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

DNRC Water Resources
Billings Regional Office
1371 Rimtop Dr.
Billings, MT 59105-1978

March 26, 2026

REGAL LAND DEVELOPMENT, INC.
ATTN: DAN WELLS
5847 WHISPERING WOODS DR
BILLINGS, MT 59108

Subject: Correct and Complete Application for Beneficial Water Use Permit No. 43Q 30171432

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 within 60 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,

Veronica Corbett | Water Resource Specialist
Water Resources Division, DNRC
Billings Regional Office
1371 Rimtop Dr, Billings, MT 59105
DESK: 406-247-4431 | EMAIL: veronica.corbett@mt.gov

CC: In Site Engineering c/o Scott Worthington

CONSENT FOR REGAL LAND DEVELOPMENT, INC. TO APPLY FOR A WATER RIGHT PERMIT

On this 23rd day of February 2026, We, the undersigned, LARRY W. STALEY and MARY L. STALEY, Co-Trustees of the STALEY FAMILY TRUST, which owns the property described below, hereby consent to REGAL LAND DEVELOPMENT, INC. filing an application to the Department of Natural Resources and Conservation (DNRC) in the State of Montana for a Beneficial Use Permit (Water Right) with points of diversion (groundwater wells) and places of use on the property.

Identification of Property. 65 acres of land being the northernmost portion of land owned by the Staley Family Trust (Geocode 03-0926-18-3-01-01-0000) situated southeast of the intersection of 72nd Street West and O'Donnell Lane, located in the Southwest ¼ of Section 18, Township 1 South, Range 25 East, P.M.M., Yellowstone County, Montana. This property on which the water right application is filed by REGAL LAND DEVELOPMENT, INC. is the sum of Area 1 and Area 2 shown on the attached Area Exhibit, which is the same property being conveyed by the STALEY FAMILY TRUST to REGAL LAND DEVELOPMENT, INC. under the terms of the PURCHASE AGREEMENT AND SALES CONTRACT dated January 30, 2024, and SUPPLEMENT NO. ONE TO PURCHASE AGREEMENT AND SALES CONTRACT DATED JANUARY 30, 2024, by and between the STALEY FAMILY TRUST and REGAL LAND DEVELOPMENT, INC. for the sale of this 65 acres of land.

IN WITNESS WHEREOF, the Staleys have executed this Consent on the day and year first above written.

Larry Staley

LARRY W. STALEY, Co-Trustee of the Staley Family Trust

Mary Staley

MARY L. STALEY, Co-Trustee of the Staley Family Trust


O'DONNELL LANE (PUBLIC)
71ST STREET WEST (PUBLIC)
70TH STREET WEST
68TH STREET WEST
S 89°47'34" E 2437.61'
O'DONNELL LANE (PRIVATE)
72ND STREET WEST (PUBLIC)
N 00°05'02" E 1160.00'
900.00'
AREA 1: 50.410 ACRES
S 00°12'00" E 1160.03'
960.02'
WHITE CLOVER LN (PRIVATE)
2442.07'
AREA 2: 14.580 ACRES
260.00'
260.01'
68TH STREET WEST (PUBLIC)
PARK
N 89°47'34" W 2443.36'
RAIN LILY DR (PRIVATE)
100 0 100 200 300
SCALE 1" = 100' (24 x 36)
SCALE 1" = 200' (11 x 17)
DEVELOPMENT
Staley Property
DEVELOPER
REGAL LAND DEVELOPMENT, INC.
P.O. BOX 80205
BILLINGS, MT 59108
CIVIL ENGINEER
IN SITE ENGINEERING, P.C.
4231 CREEKWOOD DR
BILLINGS, MT 59106
IN SITE ENGINEERING
NO. DATE DESCRIPTION
DATE
3/20/2024
PROJECT
DESCRIPTION
AREA EXHIBIT
SHEET NAME
C
SHEET NUMBER
1

DNRC Water Resources
Billings Regional Office
1371 Rimtop Dr.
Billings, MT 59105-1978

February 9, 2026

REGAL LAND DEVELOPMENT, INC.
ATTN: DAN WELLS
5847 WHISPERING WOODS DR
BILLINGS, MT 59108

Subject: Deficiency letter for Beneficial Water Use Permit Application No. 43Q 30171432

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):

❑ **45. Do you meet one of the exceptions to the possessory interest requirements, pursuant to ARM 36.12.1802?** This question was marked "no". Information available from the Montana Department of Revenue shows this property is not owned by Regal Land Development. If the Applicant meets one the exceptions, please provide an explanation.

❑ **46. Do you own all the proposed places of use?** This question was marked "yes". Information available from the Montana Department of Revenue shows this property is not owned by Regal Land Development. Please provide documentation showing possessory interest in the proposed place of use.

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 Billings Regional Office by June 9, 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.

Best,

Veronica Corbett | Water Resource Specialist
Water Resources Division, DNRC
Billings Regional Office
1371 Rimtop Dr, Billings, MT 59105
DESK: 406-247-44131| EMAIL: veronica.corbett@mt.gov

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.

Application Materials

- Application
- Any information submitted with Application including maps

Application Materials

APPLICATION FOR BENEFICIAL WATER USE PERMIT

§ 85-2-302, MCA

Form No. 600 *(10/2025)*

For Department Use Only

RECEIVED
JAN 16 2026
DNRC-WRD-BILLINGS

Application # 30171432 Basin 43Q
Priority Date 1/16/25 Time 13:30 AM/PM
Rec'd By V. Corbett
Fee Rec'd $ 700 Check # 1531
Deposit Receipt # BLS2614073
Payor In Site Engineering
Refund $ _____ Date _____

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.

Applicant Information: *Add more as necessary.*

Applicant Name Regal Land Developmemt Inc
Mailing Address 5847 Whisperingwoods Dr City Billings State MT Zip 59106
Phone Numbers: Home 406-672-3390 Work _____ Cell _____
Email Address dan@wellsbuilt.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 In Site Engineering - Scott Worthington
Mailing Address 4231 Creek wood Dr City Billings State MT Zip 59106
Phone Numbers: Home 406-591-4355 Work _____ Cell _____
Email Address siteproscott@gmail.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.

_____
_____
_____
_____
_____
_____

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.

_____
_____
_____
_____
_____

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? Yellowstone River Terrace Level 3 Aquifer

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** ☑ *GPM* ☐ *CFS*	**Volume** *(Acre-Feet)*
Multiple Domestic	Wells		01/01 - 12/31	01/01 - 12/31	66	25.9
Lawn & Garden	Wells	42.356	04/15 - 10/15	04/15 - 10/15	320	105.9
				Total Flow Rate and Volume Required	386	131.8

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 table below, where applicable.

Purpose	**Requested Information**	**Response**
Domestic or multiple domestic	Number of households and bedrooms served per household	77 households and 4 bedrooms / household
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)	sprinkler, individual home sprinkler system
Irrigation (flood only)	Design slope	

POINT(S) OF DIVERSION

20. 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 for the project map (question 17).
See attached POD table

POD #	¼	¼	¼	Sec.	Twp.	Rge.	County	Lot	Block	Tract	Subdivision	Gov. Lot

PLACE OF USE

21. What are the geocodes of the place of use?

03-0926-18-3-01-01-0000 (to be subdivided)	

22. Describe the legal land description for the proposed place of use and, if applying for an irrigation or lawn and garden purpose, list the number of irrigated acres.
See attached POU table

Acres	Gov. Lot	Block	¼	¼	¼	Sec.	Twp.	Rge.	County

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).

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.

ADVERSE EFFECT

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

Water services will be able to be able to shut off at the curb stop valves if a valid call is made on the water source.

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

To ensure that existing water rights will be satisfied during times of water shortage, the following measures may be implemented at Maplewood Estates:
1.) Irrigation watering times may be restricted so that homes having even numbered addresses can water their yards only on Tuesdays, Thursdays, and Saturdays; and homes having odd numbered addresses can water their yards only on Mondays, Wednesdays, and Fridays. If this is insufficient, then 2.) The allowable irrigated areas will be restricted to 25% of the lots. If these measures are insufficient, then 3.) Users may be restricted to domestic use only. If a valid call is made on the source of supply, water services can be shut off at the curb stop valves.

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.

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).

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.

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.

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 system will be operated as follows: the typical diversion structure will consist of a 6" diameter steel well casing that is expected to be about 60 feet deep based on the first well that was drilled. A 2HP, 3" submersible pump with a 1.5" outlet (voltage 1 x 200-240, 60 Hz, 11.2 Amp) can deliver the peak flow at a total dynamic head (TDH) of 147 feet.

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.

The 1.5" pump discharge line will outlet from the well at a depth of 6.5 feet of cover for frost protection. On a shared well, the outlet will tee off to two, 1.25" diameter water lines with curb box shut-off valves on each branch as a water service to each home served. A typical length of 1.25" HDPE pipe from the well to a home would be 100 feet. Because the conveyance is piped, there will be no water losses. Energy losses (static lift and friction losses) are overcome by the pump and are figured into the total dynamic head along with the desired residual pressure (approximately 50 psi) with a shutoff head of 32 feet.

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.

The diversion and conveyance infrastructure as described in questions 33 and 34 above can adequately provide the required flow and volume for domestic and lawn and garden irrigation uses to each place of use. The pump in each well will supply the energy to overcome static lift and friction losses in the pipe from the well to the home and will provide a residual pressure of 50 psi that will allow the plumbing fixtures in each home and the sprinkler systems in each yard to function properly, delivering the appropriate flow rates and volumes as applied for in this permit.

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.

As described in questions 33-35 above, water will be pumped from the well to the plumbing systems of the homes. For individual wells, the 1.5" pump discharge line will connect to a 1.25" curb stop valve and a 1.25" HDPE water service line to the home. For shared wells, the 1.5" pump discharge line will connect to a 1.5"x1.25"x1.25" tee creating a 1.25" water service branch w/ curb stop valve for each home. Homeowners will extend their water services into their homes with another valve and a well expansion/pressure surge tank inside. One branch of the home's plumbing will serve domestic demand & the other will serve irrig. (lawn/garden).

37. ☑ **Y** ☐ **N** Does the proposed conveyance require easements?

37.a. If yes, explain.

A water utility easement around each well will be provided on the final plat that will allow operators to access each well, pump, controls, and valves.

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.

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.

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?
Paul Steinmetz with Aaqua Drilling, Inc., License No. WWC-542

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.

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)? COSA only

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.

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.

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.

Regal Land Development would like to hold the water right in order to facilitate management and the fulfillment of its duties under the permit toward project completion and perfection of the water right.

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)? 10 years

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

It is anticipated that it will likely take 10 years to complete the project to build-out, in other words, sell all lots, drill all wells (POD), and put the water to use in every place of use (POU).

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 Dan Wells, President of Regal Land Development, Inc.

Applicant Signature Dan Wells Date: 1/14/26

Printed Name _____

Applicant Signature _____ Date: _____

Printed Name _____

Applicant Signature _____ Date: _____

Form No. 600-TAA *(Revised 02/2025)* **Applicant Name** Regal Land Development

APPLICATION FOR BENEFICIAL WATER USE PERMIT

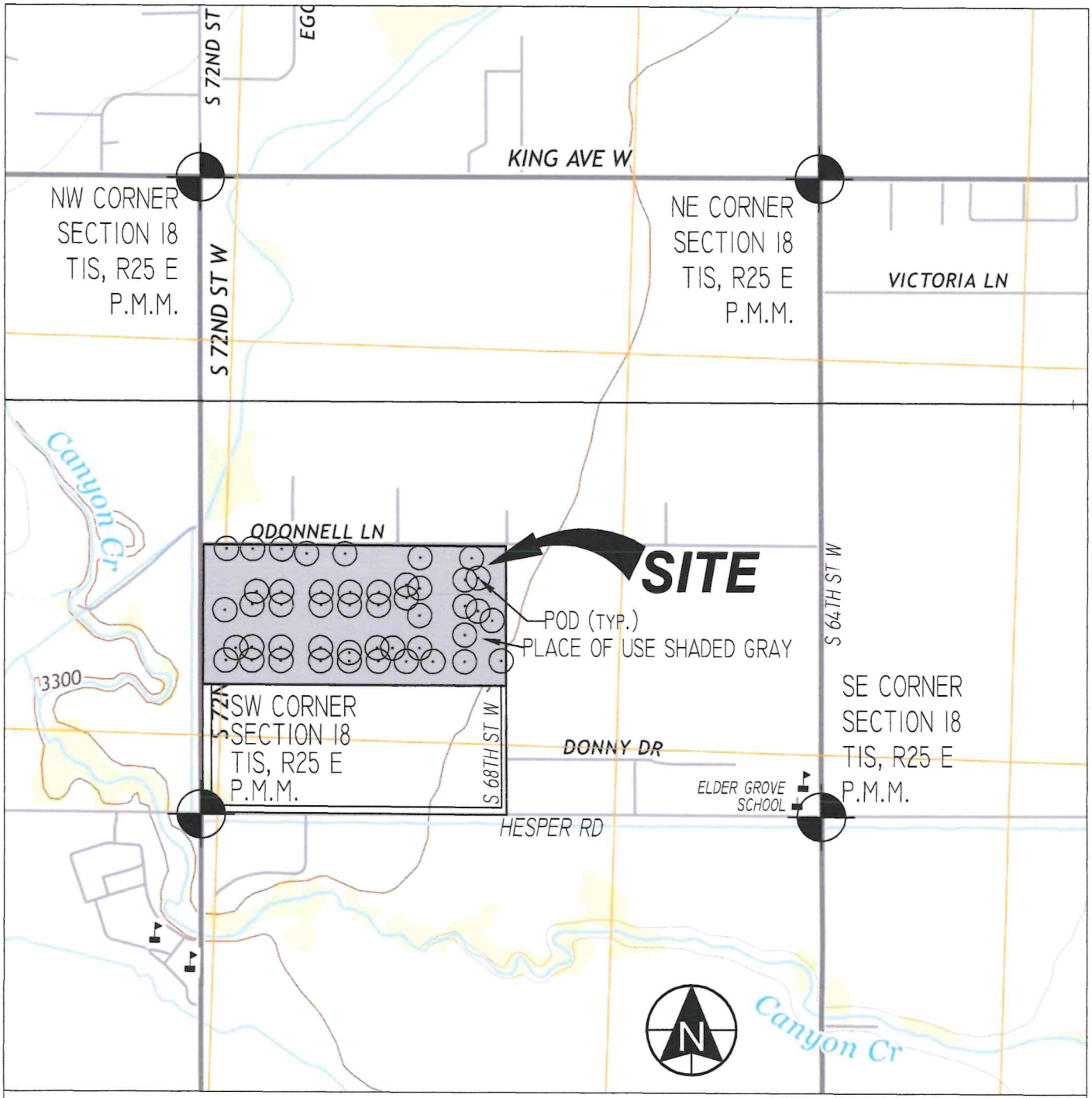
TECHNICAL ANALYSES ADDENDUM

ARM 36.12.1303

Answer every question and applicable follow-up questions. Use the checkboxes to denote yes ("Y") or no ("N"). 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 Technical Analyses Addendum. 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, mark the see attachment ("A") checkbox on this form and label the attachment with the question number. If no attachment is needed, leave the see attachment ("A) checkbox blank. 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 the see attachment ("A") checkbox on this form must be marked. Label all units in narrative responses and tables. Light gray checkbox cells denote a narrative or table response is required. Dark gray checkbox cells denote no response is needed because the question directs you to answer subsequent questions or provides you with information.

APPLICATION DETAILS

Questions, Narrative Responses, and Tables	Check-boxes
1. Did you have a preapplication meeting AND complete a Permit Preapplication Meeting Form (Form 600P)?	☑ Y ☐ N
a. If no, complete the remainder of Form 600-TAA. Skip to question 2.	
b. If yes,	
i. Do the technical analyses submitted with Form 600 remain unchanged from those completed during the preapplication meeting process?	☑ Y ☐ N
1. If yes, has any element of the project described in Form 600 changed from the mandatory elements of the project described in Forms 600P-A and/or 600P-B?	☐ Y ☑ N
a. If yes, complete the remainder of Form 600-TAA. Skip to question 2.	
b. If no, Form 600-TAA is complete.	
2. If no,	
a. Are you submitting new technical analyses with Form 600 to replace the technical analyses completed during the preapplication meeting process?	☐ Y ☐ N
i. If yes, complete the remainder of Form 600-TAA. Skip to question 2.	
ii. If no, are you correcting the technical analyses in response to a Departmental scientific credibility review completed during the preapplication meeting process?	☐ Y ☐ N



MAPLEWOOD ESTATES SUBDIVISION
LOCATION MAP

Places of Use (POU) for Maplewood Estates Subdivision

Lot	Block	Subdivision	Lot Area (Sq. Ft.)	Irrigated Area (Acres)	1/4	1/4	1/4	Sec	Twp	Rge	County
1	1	Maplewood Estates	58,415	1.006	NW	NW	SW	18	1S	25E	Yellowstone
2	1	Maplewood Estates	21,742	0.374	NW	NW	SW	18	1S	25E	Yellowstone
3	1	Maplewood Estates	21,742	0.374	NW	NW	SW	18	1S	25E	Yellowstone
4	1	Maplewood Estates	21,742	0.374	NW	NW	SW	18	1S	25E	Yellowstone
5	1	Maplewood Estates	22,244	0.383	NE	NW	SW	18	1S	25E	Yellowstone
6	1	Maplewood Estates	31,434	0.541	SE	NW	SW	18	1S	25E	Yellowstone
7	1	Maplewood Estates	27,960	0.481	SW	NW	SW	18	1S	25E	Yellowstone
8	1	Maplewood Estates	26,805	0.462	SW	NW	SW	18	1S	25E	Yellowstone
9	1	Maplewood Estates	29,115	0.501	SW	NW	SW	18	1S	25E	Yellowstone
10	1	Maplewood Estates	51,521	0.887	SW	NW	SW	18	1S	25E	Yellowstone
11	1	Maplewood Estates	44,342	0.763	SW	NW	SW	18	1S	25E	Yellowstone
12	1	Maplewood Estates	20,417	0.352	SW	NW	SW	18	1S	25E	Yellowstone
13	1	Maplewood Estates	20,400	0.351	SW	NW	SW	18	1S	25E	Yellowstone
14	1	Maplewood Estates	20,400	0.351	SW	NW	SW	18	1S	25E	Yellowstone
15	1	Maplewood Estates	22,929	0.395	SE	NW	SW	18	1S	25E	Yellowstone
16	1	Maplewood Estates	31,409	0.541	SE	NW	SW	18	1S	25E	Yellowstone
17	1	Maplewood Estates	27,938	0.481	SW	NW	SW	18	1S	25E	Yellowstone
18	1	Maplewood Estates	27,938	0.481	SW	NW	SW	18	1S	25E	Yellowstone
19	1	Maplewood Estates	27,938	0.481	SW	NW	SW	18	1S	25E	Yellowstone
Park 1	1	Maplewood Estates	31,427	0.714	SW	NW	SW	18	1S	25E	Yellowstone
1	2	Maplewood Estates	50,004	0.861	NW	SW	SW	18	1S	25E	Yellowstone
2	2	Maplewood Estates	26,760	0.461	NW	SW	SW	18	1S	25E	Yellowstone
3	2	Maplewood Estates	26,760	0.461	NW	SW	SW	18	1S	25E	Yellowstone
4	2	Maplewood Estates	26,760	0.461	NW	SW	SW	18	1S	25E	Yellowstone
5	2	Maplewood Estates	30,084	0.518	NE	SW	SW	18	1S	25E	Yellowstone
1	3	Maplewood Estates	30,059	0.518	NE	SW	SW	18	1S	25E	Yellowstone
2	3	Maplewood Estates	24,416	0.420	NE	SW	SW	18	1S	25E	Yellowstone
3	3	Maplewood Estates	24,921	0.429	NE	SW	SW	18	1S	25E	Yellowstone
4	3	Maplewood Estates	30,922	0.532	SE	NW	SW	18	1S	25E	Yellowstone
5	3	Maplewood Estates	27,690	0.477	SE	NW	SW	18	1S	25E	Yellowstone
6	3	Maplewood Estates	31,434	0.541	SE	NW	SW	18	1S	25E	Yellowstone
7	3	Maplewood Estates	22,929	0.395	SE	NW	SW	18	1S	25E	Yellowstone
8	3	Maplewood Estates	20,400	0.351	SE	NW	SW	18	1S	25E	Yellowstone
9	3	Maplewood Estates	20,400	0.351	SE	NW	SW	18	1S	25E	Yellowstone
10	3	Maplewood Estates	20,400	0.351	SW	NE	SW	18	1S	25E	Yellowstone
11	3	Maplewood Estates	20,400	0.351	SW	NE	SW	18	1S	25E	Yellowstone
12	3	Maplewood Estates	21,252	0.366	SW	NE	SW	18	1S	25E	Yellowstone
13	3	Maplewood Estates	29,596	0.510	SW	NE	SW	18	1S	25E	Yellowstone
14	3	Maplewood Estates	31,626	0.545	SW	NE	SW	18	1S	25E	Yellowstone
15	3	Maplewood Estates	27,960	0.481	SW	NE	SW	18	1S	25E	Yellowstone

16	3	Maplewood Estates	27,668	0.476	SW	NE	SW	18	1S	25E	Yellowstone
17	3	Maplewood Estates	31,036	0.534	SW	NE	SW	18	1S	25E	Yellowstone
18	3	Maplewood Estates	25,195	0.434	NW	SE	SW	18	1S	25E	Yellowstone
19	3	Maplewood Estates	24,368	0.420	NW	SE	SW	18	1S	25E	Yellowstone
20	3	Maplewood Estates	26,738	0.460	NW	SE	SW	18	1S	25E	Yellowstone
21	3	Maplewood Estates	30,493	0.525	NW	SE	SW	18	1S	25E	Yellowstone
Park 2	4	Maplewood Estates	111,460	2.533	NW	NE	SW	18	1S	25E	Yellowstone
1	4	Maplewood Estates	28,328	0.488	NE	NW	SW	18	1S	25E	Yellowstone
2	4	Maplewood Estates	31,434	0.541	SE	NW	SW	18	1S	25E	Yellowstone
3	4	Maplewood Estates	27,960	0.481	SE	NW	SW	18	1S	25E	Yellowstone
4	4	Maplewood Estates	27,960	0.481	SE	NW	SW	18	1S	25E	Yellowstone
5	4	Maplewood Estates	27,960	0.481	SW	NE	SW	18	1S	25E	Yellowstone
6	4	Maplewood Estates	27,960	0.481	SW	NE	SW	18	1S	25E	Yellowstone
7	4	Maplewood Estates	34,945	0.602	SW	NE	SW	18	1S	25E	Yellowstone
8	4	Maplewood Estates	36,829	0.634	NW	NE	SW	18	1S	25E	Yellowstone
9	4	Maplewood Estates	38,164	0.657	NW	NE	SW	18	1S	25E	Yellowstone
10	4	Maplewood Estates	20,400	0.351	SW	NE	SW	18	1S	25E	Yellowstone
11	4	Maplewood Estates	20,400	0.351	SW	NE	SW	18	1S	25E	Yellowstone
12	4	Maplewood Estates	20,400	0.351	SW	NE	SW	18	1S	25E	Yellowstone
13	4	Maplewood Estates	20,400	0.351	SW	NE	SW	18	1S	25E	Yellowstone
14	4	Maplewood Estates	27,890	0.480	SW	NE	SW	18	1S	25E	Yellowstone
15	4	Maplewood Estates	34,662	0.597	SE	NE	SW	18	1S	25E	Yellowstone
16	4	Maplewood Estates	30,600	0.527	SE	NE	SW	18	1S	25E	Yellowstone
17	4	Maplewood Estates	30,600	0.527	SE	NE	SW	18	1S	25E	Yellowstone
18	4	Maplewood Estates	30,600	0.527	SE	NE	SW	18	1S	25E	Yellowstone
19	4	Maplewood Estates	25,500	0.439	SE	NE	SW	18	1S	25E	Yellowstone
20	4	Maplewood Estates	32,717	0.563	NE	NE	SW	18	1S	25E	Yellowstone
21	4	Maplewood Estates	40,509	0.697	NE	NE	SW	18	1S	25E	Yellowstone
22	4	Maplewood Estates	37,004	0.637	NE	NE	SW	18	1S	25E	Yellowstone
23	4	Maplewood Estates	24,498	0.422	NE	NE	SW	18	1S	25E	Yellowstone
24	4	Maplewood Estates	27,309	0.470	SE	NE	SW	18	1S	25E	Yellowstone
25	4	Maplewood Estates	20,126	0.347	SE	NE	SW	18	1S	25E	Yellowstone
26	4	Maplewood Estates	33,078	0.570	SE	NE	SW	18	1S	25E	Yellowstone
27	4	Maplewood Estates	33,068	0.569	SE	NE	SW	18	1S	25E	Yellowstone
28	4	Maplewood Estates	31,953	0.550	SE	NE	SW	18	1S	25E	Yellowstone
Park 3	5	Maplewood Estates	49,976	1.136	NE	SE	SW	18	1S	25E	Yellowstone
1	5	Maplewood Estates	26,760	0.461	NE	SE	SW	18	1S	25E	Yellowstone
2	5	Maplewood Estates	26,760	0.461	NE	SE	SW	18	1S	25E	Yellowstone
3	5	Maplewood Estates	31,901	0.549	NE	SE	SW	18	1S	25E	Yellowstone
4	5	Maplewood Estates	30,159	0.519	NW	SE	SW	18	1S	25E	Yellowstone
		Total Irrigated Area (Acres):	42.357								

Points of Diversion (POD) for Maplewood Estates Subdivision

Notes: Source Name for all points of diversion is the Yellowstone River Terrace Level 3 Aquifer

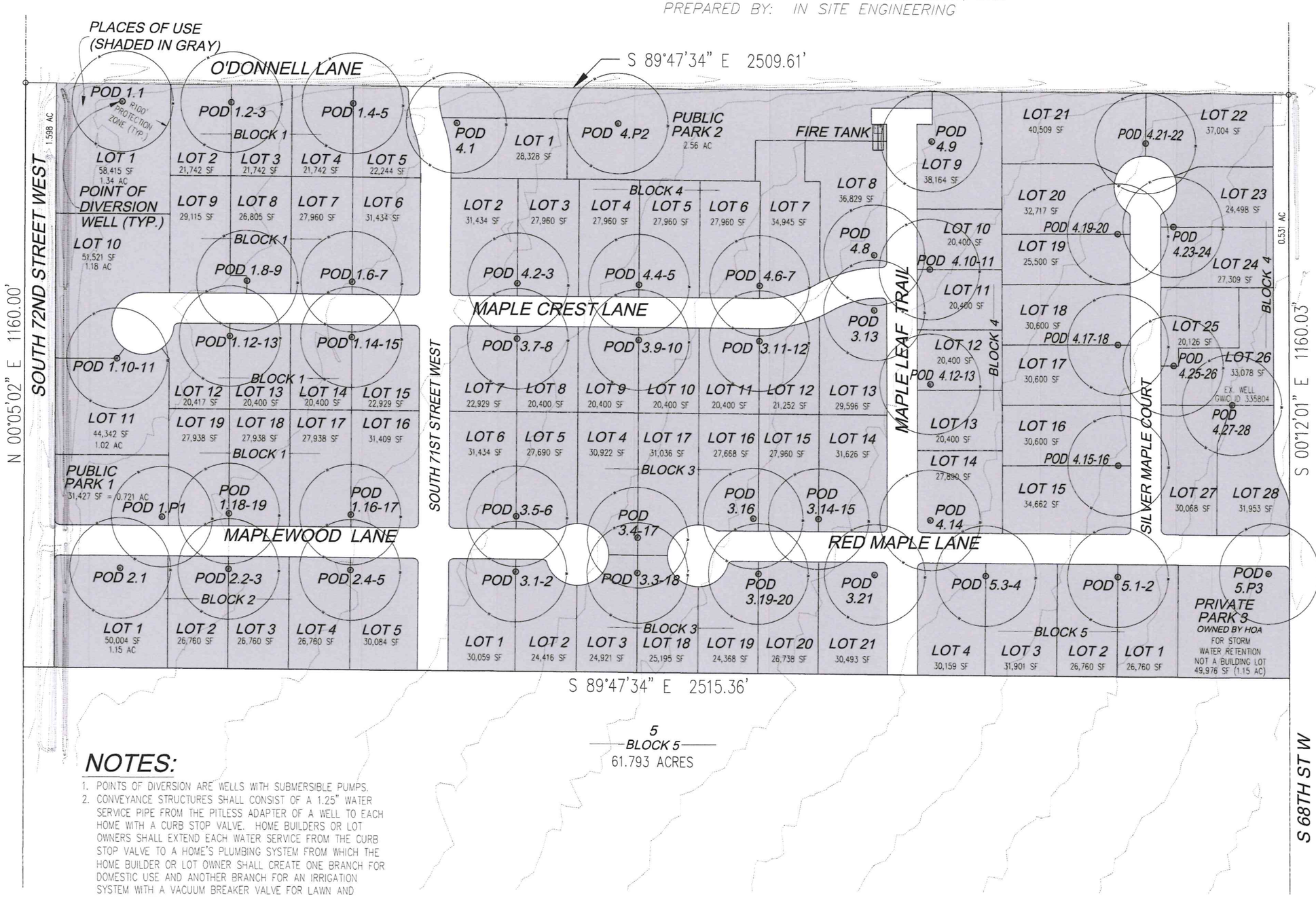
For POD #, the first digit indicates the block number, and the digit(s) after the . indicates the corresponding lot number(s) of the proposed Maplewood Estates Subdivision. A "P" after the . indicates parkland.

Shared wells are on common lot lines. Well easements will be defined with the final plat.

