		13.5	89.01	-0.07	
3/9/2024 10:55		14	91.09	-0.06	
3/9/2024 10:55		14.5	91.15	-0.03	
3/9/2024 10:56		15	90.78	-0.09	
3/9/2024 10:56		15.5	91.34	-0.05	
3/9/2024 10:57		16	91.06	-0.03	
3/9/2024 10:57		16.5	91.10	-0.07	
3/9/2024 10:58		17	91.16	-0.05	
3/9/2024 10:58		17.5	91.18	-0.13	
3/9/2024 10:59		18	91.10	-0.08	
3/9/2024 10:59		18.5	91.12	-0.03	
3/9/2024 11:00		19	91.13	-0.06	
3/9/2024 11:00		19.5	91.06	-0.03	
3/9/2024 11:01		20	91.18	-0.03	
3/9/2024 11:01		20.5	91.00	0.05	
3/9/2024 11:02		21	91.08	-2.15	
3/9/2024 11:02		21.5	91.03	0.20	
3/9/2024 11:03		22	91.10	-0.07	
3/9/2024 11:03		22.5	91.44	0.78	



3/10/2024 11:18	1478	11.93	-0.32
3/10/2024 11:19	1478.5	11.98	-0.27
3/10/2024 11:19	1479	12.01	-0.24
3/10/2024 11:20	1479.5	12.16	-0.09
3/10/2024 11:20	1480	12.17	-0.08
3/10/2024 11:21	1480.5	12.05	-0.20
3/10/2024 11:21	1481	12.05	-0.20
3/10/2024 11:22	1481.5	12.07	-0.18
3/10/2024 11:22	1482	12.10	-0.15
3/10/2024 11:23	1482.5	12.14	-0.11
3/10/2024 11:23	1483	12.05	-0.20
3/10/2024 11:24	1483.5	12.11	-0.14
3/10/2024 11:24	1484	12.01	-0.24
3/10/2024 11:25	1484.5	12.11	-0.14
3/10/2024 11:25	1485	12.02	-0.23
3/10/2024 11:26	1485.5	12.06	-0.19
3/10/2024 11:26	1486	12.00	-0.25
3/10/2024 11:27	1486.5	12.03	-0.22
3/10/2024 11:27	1487	12.16	-0.09
3/10/2024 11:28	1487.5	12.09	-0.16
3/10/2024 11:28	1488	12.10	-0.15
3/10/2024 11:29	1488.5	12.00	-0.25
3/10/2024 11:29	1489	12.17	-0.08
3/10/2024 11:30	1489.5	12.05	-0.20
3/10/2024 11:30	1490	11.95	-0.30
3/10/2024 11:31	1490.5	12.07	-0.18
3/10/2024 11:31	1491	12.06	-0.19
3/10/2024 11:32	1491.5	12.12	-0.13
3/10/2024 11:32	1492	12.11	-0.14
3/10/2024 11:33	1492.5	12.02	-0.23
3/10/2024 11:33	1493	12.07	-0.19
3/10/2024 11:34	1493.5	11.92	-0.33
3/10/2024 11:34	1494	12.13	-0.12
3/10/2024 11:35	1494.5	12.02	-0.23
3/10/2024 11:35	1495	12.10	-0.15
3/10/2024 11:36	1495.5	11.99	-0.26
3/10/2024 11:36	1496	12.07	-0.18
3/10/2024 11:37	1496.5	12.10	-0.15
3/10/2024 11:37	1497	12.08	-0.17
3/10/2024 11:38	1497.5	12.01	-0.24
3/10/2024 11:38	1498	11.99	-0.26
3/10/2024 11:39	1498.5	12.12	-0.13
3/10/2024 11:39	1499	12.12	-0.13
3/10/2024 11:40	1499.5	12.10	-0.15
3/10/2024 11:40	1500	12.10	-0.15
3/10/2024 11:41	1500.5	12.09	-0.16
3/10/2024 11:41	1501	12.09	-0.16
3/10/2024 11:42	1501.5	12.12	-0.13



# APPENDIX F. PROOF OF POSSESSORY INTEREST

## Business Search

RJM Properties



Advanced

Results: 2

Form Info

RJM Properties LLC (C1296743) <i>Domestic Limited Liability Company</i>	>
RJM PROPERTIES, LLC (C134516) <i>Domestic Limited Liability Company</i>	>