POD #	1/4	1/4	1/4	Sec	Twp	Rge	County	Lot	Block	Tract	Subdivision	Gov Lot	SW or GW	Means	Constructed?	Domestic Flow Rate (GPM)	Domestic Volume (AF)	Domestic Period of Diversion From	Domestic Period of Diversion To	Irrigated Area (Acres)	Irrigation Flow Rate (GPM)	Irrigation Volume (AF)	Irrigation Period of Diversion From	Irrigation Period of Diversion To	Combined (Peak) Flow Rate (GPM)	Combined Volume (AF)	Depth (FT)	Estimated or Measured
1.1	NW	NW	SW	18	1S	25E	Yellowstone	1	1	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	1.006	7.6	2.51	04/15	10/15	8.5	2.85	60	estimated
1.2-3	NW	NW	SW	18	1S	25E	Yellowstone	2-3	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.749	5.7	1.87	04/15	10/15	7.4	2.54	60	estimated
1.4-5	NE	NW	SW	18	1S	25E	Yellowstone	4-5	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.757	5.7	1.89	04/15	10/15	7.4	2.57	60	estimated
1.6-7	SE	NW	SW	18	1S	25E	Yellowstone	6-7	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.023	7.7	2.56	04/15	10/15	9.4	3.23	60	estimated
1.8-9	SW	NW	SW	18	1S	25E	Yellowstone	8-9	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.963	7.3	2.41	04/15	10/15	9.0	3.08	60	estimated
1.10-11	SW	NW	SW	18	1S	25E	Yellowstone	10-11	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.651	12.5	4.13	04/15	10/15	14.2	4.80	60	estimated
1.12-13	SW	NW	SW	18	1S	25E	Yellowstone	12-13	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.943	7.1	2.36	04/15	10/15	8.8	3.03	60	estimated
1.14-15	SW	NW	SW	18	1S	25E	Yellowstone	14-15	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.746	5.6	1.87	04/15	10/15	7.4	2.54	60	estimated
1.16-17	SW	NW	SW	18	1S	25E	Yellowstone	16-17	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.022	7.7	2.55	04/15	10/15	9.4	3.23	60	estimated
1.18-19	SW	NW	SW	18	1S	25E	Yellowstone	18-19	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.962	7.3	2.41	04/15	10/15	9.0	3.08	60	estimated
1.P1	SW	NW	SW	18	1S	25E	Yellowstone	Park 1	1	N/A	Maplewood Est.	N/A	GW	pump	no	0	0	01/01	12/31	0.714	5.4	1.79	04/15	10/15	5.4	1.79	60	estimated
2.1	NW	SW	SW	18	1S	25E	Yellowstone	1	2	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.861	6.5	2.15	04/15	10/15	7.4	2.49	60	estimated
2.2-3	NW	SW	SW	18	1S	25E	Yellowstone	2-3	2	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.921	7.0	2.30	04/15	10/15	8.7	2.98	60	estimated
2.4-5	NE	SW	SW	18	1S	25E	Yellowstone	4-5	2	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.979	7.4	2.45	04/15	10/15	9.1	3.12	60	estimated
3.1-2	NE	SW	SW	18	1S	25E	Yellowstone	1-2	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.938	7.1	2.34	04/15	10/15	8.8	3.02	60	estimated
3.3-18	NE	SW	SW	18	1S	25E	Yellowstone	3-18	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.863	6.5	2.16	04/15	10/15	8.2	2.83	60	estimated
3.4-17	SE	NW	SW	18	1S	25E	Yellowstone	4-17	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.067	8.1	2.67	04/15	10/15	9.8	3.34	60	estimated
3.5-6	SE	NW	SW	18	1S	25E	Yellowstone	5-6	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.018	7.7	2.54	04/15	10/15	9.4	3.22	60	estimated
3.7-8	SE	NW	SW	18	1S	25E	Yellowstone	7-8	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.746	5.6	1.87	04/15	10/15	7.4	2.54	60	estimated
3.9-10	SE	NW	SW	18	1S	25E	Yellowstone	9-10	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.702	5.3	1.76	04/15	10/15	7.0	2.43	60	estimated
3.11-12	SW	NE	SW	18	1S	25E	Yellowstone	11-12	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.717	5.4	1.79	04/15	10/15	7.1	2.47	60	estimated
3.13	SW	NE	SW	18	1S	25E	Yellowstone	13	3	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.510	3.8	1.27	04/15	10/15	4.7	1.61	60	estimated
3.14-15	SW	NE	SW	18	1S	25E	Yellowstone	14-15	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.026	7.8	2.56	04/15	10/15	9.5	3.24	60	estimated
3.16	SW	NE	SW	18	1S	25E	Yellowstone	16	3	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.476	3.6	1.19	04/15	10/15	4.5	1.53	60	estimated
3.19-20	NW	SE	SW	18	1S	25E	Yellowstone	19-20	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.880	6.6	2.20	04/15	10/15	8.4	2.87	60	estimated
3.21	NW	SE	SW	18	1S	25E	Yellowstone	21	3	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.525	4.0	1.31	04/15	10/15	4.8	1.65	60	estimated
4.1	NE	NW	SW	18	1S	25E	Yellowstone	1	4	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.488	3.7	1.22	04/15	10/15	4.5	1.56	60	estimated
4.P2	NE	NW	SW	18	1S	25E	Yellowstone	Park 2	4	N/A	Maplewood Est.	N/A	GW	pump	no	0	0	01/01	12/31	2.292	17.3	5.73	04/15	10/15	17.3	5.73	60	estimated
4.2-3	SE	NW	SW	18	1S	25E	Yellowstone	2-3	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.023	7.7	2.56	04/15	10/15	9.4	3.23	60	estimated
4.4-5	SE	NW	SW	18	1S	25E	Yellowstone	4-5	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.963	7.3	2.41	04/15	10/15	9.0	3.08	60	estimated
4.6-7	SW	NE	SW	18	1S	25E	Yellowstone	6-7	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.083	8.2	2.71	04/15	10/15	9.9	3.38	60	estimated
4.8	SW	NE	SW	18	1S	25E	Yellowstone	8	4	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.634	4.8	1.59	04/15	10/15	5.6	1.92	60	estimated
4.9	NW	NE	SW	18	1S	25E	Yellowstone	9	4	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.657	5.0	1.64	04/15	10/15	5.8	1.98	60	estimated
4.10-11	SW	NE	SW	18	1S	25E	Yellowstone	10-11	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.702	5.3	1.76	04/15	10/15	7.0	2.43	60	estimated
4.12-13	SW	NE	SW	18	1S	25E	Yellowstone	12-13	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.702	5.3	1.76	04/15	10/15	7.0	2.43	60	estimated
4.14	SW	NE	SW	18	1S	25E	Yellowstone	14	4	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.480	3.6	1.20	04/15	10/15	4.5	1.54	60	estimated
4.15-16	SE	NE	SW	18	1S	25E	Yellowstone	15-16	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.124	8.5	2.81	04/15	10/15	10.2	3.48	60	estimated
4.17-18	SE	NE	SW	18	1S	25E	Yellowstone	17-18	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.054	8.0	2.63	04/15	10/15	9.7	3.31	60	estimated
4.19-20	SE	NE	SW	18	1S	25E	Yellowstone	19-20	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.002	7.6	2.51	04/15	10/15	9.3	3.18	60	estimated
4.21-22	NE	NE	SW	18	1S	25E	Yellowstone	21-22	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.335	10.1	3.34	04/15	10/15	11.8	4.01	60	estimated
4.23-24	SE	NE	SW	18	1S	25E	Yellowstone	23-24	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.892	6.7	2.23	04/15	10/15	8.5	2.90	60	estimated
4.25-26	SE	NE	SW	18	1S	25E	Yellowstone	25-26	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.916	6.9	2.29	04/15	10/15	8.6	2.96	60	estimated
4.27-28	SE	NE	SW	18	1S	25E	Yellowstone	27-28	4	N/A	Maplewood Est.	N/A	GW	pump	yes	1.71	0.673	01/01	12/31	1.120	8.5	2.80	04/15	10/15	10.2	3.47	61	measured
5.P3	NE	SE	SW	18	1S	25E	Yellowstone	Park 3	5	N/A	Maplewood Est.	N/A	GW	pump	no	0	0	01/01	12/31	1.136	8.6	2.84	04/15	10/15	8.6	2.84	60	estimated
5.1-2	NE	SE	SW	18	1S	25E	Yellowstone	1-2	5	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.921	7.0	2.30	04/15	10/15	8.7	2.98	60	estimated
5.3-4	NE	SE	SW	18	1S	25E	Yellowstone	3-4	5	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.069	8.1	2.67	04/15	10/15	9.8	3.34	60	estimated
															Totals:	66	25.9	01/01	12/31	42.356	320	105.9	04/15	10/15	386	131.8		

MAPLEWOOD ESTATES - POINTS OF DIVERSION (WELLS) & PLACES OF USE

LOCATED IN SECTION 18, T01 S, R25 E, P.M.M. YELLOWSTONE COUNTY, MONTANA
PREPARED FOR: REGAL LAND DEVELOPMENT, INC.
PREPARED BY: IN SITE ENGINEERING



NOTES:

1. POINTS OF DIVERSION ARE WELLS WITH SUBMERSIBLE PUMPS.
2. CONVEYANCE STRUCTURES SHALL CONSIST OF A 1.25" WATER SERVICE PIPE FROM THE PITLESS ADAPTER OF A WELL TO EACH HOME WITH A CURB STOP VALVE. HOME BUILDERS OR LOT OWNERS SHALL EXTEND EACH WATER SERVICE FROM THE CURB STOP VALVE TO A HOME'S PLUMBING SYSTEM FROM WHICH THE HOME BUILDER OR LOT OWNER SHALL CREATE ONE BRANCH FOR DOMESTIC USE AND ANOTHER BRANCH FOR AN IRRIGATION SYSTEM WITH A VACUUM BREAKER VALVE FOR LAWN AND GARDEN WATERING.
3. THERE ARE NO PROPOSED PLACES OF STORAGE FOR GROUNDWATER.

100 0 100 200 300
SCALE 1" = 100' (24 x 36)
SCALE 1" = 200' (11 x 17)

DEVELOPMENT
Maplewood Estates Residential Subdivision

DEVELOPER
REGAL LAND DEVELOPMENT, INC.
P.O. BOX 80205
BILLINGS, MT 59108

CIVIL ENGINEER
IN SITE ENGINEERING, P.C.
4231 CREEKWOOD DR
BILLINGS, MT 59106
IN SITE ENGINEERING

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		

DATE: 8/20/2025

PROJECT
Maplewood Estates

DESCRIPTION
POINTS OF DIVERSION & PLACES OF USE

SHEET NAME	SHEET NUMBER
POD / POU	1

IN SITE
ENGINEERING

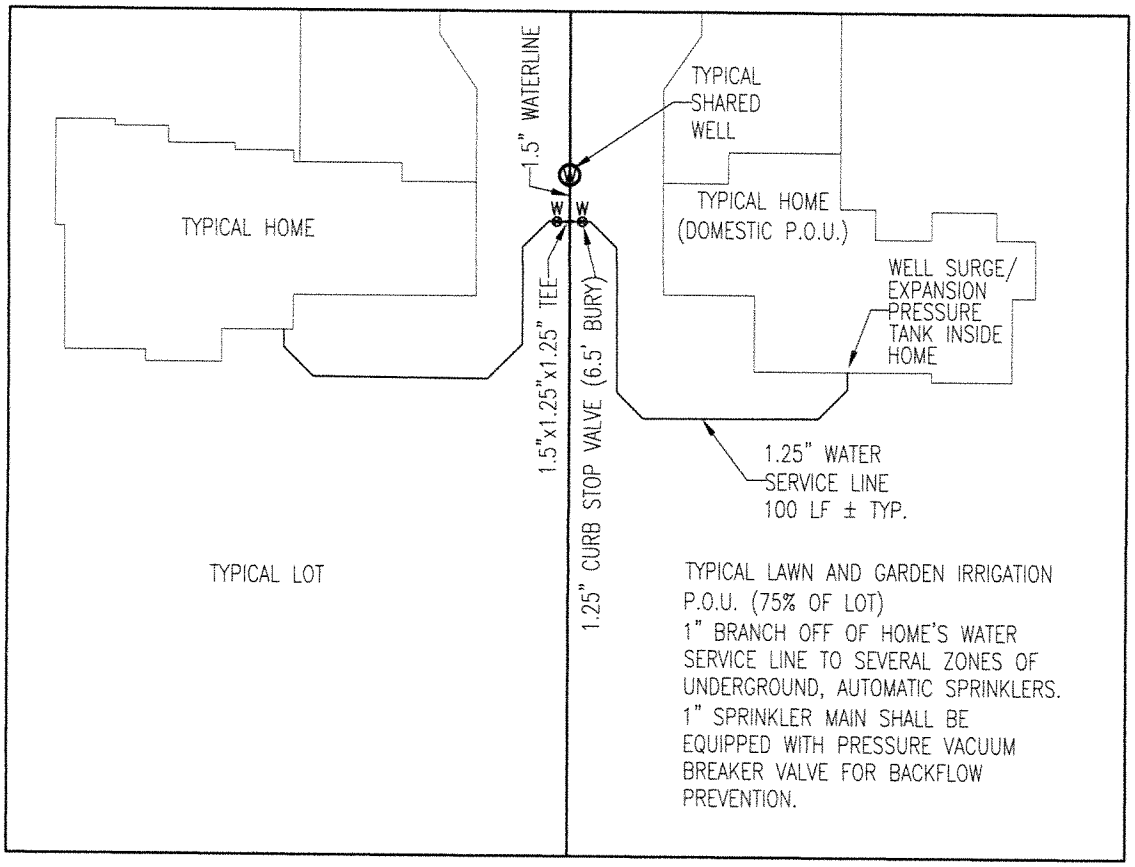
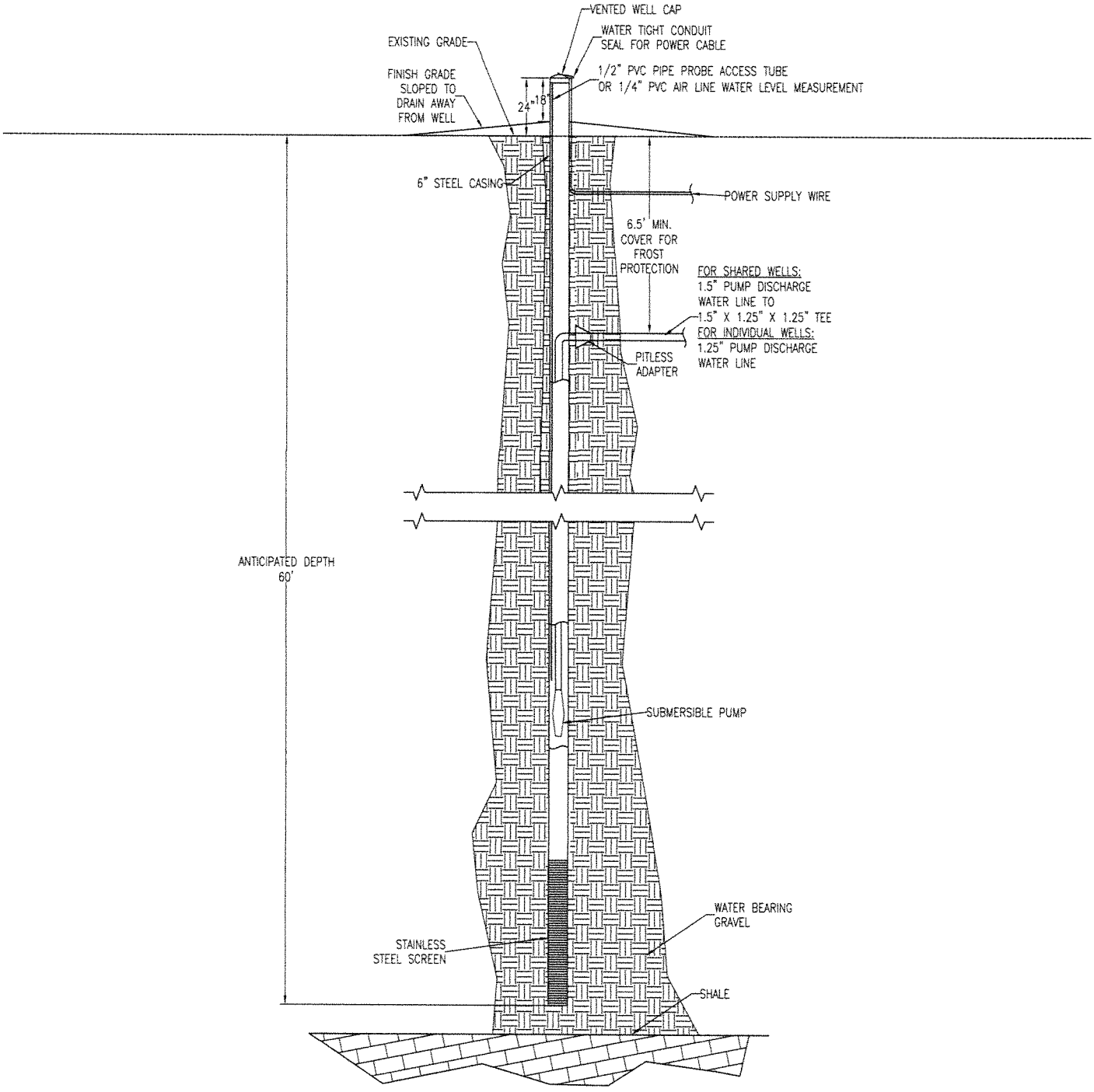


DIAGRAM OF WATER SYSTEM FROM P.O.D. TO P.O.U.

NOT TO SCALE

SHEET 1 OF 2

IN SITE
ENGINEERING



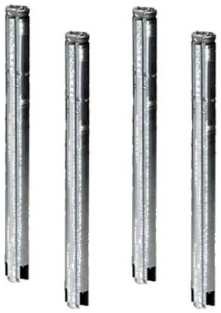
INDIVIDUAL / SHARED WELL PLAN AND SPECIFICATIONS (TYPICAL)

NOT TO SCALE

SHEET 2 OF 2

Submittal Data

PROJECT: Maplewood Estates	UNIT TAG:	QUANTITY:
	TYPE OF SERVICE:	
REPRESENTATIVE:	SUBMITTED BY:	DATE:
ENGINEER:	APPROVED BY:	DATE:
CONTRACTOR:	ORDER NO.:	DATE:



Note! Product picture may differ from actual product

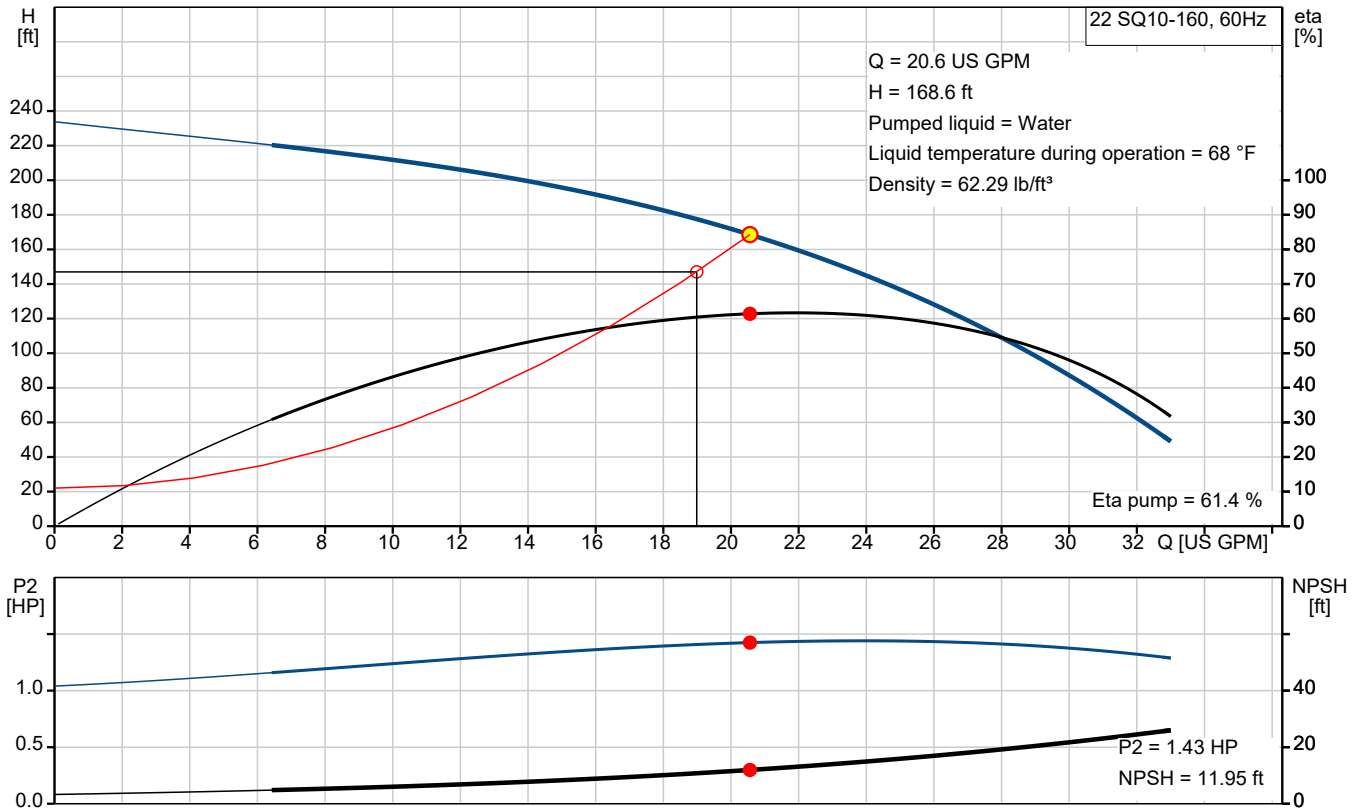
22 SQ10-160

Submersible pumps

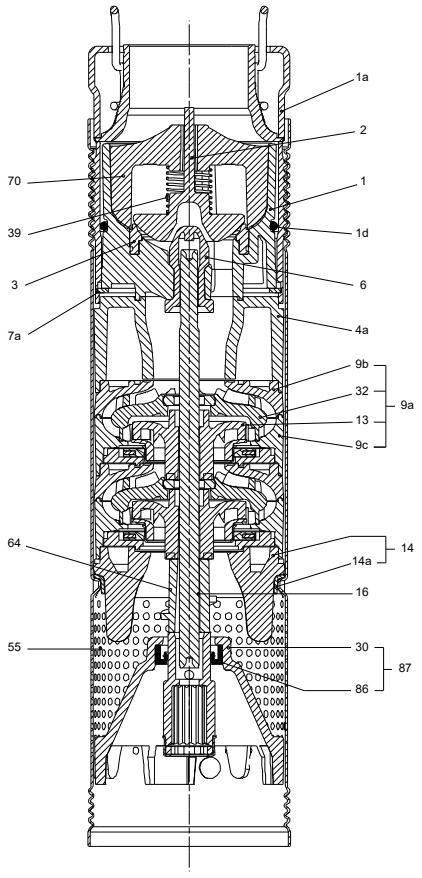
Conditions of Service	
Flow:	20.6 US GPM
Head:	168.6 ft
Efficiency:	%
Liquid:	Water
Temperature:	68 °F
NPSH required:	11.95 ft
Specific Gravity:	1.000

Pump Data	
Liquid temperature range:	32 .. 95 °F
Product number:	96160156

Motor Data	
Rated voltage:	200-240 V
Mains frequency:	60 Hz
Enclosure class:	IP68
Insulation class:	F
Motor protection:	Y
Thermal protection:	internal
Motor type:	MS3



Submittal Data



Materials:

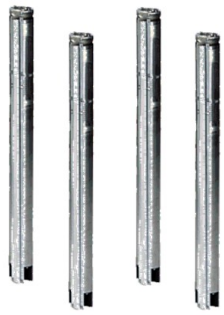
Impeller:	Composite
Motor:	Stainless steel
	DIN W.-Nr. 1.4301
	AISI 304

GRUNDFOS

Company name:
Created by:
Phone:

Date: 14/01/2026

Qty.	Description
1	**22 SQ10-160**



Note! Product picture may differ from actual product

Product No.: 96160156

3" multi-stage, submersible pump designed for domestic water supply, liquid transfer in tanks, irrigation and environmental applications. The pump has "floating" impellers, each with its own tungsten carbide/ceramic bearing.

The pump features soft starting and protection against dry-running, upthrust, overvoltage, undervoltage, overload and overtemperature.

The motor is a single-phase motor of the permanent magnet rotor type ensuring optimum efficiency within a wide load range.
The motor is fitted with a replaceable end cover with socket.

Liquid:

Pumped liquid:	Water
Liquid temperature range:	32 .. 95 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³

Technical:

Pump speed on which pump data are based:	10700 rpm
Actual calculated flow:	20.6 US GPM
Rated flow:	22 US GPM
Resulting head of the pump:	168.6 ft
Rated head:	157.5 ft
Approvals:	cULus
Curve tolerance:	ISO9906:2012 3B

Materials:

Pump:	Stainless steel
	EN 1.4301
	AISI 304
Impeller:	Composite
	ZYTEL 70G30 HSLR PA6.6-GF30
Motor:	Stainless steel
	DIN W.-Nr. 1.4301
	AISI 304

Installation:

Maximum operating pressure:	217.56 psi

GRUNDFOS

Company name:
Created by:
Phone:

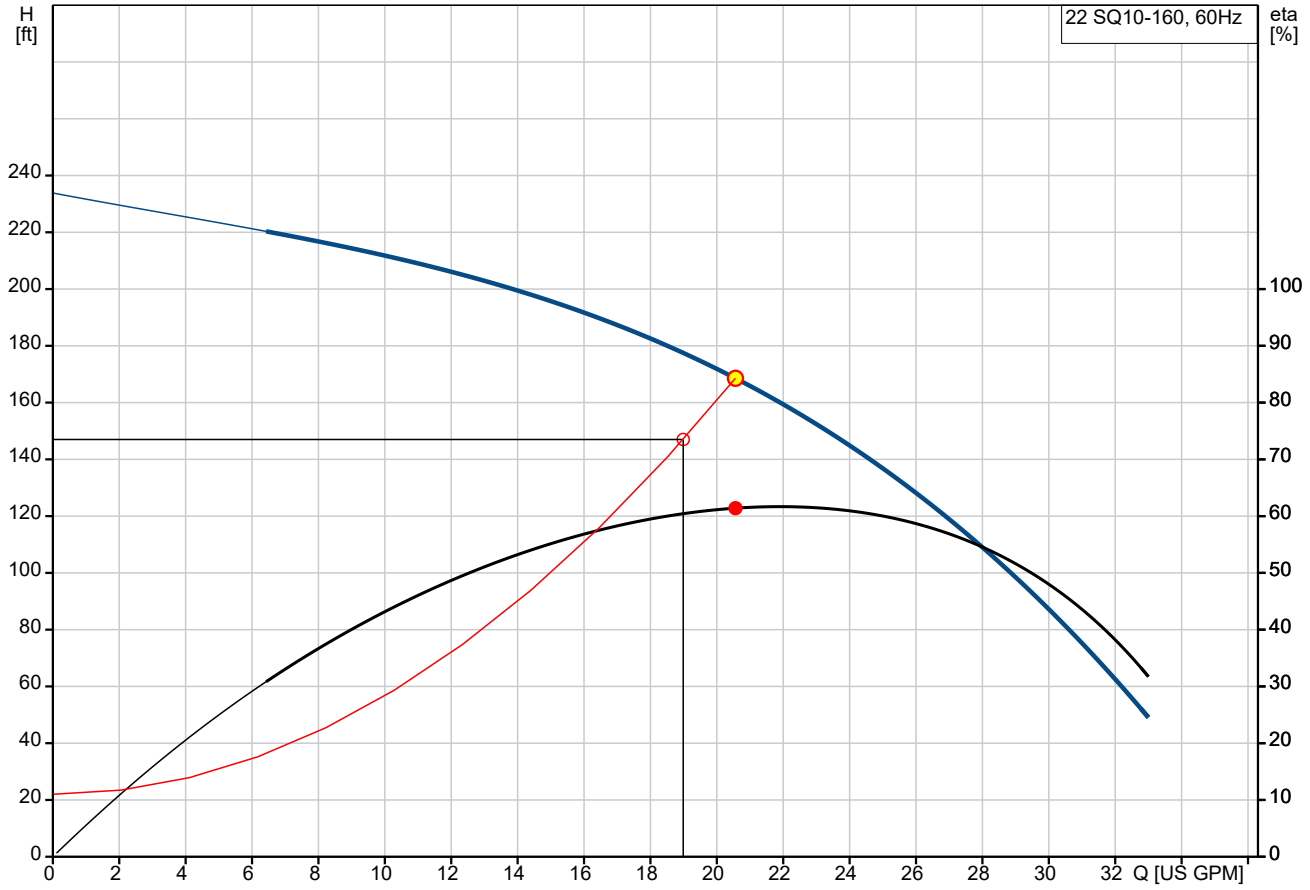
Date: 14/01/2026

Qty.	Description	
1	Pump outlet:	1 1/2"NPT
	Minimum borehole diameter:	2.99 in
	Electrical data:	
	Motor type:	MS3
	Power input - P1:	2.05 kW
	Rated power - P2:	2.08 HP
	Power (P2) required by pump:	2.28 HP
	Mains frequency:	60 Hz
	Rated voltage:	1 x 200-240 V
	Service factor:	2.07
	Rated current:	11.2 A
	Power factor:	1.00
	Rated speed:	10700 rpm
	Start. method:	direct-on-line
	Enclosure class (IEC 34-5):	IP68
	Insulation class (IEC 85):	F
	Length of cable:	4.92 ft
	Motor No:	96160537
	Others:	
	Net weight:	13.5 lb
	Gross weight:	15 lb
	Country of origin:	MX
	Custom tariff no.:	8413.70.2004

Company name:
Created by:
Phone:

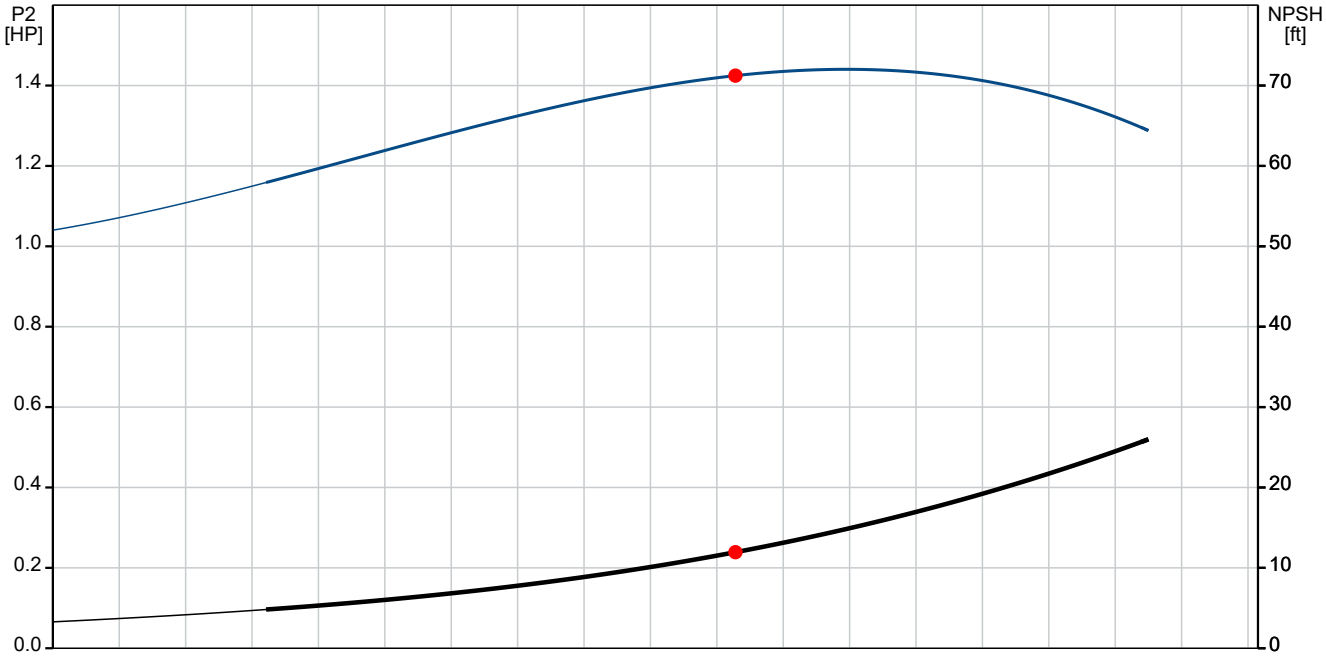
Date: 14/01/2026

96160156 22 SQ10-160 60 Hz



Q = 20.6 US GPM
Pumped liquid = Water
Density = 62.29 lb/ft³

H = 168.6 ft
Liquid temperature during operation = 68 °F
Eta pump = 61.4 %

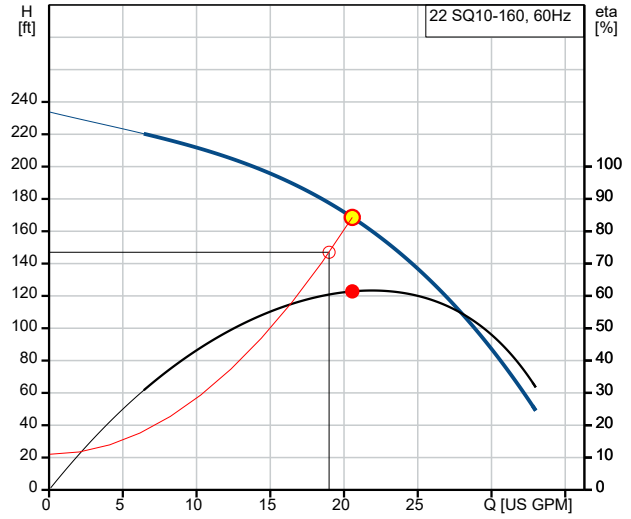


P2 = 1.43 HP
NPSH = 11.95 ft

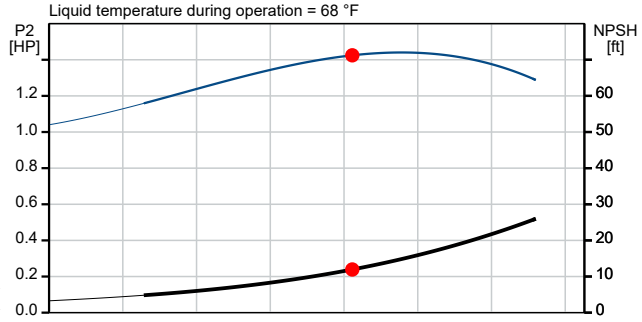
Company name:
Created by:
Phone:

Date: 14/01/2026

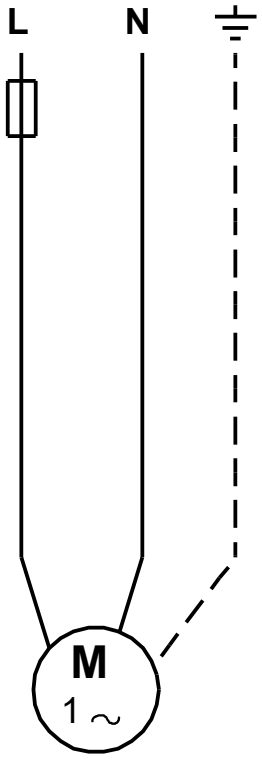
Description	Value
General information:	
Product name:	22 SQ10-160
Product No:	96160156
EAN number:	5700398694533
Price:	
Technical:	
Pump speed on which pump data are based:	10700 rpm
Actual calculated flow:	20.6 US GPM
Rated flow:	22 US GPM
Resulting head of the pump:	168.6 ft
Rated head:	157.5 ft
Stages:	4
Approvals:	cULus
Curve tolerance:	ISO9906:2012 3B
Pump No:	96397385
Model:	C
Valve:	pump with built-in non-return valve
Materials:	
Pump:	Stainless steel
	EN 1.4301
	AISI 304
Impeller:	Composite
	ZYTEL 70G30 HSLR PA6.6-GF30
Motor:	Stainless steel
	DIN W.-Nr. 1.4301
	AISI 304
Installation:	
Maximum operating pressure:	217.56 psi
Pump outlet:	1 1/2"NPT
Minimum borehole diameter:	2.99 in
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	32 .. 95 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³
Electrical data:	
Motor type:	MS3
Power input - P1:	2.05 kW
Rated power - P2:	2.08 HP
Power (P2) required by pump:	2.28 HP
Mains frequency:	60 Hz
Rated voltage:	1 x 200-240 V
Service factor:	2.07
Rated current:	11.2 A
Power factor:	1.00
Rated speed:	10700 rpm
Start. method:	direct-on-line
Enclosure class (IEC 34-5):	IP68
Insulation class (IEC 85):	F
Built-in motor protection:	Y
Thermal protec:	internal
Length of cable:	4.92 ft
Motor No:	96160537
Controls:	



Q = 20.6 US GPM
H = 168.6 ft
Pumped liquid = Water
Density = 62.29 lb/ft³
Eta pump = 61.4 %
Liquid temperature during operation = 68 °F



P2 = 1.43 HP
NPSH = 11.95 ft



GRUNDFOS

Company name:
Created by:
Phone:

Date: 14/01/2026

Description	Value
CU 300/CU 301:	no communication possible
Others:	
Net weight:	13.5 lb
Gross weight:	15 lb
Sales region:	Namreg
Country of origin:	MX
Custom tariff no.:	8413.70.2004

MONTANA WELL LOG REPORT

This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is compiled electronically from the contents of the Ground Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.

Other Options

Go to GWIC website
Plot this site in State Library Digital Atlas
Plot this site in Google Maps

Site Name: REGAL LAND DEVELOPMENT
GWIC Id: 335804

Section 1: Well Owner(s)

1) REGAL LAND DEVELOPMENT (MAIL)
5847 WHISPERING WOODS DRIVE
BILLINGS MT 59106 [03/12/2025]
2) REGAL LAND DEVELOPMENT (WELL)
7001 HESPER ROAD
BILLINGS MT 59106 [03/12/2025]

Section 2: Location

Township	Range	Section	Quarter Sections
01S	25E	18	SE¼ NE¼ SW¼

County	Geocode
YELLOWSTONE	03-0926-18-3-01-01-0000

Latitude	Longitude	Geomethod	Datum
45.7449	-108.690317	NAV-GPS	WGS84

Ground Surface Altitude	Ground Surface Method	Datum	Date

Addition	Block	Lot

Section 3: Proposed Use of Water

PUBLIC WATER SUPPLY (1)

Section 4: Type of Work

Drilling Method: ROTARY
Status: NEW WELL

Section 5: Well Completion Date

Date well completed: Wednesday, March 12, 2025

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	25	12.3
25	56.5	9.9
56.5	61	7.6

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2	47	8	0.25		WELDED	A53B STEEL
56.5	61	6	0.25		WELDED	A53B STEEL

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
46.5	56.5	8		.50TH SLOTS	SCREEN-CONTINUOUS-STAINLESS

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	25	BENTONTIE	

Section 7: Well Test Data

Total Depth: 61
Static Water Level: 16.5
Water Temperature:

Air Test *

300 gpm with drill stem set at 61 feet for 6 hours.
Time of recovery 0.08 hours.
Recovery water level 16.5 feet.
Pumping water level _ feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log

Geologic Source

Unassigned

From	To	Description
0	3	TAN/TOPSOIL/SOFT
3	16	TAN/SANDY LOAM/SOFT
16	35	TAN/SILT/SOFT
35	56.5	TAN/GRAVEL/MEDIUM
56.5	61	DARK/SHALE/MEDIUM

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: PAUL STEINMETZ
Company: AAQUA DRILLING INC
License No: WWC-542
Date Completed: 3/12/2025

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

The Montana Department of Natural Resources and Conservation (DNRC) Water Resources Division

David Parmelee, Groundwater Hydrologist, Water Sciences Bureau (WSB)

Applicant Name	Regal Land Development, Inc.
Application No.	43Q 30171432
Point of Diversion Legal Land Description	Section 18, Township 1 South, Range 25 East, Yellowstone County

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 permit 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 §85-2-402, Montana Code Annotated (MCA).

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

1.0 Executive Summary

Application Details

The Applicant requests to divert 131.8 acre-feet (AF) annually from 46 wells at a maximum cumulative flow rate of 386 gallons per minute (gpm) for a proposed housing subdivision. Of the total requested volume, 25.9 AF would be diverted for multiple domestic use from January 1 to December 31, and 105.9 AF would be diverted for 42.4 acres of lawn and garden irrigation from April 15 to October 15.

Approved Variances from ARM 36.12.121

Variances from aquifer test requirements found in ARM 36.12.121 were requested on September 18, 2025 and granted by the Billings Regional Office on October 6, 2025. The reasoning for the requested variances can be found in the WSB Aquifer Testing Addendum Review document dated September 19, 2025. The proposed points of diversion are located within the Yellowstone River Terrace Level 3 aquifer, and the Applicant agreed to use the aquifer properties described in DNRC Technical Memorandum: Variance – Yellowstone River Terrace Level 3 Aquifer Properties, dated March 1, 2022.

WSB Technical Analyses Findings

Based on information submitted, the WSB estimated aquifer properties, evaluated the proposed well(s) available water column, and evaluated potential impacts to existing groundwater and surface water rights. Adverse effects were evaluated by comparing drawdown in existing wells and quantifying net depletions to surface water. These 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

AQUIFER TEST ANALYSIS	A 73-hr aquifer test on proposed well Groundwater Information Center (GWIC) ID 335804 was used to evaluate well efficiency for assessment of adequacy of diversion but was not used to estimate aquifer properties. Aquifer properties from DNRC (2022) were used for forward modeling.
MODELING INPUTS	The following aquifer properties were used to complete adequacy of diversion, physical availability, and adverse effect technical analyses: transmissivity (T) of 6,000 ft^2/day and specific yield (S_y) of 0.1. Pumping schedules used to model each criterion are identified within the document.
ADEQUACY OF DIVERSION	The aquifer adjacent to GWIC ID 335804 would experience 1.83 ft of drawdown at the end of August of the first year, leaving approximately 40.2 ft of available water column above the bottom of the perforated interval. Because the underlying shale creates a distinct lower boundary to the aquifer, the other proposed wells are likely to have similar drawdown and available water columns to GWIC ID 335804.

PHYSICAL AVAILABILITY	The model predicted the 0.01-foot drawdown contour, or zone of influence (ZOI), extends a maximum of 13,400 ft from the center of the Applicant's proposed wells. The ZOI was truncated north, west, and southwest of the proposed wells to exclude areas mapped at the surface as the Niobrara Formation. The calculated groundwater flux through the ZOI totaled 5,082 AF. **Appendix B of Part B** of this report lists the active and severed water rights within the ZOI.
ADVERSE EFFECT (DRAWDOWN IN EXISTING WELLS)	The 1-foot drawdown contour is approximately 2,500 ft from the center of the proposed wells at the end of the fifth August of the proposed annual pumping schedule. As such, 46 water rights are predicted to experience drawdown equal to or greater than one foot (**Appendix A of Part A**).
ADVERSE EFFECT (NET DEPLETION TO SURFACE WATER)	Monthly net depletions resulting from the proposed use of groundwater are identified in **Table 1.** The starting point of the depleted reach is in the NESESE of Section 13, Township 1 South, Range 24 East, Yellowstone County.

Table 1: Consumed volume and net depletions to hydraulically connected surface water sources.

Month	Consumed Volume (AF)	Canyon Creek Net Depletion (AF)	Canyon Creek Net Depletion (gpm)
January	0.22	2.88	21.0
February	0.20	2.27	18.4
March	0.22	2.24	16.4
April	2.32	2.89	21.8
May	9.16	6.04	44.1
June	14.71	9.31	70.2
July	19.76	12.96	94.6
August	17.56	13.41	97.9
September	9.12	10.08	76.0
October	3.01	6.87	50.2
November	0.21	4.32	32.6
December	0.22	3.44	25.1
Total	**76.72**	**76.72**	

2.0 Hydrogeologic Setting

The proposed points of diversion (PODs) are mapped as being within the Yellowstone River Terrace Level 3 aquifer (Lopez, 2000) (**Figure 1**), which has a DNRC aquifer code of 110ALVM (Quaternary Alluvium). The only proposed well that has been drilled is GWIC ID 335804, which has a total depth of 61 ft below ground surface (bgs) and static water level of 16.49 ft below top of casing (btc). The lithology on the well log for GWIC ID 335804 describes loam and silt from 0 to 35 ft bgs, gravel from 35 to 56.5 ft bgs, and shale below 56.5 ft bgs.

The Yellowstone River Terrace Level 3 aquifer is in the Yellowstone River Valley southwest of Billings. The valley is bounded by outcrops of the Colorado-Group Belle Fourche and Mowry Formations immediately south of the Yellowstone River and the rim rocks of the Eagle Formation to the north. The valley is incised 200 to 300 ft into the shale of the Colorado Group and filled with Quaternary alluvium. Above the modern floodplain, the alluvium comprises a series of terraces formed by the migration and downcutting of the Yellowstone River. The most areally extensive of these is Terrace Level 3, which sits 50 to 90 feet above the river (Lopez, 2000; Olson and Reiten, 2002). Terrace Level 3 is dissected by numerous irrigation ditches, drains, and streams. Canyon Creek, Danford Drain, Shiloh Drain, and Hogans Slough are known to receive baseflow from groundwater. Groundwater occurs in gravel deposits beneath Terrace Level 3 and flows generally from northwest to southeast under unconfined to semiconfined conditions (Olson and Reiten, 2002, Plate 1). Sources of recharge to the aquifer are flood irrigation and ditch leakage, precipitation, lawn irrigation, and septic returns. The Terrace Level 3 gravel deposits are disconnected from adjacent terraces by scarps and open-pit mining, creating a distinct hydrogeologic unit (Olson and Reiten, 2002).

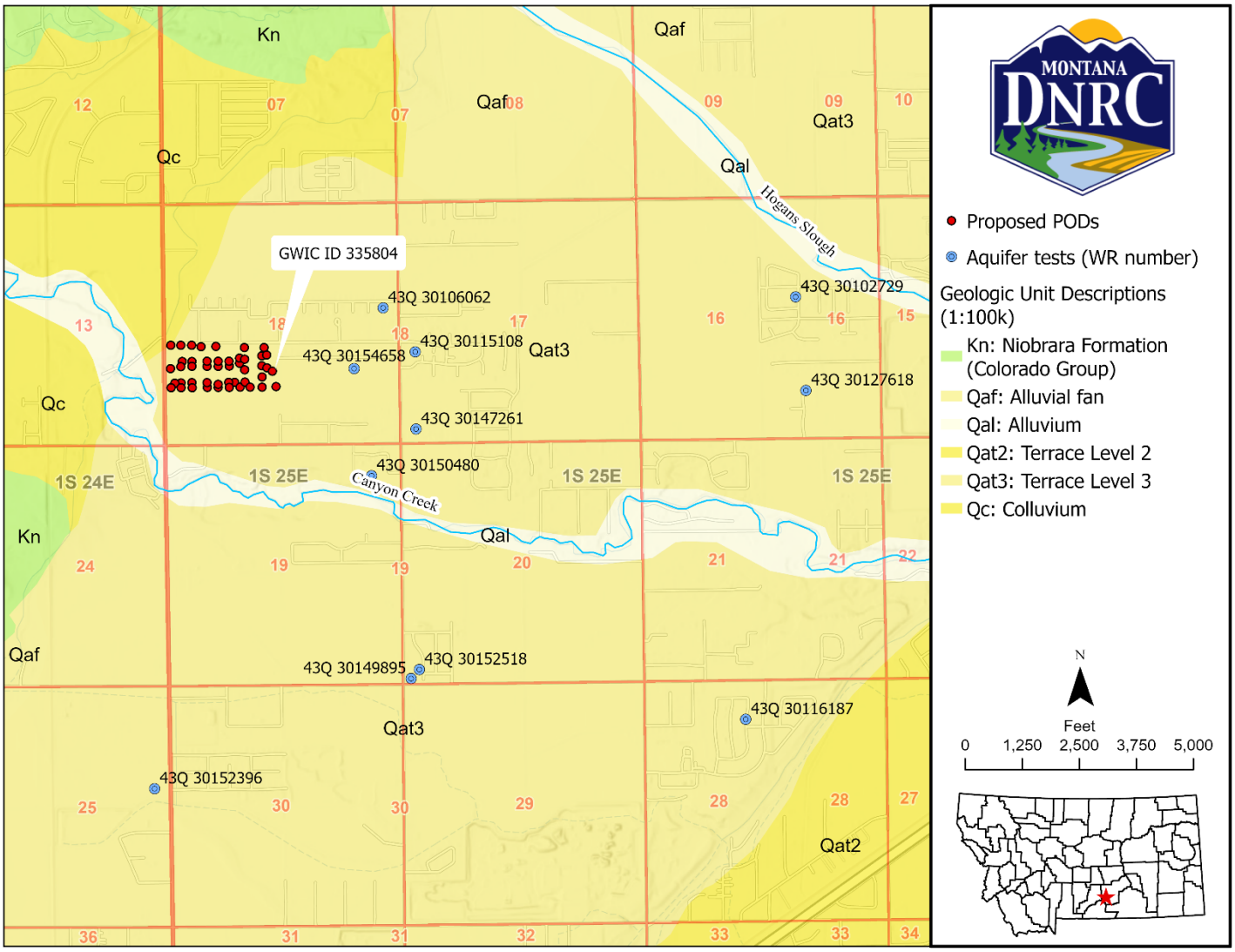


Figure 1: Map of the Applicant's proposed wells, nearby existing aquifer tests, and surface geology.

3.0 Aquifer Test Summary

DNRC requires two different types of tests, "Aquifer Tests" and "Drawdown and Yield Tests," which are used to analyze different application criteria.

- An "Aquifer Test" is a pumping test that is meant to provide data to model aquifer properties. The minimum duration of these tests is either 24 hours or 72 hours, depending on the proposed flow rate and volume (AMR 36.12.121(3)(e)), and DNRC only requires one of these tests per application. Aquifer Tests must include observation well data, pre-test background water-level data, and post-test recovery data.
- A "Drawdown and Yield Test" is a pumping test that is meant to evaluate well construction and the ability of the aquifer to yield water to the well. This is also known as demonstrating "adequacy of

diversion." The minimum duration of these tests is 8 hours, and every well that is a part of the application must be tested. Observation wells, background data, and recovery data are not required for Drawdown and Yield Tests.

Because the Applicant was granted a variance from the requirement to complete an aquifer test (see Section 1.0, Approved Variances), only a drawdown and yield test was required. The Applicant submitted a 73-hour single-well aquifer test to meet this requirement.

Field Methods and Equipment

A 73-hour aquifer test was conducted on the Production Well, GWIC ID 335804 starting on March 31, 2025. The average pumping rate was 220 gpm. Completion details for the tested well are identified in **Table 2**. Additional information, such as the monitoring periods for the test, equipment used, water level measurements, and discharge measurements, can be found on Form 633. **Figure 1** shows the location of GWIC ID 335804.

Table 2: Specifications of well used for the aquifer test.

GWIC ID	Well ID	Distance from the Production Well (ft)	Completed Well Depth (ft bgs)	Perforated Interval (ft bgs)	Casing Diameter (inches)
335804	Production	NA	61	46.5 to 56.5	8

Background, Drawdown and Recovery Data

Background water-level data were not required for the drawdown and yield test but were submitted and are summarized in **Figure 2**. Water levels were monitored in the Production Well for 48 hours prior to the aquifer test. Background water levels fluctuated a maximum of 0.15 ft during this time and showed no trend.

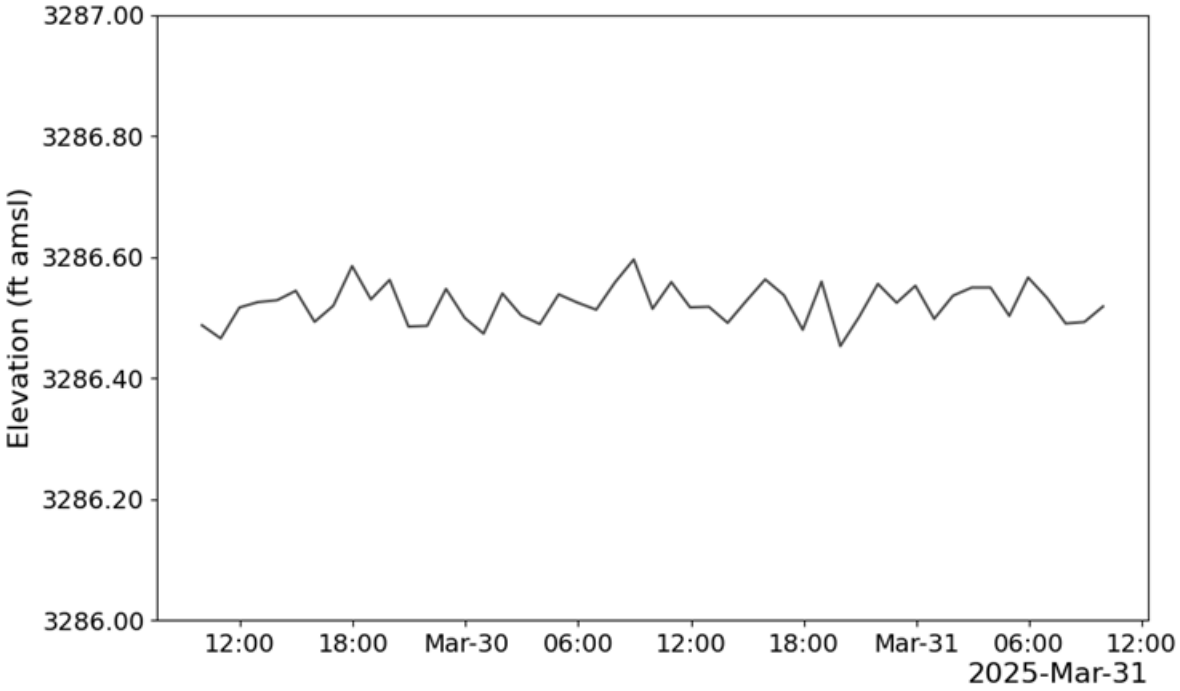


Figure 2: Background water-level data for the Production Well prior to the aquifer test.

Drawdown and recovery water-level data measured during the test are summarized in **Figure 3**. **Table 3** identifies the maximum drawdown and available water column above the bottom of the perforated interval for the Production Well at the end of the drawdown phase of the aquifer test.

Table 3: Available water column at the end of the aquifer test for the Production Well.

GWIC ID	Well ID	Static Water Level (ft btc)	Maximum Observed Drawdown (ft)	Available Water Column[1] (ft)
335804	Production	16.49	14.04	28.0

[1]Accounts for the 2-ft difference in height between the ground surface and top of well casing.

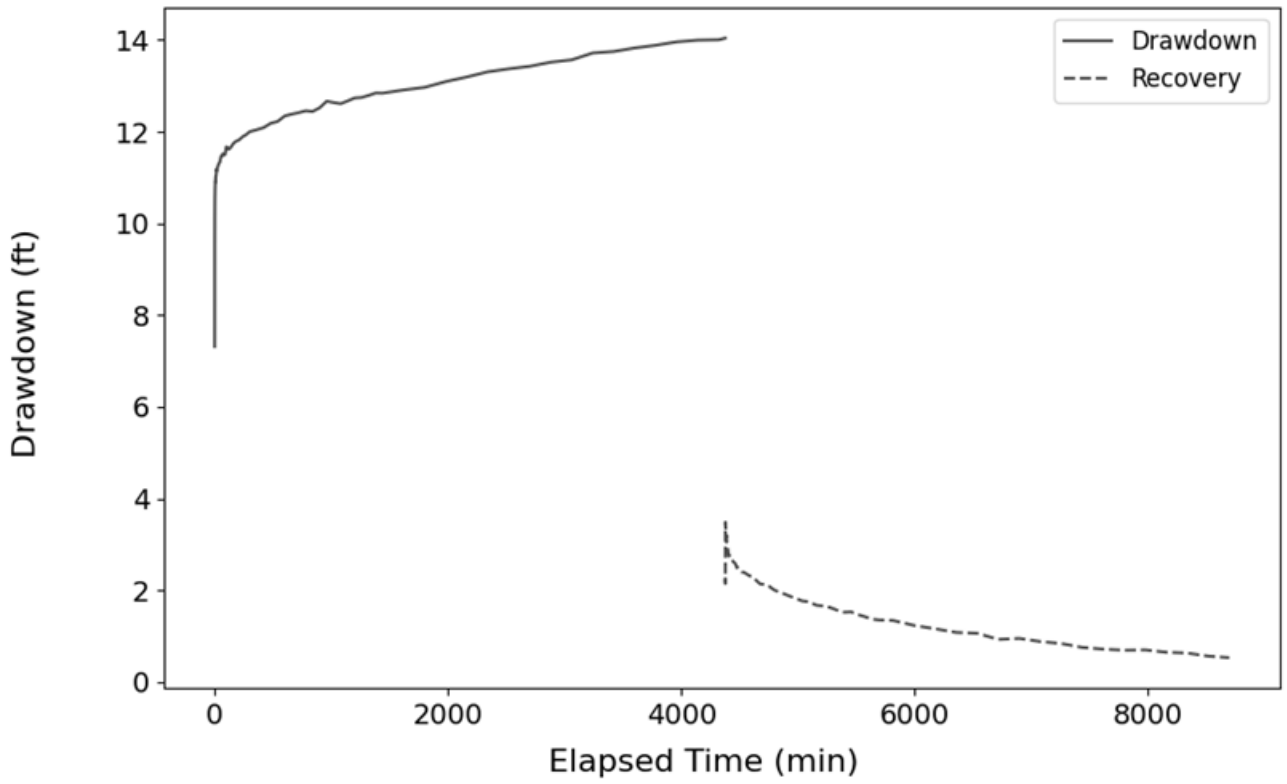


Figure 3: Drawdown and recovery data for the 73-hour aquifer test on the Production Well.

4.0 Aquifer Properties

In lieu of using the submitted 73-hour aquifer test on the proposed well to derive aquifer properties, the Applicant agreed to use aquifer properties from DNRC Technical Memorandum: Variance – Yellowstone River Terrace Level 3 Aquifer Properties (DNRC, 2022). Aquifer properties from DNRC (2022) are T = 6,000 ft^2/day and S_y = 0.1.

Aquifer Property Comparison

Transmissivity values from eleven nearby aquifer tests in the Yellowstone River Terrace Level 3 aquifer are shown in **Table 4**, and locations of the nearby test are shown in **Figure 1**. The inverse-distance-weighted geometric mean of all T values in **Table 4** is 5,948 ft^2/day, which is consistent with the T value of 6,000 ft^2/day from DNRC (2022). Values for specific yield are not included in **Table 4** because most aquifer-test analyses in Yellowstone River Terrace Level 3 aquifer use an assumed S_y of 0.1 from Lohman (1972).