Status

Active-Good Standing
Involuntary Dissolution

Registration Date

07/06/2022
06/30/2004

Agent

Tia Macfarlane
JARED S HEGGEN

### RJM Properties LLC (C1296743)

Domestic Limited Liability Company



Filing Number	C1296743
Entity Type	Domestic Limited Liability Company
Entity SubType	Limited Liability Company
Status	Active-Good Standing
Managed By	Member
Formed In	Montana
Principal Address	N/A
Mailing Address	1191 MAJESTIC VIEW LANE KALISPELL, MT 59901
Registration Date	07/06/2022
AR Due Date	04/15/2024
Registered Agent	Noncommercial RA1296804 Tia Macfarlane 1191 MAJESTIC VIEW LN KALISPELL, MT 59901-1814



**APPENDIX G. DNRC APPROVALS**

**Aquifer Testing Requirements Variance Approval**

**DEPARTMENT OF NATURAL RESOURCES  
AND CONSERVATION**

Water Resources Division

1424 9th Ave, Helena, MT 59620-1601 Phone: (406) 444-6601 Fax: (406) 444-0533



GREG GIANFORTE, GOVERNOR

1539 ELEVENTH AVENUE

**STATE OF MONTANA**

DIRECTOR'S OFFICE: (406) 444-2074  
FAX: (406) 444-2684

PO BOX 201601  
HELENA, MONTANA 59620-1601

December 26, 2024

Core Water Consulting

RE: Granted Variance for Pre-Application No. 76LJ 30164921 - RJM Real Estate

Dear Ms. Siemens,

The Applicant (through its consultant) requested a variance from the aquifer testing requirements for the subject line permit application.

Variances from the following rules are needed for the aquifer test conducted on the well.

- ARM 36.12.121(3)(a) requires a maintained flow rate throughout the test that does not deviate more than 5% from the average rate.
- ARM 36.12.121(3)(b) requires the average pumping rate meet or exceeds the requested rate.
- ARM 36.12.121(3)(f) requires specific observation well data.
- ARM 36.12.121(3)(g) requires 48 hours of background data on the tested well.

The Department grants variances of aquifer testing from the ARM noted directly above.

Sincerely,

A handwritten signature in blue ink that reads "Jim Ferch".

Jim Ferch  
Kalispell Water Resources Regional Manager  
jferch@mt.gov  
406-752-2706





**Groundwater Permit Technical Analyses Report - Part A**

**Department of Natural Resources and Conservation (DNRC)**  
**Water Resources Division**  
 Kim Bolhuis, Groundwater Hydrologist, Water Sciences Bureau (WSB)

<b>Application No.</b>	76LJ 30164921	<b>Point of Diversion Legal Land Description</b>	Sec 17, Township 27 North, Range 20 West
<b>Applicant</b>	RJM Real Estate, LLC		

Overview

This report is Part A of a two-part publication which analyzes data submitted by the Applicant in support of the above-mentioned water right application. This report provides technical analyses as required under the Administrative Rules of Montana (ARM) 36.12.1303 in support of the water rights criteria assessment as required in §85-2-311, Montana Code Annotated (MCA). For applications in closed basins, this report fulfills the requirements of MCA 85-2-361.

This Groundwater Permit Technical Analyses Report – Part A contains the following sections:

Overview ..... 1

1.0 Executive Summary ..... 2

2.0 Hydrogeologic Setting ..... 3

3.0 Aquifer Test Summary ..... 5

4.0 Aquifer Test Analysis ..... 7

5.0 Adequacy of Diversion Analysis ..... 10

6.0 Physical Availability Analysis ..... 12

7.0 Adverse Effect Analysis ..... 14

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    7.2 Surface Water - Net Depletion ..... 15

Review ..... 20

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Appendix A: Groundwater Rights Within Area of Potential Impact





## Groundwater Permit Technical Analyses Report – Part B

Department of Natural Resources and Conservation (DNRC or Department)  
Water Resources Division

Kristal Kiel, Water Resource Specialist, Kalispell Regional Office

<b>Application No.</b>	76LJ 30164921	<b>Proposed Point of Diversion</b>	NW ¼ of the SW ¼ of the NE ¼ of Section 17, Township 27 N, Range 20 W, Flathead County, Montana.
<b>Applicant</b>	RJM Properties, LLC		

### Overview

This report is Part B of a two-part publication which analyzes data submitted by the Applicant in support of the above-mentioned water right application. This report provides technical analyses as required under the Administrative Rules of Montana (ARM) 36.12.1303 in support of the water rights criteria assessment as required in §85-2-311, Montana Code Annotated (MCA).

This Groundwater Permit Technical Analyses Report – Part B contains the following sections:

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Variances .....	2
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2.0 Surface Water Analysis of Depleted Surface Water .....	3
2.1 Source Description- Flathead River .....	3
2.1.1 Method of Estimation.....	3
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