Table 4: Nearby aquifer tests. T = transmissivity

Water Right No.	GWIC ID	Well Depth (ft)	Distance from Applicant wells (mi)	Aquifer Test Length (hours)	Pump Rate (gpm)	T (ft^2/day)
43Q 30154658	320896	54	0.56	8	81	6,863
43Q 30106062	287847	56	0.72	72	218	3,443
43Q 30150480	313087	43	0.79	8	66	6,070
43Q 30115108	295769	51	0.81	73	189	4,195
43Q 30147261	303647	51	0.86	74	182	8,700
43Q 30152518	317002	52	1.51	76	197	5,985
43Q 30149895	314565	36	1.52	72	227	7,060
43Q 30152396	188964	44	1.78	24	68	18,100
43Q 30102729	281919	37	2.41	72	112	7,606
43Q 30127618	304825	31	2.44	24	70	9,155
43Q 30116187	300066	26	2.63	72	66	7,845
					Weighted geometric mean[1] =	**5,948**

[1]T values were weighted by the inverse of the square of the distance from the test location to the center of the proposed wells.

5.0 Modeling Inputs

Technical analyses in support of criteria assessment for adequacy of diversion, physical availability, and adverse effect (drawdown in existing wells) were modeled in FWD:SOLV (HydroSOLVE INC., 2024) using the following inputs:

- Theis (1935) solution for fully penetrating wells in a single-porosity aquifer
- Well radius of 0.33 ft and screened interval of 10 ft for all proposed wells (based on the construction of proposed well GWIC ID 335804)
- Well locations based on a map supplied by the Applicant
- Saturated thickness (b) of 40 ft
- T of 6,000 ft^2/day (DNRC, 2022)
- S_y of 0.1 (DNRC, 2022)

Monthly pumping schedules used to complete technical analyses are described in subsequent criteria sections.

6.0 Adequacy of Diversion Analysis

An evaluation of the potentially available water column remaining in GWIC ID 335804 during maximum drawdown in the first year of pumping was modeled in FWD:SOLV (HydroSOLVE INC., 2024) using the following:

- Pumping schedule: monthly diverted volumes per use in **Table 5** distributed to all 46 wells based on each well's proportion of the total volume per use in **Table 6** and converted to gpm.

The Applicant requests 25.9 AF per year for multiple domestic use and 105.9 AF April 15 to October 15 for lawn and garden irrigation from 46 wells. The Applicant provided annual volumes for each use for all 46 wells (**Table 6**). To create a monthly pumping schedule for each well, monthly diverted volumes were calculated for each use (**Table 5**) and then apportioned to each well using the proportion of total values in **Table 6**. The diverted volume for multiple domestic use was distributed evenly throughout the year and apportioned to each month based on the number of days in the month. The diverted volume for lawn and garden irrigation was apportioned to each month according to the monthly percentage of the total net irrigation requirement (NIR) for pasture grass in a dry year calculated for the Billings water plant weather station using the Irrigation Water Requirement program (NRCS, 2003). Pasture grass was used as a proxy for turf grass by applying the inputs described in DNRC (2010). Monthly volumes for each use for each well were converted to a flow rate of gallons per minute based on the period of use.

Table 5: Monthly diverted volumes for the proposed uses.

Month	NIR[1] (in/ac)	Multiple Domestic Diverted Volume (AF)	Lawn and Garden Diverted Volume (AF)	Total Diverted Volume (AF)
January	0.00	2.20	0.00	2.20
February	0.00	1.99	0.00	1.99
March	0.00	2.20	0.00	2.20
April	0.71	2.13	3.01	5.14
May	3.01	2.20	12.77	14.97
June	4.88	2.13	20.70	22.83
July	6.58	2.20	27.92	30.12
August	5.84	2.20	24.78	26.98
September	3.00	2.13	12.73	14.86
October	0.94	2.20	3.99	6.19
November	0.00	2.13	0.00	2.13
December	0.00	2.20	0.00	2.20
Total	**24.96**	**25.9**	**105.9**	**131.8**

[1]Billings water plant weather station

Table 6: Annual diverted volumes for each POD.

POD No.	Applicant POD ID	Multiple Domestic		Lawn and Garden Irrigation		Total Diverted Volume (AF/year)	Average Annual Flow Rate (gpm)
		Proposed volume (AF/year)	*Proportion of total*	*Proposed volume (AF/year)*	*Proportion of total*		
1	1.1	0.336	0.0130	2.51	0.0237	2.85	1.76
2	1.2-3	0.673	0.0260	1.87	0.0177	2.54	1.58
3	1.4-5	0.673	0.0260	1.89	0.0178	2.56	1.59
4	1.6-7	0.673	0.0260	2.56	0.0242	3.23	2.00
5	1.8-9	0.673	0.0260	2.41	0.0228	3.08	1.91
6	1.10-11	0.673	0.0260	4.13	0.0390	4.80	2.98
7	1.12-13	0.673	0.0260	2.36	0.0223	3.03	1.88
8	1.14-15	0.673	0.0260	1.87	0.0177	2.54	1.58
9	1.16-17	0.673	0.0260	2.55	0.0241	3.22	2.00
10	1.18-19	0.673	0.0260	2.41	0.0228	3.08	1.91
11	1.P1	0.000	0.0000	1.79	0.0169	1.79	1.11
12	2.1	0.336	0.0130	2.15	0.0203	2.49	1.54
13	2.2-3	0.673	0.0260	2.30	0.0217	2.97	1.84
14	2.4-5	0.673	0.0260	2.45	0.0231	3.12	1.94
15	3.1-2	0.673	0.0260	2.34	0.0221	3.01	1.87
16	3.3-18	0.673	0.0260	2.16	0.0204	2.83	1.76
17	3.4-17	0.673	0.0260	2.67	0.0252	3.34	2.07
18	3.5-6	0.673	0.0260	2.54	0.0240	3.21	1.99
19	3.7-8	0.673	0.0260	1.87	0.0177	2.54	1.58
20	3.9-10	0.673	0.0260	1.76	0.0166	2.43	1.51
21	3.11-12	0.673	0.0260	1.79	0.0169	2.46	1.53
22	3.13	0.336	0.0130	1.27	0.0120	1.61	1.00
23	3.14-15	0.673	0.0260	2.56	0.0242	3.23	2.00
24	3.16	0.336	0.0130	1.19	0.0112	1.53	0.95
25	3.19-20	0.673	0.0260	2.20	0.0208	2.87	1.78
26	3.21	0.336	0.0130	1.31	0.0124	1.65	1.02
27	4.1	0.336	0.0130	1.22	0.0115	1.56	0.96
28	4.P2	0.000	0.0000	5.73	0.0541	5.73	3.55
29	4.2-3	0.673	0.0260	2.56	0.0242	3.23	2.00
30	4.4-5	0.673	0.0260	2.41	0.0228	3.08	1.91
31	4.6-7	0.673	0.0260	2.71	0.0256	3.38	2.10
32	4.8	0.336	0.0130	1.59	0.0150	1.93	1.19
33	4.9	0.336	0.0130	1.64	0.0155	1.98	1.23
34	4.10-11	0.673	0.0260	1.76	0.0166	2.43	1.51
35	4.12-13	0.673	0.0260	1.76	0.0166	2.43	1.51
36	4.14	0.336	0.0130	1.20	0.0113	1.54	0.95

POD No.	Applicant POD ID	Multiple Domestic		Lawn and Garden Irrigation		Total Diverted Volume (AF/year)	Average Annual Flow Rate (gpm)
		Proposed volume (AF/year)	*Proportion of total*	*Proposed volume (AF/year)*	*Proportion of total*		
37	4.15-16	0.673	0.0260	2.81	0.0265	3.48	2.16
38	4.17-18	0.673	0.0260	2.63	0.0248	3.30	2.05
39	4.19-20	0.673	0.0260	2.51	0.0237	3.18	1.97
40	4.21-22	0.673	0.0260	3.34	0.0315	4.01	2.49
41	4.23-24	0.673	0.0260	2.23	0.0211	2.90	1.80
42	4.25-26	0.673	0.0260	2.29	0.0216	2.96	1.84
43	4.27-28[1]	0.673	0.0260	2.80	0.0264	3.47	2.15
44	5.P3	0.000	0.0000	2.84	0.0268	2.84	1.76
45	5.1-2	0.673	0.0260	2.30	0.0217	2.97	1.84
46	5.3-4	0.673	0.0260	2.67	0.0252	3.34	2.07
	Total	**25.9**	**1.0000**	**105.9**	**1.0000**	**131.8**	

[1]GWIC ID 335804

Theoretical drawdown due to pumping proposed well GWIC ID 335804 was modeled for the period of diversion using the monthly pumping schedule for that well. Predicted drawdown with well loss was calculated by dividing the theoretical drawdown by well efficiency. Well efficiency was calculated by dividing the maximum modeled drawdown for the aquifer test by the maximum observed drawdown of the aquifer test. Interference drawdown, which is additional drawdown in GWIC ID 335804 created by pumping the other 45 proposed wells, was modeled for the period of diversion using the monthly pumping schedules calculated from **Tables 5 and 6**. Total drawdown in GWIC ID 335804 was calculated as the sum of the maximum predicted drawdown with well loss and maximum interference drawdown during the period of diversion.

As shown in **Table 7**, the aquifer adjacent to proposed well GWIC ID 335804 would experience a total drawdown of 1.83 ft at the end of August in the first year of pumping. The remaining available water column for GWIC ID 335804 is 40.2 ft and is equal to the available drawdown above the bottom of the well minus total drawdown.

Figure 4 shows a time series of theoretical drawdown (without well loss) plus interference drawdown in GWIC ID 335804 throughout the period of diversion. GWIC ID 335804 is located on the eastern edge of the proposed subdivision. Because the underlying shale creates a distinct lower boundary to the aquifer, the other proposed wells are likely to have similar drawdown and available water columns to GWIC ID 335804. Total drawdown would be highest near the center of the subdivision, where wells would experience approximately 0.4 ft more interference drawdown than GWIC ID 335804 (**Figure 5**). Theoretical drawdown plus interference drawdown in proposed well 4.4-5, which has a monthly pumping schedule similar to GWIC ID 335804 and is within the area of greatest interference drawdown, is shown in **Figure 4** for comparison.

Table 7: Remaining available water column for proposed well GWIC ID 335804.

Drawdown Estimate	GWIC ID 335804
Total Depth at Bottom of Perforated Interval (ft btc)[1]	58.5
Pre-Test Static Water Level (ft btc)	16.49
Available Drawdown Above Bottom of Well (ft)	42.0
Observed Drawdown of Aquifer Test (ft)	14.04
Modeled Drawdown Using Mean Aquifer Test Rate (ft)	8.50
Well Efficiency (%)	60.5
Maximum Theoretical Drawdown (ft)	0.27
Maximum Predicted Drawdown with Well Loss (ft)	0.45
Maximum Interference Drawdown (ft)	1.38
Total Drawdown (ft)	1.83
Remaining Available Water Column (ft)	**40.2**

[1]The total well depth measuring point (bgs) was adjusted to the top of well casing based on a 2 ft well casing stickup reported on the well log.

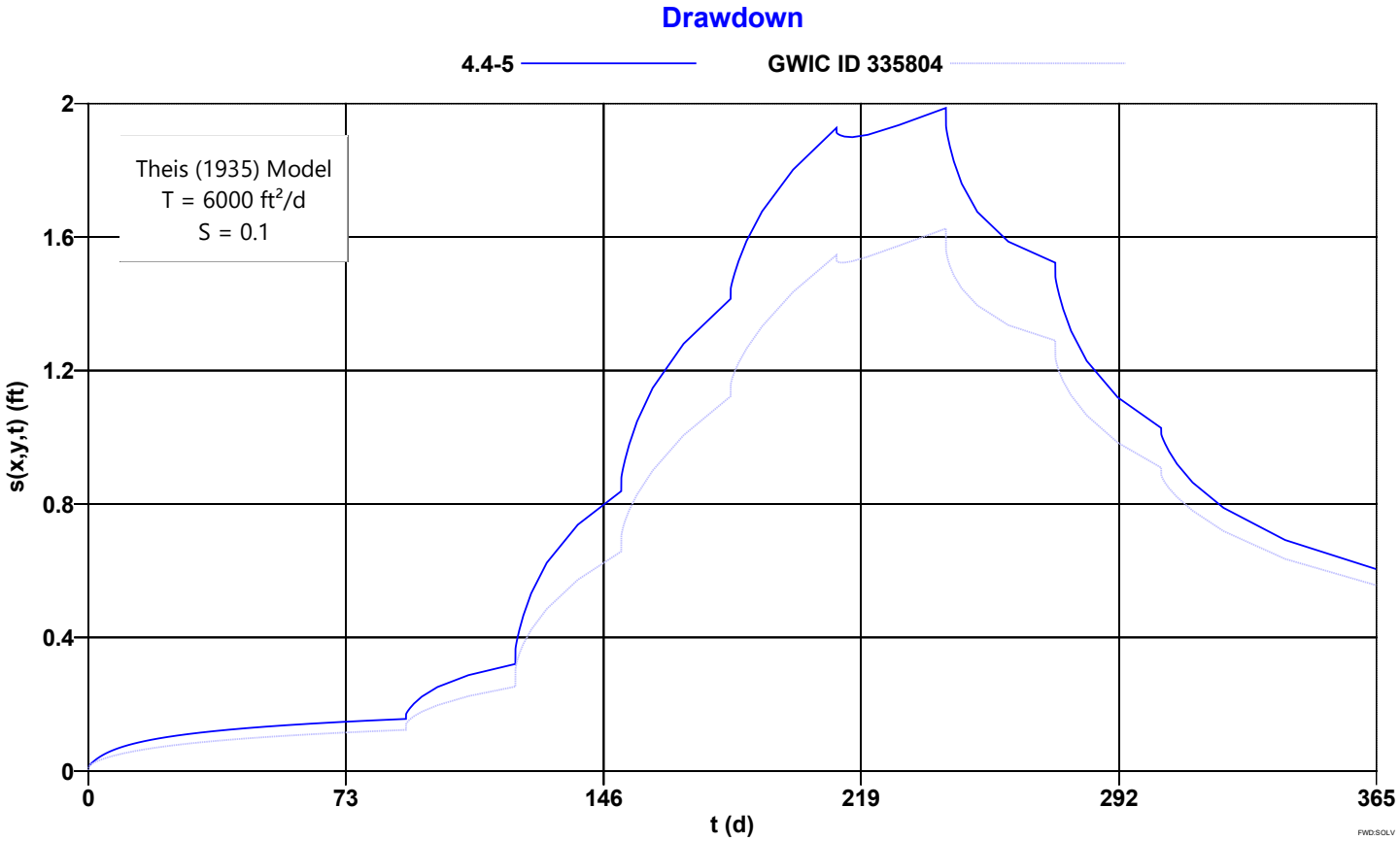


Figure 4: Theoretical drawdown plus interference drawdown in proposed wells GWIC ID 335804 and 4.4-5. The other proposed wells are not shown, but interference drawdown from them is included.

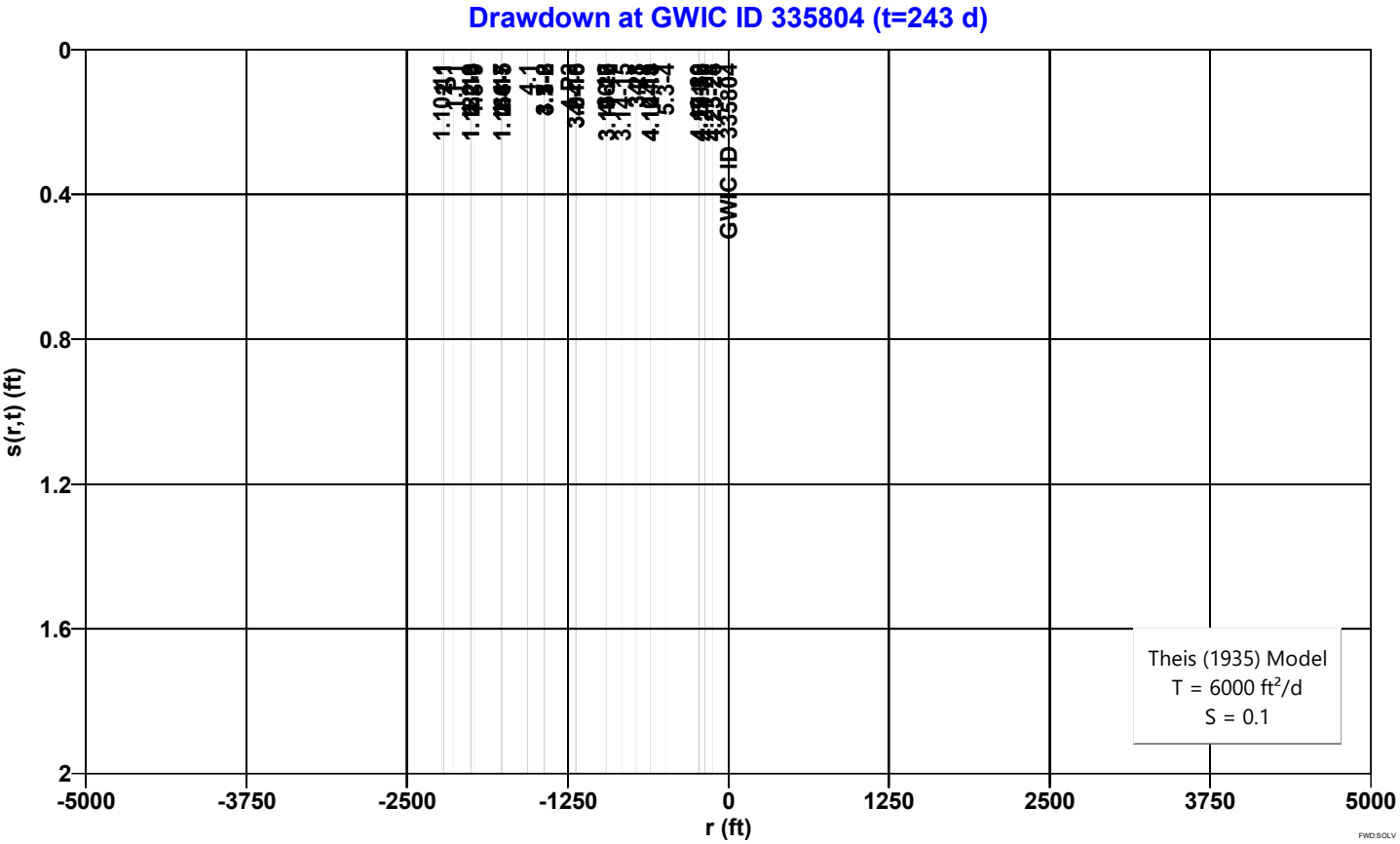


Figure 5: North-facing radial profile of the cone of depression at the end of August in the first year of pumping. Drawdown is greatest near the center of the wellfield.

7.0 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. The 0.01-foot drawdown contour was modeled in FWD:SOLV (HydroSOLVE Inc., 2024) using the following pumping schedule:

- A constant pumping rate for each proposed well for the period of diversion based on each well's total annual diverted volume (**Table 6**).

The cumulative average pumping rate that would be required to produce the proposed volume of 131.8 AF during the period of diversion is 81.7 gpm. To model the 0.01-ft drawdown contour that would result from pumping all 46 proposed wells at a constant rate for one year, the cumulative average pumping rate was apportioned to each well based on each well's proportion of the total proposed volume. The pumping rate used for each well is shown in **column 7** of **Table 6**.

As shown in **Figure 6**, the ZOI extends a maximum of approximately 13,400 ft from the center of the proposed wells. The ZOI was truncated where it intersects the contact between Quaternary sediments and the Cretaceous Niobrara Formation to the north, west, and southwest of the proposed wells, as mapped on the

Billings 30' x 60' 1:100k geologic map (Lopez, 2000). **Appendix A of Part B** of this report lists the active and severed groundwater rights within the ZOI.

The direction of groundwater flow in the ZOI is predominantly to the southeast. The gradient is estimated to be 0.0038 ft/ft based on the potentiometric surface map in Olson (2005). The width of the ZOI perpendicular to groundwater flow is 26,600 ft. Groundwater flux (Q) through the ZOI, calculated using the equation below, is 606,480 ft^3/day or 5,082 AF/year:

$$\mathbf{Q = TWi}$$

where:
T = Transmissivity = 6,000 ft^2/day
W = Width of Zone of Influence = 26,600 ft
i = Groundwater gradient (from Olson, 2005) = 0.0038 ft/ft

8.0 Adverse Effect Analyses

Under §85-2-402, Montana Code Annotated (MCA), using the Applicant's proposed pump schedule and associated volume, adverse effect is evaluated by modeling drawdown in nearby wells, changes in net depletions to surface water, and changes in return flows to surface water.

8.1 Groundwater - Drawdown in Existing Wells

The drawdown in existing wells was modeled in FWD:SOLV (HydroSOLVE INC., 2024) using the following:

- A monthly pumping schedule for the proposed wells based on the monthly diverted volumes in **Table 5** and per-well apportionments in **Table 6** (as described in section 6.0) for a period of five years.

Maximum drawdown in the fifth year of pumping occurs at the end of August, when drawdown greater than one foot occurs within 2,500 ft of the center of the proposed wells (**Figure 6**). 46 groundwater rights in the aquifer are within the one-foot drawdown contour and are listed in **Appendix A** of **Part A**.

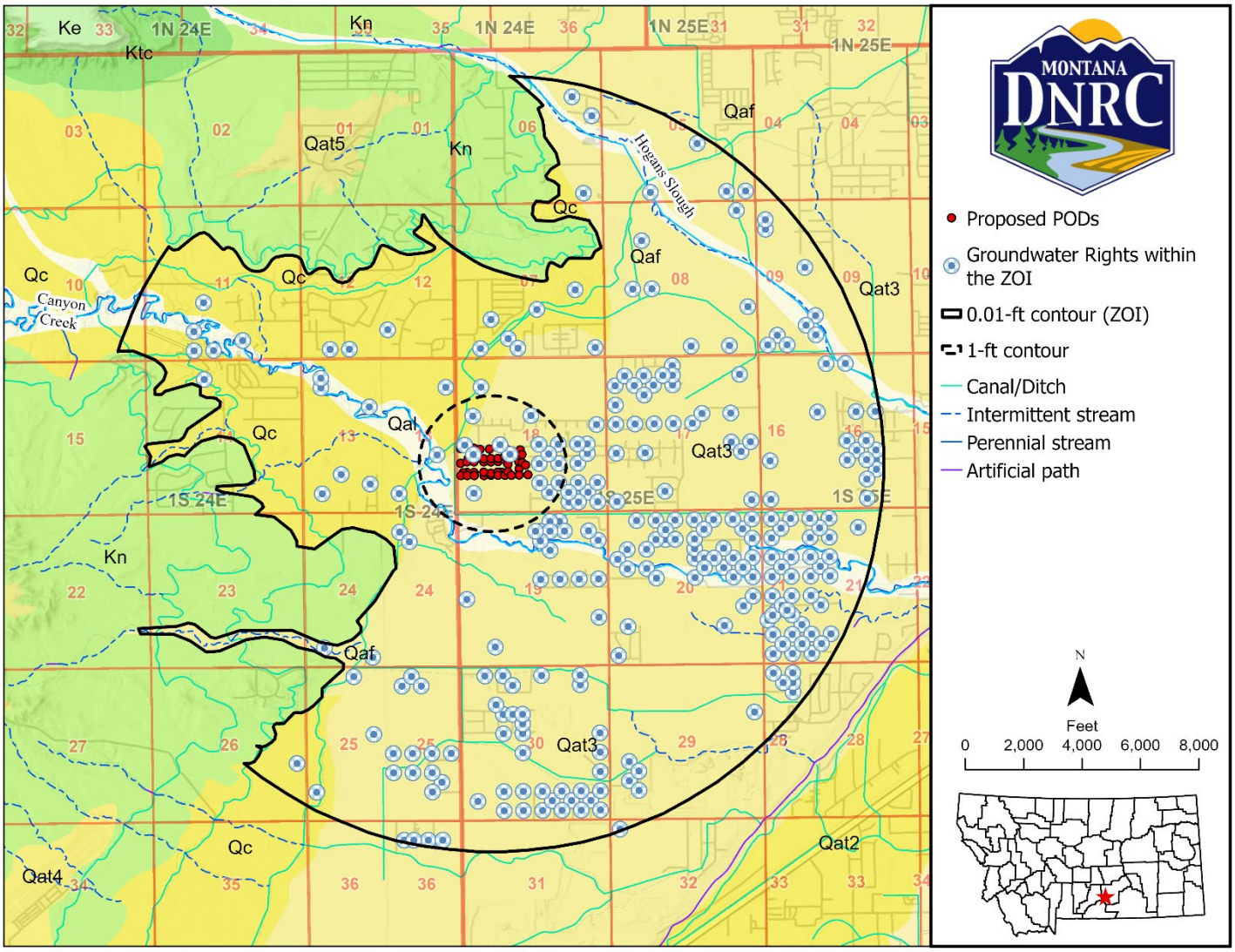


Figure 6: Map showing the 0.01-ft and 1-foot contours and groundwater rights within the ZOI.

8.2 Surface Water - Net Depletions (Consumed Water)

Pursuant to *Montana Trout Unlimited v. DNRC*, 2006 MT 72, 331 Mont. 483, 133 P.3d 224, the DNRC recognizes the connection between surface water and groundwater and the effects of stream capture and induced infiltration on surface waters.

Net depletions to surface water depend on propagation of drawdown to areas of the aquifer from which water can be captured. Captured water consists of two possible sources: a reduction in the natural discharge (outflow) rate of groundwater from the aquifer (stream capture), and an increase in the natural/artificial recharge (inflow) rate to the aquifer (induced infiltration). Two important assumptions are made when evaluating net depletions: first, the stream and underlying aquifer remain hydraulically connected by a continuous saturated zone, and second, the stream does not become dry. Net depletion is not a function of groundwater flow rate or direction (Theis, 1938; Leake, 2011), and drawdown from pumping can propagate

through the entire thickness of the confining layer to overlying aquifers or surface waters (Konikow and Neuzil, 2007).

As such, net depletions are identified for hydraulically connected perennial surface water sources. Net depletion is equal to consumption for 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 a 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. Net 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, not including turf grass, can be calculated using ARM 36.12.115 irrigation standards and associated efficiency values or the net irrigation requirement (dry year 80% chance) 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 calculated using either a minimum efficiency value of 70% and ARM 36.12.115 lawn and garden standards or the net irrigation requirement from IWR with inputs consistent with DNRC (2010) Consumptive Use Methodology for turf grass.

Consumption percentages for other purposes are listed in **Table 8** and are based on Kimsey and Flood (1987), Vanslyke and Simpson (1974), Paul et al. (2007), DNRC (2018), wastewater treatment method, operation of systems, and DNRC policy. Net evaporation is calculated using gridded monthly net evaporation values and methodologies associated with DNRC (2023). Municipal use for non-municipalities (e.g., water district) may have variable consumption rates.

Table 8: Percent consumption by use.

Purpose	Method of Treatment/Use	Consumed
Domestic/Municipal/Commercial/Institutional	Individual drainfields	10%
Domestic/Municipal/Commercial/Institutional	Central treatment facility with minimal consumption	5%
Domestic/Municipal/Commercial/Institutional	Evaporation basin or land application	100%
Municipal Use for Municipality	Variable	100%
Water Marketing/Agriculture Spraying/Stock Water/some Industrial Uses	Variable	100%
Commercial/Industrial	Aggregate Washing – construction standard for moisture allowed in the finished aggregate product.	5%
Commercial	Snow Making – depends on time of day, machine, weather at time of operation, etc.	10-30%
Fisheries, Recreation, Storage for Irrigation	Net evaporation off reservoir surface, gridded monthly net evaporation values and methodologies	AF/acre
Geothermal	Closed loop systems	0%

WSB Findings

For the subject application, wastewater for multiple domestic use will be treated in individual drainfields, resulting in 10% consumption. The consumed volume for lawn and garden irrigation is based on an assumed efficiency of 70%. The monthly consumed volume for each proposed use is shown in **Table 9**.

Table 9: Monthly consumed volume for each of the proposed uses.

Month	Multiple Domestic Consumed Volume (AF)	Lawn and Garden Consumed Volume (AF)	Total Consumed Volume (AF)
January	0.22	0.00	0.22
February	0.20	0.00	0.20
March	0.22	0.00	0.22
April	0.21	2.11	2.32
May	0.22	8.94	9.16
June	0.21	14.49	14.71
July	0.22	19.54	19.76
August	0.22	17.34	17.56
September	0.21	8.91	9.12
October	0.22	2.79	3.01
November	0.21	0.00	0.21
December	0.22	0.00	0.22
Total	**2.59**	**74.13**	**76.72**

2. Hydraulically Connected Surface Water(s) and Location of Net Depletions

Potentially affected surface waters in a net depletion evaluation are identified by their hydraulic connection to the source aquifer of a proposed groundwater diversion. Hydraulic connection depends on the depth to groundwater beneath the beds of surface waters, connection between deep and overlying shallow aquifers, and vertical gradients, and it can vary along a reach and with time of year.

Procedures for evaluating hydraulic connection and identifying one or more potentially affected surface water(s) for a proposed well in an unconfined/confined aquifer or regional bedrock aquifer can be found in DNRC (2018) and DNRC (2019), respectively. Net depletion is apportioned to multiple potentially affected surface waters following procedures described in Section 3.2 of a guidance document developed by the Province of British Columbia (2016) for determining the effect of groundwater diversion on specific streams.

Following protocols in DNRC (2018), **Table 10** identifies published information used to assess hydraulic connection of nearby surface water(s) to the source aquifer for the proposed wells. Not all data may be available for each project; “NA” is noted when that occurs.

Table 10: Published information used to identify hydraulically connected surface water(s).

Published Information	**Canyon Creek**
USGS National Hydrographic Dataset (NHD)[1]	Perennial
USGS PROSPER Dataset[2]	0.7-0.8
MBMG GWIC wells, less than 50 ft deep, within 1,000 ft of surface water, static water levels above or within 10 ft of elevation of stream bed (DNRC, 2018)[3]	GWIC IDs 172229, 92753, 272325, 93313, 93310, 93340
Published Water Table Maps, Publications, Previous Water Rights, etc.	Potentiometric surface maps in Olson (2005) and Chandler and Reiten (2019) show groundwater flow direction is toward the stream in the vicinity of the stream.
Gridded National Soil Survey Geographic Database[4]	No presence of hydric soils or shallow water tables adjacent to stream along reach closest to the proposed diversion.
Aerial imagery	NAIP and Google Earth imagery show water in the stream in all years from 2011 to 2023.
Affidavits, photographs, etc.	DNRC stream gage 43Q 05900 shows year-round flow.

[1] Review NHD to identify perennial, intermittent, and ephemeral classifications for surface water sources most proximal to the proposed diversion(s).

[2] USGS PROSPER Streamflow Permanence Probabilities (SPP). Higher values indicate higher probability of year-round flow. Streams with SPP greater than 0.5 are classified as perennial, though values near 0.5 have a high probability of classification error.

[3] 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 MBMG GWIC 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.

[4] Review Gridded National Soil Survey Geographic Database to identify hydric soils or shallow water tables near surface water sources.

WSB Findings

Based on a review of the published information in **Table 10**, DNRC identifies Canyon Creek as the closest perennial surface water source that is hydraulically connected to the source aquifer and determines that Canyon Creek will be depleted by the proposed diversion. The starting point of the depleted reach on Canyon Creek is in the NESESE of Section 13, Township 1 South, Range 24 East, Yellowstone County (**Figure 7**). Because the distance from the proposed wells to the next closest potentially connected surface water source is approximately six times greater than the distance from the proposed wells to the start of the depleted reach on Canyon Creek, the full volume of net depletions is assigned to Canyon Creek.

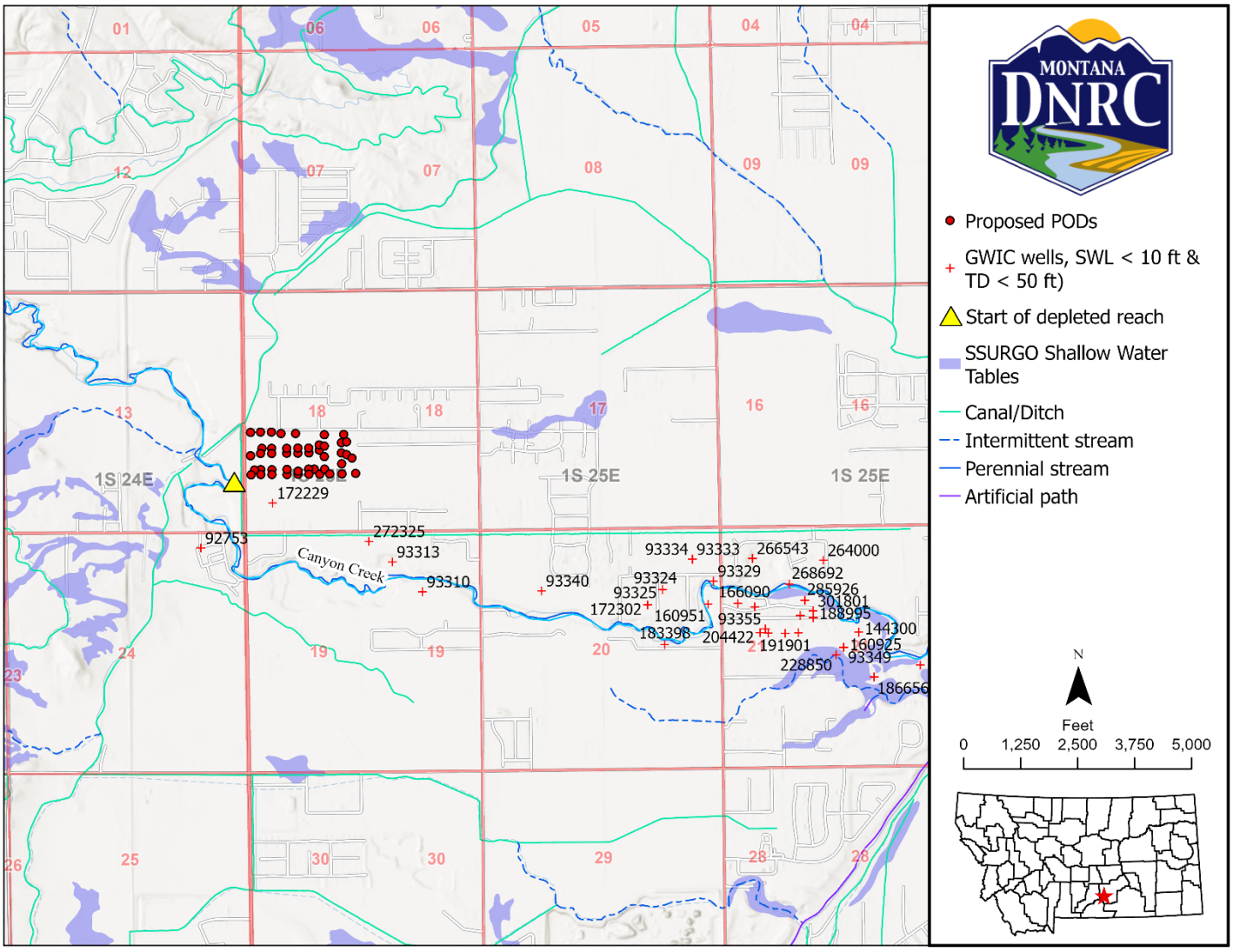


Figure 7: Location of wells used to assess hydrologic connection and starting point of the depleted reach.

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 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), the Well Pumping Depletion Model (WPDM) or FWD:SOLV (HydroSOLVE, 2024) 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 when the proposed use is constant year-round, the source aquifer is deep and vertical hydraulic conductivity is low, or the distance between the proposed POD(s) and the affected stream reach(es) is large. 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.

Net depletion by pumping in the Yellowstone River Terrace Level 3 aquifer at the location of the proposed wells occurs through propagation of drawdown to the potentially affected reach of Canyon Creek. This process is modeled in FWD:SOLV (HydroSOLVE, 2024) using the following pump schedule and boundaries:

- Theis (1941)/Glover and Balmer (1954) fully penetrating stream solution.
- A monthly pumping schedule for each well, calculated by multiplying the monthly consumed volumes for each use in **Table 9** by the proportions in **Table 6** and converting to gpm.
- A simulation time of 100 years.
- A stream boundary 1,600 ft southwest of the center of the proposed wells to represent Canyon Creek.

Monthly net depletions to Canyon Creek due to the proposed diversions are shown in **Table 1**.

Review

This document has been reviewed on November 24, 2025 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: 1-foot-Contour-Water Rights

WRNUMBER	ALL_OWNERS	Well Depth (ft)	Static Water Level (ft)	Drawdown (ft)	Available Water Column (ft)
43Q 101360 00	CELESTE BUTLER	65	12	1.89	51.11
43Q 113926 00	JACKSON FAMILY TRUST	60	8	1.24	50.76
43Q 96513 00	CORY L HASIAK; HEATHER HASIAK	54	8	1.06	44.94
43Q 30109326	RENT IS DUE LLC	60	16	1.71	42.29
43Q 30118869	COLE J TURLEY; JAIMEE M TURLEY	58	15	1.24	41.76
43Q 30109826	KEVIN LUNDIN	56	14	1.35	40.65
43Q 56254 00	DANIEL W DOLES	57	15	1.89	40.11
43Q 15717 00	SARAH BADER; TRAVIS BADER	50	9	2.06	38.94
43Q 30170753	TERESA KNEPPER; WYATT KNEPPER	56	17	1.24	37.76
43Q 19208 00	DARCI D RYKOWSKI; TRAVIS J RYKOWSKI	52	14	2.06	35.94
43Q 30004027	BRIAN A BORNHOFT; JANA K BORNHOFT	50	13	1.11	35.89
43Q 77734 00	STALEY FAMILY TRUST	53	18	1.58	33.42
43Q 30149303	JULIE A WORDEN; MICHAEL S WORDEN	47	15	1.06	30.94
43Q 56087 00	CONNIE MCDONALD; THOMAS MCDONALD	52	20	1.23	30.77
43Q 99186 00	THOMAS W CARROLL			2.05	
43Q 30108417	CHELSEA A COLE; JOSHUA L COLE			1.89	
43Q 30108418	CHELSEA A COLE; JOSHUA L COLE			1.89	
43Q 30154658	M & J LAND CO LLC			1.46	
43Q 30154658	M & J LAND CO LLC			1.46	
43Q 30154658	M & J LAND CO LLC			1.46	
43Q 30154658	M & J LAND CO LLC			1.46	
43Q 99134 00	BONNIE D HALL; EDWARD C HALL	58		1.35	
43Q 30154658	M & J LAND CO LLC			1.35	
43Q 30154658	M & J LAND CO LLC			1.35	
43Q 30154658	M & J LAND CO LLC			1.35	
43Q 30154658	M & J LAND CO LLC			1.35	
43Q 30154658	M & J LAND CO LLC			1.35	
43Q 30154658	M & J LAND CO LLC			1.35	
43Q 30154658	M & J LAND CO LLC			1.35	
43Q 39208 00	JEFFREY T YELEY; KRISTEN D YELEY			1.26	
43Q 39207 00	JEFFREY T YELEY; KRISTEN D YELEY			1.26	
43Q 39206 00	JEFFREY T YELEY; KRISTEN D YELEY			1.26	

WRNUMBER	ALL_OWNERS	Well Depth (ft)	Static Water Level (ft)	Drawdown (ft)	Available Water Column (ft)
43Q 34020 00	EILEEN A WRIGHT; PETER R WRIGHT			1.10	
43Q 30154658	M & J LAND CO LLC			1.10	
43Q 30154658	M & J LAND CO LLC			1.10	
43Q 30154658	M & J LAND CO LLC			1.10	
43Q 30154658	M & J LAND CO LLC			1.10	
43Q 30165662	ANNIE C FOSTER; NOLAN FOSTER			1.06	
43Q 30154658	M & J LAND CO LLC			1.05	
43Q 30154658	M & J LAND CO LLC			1.05	
43Q 30154658	M & J LAND CO LLC			1.05	
43Q 30154658	M & J LAND CO LLC			1.05	
43Q 30154658	M & J LAND CO LLC			1.05	
43Q 30154658	M & J LAND CO LLC			1.05	
43Q 30154658	M & J LAND CO LLC			1.05	

Groundwater Permit Technical Analyses Report- Part B

Department of Natural Resources and Conservation (DNRC/Department) Water Resources Division

Veronica Corbett, Water Resource Specialist, Billings Regional Office

Applicant	Regal Land Development, Inc.
Application No.	43Q 30171432
Proposed Point of Diversion	46 wells in the SW Sec. 18, T1S, R25E, Yellowstone County

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:

Variances

A variance from the requirements found in ARM 36.12.121 for Aquifer Testing Requirements was granted from the Billings Regional office on October 6, 2025, because the Applicant agreed to use the aquifer properties described in DNRC Technical Memorandum: Variance – Yellowstone River Terrace Level 3 Aquifer Properties, dated March 1, 2022. Variances requested from the Aquifer Testing Requirements found in ARM 36.12.121 are as follows:

- (c) 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).
- (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 acre-feet, or 72 hours for a proposed pumping rate and volume greater than 150 GPM or 50 acre-feet.
  - (e)(i) At a minimum, an eight-hour drawdown and yield test is required on all new production wells.
  - (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.
  - (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).
- (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.
- (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 the beginning of the aquifer test according to Form No. 633.

The Department requires 8-hour drawdown and yield tests to be completed on all production wells until the proposed flow rate is met. The average pumping rate during the 72-hour test was 220 GPM. The proposed flow rate is 386 GPM. These 8-hour drawdown and yield tests may be conducted at any time prior to project completion.

1.0 Application Details

The Applicant proposes to divert water from January 1 to December 31 by means of 46 groundwater wells at a combined flow rate of 386 GPM. The Applicant proposes to use 131.8 AF of water between January 1 to December 31 for domestic use and April 15 to October 15 for lawn and garden use on 42.4 acres in the SW Sec. 18, T1S, R25E, Yellowstone County, in the proposed Maplewood Estates Subdivision. The proposed Maplewood Estates Subdivision is a 77-lot subdivision with three (3) irrigated park areas. Of the lots, 68 domestic lots will utilize a shared well between two lots (34 shared wells), while nine (9) domestic lots and the three (3) park areas will utilize individual wells (12 individual wells). The wells serving the domestic lots will provide water for domestic and lawn and garden irrigation purposes. The three (3) wells for the park lots will only provide water for the lawn and garden irrigation purpose.

Table 1. Summary of the proposed use

Source	Flow Rate	Diverted Volume	Purpose	Period of Diversion	Period of Use	Place of Use	Points of Diversion
Groundwater	386 GPM	131.8 AF	Domestic; lawn and garden	Jan. 1 – Dec. 31	Jan. 1 – Dec. 31	See Table 2	See Table 3

Table 2. Proposed place of use (POU) in Maplewood Estates Subdivision

POU #	Subdivision Lot	Subdivision Block	Quarter Section	Section	Township	Range	County	Irrigated Acres
1	1	1	NWNWSW	18	1S	25E	Yellowstone	1.006
2	2	1	NWNWSW	18	1S	25E	Yellowstone	0.374
3	3	1	NWNWSW	18	1S	25E	Yellowstone	0.374
4	4	1	NWNWSW	18	1S	25E	Yellowstone	0.374
5	5	1	NENWSW	18	1S	25E	Yellowstone	0.383
6	6	1	SENWSW	18	1S	25E	Yellowstone	0.541
7	7	1	SWNWSW	18	1S	25E	Yellowstone	0.481
8	8	1	SWNWSW	18	1S	25E	Yellowstone	0.462
9	9	1	SWNWSW	18	1S	25E	Yellowstone	0.501
10	10	1	SWNWSW	18	1S	25E	Yellowstone	0.887
11	11	1	SWNWSW	18	1S	25E	Yellowstone	0.763
12	12	1	SWNWSW	18	1S	25E	Yellowstone	0.352
13	13	1	SWNWSW	18	1S	25E	Yellowstone	0.351
14	14	1	SWNWSW	18	1S	25E	Yellowstone	0.351
15	15	1	SENWSW	18	1S	25E	Yellowstone	0.395
16	16	1	SENWSW	18	1S	25E	Yellowstone	0.541

17	17	1	SWNWSW	18	1S	25E	Yellowstone	0.481
18	18	1	SWNWSW	18	1S	25E	Yellowstone	0.481
19	19	1	SWNWSW	18	1S	25E	Yellowstone	0.481
20	Park 1	1	SWNWSW	18	1S	25E	Yellowstone	0.714
21	1	2	NWSWSW	18	1S	25E	Yellowstone	0.861
22	2	2	NWSWSW	18	1S	25E	Yellowstone	0.461
23	3	2	NWSWSW	18	1S	25E	Yellowstone	0.461
24	4	2	NWSWSW	18	1S	25E	Yellowstone	0.461
25	5	2	NESWSW	18	1S	25E	Yellowstone	0.518
26	1	3	NESWSW	18	1S	25E	Yellowstone	0.518
27	2	3	NESWSW	18	1S	25E	Yellowstone	0.420
28	3	3	NESWSW	18	1S	25E	Yellowstone	0.429
29	4	3	SENWSW	18	1S	25E	Yellowstone	0.532
30	5	3	SENWSW	18	1S	25E	Yellowstone	0.477
31	6	3	SENWSW	18	1S	25E	Yellowstone	0.541
32	7	3	SENWSW	18	1S	25E	Yellowstone	0.395
33	8	3	SENWSW	18	1S	25E	Yellowstone	0.351
34	9	3	SENWSW	18	1S	25E	Yellowstone	0.351
35	10	3	SWNESW	18	1S	25E	Yellowstone	0.351
36	11	3	SWNESW	18	1S	25E	Yellowstone	0.351
37	12	3	SWNESW	18	1S	25E	Yellowstone	0.366
38	13	3	SWNESW	18	1S	25E	Yellowstone	0.510
39	14	3	SWNESW	18	1S	25E	Yellowstone	0.545
40	15	3	SWNESW	18	1S	25E	Yellowstone	0.481
41	16	3	SWNESW	18	1S	25E	Yellowstone	0.476
42	17	3	SWNESW	18	1S	25E	Yellowstone	0.534
43	18	3	NWSESW	18	1S	25E	Yellowstone	0.434
44	19	3	NWSESW	18	1S	25E	Yellowstone	0.420
45	20	3	NWSESW	18	1S	25E	Yellowstone	0.460
46	21	3	NWSESW	18	1S	25E	Yellowstone	0.525
47	Park 2	4	NWNESW	18	1S	25E	Yellowstone	2.533
48	1	4	NENWSW	18	1S	25E	Yellowstone	0.488
49	2	4	SENWSW	18	1S	25E	Yellowstone	0.541
50	3	4	SENWSW	18	1S	25E	Yellowstone	0.481
51	4	4	SENWSW	18	1S	25E	Yellowstone	0.481
52	5	4	SWNESW	18	1S	25E	Yellowstone	0.481
53	6	4	SWNESW	18	1S	25E	Yellowstone	0.481
54	7	4	SWNESW	18	1S	25E	Yellowstone	0.602
55	8	4	NWNESW	18	1S	25E	Yellowstone	0.634
56	9	4	NWNESW	18	1S	25E	Yellowstone	0.657
57	10	4	SWNESW	18	1S	25E	Yellowstone	0.351
58	11	4	SWNESW	18	1S	25E	Yellowstone	0.351

59	12	4	SWNESW	18	1S	25E	Yellowstone	0.351
60	13	4	SWNESW	18	1S	25E	Yellowstone	0.351
61	14	4	SWNESW	18	1S	25E	Yellowstone	0.480
62	15	4	SENESW	18	1S	25E	Yellowstone	0.597
63	16	4	SENESW	18	1S	25E	Yellowstone	0.527
64	17	4	SENESW	18	1S	25E	Yellowstone	0.527
65	18	4	SENESW	18	1S	25E	Yellowstone	0.527
66	19	4	SENESW	18	1S	25E	Yellowstone	0.439
67	20	4	NENESW	18	1S	25E	Yellowstone	0.563
68	21	4	NENESW	18	1S	25E	Yellowstone	0.697
69	22	4	NENESW	18	1S	25E	Yellowstone	0.637
70	23	4	NENESW	18	1S	25E	Yellowstone	0.422
71	24	4	SENESW	18	1S	25E	Yellowstone	0.470
72	25	4	SENESW	18	1S	25E	Yellowstone	0.347
73	26	4	SENESW	18	1S	25E	Yellowstone	0.570
74	27	4	SENESW	18	1S	25E	Yellowstone	0.569
75	28	4	SENESW	18	1S	25E	Yellowstone	0.550
76	Park 3	5	NESESW	18	1S	25E	Yellowstone	1.136
77	1	5	NESESW	18	1S	25E	Yellowstone	0.461
78	2	5	NESESW	18	1S	25E	Yellowstone	0.461
79	3	5	NESESW	18	1S	25E	Yellowstone	0.549
80	4	5	NWSESW	18	1S	25E	Yellowstone	0.519
							TOTAL:	42.4

Table 3. Proposed points of diversion (POD) in Maplewood Estates Subdivision

POD #	POD ID	Subdivision Lot	Subdivision Block	Quarter Section	Section	Township	Range	County
1	1.1	1	1	NWNWSW	18	1S	25E	Yellowstone
2	1.2-3	2-3	1	NWNWSW	18	1S	25E	Yellowstone
3	1.4-5	4-5	1	NENWSW	18	1S	25E	Yellowstone
4	1.6-7	6-7	1	SENWSW	18	1S	25E	Yellowstone
5	1.8-9	8-9	1	SWNWSW	18	1S	25E	Yellowstone
6	1.10-11	10-11	1	SWNWSW	18	1S	25E	Yellowstone
7	1.12-13	12-13	1	SWNWSW	18	1S	25E	Yellowstone
8	1.14-15	14-15	1	SWNWSW	18	1S	25E	Yellowstone
9	1.16-17	16-17	1	SWNWSW	18	1S	25E	Yellowstone
10	1.18-19	18-19	1	SWNWSW	18	1S	25E	Yellowstone
11	1.P1	Park 1	1	SWNWSW	18	1S	25E	Yellowstone
12	2.1	1	2	NWSWSW	18	1S	25E	Yellowstone
13	2.2-3	2-3	2	NWSWSW	18	1S	25E	Yellowstone
14	2.4-5	4-5	2	NESWSW	18	1S	25E	Yellowstone

15	3.1-2	1-2	3	NESWSW	18	1S	25E	Yellowstone
16	3.3-18	3-18	3	NESWSW	18	1S	25E	Yellowstone
17	3.4-17	4-17	3	SENWSW	18	1S	25E	Yellowstone
18	3.5-6	5-6	3	SENWSW	18	1S	25E	Yellowstone
19	3.7-8	7-8	3	SENWSW	18	1S	25E	Yellowstone
20	3.9-10	9-10	3	SENWSW	18	1S	25E	Yellowstone
21	3.11-12	11-12	3	SWNESW	18	1S	25E	Yellowstone
22	3.13	13	3	SWNESW	18	1S	25E	Yellowstone
23	3.14-15	14-15	3	SWNESW	18	1S	25E	Yellowstone
24	3.16	16	3	SWNESW	18	1S	25E	Yellowstone
25	3.19-20	19-20	3	NWSESW	18	1S	25E	Yellowstone
26	3.21	21	3	NWSESW	18	1S	25E	Yellowstone
27	4.1	1	4	NENWSW	18	1S	25E	Yellowstone
28	4.P2	Park 2	4	NENWSW	18	1S	25E	Yellowstone
29	4.2-3	2-3	4	SENWSW	18	1S	25E	Yellowstone
30	4.4-5	4-5	4	SENWSW	18	1S	25E	Yellowstone
31	4.6-7	6-7	4	SWNESW	18	1S	25E	Yellowstone
32	4.8	8	4	SWNESW	18	1S	25E	Yellowstone
33	4.9	9	4	NWNESW	18	1S	25E	Yellowstone
34	4.10-11	10-11	4	SWNESW	18	1S	25E	Yellowstone
35	4.12-13	12-13	4	SWNESW	18	1S	25E	Yellowstone
36	4.14	14	4	SWNESW	18	1S	25E	Yellowstone
37	4.15-16	15-16	4	SENESW	18	1S	25E	Yellowstone
38	4.17-18	17-18	4	SENESW	18	1S	25E	Yellowstone
39	4.19-20	19-20	4	SENESW	18	1S	25E	Yellowstone
40	4.21-22	21-22	4	NENESW	18	1S	25E	Yellowstone
41	4.23-24	23-24	4	SENESW	18	1S	25E	Yellowstone
42	4.25-26	25-26	4	SENESW	18	1S	25E	Yellowstone
43	4.27-28	27-28	4	SENESW	18	1S	25E	Yellowstone
44	5.P3	Park 3	5	NESESW	18	1S	25E	Yellowstone
45	5.1-2	1-2	5	NESESW	18	1S	25E	Yellowstone
46	5.3-4	3-4	5	NESESW	18	1S	25E	Yellowstone

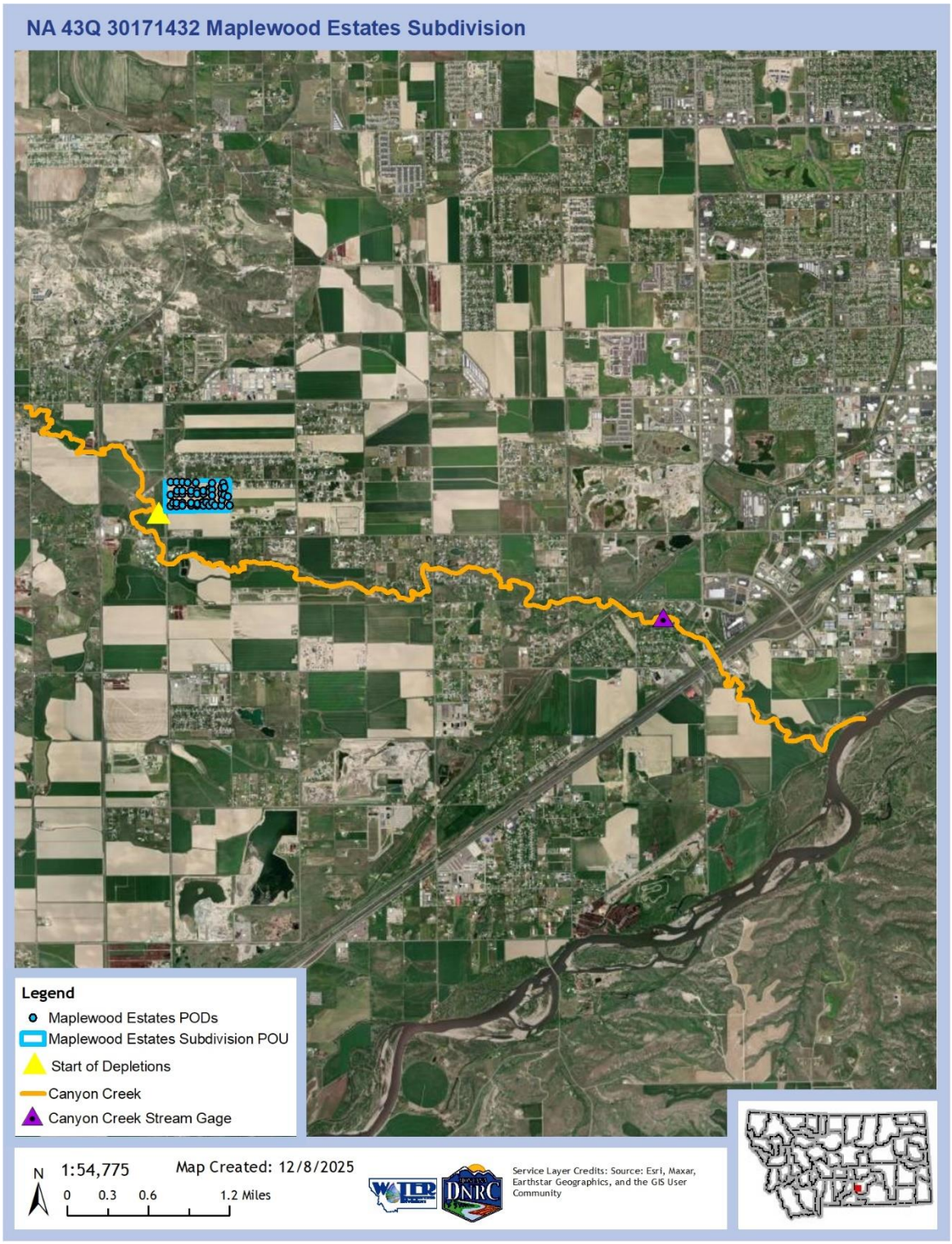


Figure 1: Map of the Applicant's proposed POD, proposed POU, and depleted reach

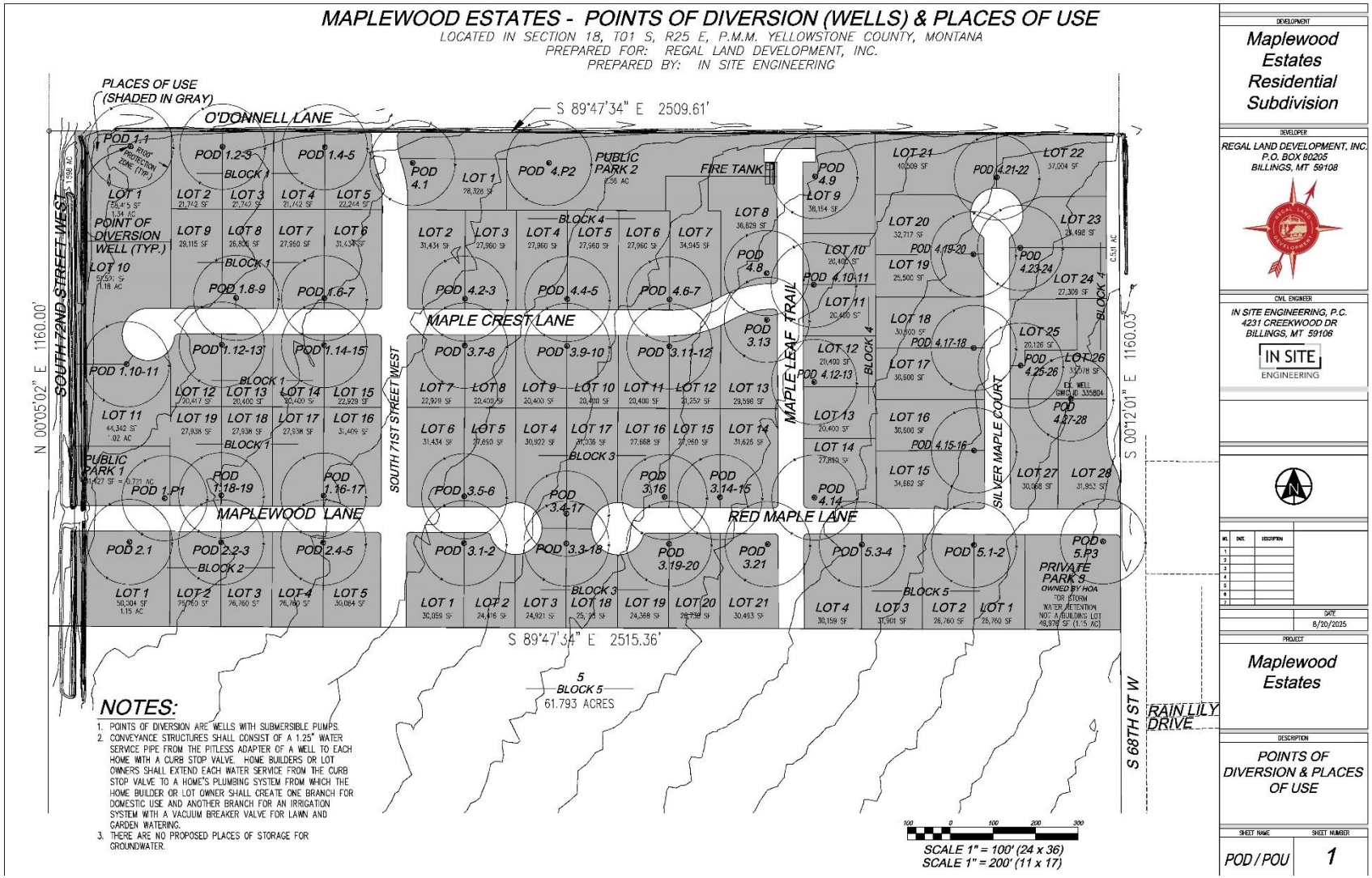


Figure 2: Map of the Applicant's proposed Maplewood Estates Subdivision with PODs and POU.

2.0 Surface Water Analysis of Depleted Surface Water

2.1 Source Description

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: Canyon Creek
Depleted Source Type: Perennial Stream
Location of Depletions: The point depletions accrue is in the NESESE Sec. 13, T1S, R24E, Yellowstone County.

2.2 Method of Estimation

Gage Name: DNRC Canyon Creek @ ZooMontana
Gage Number: 43Q 05900
Period of Record: 05/05/2016-9/30/2024. Provisional data, which has not been validated by the Department, is available from 10/1/2024 to 11/25/2025. This provisional data is subject to change until it has been corrected against an established rating curve and is validated by the Department. Therefore, this provisional data was not used in the gage data to estimate physically available water on Canyon Creek.
Why this gage is considered an appropriate data source: The surface water depletions from the proposed groundwater wells are identified as 100% to Canyon Creek (Groundwater Permit Technical Analyses Report – Part A). The Department has operated a stream gage on Canyon Creek at ZooMontana in the SENESE Sec. 22, T1S, R25E, Yellowstone County, since May 2016. Data from that gage is the only available discharge data for this depleted source. These records include approximately six full years of data (2017-2021, 2023) and three partial years of data (2016, 2022, 2024). The mean monthly flow rate will be used based on the available, non-provisional gage data, as this information is more representative of flow conditions than a modeling technique.

2.3 Monthly Flow Rate and Volume

Methodology: The DNRC gage on Canyon Creek at ZooMontana is the only gage on Canyon Creek. The available stream gage records were used to quantify the physically available flow rate and volume using the mean monthly flow rate during the modeled period of depletion. The flow rate is taken as the mean monthly flow rate from the available, non-provisional gage records. The mean monthly volume in AF is calculated by multiplying the mean monthly flow rate in CFS by 1.98 (unit

conversion constant from CFS to AF/day) and by the number of days in the month. Table 4 shows the mean monthly flow rate in CFS and the calculated volume in AF of water available at the gage.

Table 4. Mean monthly flow rate and calculated volume at Canyon Creek gage by month

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean Monthly Flow at Gage (CFS)	11.75	13.04	23.41	41.84	128.67	141.59	93.04	104.30	149.48	128.81	26.19	14.03
Calculated Monthly Volume at Gage (AF)	721.38	722.77	1437.03	2485.21	7897.58	8410.70	5711.06	6401.74	8879.17	7906.19	1555.67	860.91

This gage is located downstream of the modeled point where depletions accrue. To determine physically available water at the point where depletions accrue, the flow rate and volume of existing water rights between the gage and the modeled point where depletions accrue are added to the mean monthly gage data. There are 10 water rights between the gage and the modeled point where depletions accrue, shown in Table 5. The flow rate and volume of these water rights were taken at face value. Water rights with no flow rate or volume were quantified by Department standard practice.

Of the 10 water rights, seven (7) have no volume; all seven (7) are Statements of Claim, six (6) with an irrigation purpose and one (1) with a stock purpose (livestock direct from source). For Statements of Claim with a purpose of irrigation, the volume was calculated as the low end of the standard range for 60% efficient flood irrigation in the Climatic Area multiplied by the number of acres irrigated. Statements of Claim 43Q 214609-00, 43Q 26726-00, and 43Q 39516-00 are in Climatic Area 1 where the standard is 3.07 AF/AC, per ARM 36.12.115(2)(e); Statements of Claim 43Q 180005-00, 43Q 199829-00, and 43Q 199830-00 are in Climatic Area 2 where the standard is 2.69 AF/AC, per ARM 36.12.115(2)(e). The volume of Statement of Claim 43Q 30115456 was calculated as the number of animal units multiplied by the Adjudication standard of 30 gallons per day per animal unit (0.034 AF/AU).

Of the 10 water rights, one (1) has no flow rate: Statement of Claim 43Q 30115456 for livestock direct from source. Per Department standard practice, the flow rate is taken as the volume converted into gallons per minute using the following formula:

$$AU\ x\ \frac{0.034\ AF}{AU\ year}\ \text{x}\ \frac{1\ year}{365\ days}\ \text{x}\frac{1\ day}{1440\ min}\ x\ 325851\frac{gal}{AF} = GPM$$

The Department adds 35 GPM to the calculated flow rate to provide a conservative estimate.

Table 5. Water rights on Canyon Creek between the gage location and the point depletions accrue

Water Right Number	Owners	Purposes	Flow Rate (GPM)	Flow Rate (CFS)	Volume (AF)	Period of Diversion
Statement of Claim 43Q 180005-00	Jerry J O'Donnell; Susan R O'Donnell	Irrigation	30.00	0.06	8.07*	03/01 to 11/30
Statement of Claim 43Q 199829-00	Yellowstone Boys and Girls Ranch Inc	Irrigation	340.00	0.75	53.80*	05/01 to 09/04
Statement of Claim 43Q 199830-00	Yellowstone Boys and Girls Ranch Inc	Irrigation	119.00	0.26	18.83*	05/01 to 09/30
Statement of Claim 43Q 214609-00	Catherine McNally; Jim McNally; Judy C McNally; Teresa C McNally	Irrigation	297.50	0.66	53.73*	03/15 to 11/19
Statement of Claim 43Q 26726-00	Sally A Saunders	Irrigation	153.00	0.34	27.63*	06/01 to 09/30
Provisional Permit 43Q 30067817	Kathleen Katsilas; Zachary Katsilas	Lawn and Garden	6.00	0.01	2.50	04/15 to 09/30
Statement of Claim 43Q 30115456	Geordie N Steilen; Sherri J Steilen	Livestock Direct	35.22*	0.08*	0.36*	01/01 to 12/31
Statement of Claim 43Q 39516-00	Randolph L Legare; Susan C Legare	Irrigation	264.00	0.58	46.05*	04/15 to 11/19
Provisional Permit 43Q 8960-00	George L Lambrecht	Irrigation; Stock	596.90	1.33	175.00	04/30 to 12/01
Provisional Permit 43Q 8965-00	Dolores D Grover; George S Grover	Irrigation; Stock	498.16	1.11	28.00	01/01 to 12/31

*calculated by DNRC

The water rights between the gage and the point where depletions accrue were added to the mean monthly flow at the gage to determine physical availability of water on Canyon Creek at the point where depletions accrue. The water rights were distributed by flow rate and volume monthly based on their period of diversion. The distribution for these rights is in Appendix A.

Table 6. Physically available flow rate on Canyon Creek at point where depletions accrue by month (CFS)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean Monthly Flow at Gage	11.75	13.04	23.41	41.84	128.67	141.59	93.04	104.30	149.48	128.81	26.19	14.03
Legal Demands Between Gage and Top of Depleted Reach	1.19	1.19	1.91	3.83	4.84	5.18	5.18	5.18	5.18	3.82	3.82	2.52
Physically Available Flow Rate of Water at Point Where Depletions Accrue	12.94	14.23	25.32	45.67	133.51	146.77	98.22	109.48	154.66	132.63	30.01	16.55

Table 7. Physically available volume on Canyon Creek at point where depletions accrue by month (AF)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean Monthly Volume at Gage	721.38	722.77	1437.03	2485.21	7897.58	8410.70	5711.06	6401.74	8879.17	7906.19	1555.67	860.91
Legal Demands Between Gage and Top of Depleted Reach	0.11	0.11	6.98	41.87	56.52	63.43	63.43	63.43	63.43	41.58	12.86	0.24
Physically Available Volume of Water at Point Where Depletions Accrue	721.50	722.88	1444.01	2527.08	7954.10	8474.12	5774.48	6465.16	8942.59	7947.76	1568.54	861.15

3.0 Area of Potential Impact Analysis

3.1 Area of Potential Impact Analysis of Groundwater

The Area of Potential Impact for groundwater is considered to be the Zone of Influence (ZOI), or 0.01-foot drawdown contour surrounding the point(s) 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 B of Part B of this report.

Quantification Methodology: The Department identified 557 water rights within the ZOI. All water rights found within the ZOI will be considered for potential adverse effect as they are in the same source aquifer or have no well depth recorded with the Department and will be considered in order to be conservative. Of the 557 water rights, 502 are Ground Water Certificates, 16 are Provisional Permits, 33 are Statements of Claim, and six (6) are Exempt Notices. Of these 557 water rights, 97 did not have a volume identified. The Department quantified these water rights using Department standard practice for the type of right and purpose. For the 80 Ground Water Certificates with no volume, the volume was taken as the average of the Groundwater Certificates with a volume and is 2.92 AF. For the 17 Statements of Claim with no volume, the water rights were quantified using Department volume standards for the purpose. For Statements of Claim for domestic use, the Adjudication standard is 1.5 AF for domestic and 2.5 AF/AC of lawn and garden irrigation, up to 5 acres total. For Statements of Claim for stock use, the Adjudication standard is 30 GPD/AU (0.034 AF/YR). For Statements of Claim for irrigation, the volume is calculated as the low range of 60% efficiency flood irrigation in the Climatic Area multiplied by the number of acres irrigated. In Climatic Area 1, the standard is 3.07 AF/AC, and in Climatic Area 2, the standard is 2.69 AF/AC, per ARM 36.12.115(2)(e). The quantification of these rights is shown in Appendix B.

3.2 Area of Potential Impact Analysis of Depleted Surface Water

The surface water Area of Potential Impact for this application is: from the point where the depletions accrue on Canyon Creek to the confluence of Canyon Creek with the Yellowstone River. The start of the Area of Potential Impact (AOPI), the point where the depletions accrue, is in the NESESE Sec. 13, T1S, R24E, Yellowstone County. The end of the reach considered for potential impact is approximately 8.3 river miles downstream in Gov't Lot 2 (NW) Sec. 25, T1S, R25E, Yellowstone County. The AOPI includes 11 surface water rights on Canyon Creek.

Why this is an appropriate Area of Potential Impact: This is an appropriate AOPI of the depleted surface water source because it considers the entirety of Canyon Creek from the modeled point

depletions accrue to its confluence with the Yellowstone River. The confluence represents a significant hydraulic boundary from which downstream appropriators are not likely to experience adverse effects as a result of these modeled depletions.

Methodology: Surface water rights within the AOPI on Canyon Creek considered for adverse effect are shown in Table 8. The water rights within the AOPI with no flow rate or volume were quantified according to Department standard practice. Water rights above the stream gage were quantified as discussed in Section 2.3. Statement of Claim 43Q 206480-00 is the only water right within the AOPI below the stream gage on Canyon Creek which was not quantified in Section 2.3. Statement of Claim 43Q 206480-00 has an irrigation purpose, is in Climatic Area 1, and the volume was calculated by multiplying the irrigated acres by 3.07 AF/AC for the low end of 60% efficient flood irrigation, per ARM.36.12.115(2)(e). The water rights were distributed by flow rate and volume monthly based on their period of diversion. The distribution for these rights is in Appendix C.

Table 8. Water rights on Canyon Creek within the AOPI

Water Right Number	Owners	Purposes	Flow Rate (GPM)	Flow Rate (CFS)	Volume (AF)	Period of Diversion
Statement of Claim 43Q 180005-00	Jerry J O'Donnell; Susan R O'Donnell	Irrigation	30.00	0.06	8.07*	03/01 to 11/30
Statement of Claim 43Q 199829-00	Yellowstone Boys and Girls Ranch Inc	Irrigation	340.00	0.75	53.80*	05/01 to 09/04
Statement of Claim 43Q 199830-00	Yellowstone Boys and Girls Ranch Inc	Irrigation	119.00	0.26	18.83*	05/01 to 09/30
Statement of Claim 43Q 214609-00	Catherine McNally; Jim McNally; Judy C McNally; Teresa C McNally	Irrigation	297.50	0.66	53.73*	03/15 to 11/19
Statement of Claim 43Q 26726-00	Sally A Saunders	Irrigation	153.00	0.34	27.63*	06/01 to 09/30
Provisional Permit 43Q 30067817	Kathleen Katsilas; Zachary Katsilas	Lawn and Garden	6.00	0.01	2.50	04/15 to 09/30
Statement of Claim 43Q 30115456	Geordie N Steilen; Sherri J Steilen	Livestock Direct	35.22*	0.08*	0.36*	01/01 to 12/31
Statement of Claim 43Q 39516-00	Randolph L Legare; Susan C Legare	Irrigation	264.00	0.58	46.05*	04/15 to 11/19
Provisional Permit 43Q 8960-00	George L Lambrecht	Irrigation; Stock	596.90	1.33	175.00	04/30 to 12/01
Provisional Permit 43Q 8965-00	Dolores D Grover; George S Grover	Irrigation; Stock	498.16	1.11	28.00	01/01 to 12/31
Statement of Claim 43Q 206480 00	J&C Hanson Trust	Irrigation	350.0	0.77	61.40*	04/15 to 11/04

*calculated by DNRC

Review

This document has been reviewed by the Department on December 5, 2025.

References

Department Standard Practice for Determining Physical Availability of Surface Water
Department Standard Practice for Area of Potential Impact Analysis
DNRC Permit Manual
DNRC Water Calculation Guide
Technical Memorandum: Physical Availability of Surface Water With Gage Data
Technical Memorandum: Variance- Yellowstone River Terrace Level 3 Aquifer Properties

Appendix A: Monthly Distribution of Water Rights Between the Gage and the Point Where Depletions Accrue on Canyon Creek by Flow Rate (CFS) and Volume (AF)

Table A-1. Monthly Distribution of Water Rights Between the Gage and Point Where Depletions Accrue on Canyon Creek by Flow Rate (CFS)

Water Right Number	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
43Q 180005 00			0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	
43Q 199829 00					0.75	0.75	0.75	0.75	0.75			
43Q 199830 00					0.26	0.26	0.26	0.26	0.26			
43Q 214609 00			0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	
43Q 26726 00						0.34	0.34	0.34	0.34			
43Q 30067817				0.01	0.01	0.01	0.01	0.01	0.01			
43Q 30115456	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
43Q 39516 00				0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	
43Q 8960 00				1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
43Q 8965 00	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
SUM	1.19	1.19	1.91	3.83	4.84	5.18	5.18	5.18	5.18	3.82	3.82	2.52

Table A-2. Monthly Distribution of Water Rights Between the Gage and Point Where Depletions Accrue on Canyon Creek by Volume (AF)

Water Right Number	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
43Q 180005 00			0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
43Q 199829 00					10.76	10.76	10.76	10.76	10.76			
43Q 199830 00					3.77	3.77	3.77	3.77	3.77			
43Q 214609 00			5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	
43Q 26726 00						6.91	6.91	6.91	6.91			
43Q 30067817				0.42	0.42	0.42	0.42	0.42	0.42			
43Q 30115456	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
43Q 39516 00				5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	
43Q 8960 00 (Stock)					0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
43Q 8960 00 (Irrigation)				24.86	24.86	24.86	24.86	24.86	24.86	24.86		
43Q 8965 00 (Stock)	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
43Q 8965 00 (Irrigation)				3.86	3.86	3.86	3.86	3.86	3.86	3.86		
SUM	0.11	0.11	6.98	41.87	56.52	63.43	63.43	63.43	63.43	41.58	12.86	0.24

Appendix B: Groundwater Rights in the Zone of Influence

Table B-1. Water Rights within the area of potential impact for groundwater

Water Right Type	Water Right Number	Owners	Purpose	Volume (AF)
Ground Water Certificate	43Q 100083 00	KRAFT, EDWARD & ROXANA LIVING TRUST	Lawn & Garden	1.88
Ground Water Certificate	43Q 101360 00	CELESTE BUTLER	Stock	0.05
Ground Water Certificate	43Q 101461 00	KYLE E BISTLINE; LINDA L BISTLINE	Domestic	1.63
Ground Water Certificate	43Q 101509 00	TINA W OXLEY	Domestic	1.63
Ground Water Certificate	43Q 102165 00	MILO ZEMLISKA	Lawn & Garden	5.0
Ground Water Certificate	43Q 102173 00	WILLIAM A MITCHELL	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 102241 00	DIANE M HILL; ROBIN E HILL	Domestic	1.63
Ground Water Certificate	43Q 103417 00	ERNEST R WEIGEL; MELISSA WEIGEL	Domestic; Lawn & Garden; Stock	2.38
Ground Water Certificate	43Q 103493 00	KRISTA WESTON; SCOTT WESTON	Domestic	1.63
Ground Water Certificate	43Q 103551 00	BRADLEY C CARSTENS; GREGORY C CARSTENS	Domestic; Lawn & Garden	4.75
Ground Water Certificate	43Q 103554 00	BONNIE K JARES; JOHN E JARES	Domestic; Lawn & Garden	4.75
Ground Water Certificate	43Q 103562 00	JOANN JURICA; LEO JURICA	Domestic; Lawn & Garden	2.88
Ground Water Certificate	43Q 103595 00	DAVID BLACK; WUANITA A BLACK	Domestic	1.63
Ground Water Certificate	43Q 104991 00	KIRK BLEE	Lawn & Garden; Multiple Domestic	4.5
Ground Water Certificate	43Q 104993 00	SCOTT SCHEETZ	Domestic; Lawn & Garden	4.75
Ground Water Certificate	43Q 105045 00	WILLIAM A MITCHELL	Lawn & Garden	1.25
Ground Water Certificate	43Q 105892 00	DAN LOWE	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 105940 00	MONEEN D MEANS; SAM A MEANS	Domestic	1.63
Ground Water Certificate	43Q 105941 00	MONEEN D MEANS; SAM A MEANS	Lawn & Garden; Stock	3.7
Ground Water Certificate	43Q 105963 00	RICHARD D GUFFEY; SUSAN D GUFFEY	Domestic; Lawn & Garden; Stock	3.54
Ground Water Certificate	43Q 106046 00	OLSEN ERIC HOWARD & DIANE LEE LIVING TRUST	Domestic; Stock	1.71

Ground Water Certificate	43Q 106047 00	TWO MARINES OLSON TRUST	Lawn & Garden	1.25
Ground Water Certificate	43Q 106048 00	TWO MARINES OLSON TRUST	Domestic; Lawn & Garden; Stock	2.35
Ground Water Certificate	43Q 106508 00	PROUE FAMILY TRUST	Lawn & Garden	1.88
Ground Water Certificate	43Q 107223 00	DANIEL D MOLLETT; GENIA M MOLLETT	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 107395 00	RICHARD A NEVE	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 107396 00	ROBERT J KRAEGER	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 107397 00	COLLEEN JACOBSON; RODNEY JACOBSON	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 107398 00	JENNIFER L EDGELL; KEITH R EDGELL	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 108098 00	MARY J WERTZ; RICHARD W WERTZ	Domestic; Lawn & Garden	1.63
Ground Water Certificate	43Q 108803 00	JONINE K SMITH; JOHN E TETER	Domestic; Lawn & Garden; Stock	4.05
Ground Water Certificate	43Q 109262 00	LISA MOLINE; MICHAEL J MOLINE	Domestic	1.63
Ground Water Certificate	43Q 109303 00	LEE E BURRINGTON	Lawn & Garden	0.63
Ground Water Certificate	43Q 109304 00	LEE E BURRINGTON	Domestic	1.63
Ground Water Certificate	43Q 109701 00	JULIE A MYERS; WILLARD L MYERS	Domestic; Stock	2.14
Ground Water Certificate	43Q 109865 00	TAMARA M LORENZ	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 109877 00	TAMARA M LORENZ	Lawn & Garden; Stock	2.58
Ground Water Certificate	43Q 109975 00	JUDY A WARD; THEODORE A WARD	Domestic	1.63
Ground Water Certificate	43Q 109995 00	TEEN CHALLENGE INTERNATIONAL PACIFIC NW CENTERS	Domestic; Stock	1.68
Ground Water Certificate	43Q 110931 00	BRET REAY; DEANE REAY	Domestic; Lawn & Garden	6
Ground Water Certificate	43Q 110958 00	KEVIN SILVERNAGEL	Domestic	1.63
Ground Water Certificate	43Q 111960 00	DANNY R WELBORN; TERRI R WELBORN	Domestic; Lawn & Garden	5.08
Ground Water Certificate	43Q 112751 00	PDQ PROPERTIES LLC	Domestic; Lawn & Garden	3.5

Ground Water Certificate	43Q 112776 00	KELLY HOWELL; TODD HOWELL	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 113440 00	CHUCK CREMER; JEANETTE CREMER	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 113455 00	JUDY A WARD; THEODORE A WARD	Lawn & Garden	0.63
Ground Water Certificate	43Q 11362 00	KATHLEEN KATSILAS; ZACHARY KATSILAS	Domestic	2.92
Ground Water Certificate	43Q 113926 00	JACKSON FAMILY TRUST	Lawn & Garden; Domestic	2.88
Ground Water Certificate	43Q 113927 00	ANNA M HOPKINS	Domestic; Lawn & Garden	2.92
Ground Water Certificate	43Q 113949 00	JOLENE K STATON; LEONARD E STATON	Domestic; Stock	1.51
Ground Water Certificate	43Q 113950 00	JOLENE K STATON; LEONARD E STATON	Lawn & Garden	1.88
Ground Water Certificate	43Q 113958 00	DARCY D MILLER	Stock; Domestic	8.43
Ground Water Certificate	43Q 113959 00	GREGORY E MILLER	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 113970 00	CONNIE JOHNSON; JERRY JOHNSON	Domestic	1.63
Ground Water Certificate	43Q 113980 00	BRENDA RIDER; TERRY RIDER	Lawn & Garden; Stock	5.05
Ground Water Certificate	43Q 113981 00	BRENDA RIDER; TERRY RIDER	Domestic	1.63
Ground Water Certificate	43Q 113999 00	CORDELL ANTHONY; PRESLEY PAYNE	Domestic; Irrigation	4.13
Ground Water Certificate	43Q 115137 00	CATHERINE MCNALLY; JAMES MCNALLY; JUDY C MCNALLY; TERESA MCNALLY	Domestic	1.63
Ground Water Certificate	43Q 115221 00	BARBARA L BRITTON; LEVI J BRITTON	Domestic; Stock	1.89
Ground Water Certificate	43Q 115249 00	CONNIE JOHNSON; JERRY JOHNSON	Lawn & Garden	2.5
Ground Water Certificate	43Q 115250 00	CONNIE JOHNSON; JERRY JOHNSON	Lawn & Garden	5.0
Ground Water Certificate	43Q 115354 00	JEAN M MALKUCH	Lawn & Garden	10.0
Ground Water Certificate	43Q 1155 00	SCOTT A TOTH	Domestic; Irrigation; Stock	2.92*
Ground Water Certificate	43Q 116137 00	ANNA M HOPKINS	Domestic	1.63
Ground Water Certificate	43Q 116149 00	MELVIN L MILLER; SHARON L MILLER	Lawn & Garden; Multiple Domestic; Stock	7.32

Ground Water Certificate	43Q 116210 00	SANDRA L SANDVIG; SCOTT D SANDVIG	Domestic	1.63
Ground Water Certificate	43Q 116214 00	JEAN M MALKUCH	Lawn & Garden	5.0
Ground Water Certificate	43Q 116811 00	BUROWS-DURAY, CHRISTINA L LIVING TRUST; DURAY MATHEW A LIVING TRUST	Lawn & Garden	2.0
Ground Water Certificate	43Q 116812 00	BUROWS-DURAY, CHRISTINA L LIVING TRUST; DURAY MATHEW A LIVING TRUST	Domestic; Lawn & Garden	3.0
Ground Water Certificate	43Q 12328 00	KRAFT, EDWARD & ROXANA LIVING TRUST	Stock; Domestic	12.0
Ground Water Certificate	43Q 12861 00	CHAD H INGRAHAM; CHARLENE R INGRAHAM	Domestic	2.92*
Ground Water Certificate	43Q 14064 00	DARRYL G CHRISTIANSON	Domestic; Irrigation; Stock	19.0
Ground Water Certificate	43Q 14587 00	MARY M BLOUNT	Domestic	1.5
Provisional Permit	43Q 1545 00	YELLOWSTONE BOYS AND GIRLS RANCH INC	Domestic	40.0
Ground Water Certificate	43Q 15450 00	ANITA F KUDRNA; DOUGLAS J KUDRNA	Stock; Domestic	1.55
Ground Water Certificate	43Q 15717 00	SARAH BADER; TRAVIS BADER	Domestic	1.5
Ground Water Certificate	43Q 1632 00	PETE HARDT	Domestic	1.0
Ground Water Certificate	43Q 16530 00	BANGERT, LARRY & NANCY LIVING TRUST	Domestic	1.5
Ground Water Certificate	43Q 16593 00	BRITTANY'S DREAM LLC	Domestic	1.5
Ground Water Certificate	43Q 18771 00	DAVID PRINCIPE; LISA PRINCIPE	Domestic	1.5
Ground Water Certificate	43Q 19208 00	DARCI D RYKOWSKI; TRAVIS J RYKOWSKI	Domestic; Irrigation	6.9
Ground Water Certificate	43Q 19460 00	DONALD MAY	Domestic	1.5
Ground Water Certificate	43Q 19955 00	DALE M DAHL; NOREEN H DAHL	Domestic	1.5
Statement Of Claim	43Q 208169 00	EDITH J WOODS	Stock	10.37*
Statement Of Claim	43Q 208170 00	MIKEL ANDERSON; JAY COCHRAN; MOLLY DEKAYE; PAUL L DEKAYE; KEVIN F KURTH; ERIC M MUELLER; HANNAH M MUELLER; OLIVE GROVE	Irrigation	564.9*

		LLC; STANLEY, NANCY LIVING REVOCABLE TRUST		
Statement Of Claim	43Q 208191 00	JEANINE HOLT-SEAVY; LYLE SEAVY	Stock	0.153*
Statement Of Claim	43Q 208192 00	JEANINE HOLT-SEAVY; LYLE SEAVY	Domestic	3.0
Ground Water Certificate	43Q 20832 00	ALLEN J FISCHER	Domestic; Stock	2.0
Ground Water Certificate	43Q 21133 00	DAVID L MCCRORIE	Domestic	1.0
Ground Water Certificate	43Q 21474 00	BLAINE LIVING TRUST	Domestic	1.5
Ground Water Certificate	43Q 23760 00	HELENA AGRI-ENTERPRISES LLC	Industrial	1.5
Ground Water Certificate	43Q 24536 00	PROUE FAMILY TRUST	Domestic	1.5
Ground Water Certificate	43Q 25622 00	WINONA R ACHTEN; CHRISTINE A OBENAUER	Domestic; Irrigation; Stock	3.27
Ground Water Certificate	43Q 26769 00	JEANNE B DOWNEY; RICHARD M DOWNEY	Domestic	1.5
Ground Water Certificate	43Q 26770 00	LEO C SCHWEHR	Domestic	1.5
Ground Water Certificate	43Q 27922 00	XB RENTALS LLC	Domestic	1.5
Ground Water Certificate	43Q 28690 00	ASHLEY R DIMMICK; TRAVIS DIMMICK	Domestic	1.5
Ground Water Certificate	43Q 28822 00	GARY C SCHILD; PATRICIA SCHILD	Domestic	1.5
Ground Water Certificate	43Q 28912 00	FORMENTO FAMILY TRUST	Domestic	0.5
Ground Water Certificate	43Q 30000556	LAURIE A MOHL	Domestic	1.63
Ground Water Certificate	43Q 30001482	BRENT A WENNING; JESSICA D WENNING	Domestic	1.63
Ground Water Certificate	43Q 30001893	CHRISTINE L MARTIN; STEVEN MARTIN	Domestic; Lawn & Garden	4.5
Ground Water Certificate	43Q 30002318	KEITH HEIDECKER	Domestic	1.63
Ground Water Certificate	43Q 30002715	WILLIAM F MADILL	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 30003490	JEFFREY D ROBERTS	Domestic	1.63
Ground Water Certificate	43Q 30004027	BRIAN A BORNHOFT; JANA K BORNHOFT	Domestic; Lawn & Garden	3.0

Ground Water Certificate	43Q 30007531	STEPHANIE WEAVER; TOM WEAVER	Domestic; Lawn & Garden	2.92*
Ground Water Certificate	43Q 30008514	LANNY LUCARA; LISA LUCARA	Domestic	2.92*
Ground Water Certificate	43Q 30008585	JESSICA SCHROTENBOER; MATTHEW SCHROTENBOER	Domestic	2.92*
Ground Water Certificate	43Q 30010011	RUSS WALTERS; TERRI WALTERS	Domestic	2.92*
Ground Water Certificate	43Q 30010576	BARBARA J LOVE; BRUCE LOVE	Domestic	2.92*
Ground Water Certificate	43Q 30010577	BARBARA J LOVE; BRUCE LOVE	Lawn & Garden	2.92*
Ground Water Certificate	43Q 30010957	DEBORAH A DORN; JAMES C DORN	Domestic; Lawn & Garden	2.92*
Ground Water Certificate	43Q 30011110	ROBERT J MALCOLM; PAULA R ODEGAARD	Domestic; Lawn & Garden	2.92*
Ground Water Certificate	43Q 30012185	NATHAN P BEMER	Domestic	2.92*
Ground Water Certificate	43Q 30013358	DAVID C LYNCH	Domestic; Lawn & Garden; Irrigation; Stock	2.92*
Ground Water Certificate	43Q 30013363	FUSON LINDA NICHOLS REVOCABLE TRUST	Domestic; Lawn & Garden; Irrigation; Stock	2.92*
Ground Water Certificate	43Q 30013364	VICKI L BENDER	Domestic; Lawn & Garden; Irrigation; Stock	2.92*
Ground Water Certificate	43Q 30014667	DOLORES D GROVER; GEORGE S GROVER	Lawn & Garden	2.92*
Ground Water Certificate	43Q 30014692	STACY L BROWN	Domestic	2.92*
Ground Water Certificate	43Q 30014693	LEVI J BRITTON	Domestic	2.92*
Ground Water Certificate	43Q 30014694	LEVI J BRITTON	Domestic	2.92*
Ground Water Certificate	43Q 30014859	KRISTEN M CLARK; NICHOLAS L EICKHOFF	Domestic; Lawn & Garden	2.92*
Ground Water Certificate	43Q 30015153	STEPHEN C BALL	Domestic; Lawn & Garden	2.92*
Ground Water Certificate	43Q 30015172	JEFFREY MEIER; KIMBERLY MEIER	Domestic	2.92*
Ground Water Certificate	43Q 30015335	BEIERWALTES, CHRIS & BIRGIT FAMILY TRUST	Domestic	2.92*
Ground Water Certificate	43Q 30016629	RON G PIERCE	Lawn & Garden; Irrigation	2.92*
Ground Water Certificate	43Q 30017258	COLLEEN E BLACKFORD; THOMAS E BLACKFORD	Domestic	2.92*

Ground Water Certificate	43Q 30017873	EDWARD LAMBRECHT	Domestic	2.92*
Ground Water Certificate	43Q 30018289	SJK FARM LLC	Domestic; Irrigation; Stock	2.92*
Ground Water Certificate	43Q 30019141	AMEN, GEORGE W TRUST	Domestic; Stock	2.92*
Ground Water Certificate	43Q 30019235	SCOTT COX	Domestic	2.92*
Ground Water Certificate	43Q 30019249	DONNA JOHNS; MARK JOHNS	Domestic	2.92*
Ground Water Certificate	43Q 30019271	JACKIE ZAWADA; JOE ZAWADA	Domestic	2.92*
Ground Water Certificate	43Q 30019287	MARK CADY; MARY CADY	Irrigation; Stock	2.92*
Ground Water Certificate	43Q 30019312	STEINMETZ LP	Stock	2.92*
Ground Water Certificate	43Q 30019314	STEINMETZ LP	Domestic	2.92*
Ground Water Certificate	43Q 30019316	STEINMETZ LP	Domestic; Stock	2.92*
Ground Water Certificate	43Q 30019321	KORDELL HARMON; KAYLA JOHNSON	Domestic	2.92*
Ground Water Certificate	43Q 30019472	EDWARD E ERICKSON	Domestic	2.92*
Ground Water Certificate	43Q 30019475	SCOTT COX	Domestic; Irrigation	2.92*
Ground Water Certificate	43Q 30020990	TANGIE J RHOADS; ROBERT M TEHLE	Domestic; Stock	2.92*
Ground Water Certificate	43Q 30021983	BRANDON MCKNIRE; KELSIE MCKNIRE	Irrigation	2.92*
Ground Water Certificate	43Q 30021988	BRANDON MCKNIRE; KELSIE MCKNIRE	Domestic	2.92*
Ground Water Certificate	43Q 30022054	L & L MYERS TRUST	Domestic	2.92*
Exempt Right	43Q 30022683	MELVIN L MILLER; SHARON L MILLER	Domestic; Lawn & Garden; Stock	3.76
Ground Water Certificate	43Q 30022777	BIG UNIT STORAGE LLC	Irrigation	2.92*
Ground Water Certificate	43Q 30022837	KIRK LIX	Domestic	2.92*
Ground Water Certificate	43Q 30022846	DOLORES LIX	Lawn & Garden	2.92*
Ground Water Certificate	43Q 30022992	HICKS, SCOTT LIVING TRUST	Domestic	2.92*

Ground Water Certificate	43Q 30023035	HICKS, SCOTT LIVING TRUST	Domestic	2.92*
Ground Water Certificate	43Q 30023266	DOLORES LIX	Domestic	2.92*
Ground Water Certificate	43Q 30024274	JEANINE HOLT-SEAVY; LYLE SEAVY	Domestic; Lawn & Garden	2.92*
Ground Water Certificate	43Q 30026947	JACKI L SHERMAN	Domestic; Lawn & Garden	2.92*
Ground Water Certificate	43Q 30027121	RICK KRAFT	Domestic; Lawn & Garden; Stock	2.92*
Ground Water Certificate	43Q 30027147	QUENTIN EGGART	Stock	2.92*
Ground Water Certificate	43Q 30027149	STUDER PROPERTIES LLC	Domestic; Lawn & Garden	2.92*
Ground Water Certificate	43Q 30027201	MURIEL SWENSON; RONALD SWENSON	Domestic	2.92*
Ground Water Certificate	43Q 30027203	D SCOTT ASAY; LEANN C ASAY	Domestic	2.92*
Ground Water Certificate	43Q 30027207	RICK KRAFT	Domestic; Stock	2.92*
Ground Water Certificate	43Q 30027210	GEORDIE N STEILEN; SHERRI J STEILEN	Domestic	2.92*
Ground Water Certificate	43Q 30028205	WILLIAM F MADILL	Lawn & Garden	2.92*
Ground Water Certificate	43Q 30029071	LISA BLOHM; STEVE BLOHM	Domestic; Lawn & Garden	2.92*
Ground Water Certificate	43Q 30030053	SAMPSON PROPERTIES LLC	Domestic	2.92*
Ground Water Certificate	43Q 30030821	CAROL PHILLIPS; KEITH PHILLIPS	Domestic	2.92*
Ground Water Certificate	43Q 30042119	RICHARD A MCCANN; SHARON M MCCANN	Domestic	2.92*
Ground Water Certificate	43Q 30042450	LOVELL WITTMAYER	Lawn & Garden	2.92*
Ground Water Certificate	43Q 30042788	GINA EARNST; LEONARD EARNST	Domestic	2.92*
Ground Water Certificate	43Q 30042789	GINA EARNST; LEONARD EARNST	Domestic	2.92*
Ground Water Certificate	43Q 30042969	JOSHUA C MUIR; KRYSTAL MUIR	Domestic; Lawn & Garden	2.92*
Ground Water Certificate	43Q 30043846	HARDRIVES CONSTRUCTION INC	Lawn & Garden	0.15
Ground Water Certificate	43Q 30043866	HARDRIVES CONSTRUCTION INC	Domestic	1.0

Ground Water Certificate	43Q 30043909	DALE EDLUND; ELLA L EDLUND	Lawn & Garden	2.92*
Ground Water Certificate	43Q 30044191	PATRICE M OLOUGHLIN; RAYMOND F OLOUGHLIN	Domestic; Lawn & Garden	2.5
Ground Water Certificate	43Q 30044770	EEC INDUSTRIAL PARK	Lawn & Garden	2.92*
Ground Water Certificate	43Q 30044830	LOUIS TAYLOR; NANCY TAYLOR	Domestic	2.92*
Ground Water Certificate	43Q 30044880	JAMES R FORSETH; KARIE A FORSETH	Domestic; Lawn & Garden; Irrigation	2.92*
Ground Water Certificate	43Q 30045650	CURTIS SCHELLE; SUSAN SCHELLE	Domestic	1.0
Ground Water Certificate	43Q 30045811	RVU RANCH LLC	Domestic	1.0
Ground Water Certificate	43Q 30046672	NATHAN P BEMER	Lawn & Garden	2.5
Ground Water Certificate	43Q 30046813	ROUTSON, MARY K TRUST	Domestic; Lawn & Garden	1.83
Ground Water Certificate	43Q 30047386	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047387	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	1.7
Ground Water Certificate	43Q 30047388	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	1.7
Ground Water Certificate	43Q 30047389	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047390	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047391	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047392	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	1.7
Ground Water Certificate	43Q 30047393	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	1.7
Ground Water Certificate	43Q 30047394	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	1.7
Ground Water Certificate	43Q 30047395	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047396	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047397	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047398	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7

Ground Water Certificate	43Q 30047399	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047400	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047401	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047402	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047403	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047404	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047405	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047406	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047407	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047408	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047409	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	2.7
Ground Water Certificate	43Q 30047410	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	1.7
Ground Water Certificate	43Q 30047411	REGAL LAND DEVELOPMENT INC	Domestic; Lawn & Garden	1.7
Ground Water Certificate	43Q 30047699	CAMERON TOWNSEND; KARI TOWNSEND	Domestic	1.0
Ground Water Certificate	43Q 30048848	CHARLES A BROWNLEE	Domestic	1.0
Ground Water Certificate	43Q 30049418	BRADFORD, ROBERT & KAREE LIVING TRUST	Lawn & Garden; Stock	2.01
Ground Water Certificate	43Q 30050769	DAVID A VALDEZ; VICKI L VALDEZ	Lawn & Garden; Domestic	2.25
Ground Water Certificate	43Q 30050836	BRADFORD, ROBERT & KAREE LIVING TRUST	Domestic; Lawn & Garden	6.0
Ground Water Certificate	43Q 30050938	PAMELA R ADAMS; ROSS E ADAMS	Domestic	1.0
Ground Water Certificate	43Q 30050951	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden	2.69
Ground Water Certificate	43Q 30051071	GARY R LUCAS; SUZANNE K LUCAS	Domestic	1.0
Ground Water Certificate	43Q 30051273	AMY M KINNETT; CHAD W KINNETT	Domestic; Lawn & Garden	3.78

Ground Water Certificate	43Q 30051613	D BAR C LIVING TRUST	Lawn & Garden	2.53
Ground Water Certificate	43Q 30051812	XB RENTALS LLC	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 30051993	COLE J REINHARDT; SHARI K REINHARDT	Domestic	1.0
Ground Water Certificate	43Q 30052056	GARY R LUCAS; SUZANNE K LUCAS	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 30052213	JACOB M TAYLOR	Domestic	1.0
Ground Water Certificate	43Q 30052502	ALEXANDRA C BLAIR; SCOTT B BLAIR	Domestic	1.0
Ground Water Certificate	43Q 30062919	MICHELLE HINTZ; NATHAN HINTZ	Domestic	1.0
Ground Water Certificate	43Q 30063364	DARREN W MILLER	Lawn & Garden; Stock	9.92
Ground Water Certificate	43Q 30063469	NICOLE PHILIPS	Lawn & Garden; Domestic	2.3
Ground Water Certificate	43Q 30063489	XB RENTALS LLC	Domestic; Lawn & Garden	1.83
Ground Water Certificate	43Q 30063500	ANDREW MERRY	Domestic	1.0
Ground Water Certificate	43Q 30064196	DOUG STAHLMAN; MARISSA STAHLMAN	Domestic	1.0
Ground Water Certificate	43Q 30064366	MOORE LIVING TRUST	Lawn & Garden; Irrigation; Stock	3.64
Ground Water Certificate	43Q 30065296	BRYAN J FAULKES; MINNA A FAULKES	Domestic	1.0
Ground Water Certificate	43Q 30065552	ED JORDEN; KARI JORDEN	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 30066610	MARY E BAROVICH	Domestic	1.0
Ground Water Certificate	43Q 30066678	LESLIE R ESHAM; RICHARD H ESHAM	Domestic; Lawn & Garden; Stock	2.3
Ground Water Certificate	43Q 30066861	DIANE M HILL; ROBIN E HILL	Lawn & Garden	2.5
Ground Water Certificate	43Q 30066864	EDWARD G CODDEN	Domestic; Lawn & Garden	2.88
Ground Water Certificate	43Q 30067114	MCKELL PHIPPS; PARKER J PHIPPS	Domestic	1.0
Ground Water Certificate	43Q 30067449	JASON W HUBBARD; KRISTINA HUBBARD	Domestic	1.0
Ground Water Certificate	43Q 30067450	JASON W HUBBARD; KRISTINA HUBBARD	Lawn & Garden	2.5

Ground Water Certificate	43Q 30067464	JULIEN, DEBRA J LIVING TRUST	Domestic	1.0
Ground Water Certificate	43Q 30067465	JULIEN, DEBRA J LIVING TRUST	Domestic	1.0
Ground Water Certificate	43Q 30067466	AMANDA DORNHORST; CHRISTIAN DORNHORST	Domestic; Lawn & Garden	4.25
Ground Water Certificate	43Q 30067705	CURTIS MOLT; STACY MOLT	Domestic; Lawn & Garden	1.43
Ground Water Certificate	43Q 30067746	BRIAN P COOK; MICHELLE JONES	Domestic	1.0
Ground Water Certificate	43Q 30067842	MICHAEL T MCCLEARY; SARA L MCCLEARY	Multiple Domestic; Lawn & Garden; Other Purpose	6.7
Ground Water Certificate	43Q 30067854	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden	3.15
Ground Water Certificate	43Q 30067855	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden	3.15
Ground Water Certificate	43Q 30067856	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden	3.15
Ground Water Certificate	43Q 30068600	ANNE MARIE D GONZALES; RONALD A GONZALES	Domestic; Lawn & Garden	1.63
Ground Water Certificate	43Q 30068707	ANDREW J HANSON; EDIE R HANSON	Domestic	1.0
Ground Water Certificate	43Q 30069320	ROBERT J CUSTER; BECKY J THOMPSON	Lawn & Garden; Irrigation; Stock	7.23
Ground Water Certificate	43Q 30069373	ASHLEIGH A HOSKINS; LEE A HOSKINS	Domestic; Lawn & Garden	2.88
Ground Water Certificate	43Q 30069449	SILVERADO HOME OWNERS ASSN	Lawn & Garden	5.0
Ground Water Certificate	43Q 30069452	SILVERADO HOME OWNERS ASSN	Lawn & Garden	6.5
Ground Water Certificate	43Q 30069555	QUALITY HEATING AND AIR CONDITIONING	Commercial	1.34
Ground Water Certificate	43Q 30070082	CHERI ANDERSON; RICHARD ANDERSON	Domestic; Lawn & Garden	3.3
Ground Water Certificate	43Q 30070144	MARY E BURLEY; WESLEY D BURLEY	Domestic; Lawn & Garden	2.33
Ground Water Certificate	43Q 30070169	CHARLES EISELE; DEBORAH EISELE	Domestic; Lawn & Garden; Stock	4.05
Ground Water Certificate	43Q 30071606	MELISSA L HUBBARD; ZACHARY J HUBBARD	Domestic	1.0
Ground Water Certificate	43Q 30072062	DARRON ALDERMAN; NATASHA ALDERMAN	Domestic	1.0
Ground Water Certificate	43Q 30072861	AUGUSTIA M SATCHELL; JOHN D SATCHELL	Lawn & Garden	2.3

Ground Water Certificate	43Q 30072862	AUGUSTIA M SATCHELL; JOHN D SATCHELL	Domestic	1.0
Ground Water Certificate	43Q 30072923	CORINA GOLLEHON; DARREN GOLLEHON	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 30073005	DAVID P HEADRICK; SHAY M HEADRICK	Domestic	1.0
Provisional Permit	43Q 30102729	DIAMOND FALLS LLC	Multiple Domestic; Lawn & Garden	117.05
Ground Water Certificate	43Q 30102810	JEFF GOLINI; KIM GOLINI	Domestic; Lawn & Garden	1.15
Ground Water Certificate	43Q 30102833	DARCI SMITH; DARRELL SMITH	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 30102875	DURYEA TRUST	Domestic; Lawn & Garden	1.45
Ground Water Certificate	43Q 30103335	JASON A LEHMAN	Domestic	1.0
Ground Water Certificate	43Q 30103357	TRAVIS STORTZ	Domestic	1.0
Ground Water Certificate	43Q 30103446	THURSDAY MORNING LIVING TRUST	Domestic	1.0
Ground Water Certificate	43Q 30104162	WAYNE D ROBINSON	Lawn & Garden	2.5
Ground Water Certificate	43Q 30104263	AARON GUSTIN; DANIELLE GUSTIN	Domestic	1.0
Ground Water Certificate	43Q 30104295	JODIE L SMITH	Lawn & Garden	2.5
Ground Water Certificate	43Q 30104563	KATHY MENDOZA-POWERS; WAYNE POWERS	Domestic; Lawn & Garden	4.0
Ground Water Certificate	43Q 30104830	ALYCIA FLEURY; RYAN FLEURY	Domestic	1.0
Ground Water Certificate	43Q 30105010	BRUCE C NELSON; SUSAN NELSON	Lawn & Garden	5.0
Ground Water Certificate	43Q 30105011	BRUCE C NELSON; SUSAN NELSON	Domestic	1.0
Ground Water Certificate	43Q 30105814	DEANNA K LEFFERS; JEFFRY L LEFFERS	Domestic	1.0
Ground Water Certificate	43Q 30105815	BARBARA L HOPE; WILLIAM H HOPE	Lawn & Garden	1.25
Ground Water Certificate	43Q 30105912	DARREN BUONOCORE; SARA KRAMVIS	Domestic; Lawn & Garden	2.25
Provisional Permit	43Q 30106062	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden	128.89
Ground Water Certificate	43Q 30107755	JEFF GOLINI; KIM GOLINI	Lawn & Garden	2.75

Ground Water Certificate	43Q 30107923	LISA DELL; WILLIAM STRADTMAN	Lawn & Garden	2.5
Ground Water Certificate	43Q 30108241	RHONDA M LAUGHMAN; CODY STEINMETZ	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 30108244	BTC OIL PROPERTIES LLC	Domestic; Lawn & Garden; Stock	9.4
Ground Water Certificate	43Q 30108417	CHELSEA A COLE; JOSHUA L COLE	Domestic	1.0
Ground Water Certificate	43Q 30108418	CHELSEA A COLE; JOSHUA L COLE	Lawn & Garden	3.25
Ground Water Certificate	43Q 30108737	JAMES YELEY; SHIRLEE YELEY	Domestic	1.0
Ground Water Certificate	43Q 30109326	RENT IS DUE LLC	Domestic	1.0
Exempt Right	43Q 30109488	W D HOWLAND	Lawn & Garden	0.5
Ground Water Certificate	43Q 30109826	KEVIN LUNDIN	Domestic	1.0
Ground Water Certificate	43Q 30110176	TODD E BROWN; SHARON J KIRKNESS	Domestic	1.0
Ground Water Certificate	43Q 30111241	JENNIFER M LINSE; SHANE G LINSE	Domestic	1.0
Statement Of Claim	43Q 30111722	RICK KRAFT	Stock	20.4*
Ground Water Certificate	43Q 30111808	RICK KRAFT	Lawn & Garden; Stock	1.38
Ground Water Certificate	43Q 30112091	CORDELL ANTHONY; PRESLEY PAYNE	Domestic; Lawn & Garden	4.13
Ground Water Certificate	43Q 30112463	BRITTANY'S DREAM LLC	Lawn & Garden	2.5
Ground Water Certificate	43Q 30113203	BRUCE L TONN	Domestic	1.0
Ground Water Certificate	43Q 30113205	BRUCE L TONN	Lawn & Garden	1.25
Ground Water Certificate	43Q 30113206	BRUCE L TONN	Lawn & Garden	1.25
Ground Water Certificate	43Q 30114284	GARY G RAITT	Domestic	1.0
Ground Water Certificate	43Q 30114285	GARY G RAITT	Lawn & Garden	2.5
Statement Of Claim	43Q 30114314	JOHN L CHAFFEE; KATHLEEN CHAFFEE	Domestic	2.0
Statement Of Claim	43Q 30114315	JOHN L CHAFFEE; KATHLEEN CHAFFEE	Stock	2.312*
Statement Of Claim	43Q 30114359	MONTEXAS INVESTMENTS LLC	Domestic	1.63

Provisional Permit	43Q 30115108	P3 COLEMAN LLC	Multiple Domestic; Lawn & Garden	155.3
Statement Of Claim	43Q 30115454	GEORDIE N STEILEN; SHERRI J STEILEN	Domestic	1.0
Ground Water Certificate	43Q 30115581	BRADFORD, ROBERT & KAREE LIVING TRUST	Lawn & Garden; Stock	5.6
Ground Water Certificate	43Q 30115582	DOLORES D GROVER; GEORGE S GROVER	Domestic	1.0
Ground Water Certificate	43Q 30116340	JANICEK, R & D LIVING TRUST	Domestic; Lawn & Garden	2.1
Statement Of Claim	43Q 30116579	REGAL LAND DEVELOPMENT INC	Domestic	1.63
Statement Of Claim	43Q 30116580	REGAL LAND DEVELOPMENT INC	Stock	8.5*
Statement Of Claim	43Q 30116581	MILLER FEEDLOT & FARMS LLC	Stock	27.2*
Statement Of Claim	43Q 30116582	MILLER FEEDLOT & FARMS LLC	Domestic	1.63
Ground Water Certificate	43Q 30116931	MATTHEW L RHEAUME	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 30117771	ROOKHUIZEN, RYAN & JODI FAMILY TRUST	Domestic; Lawn & Garden	2.88
Ground Water Certificate	43Q 30117888	KINSFATHER BARRY RUSSELL TRUST; KINSFATHER BONITA ANN TRUST	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 30118036	RNL TRUST	Domestic	1.0
Ground Water Certificate	43Q 30118252	TODD E BROWN	Lawn & Garden	1.25
Statement Of Claim	43Q 30118849	ANITA AZAM; EARL J NICHOLS	Domestic	2.0
Ground Water Certificate	43Q 30118850	ANITA AZAM; EARL J NICHOLS	Lawn & Garden	3.25
Ground Water Certificate	43Q 30118869	COLE J TURLEY; JAIMEE M TURLEY	Domestic	1.0
Ground Water Certificate	43Q 30119383	RUSSELL MCCLELLAN	Domestic; Lawn & Garden	2.88
Ground Water Certificate	43Q 30120742	LESLIE R ESHAM; RICHARD H ESHAM	Domestic; Lawn & Garden; Stock	8.6
Ground Water Certificate	43Q 30123323	PAUL ODEGAARD; SUZANNE ODEGAARD	Domestic	1.0
Statement Of Claim	43Q 30123366	DIANE R KRAFT; ROBERT R KRAFT	Domestic	3.5
Ground Water Certificate	43Q 30123996	KENNETH ROBINSON	Domestic; Lawn & Garden	1.63

Statement Of Claim	43Q 30124949	GERALD V MILLER	Domestic	2.3
Statement Of Claim	43Q 30124950	GERALD V MILLER	Stock	10.2*
Provisional Permit	43Q 30127618	NEXCO LLC	Multiple Domestic; Lawn & Garden	31.73
Ground Water Certificate	43Q 30128116	HEIN BOYS REVOCABLE TRUST	Lawn & Garden	1.0
Statement Of Claim	43Q 30128117	HEIN BOYS REVOCABLE TRUST	Stock	0.68*
Ground Water Certificate	43Q 30129795	MCCALL RANDALL; THOMAS S RANDALL	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 30129936	DOUGLAS MAGNUS; JULIE A MAGNUS	Lawn & Garden; Stock	0.48
Ground Water Certificate	43Q 30130016	DOUGLAS MAGNUS; JULIE A MAGNUS	Lawn & Garden	7.5
Ground Water Certificate	43Q 30131283	LISA DELL; WILLIAM STRADTMAN	Domestic	1.0
Ground Water Certificate	43Q 30131709	PENNY R KINDSFATER	Domestic; Lawn & Garden	1.85
Ground Water Certificate	43Q 30133196	TAMARA VL BRALEY	Domestic	1.0
Ground Water Certificate	43Q 30133799	GWEN T SCHLEICHER	Lawn & Garden	2.93
Statement Of Claim	43Q 30134018	WILLIAM C LACKMAN	Domestic	1.5
Statement Of Claim	43Q 30134019	WILLIAM C LACKMAN	Stock	10.0
Statement Of Claim	43Q 30143772	JESS BERG; LYNDA K BERG	Domestic	4.58
Statement Of Claim	43Q 30143773	JESS BERG; LYNDA K BERG	Stock	5.34*
Statement Of Claim	43Q 30144026	JUDY C MCNALLY	Stock	2.55*
Statement Of Claim	43Q 30144029	JUDY C MCNALLY	Stock	2.55*
Statement Of Claim	43Q 30144031	JUDY C MCNALLY	Domestic	1.63
Statement Of Claim	43Q 30144032	JUDY C MCNALLY	Domestic	1.63
Statement Of Claim	43Q 30144058	SISTKO-TAYLOR TRUST	Domestic	14.0*
Statement Of Claim	43Q 30144061	SISTKO-TAYLOR TRUST	Stock	1.36*

Statement Of Claim	43Q 30144127	VANLUCHENE, RONALD & JENNIFER REVOCABLE LIVING TRT	Domestic	3.5
Statement Of Claim	43Q 30144158	DEBRA K MORRIS	Stock	0.27*
Statement Of Claim	43Q 30144160	DEBRA K MORRIS; WALTER L MORRIS	Domestic	14.0
Statement Of Claim	43Q 30145279	JUDI MACKNEY; SCOTT MACKNEY	Domestic	2.75*
Provisional Permit	43Q 30147261	ELDER GROVE SCHOOL	Institutional; Irrigation	15.26
Ground Water Certificate	43Q 30148205	CHARLES ROSE; LAURA L ROSE	Domestic	1.0
Ground Water Certificate	43Q 30148839	JOHN E TRAEGER; KAREN L TRAEGER	Domestic	1.0
Ground Water Certificate	43Q 30148938	EDWARD G CODDEN	Domestic; Lawn & Garden	2.88
Ground Water Certificate	43Q 30149303	JULIE A WORDEN; MICHAEL S WORDEN	Domestic; Lawn & Garden	3.83
Ground Water Certificate	43Q 30149585	KURU P PALAIYAN; SHARLENE L PALAIYAN	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 30149793	MEGAN J LUTHER; WARREN R LUTHER	Domestic; Lawn & Garden	1.45
Provisional Permit	43Q 30149895	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden; Other Purpose	157.75
Provisional Permit	43Q 30150480	M & J LAND CO LLC	Multiple Domestic; Lawn & Garden; Other Purpose	53.0
Ground Water Certificate	43Q 30150724	MERTON E MUSSER	Domestic; Lawn & Garden	4.75
Ground Water Certificate	43Q 30150814	WADE AFFLECK	Domestic; Lawn & Garden	2.88
Ground Water Certificate	43Q 30151799	RODNEY W LEE; THERESA L LEE	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 30151834	BRYAN OKRAGLY	Domestic	1.0
Provisional Permit	43Q 30152396	LAZY KU ESTATES LLC	Lawn & Garden; Multiple Domestic	24.61
Provisional Permit	43Q 30152518	ACK HOLDINGS INC	Multiple Domestic; Lawn & Garden	79.0
Ground Water Certificate	43Q 30152776	ELLYN E DALEY; MITCH G DALEY	Domestic; Lawn & Garden	1.13
Ground Water Certificate	43Q 30152815	CARRIE G DAVISON; DUSTIN T DAVISON	Domestic; Lawn & Garden	2.23
Ground Water Certificate	43Q 30152929	DEREK J MENHOLT	Lawn & Garden; Domestic	6.0

Ground Water Certificate	43Q 30152986	NATALIE L DRAGOO; DEVIN P SMITH	Domestic; Lawn & Garden; Stock	2.78
Ground Water Certificate	43Q 30153350	JILL W PECK; KENNETH W PECK	Domestic	1.0
Provisional Permit	43Q 30154658	M & J LAND CO LLC	Multiple Domestic; Lawn & Garden	97.6
Ground Water Certificate	43Q 30155130	TY LANTIS; PAMELA LANTIS	Lawn & Garden; Domestic	2.83
Ground Water Certificate	43Q 30155293	BETHANY J OLSON; GRANT A OLSON	Domestic; Lawn & Garden	5.23
Ground Water Certificate	43Q 30156336	MICHAEL J HRABAN; VALERIE K HRABAN	Domestic; Lawn & Garden	3.0
Ground Water Certificate	43Q 30157877	REGAL LAND DEVELOPMENT INC	Lawn & Garden; Multiple Domestic	3.4
Ground Water Certificate	43Q 30157878	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden	3.4
Ground Water Certificate	43Q 30157879	REGAL LAND DEVELOPMENT INC	Lawn & Garden; Multiple Domestic	3.4
Ground Water Certificate	43Q 30157880	REGAL LAND DEVELOPMENT INC	Lawn & Garden; Multiple Domestic	3.4
Ground Water Certificate	43Q 30157881	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden	3.4
Ground Water Certificate	43Q 30157882	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden	3.4
Ground Water Certificate	43Q 30157883	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden	3.4
Ground Water Certificate	43Q 30157884	REGAL LAND DEVELOPMENT INC	Lawn & Garden; Multiple Domestic	3.4
Ground Water Certificate	43Q 30157885	REGAL LAND DEVELOPMENT INC	Lawn & Garden; Multiple Domestic	3.4
Ground Water Certificate	43Q 30157886	REGAL LAND DEVELOPMENT INC	Lawn & Garden; Multiple Domestic	3.4
Ground Water Certificate	43Q 30157887	REGAL LAND DEVELOPMENT INC	Lawn & Garden; Multiple Domestic	3.4
Ground Water Certificate	43Q 30157888	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden	3.4
Ground Water Certificate	43Q 30157889	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden	3.4
Ground Water Certificate	43Q 30157890	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden	3.4
Ground Water Certificate	43Q 30157891	REGAL LAND DEVELOPMENT INC	Lawn & Garden; Multiple Domestic	3.4
Ground Water Certificate	43Q 30157892	REGAL LAND DEVELOPMENT INC	Multiple Domestic; Lawn & Garden	3.4

Ground Water Certificate	43Q 30158399	BLAINE A POPPLER	Lawn & Garden	7.5
Ground Water Certificate	43Q 30158528	SHERRY L WALKING EAGLE	Domestic; Lawn & Garden	3.5
Provisional Permit	43Q 30158778	MYRON S GROSS; NANCY J GROSS	Lawn & Garden; Multiple Domestic	79.1
Ground Water Certificate	43Q 30159049	DKSMITH HOLDINGS LLC	Commercial	0.11
Ground Water Certificate	43Q 30160033	ERIN M STICKEL; RYAN STICKEL	Lawn & Garden; Domestic	2.88
Ground Water Certificate	43Q 30161015	NATHANIEL G CRUZAN; NICOLE A CRUZAN	Lawn & Garden; Domestic	3.5
Ground Water Certificate	43Q 30161069	JOSHUA BENZINGER; LINDSY BENZINGER	Domestic	1.0
Ground Water Certificate	43Q 30161071	JOSHUA BENZINGER; LINDSY BENZINGER	Lawn & Garden	3.88
Ground Water Certificate	43Q 30161091	KELLY COMSTOCK; SANDEE-DEE COMSTOCK	Lawn & Garden	3.75
Ground Water Certificate	43Q 30161092	KELLY COMSTOCK; SANDEE-DEE COMSTOCK	Domestic	1.0
Ground Water Certificate	43Q 30161105	DOUGLAS CHAPMAN; BRANDY JONES	Lawn & Garden	3.65
Ground Water Certificate	43Q 30161106	DOUGLAS CHAPMAN; BRANDY JONES	Domestic	1.0
Provisional Permit	43Q 30162249	LAZY KU ESTATES LLC	Multiple Domestic; Lawn & Garden	72.4
Ground Water Certificate	43Q 30162299	CHRISTOPHER J SPILLERS; JULIE T SPILLERS	Domestic; Lawn & Garden	3.53
Provisional Permit	43Q 30162460	BIGHORN DRYWALL & CONSTRUCTION LLC	Lawn & Garden; Multiple Domestic	70.51
Ground Water Certificate	43Q 30162493	JAMES W COONS; MARY LOU PALMER	Lawn & Garden; Domestic	3.28
Ground Water Certificate	43Q 30163087	HARDRIVES CONSTRUCTION INC	Domestic	1.0
Ground Water Certificate	43Q 30163139	DAN & JULANE FARMS, LLC	Fishery	5.83
Ground Water Certificate	43Q 30163503	CHRISTINE Y LEE; RICHARD A LEE	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 30163734	KELSEY KLABOE; PAUL KLABOE	Domestic; Lawn & Garden	2.63
Ground Water Certificate	43Q 30163928	USELMAN FAMILY TRUST	Domestic	1.0
Ground Water Certificate	43Q 30163937	ASHLEY A ERB; CAMERON M ERB	Domestic; Lawn & Garden	2.73

Ground Water Certificate	43Q 30164116	BONNIE K JARES; JOHN E JARES	Lawn & Garden	3.75
Ground Water Certificate	43Q 30164746	KRAMER, RAY AND SHARON FAMILY TRUST	Domestic; Lawn & Garden	3.5
Provisional Permit	43Q 30164891	COUGAR INVESTMENTS LLC	Lawn & Garden; Commercial	48.01
Ground Water Certificate	43Q 30165392	CHRISTINE Y LEE; RICHARD A LEE	Stock	0.34
Ground Water Certificate	43Q 30165662	ANNIE C FOSTER; NOLAN FOSTER	Domestic; Lawn & Garden	2.23
Ground Water Certificate	43Q 30170753	TERESA KNEPPER; WYATT KNEPPER	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 30578 00	PAMELA P SANDERSON; ROBERT L SANDERSON	Domestic; Irrigation; Stock	8.88
Ground Water Certificate	43Q 31216 00	THOMAS H DAVIS	Domestic; Stock	1.04
Ground Water Certificate	43Q 31701 00	DEBRA S COLE; N CASSIDY COLE	Domestic	1.5
Ground Water Certificate	43Q 32930 00	BRUCE J MACINTYRE	Domestic	1.5
Ground Water Certificate	43Q 33794 00	JEAN E JACQUES; THOMAS P JACQUES	Stock	0.71
Ground Water Certificate	43Q 34020 00	EILEEN A WRIGHT; PETER R WRIGHT	Domestic	1.5
Ground Water Certificate	43Q 34552 00	JOHN HEIN; JOYCE HEIN	Domestic	1.5
Ground Water Certificate	43Q 35635 00	TAMARA L BELLINGER	Domestic; Stock	1.71
Ground Water Certificate	43Q 35746 00	DAVID KERBEL	Domestic; Stock	1.73
Ground Water Certificate	43Q 36355 00	ROBERT J CUSTER; BECKY J THOMPSON	Domestic	1.5
Ground Water Certificate	43Q 36787 00	EDWARD A HEIN	Domestic	1.5
Ground Water Certificate	43Q 36859 00	CATHERINE MCNALLY; JIM MCNALLY; TERESA C MCNALLY	Domestic	1.5
Ground Water Certificate	43Q 37930 00	CYNTHIA E PETEK	Stock	0.14
Ground Water Certificate	43Q 38459 00	SCOTT SCHEETZ	Domestic; Stock	3.24
Ground Water Certificate	43Q 39189 00	GWEN T SCHLEICHER	Domestic	1.5
Ground Water Certificate	43Q 39206 00	JEFFREY T YELEY; KRISTEN D YELEY	Domestic; Stock	25.0

Ground Water Certificate	43Q 39207 00	JEFFREY T YELEY; KRISTEN D YELEY	Domestic; Stock	25.0
Ground Water Certificate	43Q 39208 00	JEFFREY T YELEY; KRISTEN D YELEY	Domestic; Stock	25.0
Ground Water Certificate	43Q 39330 00	MARILYN A KROFT; TODD D KROFT	Domestic	1.5
Ground Water Certificate	43Q 39331 00	DONALD S LOVELESS; SUSAN D LOVELESS	Domestic	1.5
Ground Water Certificate	43Q 40804 00	LOVELL WITTMAYER	Domestic	2.0
Ground Water Certificate	43Q 4335 00	NOEL E MEISNER	Domestic; Fish And Wildlife; Stock	2.92*
Exempt Right	43Q 43987 00	JERRY J ODONNELL; SUSAN R ODONNELL	Domestic; Stock	3.0
Ground Water Certificate	43Q 4482 00	FISKE LIVING TRUST	Domestic; Stock	2.92*
Ground Water Certificate	43Q 45082 00	JERRY J ODONNELL; SUSAN R ODONNELL	Domestic; Stock	3.08
Ground Water Certificate	43Q 46880 00	JULIE A MYERS; WILLARD L MYERS	Commercial; Domestic; Lawn & Garden	11.5
Ground Water Certificate	43Q 48551 00	ROBERTS CATTLE SERVICES INC	Domestic; Lawn & Garden	3.13
Ground Water Certificate	43Q 49035 00	KATHRYN A ENSIGN	Domestic; Stock	6.2
Exempt Right	43Q 49403 00	MLH LLC	Domestic	1.5
Ground Water Certificate	43Q 49531 00	SOLOMON FAMILY TRUST	Domestic	1.5
Ground Water Certificate	43Q 49541 00	GEORGE ELLINGHOUSE	Stock	0.07
Ground Water Certificate	43Q 501 00	CLEVE NEWMAN	Domestic; Stock	2.92*
Ground Water Certificate	43Q 52262 00	4E PROPERTIES LLC	Domestic	1.75
Ground Water Certificate	43Q 54016 00	LYNETTE D SIROKY	Domestic; Lawn & Garden	1.5
Ground Water Certificate	43Q 54024 00	GARY P RAY	Domestic	1.5
Ground Water Certificate	43Q 5534 00	CECIL C OLIVER	Domestic	2.92*
Ground Water Certificate	43Q 56087 00	CONNIE MCDONALD; THOMAS MCDONALD	Domestic; Stock	4.53
Ground Water Certificate	43Q 56235 00	CAREN L MCLANE; TODD A MCLANE	Domestic	1.5
Ground Water Certificate	43Q 56236 00	KELLY J LEMM; THOMAS K LEMM	Domestic	1.5

Ground Water Certificate	43Q 56237 00	KELLY J LEMM; THOMAS K LEMM	Irrigation; Stock	12.28
Ground Water Certificate	43Q 56254 00	DANIEL W DOLES	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 57879 00	GARY L SCHULTZ; WAUNETTA M SCHULTZ	Domestic	1.5
Ground Water Certificate	43Q 57891 00	BRENDA FREYMILLER; GEORGE FREYMILLER	Domestic	1.5
Ground Water Certificate	43Q 58052 00	AMANDA M SWIFT; JAMES T SWIFT	Domestic; Stock; Irrigation	4.05
Ground Water Certificate	43Q 60345 00	DICK HARRIS	Domestic	1.5
Ground Water Certificate	43Q 60411 00	BILL CARR; BONNIE CARR	Domestic	1.5
Ground Water Certificate	43Q 60484 00	TYLER JUMPER	Domestic	1.5
Ground Water Certificate	43Q 62343 00	CHRISTINA B LANG; ROY A LANG	Domestic	1.0
Ground Water Certificate	43Q 62344 00	CHRISTINA B LANG; ROY A LANG	Lawn & Garden	3.75
Ground Water Certificate	43Q 62391 00	BRIAN G POWELL; MICHOL E POWELL	Domestic; Lawn & Garden; Stock	3.59
Ground Water Certificate	43Q 62438 00	ELDER GROVE SCHOOL	Commercial; Lawn & Garden	4.39
Ground Water Certificate	43Q 66429 00	H 5300 TRUST; H-5100 TRUST	Domestic; Stock	1.11
Ground Water Certificate	43Q 67198 00	BRAD STUART; KAY C STUART	Irrigation; Stock	13.25
Ground Water Certificate	43Q 67199 00	BRAD STUART; KAY C STUART	Domestic	1.5
Statement Of Claim	43Q 677 00	JOLENE KAY STATON; LEONARD E STATON	Irrigation	122.8*
Ground Water Certificate	43Q 68358 00	BERNADETTE J BOTZ; MICHAEL M BOTZ	Domestic; Lawn & Garden; Stock	6.05
Ground Water Certificate	43Q 68394 00	FRANK C WAGNER; PAULETTE R WAGNER	Lawn & Garden	3.75
Ground Water Certificate	43Q 68395 00	FRANK C WAGNER; PAULETTE R WAGNER	Domestic; Lawn & Garden; Stock	4.81
Ground Water Certificate	43Q 69467 00	TYLER JUMPER	Irrigation; Stock	8.14
Ground Water Certificate	43Q 69473 00	ANNIE B TEAL; PETER V TEAL	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 69496 00	LINDA K OVERSTREET; MICHAEL W OVERSTREET	Domestic	1.5

Ground Water Certificate	43Q 70777 00	EMILEE J ATKINSON; KELLY J ATKINSON	Domestic	1.5
Ground Water Certificate	43Q 70792 00	RENEWAL RANCH LLC	Domestic	1.5
Ground Water Certificate	43Q 72279 00	R A RENTALS LLC	Domestic; Lawn & Garden; Stock	15.85
Ground Water Certificate	43Q 72844 00	LYNDON S COBURN	Lawn & Garden	0.63
Ground Water Certificate	43Q 72871 00	JAMES L DEWIT; SHARON DEWIT	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 73494 00	MONTEXAS INVESTMENTS LLC	Domestic	2.5
Ground Water Certificate	43Q 75519 00	BLAINE A POPPLER	Lawn & Garden; Stock	1.33
Ground Water Certificate	43Q 759 00	MARGARET E SANDERSON	Domestic	2.92*
Ground Water Certificate	43Q 76308 00	MONTEXAS INVESTMENTS LLC	Domestic	1.5
Ground Water Certificate	43Q 76346 00	MARGARET E SANDERSON	Domestic	1.63
Ground Water Certificate	43Q 7703 00	LAS PALMAS LLC; NATHANIAL C SAYLER	Domestic; Stock	4.0
Ground Water Certificate	43Q 77128 00	MIKOL HJELVIK	Domestic; Lawn & Garden	5.13
Ground Water Certificate	43Q 77130 00	CARRIE ROBERTS	Domestic	1.63
Ground Water Certificate	43Q 7747 00	JAMES BINANDO; VIVIAN D BINANDO	Stock; Domestic	2.92*
Ground Water Certificate	43Q 77734 00	STALEY FAMILY TRUST	Domestic	1.63
Ground Water Certificate	43Q 78045 00	ANGELA GRIMSTAD; JAMES GRIMSTAD	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 78082 00	JEFFREY D HUDIBURGH; RILEY C HUDIBURGH	Domestic; Irrigation; Stock	10.0
Ground Water Certificate	43Q 78088 00	DONALD W MACDONALD	Domestic	1.0
Ground Water Certificate	43Q 78093 00	OTREMBA, GAYLE J TRUST; OTREMBA, JAMES J TRUST	Domestic	1.63
Ground Water Certificate	43Q 781 00	PHILLIP M ROTH	Domestic	2.92*
Ground Water Certificate	43Q 79823 00	JOHN C ROLLMAN	Stock	0.08
Ground Water Certificate	43Q 79845 00	MICHAEL J BARLOW; TRACY A BARLOW	Lawn & Garden	0.63

Ground Water Certificate	43Q 79850 00	GRANITE PEAK GROUP LLC	Lawn & Garden	0.85
Ground Water Certificate	43Q 80858 00	MOORE LIVING TRUST	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 80896 00	HALLIE E LINDAL; JASON T LINDAL	Domestic; Lawn & Garden	3.75
Ground Water Certificate	43Q 8233 00	D BAR C LIVING TRUST	Domestic	0.34
Ground Water Certificate	43Q 82736 00	JULIE A MYERS; WILLARD L MYERS	Domestic; Lawn & Garden; Stock	3.53
Provisional Permit	43Q 82797 00	SPRING CREEK LANDSCAPE CO	Irrigation	7.5
Ground Water Certificate	43Q 82799 00	LEWIS FAMILY TRUST	Domestic; Lawn & Garden	8.88
Ground Water Certificate	43Q 84384 00	DOUGLAS MAGNUS; JULIE A MAGNUS	Domestic	1.0
Ground Water Certificate	43Q 84404 00	MILO ZEMLISKA	Domestic	1.0
Ground Water Certificate	43Q 84411 00	DAVID J VANEK; DENYSE M VANEK	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 84447 00	CHRISTINE L MARTIN; STEVEN MARTIN	Domestic; Lawn & Garden	4.45
Ground Water Certificate	43Q 84481 00	KENNETH R HEIN	Domestic	1.63
Ground Water Certificate	43Q 85481 00	ROBINSON, JACK L TRUST	Domestic; Lawn & Garden; Stock	2.3
Ground Water Certificate	43Q 8551 00	SMITH, KOLTER RAY TRUST	Domestic	2.92*
Ground Water Certificate	43Q 87418 00	MATTHEW P BOERSCHINGER	Domestic	1.0
Ground Water Certificate	43Q 87432 00	KYLE A KINDSFATHER; SARAH F KINDSFATHER	Domestic; Lawn & Garden	6.0
Ground Water Certificate	43Q 87458 00	DORIS M KNUDSEN	Domestic; Lawn & Garden; Stock	3.54
Ground Water Certificate	43Q 87463 00	CAROL A WILLIS; THOMAS D WILLIS	Domestic	1.63
Ground Water Certificate	43Q 87471 00	JA NET HOFER; KENNETH HOFER	Domestic; Irrigation; Lawn & Garden; Stock	4.92
Ground Water Certificate	43Q 8754 00	IAN P BLUMENSHINE	Domestic	2.92*
Ground Water Certificate	43Q 88840 00	DAN KAUTZ	Domestic; Stock	1.94
Exempt Right	43Q 90679 00	R A RENTALS LLC	Domestic; Lawn & Garden; Stock	15.85

Ground Water Certificate	43Q 90966 00	ROY E HOTH	Domestic	1.63
Ground Water Certificate	43Q 91689 00	GREG F MEYER	Domestic; Lawn & Garden	1.63
Ground Water Certificate	43Q 91690 00	DANA M SHORE	Domestic; Lawn & Garden; Stock	3.53
Exempt Right	43Q 91699 00	JUDY C MCNALLY	Domestic; Lawn & Garden; Stock	2.93
Ground Water Certificate	43Q 91742 00	BRENT A WENNING; JESSICA D WENNING	Domestic; Lawn & Garden	8.5
Ground Water Certificate	43Q 91800 00	BRENT M BATES; LIANE R BATES	Domestic; Lawn & Garden	2.15
Ground Water Certificate	43Q 91833 00	LORNA STOKKE; SAM STOKKE	Domestic; Lawn & Garden	2.88
Ground Water Certificate	43Q 93018 00	TYLER LAW; TYLER ANN LAW	Domestic; Lawn & Garden; Stock	3.6
Ground Water Certificate	43Q 93019 00	VICKI L BENDER	Domestic; Lawn & Garden; Stock	3.6
Ground Water Certificate	43Q 93020 00	ANDREW L KONKEL	Domestic; Lawn & Garden; Stock	3.6
Ground Water Certificate	43Q 93021 00	SK2 LIVING TRUST DTD 3/11/2022	Domestic; Lawn & Garden; Stock	3.6
Ground Water Certificate	43Q 93022 00	JOSH LEENKNECHT; STEPHANIE LEENKNECHT	Domestic; Lawn & Garden; Stock	3.6
Ground Water Certificate	43Q 93023 00	DEBUF, MARY JEAN REVOCABLE TRUST	Domestic; Lawn & Garden; Stock	3.6
Ground Water Certificate	43Q 94669 00	THURSDAY MORNING LIVING TRUST	Domestic	1.63
Ground Water Certificate	43Q 94680 00	TOM L FULTON; SUSANNE K FULTON.	Domestic; Irrigation	4.13
Ground Water Certificate	43Q 96416 00	AMANDA LAIN; EDWIN S LAIN	Domestic; Lawn & Garden	5.25
Ground Water Certificate	43Q 96477 00	TERESA L BOTTRELL	Domestic	1.63
Ground Water Certificate	43Q 96513 00	CORY L HASIAK; HEATHER HASIAK	Domestic; Irrigation; Lawn & Garden; Stock	6.03
Ground Water Certificate	43Q 97684 00	LYNDON S COBURN	Lawn & Garden	2.5
Ground Water Certificate	43Q 97685 00	VICKI L BENDER; DEBUF, MARY JEAN REVOCABLE TRUST; RANDEE L KILLION; ANDREW L KONKEL; TYLER LAW; TYLER ANN LAW; BRENT LEBRUN; JOSH LEENKNECHT; STEPHANIE LEENKNECHT	Lawn & Garden	10.0

Ground Water Certificate	43Q 97721 00	DIANE S ASCHEMAN; STEVEN J ASCHEMAN	Domestic; Lawn & Garden	3.5
Ground Water Certificate	43Q 99134 00	BONNIE D HALL; EDWARD C HALL	Domestic	1.63
Ground Water Certificate	43Q 99185 00	JEAN E JACQUES; THOMAS P JACQUES	Domestic	1.63
Ground Water Certificate	43Q 99186 00	THOMAS W CARROLL	Domestic	1.63
Ground Water Certificate	43Q 99273 00	ERIC ARZUBI; ELA MATA	Domestic; Lawn & Garden	1.18
Ground Water Certificate	43Q 99274 00	CAREN L MCLANE; TODD A MCLANE	Lawn & Garden; Stock	2.55
Ground Water Certificate	43Q 99325 00	MICHAEL W WILLIAMS	Domestic; Lawn & Garden	2.25
Ground Water Certificate	43Q 9980 00	BIG UNIT STORAGE LLC	Domestic	2.92*
Ground Water Certificate	43Q 99953 00	JULIANNA M PAPEZ	Domestic; Lawn & Garden; Stock	2.35
Ground Water Certificate	43Q 99960 00	TOEWS FAMILY REVOCABLE TRUST	Domestic; Lawn & Garden	5.5
Ground Water Certificate	43Q 99962 00	JEAN M MALKUCH	Domestic	1.63
			Total	3,521.35

* Calculated by DNRC

Appendix C: Water Rights within the Surface Water Area of Potential Impact

Table C-1. Monthly Distribution of Water Rights Within the Depleted Reach of Canyon Creek by Flow Rate (CFS)

Water Right Number	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
43Q 180005 00			0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	
43Q 199829 00					0.75	0.75	0.75	0.75	0.75			
43Q 199830 00					0.26	0.26	0.26	0.26	0.26			
43Q 214609 00			0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	
43Q 26726 00						0.34	0.34	0.34	0.34			
43Q 30067817				0.01	0.01	0.01	0.01	0.01	0.01			
43Q 30115456	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
43Q 39516 00				0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	
43Q 8960 00				1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
43Q 8965 00	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
43Q 206480				0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	
SUM	1.19	1.19	1.91	3.83	4.84	5.18	5.18	5.18	5.18	3.82	3.82	2.52

Table C-2. Monthly Distribution of Water Rights Within the Depleted Reach of Canyon Creek by Volume (AF)

Water Right Number	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
43Q 180005 00			0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
43Q 199829 00					10.76	10.76	10.76	10.76	10.76			
43Q 199830 00					3.77	3.77	3.77	3.77	3.77			
43Q 214609 00			5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	
43Q 26726 00						6.91	6.91	6.91	6.91			
43Q 30067817				0.42	0.42	0.42	0.42	0.42	0.42			
43Q 30115456	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
43Q 39516 00				5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	
43Q 8960 00 (Stock)					0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
43Q 8960 00 (Irrigation)				24.86	24.86	24.86	24.86	24.86	24.86	24.86		
43Q 8965 00 (Stock)	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
43Q 8965 00 (Irrigation)				3.86	3.86	3.86	3.86	3.86	3.86	3.86		
43Q 206480				7.68	7.68	7.68	7.68	7.68	7.68	7.68	7.68	
SUM	0.11	0.11	6.98	49.54	64.19	71.10	71.10	71.10	71.10	49.25	20.54	0.24

DNRC Water Resources
Billings Regional Office
1371 Rimtop Dr.
Billings, MT 59105-1978

December 8, 2025

REGAL LAND DEVELOPMENT, INC.
ATTN: DAN WELLS
5847 WHISPERING WOODS DR
BILLINGS, MT 59108

Subject: Completed Technical Analyses Report for Beneficial Water Use Permit Preapplication No. 43Q 30171432

Dear Applicant,

As designated on the submitted Preapplication Meeting Form per §85-2-302(3)(b), MCA, the Department of Natural Resources and Conservation (DNRC or Department) has completed the technical analyses for Beneficial Water Use Permit Preapplication No. 43Q 30171432 based on the information provided in your Preapplication Meeting Form accepted by the Department on October 24, 2025. The technical analyses can be found in the attached report. Please note this Groundwater Permit 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 regional office staff.

This Technical Analyses Report **IS**: A collection of facts that the DNRC has gathered, including content provided in the Preapplication Meeting Form materials. The Department will use these data to analyze the criteria in §85-2-402, MCA if you submit an application for the project described in the completed Preapplication Meeting Form.

This Technical Analyses Report **IS NOT**: An analysis or discussion of whether the Preapplication Meeting Form as filed meets the criteria (§85-2-402, MCA).

You have 180 days to submit the Beneficial Water Use Permit Application Form 600 considering the information provided in the technical analyses and Preapplication Meeting Form. If the Application Form is not submitted to the Billings Regional Office by June 6, 2026, a new preapplication meeting will be required to process the Application with expedited timelines (ARM 36.12.1302(6)(b)). If any details described in the submitted Application are changed from

that of the submitted Preapplication Meeting Form, the discounted filing fee and expedited timelines will not apply (ARM 36.12.1302(6)(a)). Please note that the technical analyses will expire one year from the date of this letter (ARM 36.12.1302(8)).

Please let me know if you have any questions.

Best,

Veronica Corbett | Water Resource Specialist
Water Resources Division, DNRC
Billings Regional Office
1371 Rimtop Dr, Billings, MT 59105
DESK: 406-247-44131| EMAIL: veronica.corbett@mt.gov

CC: In Site Engineering

Variance Information

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

Variance Information

DNRC Water Resources
Billings Regional Office
1371 Rimtop Dr.
Billings, MT 59105-1978

October 6, 2025

Regal Land Development Inc
% Dan Wells
Po Box 80445
Billings, MT 59108

Subject: Variance Request Dated September 18, 2025 – 43Q 30171432

The Department of Natural Resources and Conservation (Department or DNRC) has reviewed the September 18, 2025, request for a variance from the Aquifer Testing Requirements under ARM 36.12.121.

Variances requested from the Aquifer Testing Requirements found in ARM 36.12.121 are as follows:

- (c) 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).
- (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 acre-feet, or 72 hours for a proposed pumping rate and volume greater than 150 GPM or 50 acre-feet.
    - (i) At a minimum, an eight-hour drawdown and yield test is required on all new production wells.
    - (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.
    - (iii) The testing procedures for a minimum eight-hour drawdown and yield test performed on any production well must follow (a), (d), and (h).
- (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.
- (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 Form No. 633.

The proposed project is within the boundaries of the Yellowstone River Terrace Level 3 Aquifer Properties as discussed in the March 1, 2022, Technical Memorandum (Aquifer Properties Memo). The provided 72-hour aquifer test submitted on Form 633 is sufficient for the Department to

evaluate adequacy of diversion under ARM 36.12.121(3)(c), and in conjunction with the aquifer properties discussed in the Aquifer Properties Memo, is sufficient for the Department to evaluate the aquifer properties and forward modeling.

However, the Department will require 8-hour drawdown and yield tests to be completed on all production wells until the proposed flow rate is met. The average pumping rate during the 72-hour test was 220 GPM. The proposed flow rate is 386 GPM. These 8-hour drawdown and yield tests may be conducted at any time prior to project completion.

Therefore, the Department **grants** the September 18, 2025, variance request.

As a reminder, a variance request approval does not mean that the Department can grant a water right. All criteria for the issuance of a water right must still be met before it can be granted.

If you have any questions, please call me anytime.

Sincerely,

Kathy Olsen

Kathy Olsen | Regional Operations Manager
Water Resources Division
1424 9th Ave | Helena MT 59601
DESK: 406-444-0022 EMAIL: kolsen@mt.gov

cc: In Site Engineering, P.C. c/o Scott Worthington

VARIANCE REQUEST

ARM 36.12.123

Form No. 653 *(Revised 08/2025)*

For Department Use Only

RECEIVED
SEP 18 2025
WRD - BIL RO

Application # 30171432 Basin 43Q

Received Date 9/18/2025

Received By VC

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.

Applicant Name Regal Land Development, Inc. c/o Dan Wells (358029)

Mailing Address 5847 Whisperingwoods Drive

City Billings State MT Zip 59106

Home Phone 406-672-3390 Other Phone

Email: dan@wellsbuilt.com

Representative Name (if other than Applicant) In Site Engineering, PC c/o Scott Worthington (367933)

☒ Representative is Consultant ☐ Representative is Attorney ☐ Representative is Other (describe)

Mailing Address 4231 Creekwood Drive

City Billings State MT Zip 59106

Home Phone 406-591-4355 Other Phone

Email: siteproscott@gmail.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

For each variance requested explain why the requirement was not met and why testing data are still usable and reliable. If applicable, specify alternative testing methodology or aquifer test data, to support your request. Add attachments if needed.

Because the project area is within the boundaries of the Yellowstone River Terrace Level 3 Aquifer, one can request a variance from the exact aquifer testing requirements of ARM 36.12.121. The total peak flow rate for the subdivision is 386 gpm. Water for domestic use and for lawn and garden irrigation use is to be provided by way of mostly shared wells with a few individual wells, totaling 46 points of diversion. Thus, the average peak flow rate for each well is 8.4 gpm. The following describes the pumping test that was performed, and a variance is requested for the requirement of having an observation well: The pumping rate for the aquifer test was 220 gpm. This is over half of the overall peak flow rate for the development and 26 times the average flow rate for any given well. Because the overall peak flow rate is greater than 150 gpm and the annual volume is greater than 50 acre-feet, a 72 hour pumping test was done. The total depth of the test well is 61 feet. The static water level prior to pumping was 16.49 feet below the measuring point (top of casing) or 14.49 feet below the ground surface. The maximum drawdown during the 72-hour test was 14.04 feet, leaving an available water column of 32.47 feet. Recovery was reached 51 hours after pump shutoff. No observation well was used, so it is requested that this deviation be granted by variance. All other requirements of ARM 36.12.121 for which a variance is not requested were satisfied. It is proposed that the aquifer properties of the DNRC's Yellowstone River Terrace Level 3 Memo be used for modeling and technical analysis.

☐ ARM 36.12.1702 Physical Surface Water Availability
- ☐ (1)(b) at a minimum, three measurements that reflect high, moderate, and low flows during the period of diversion
- ☐ (4) once monthly measurements at department-approved intervals during the proposed period of diversion

Explain the specific variance you are requesting and the reason for requesting it. Also identify your proposed alternative measurement methodology, if applicable. Attach additional sheets if necessary.

The specific variances requested are to 1) Waive the requirement of an observation well; and, 2) Allow the pumping test performed as described herein and reported on Form 633 submitted herewith to suffice in completing the aquifer testing requirements of this application so that the technical analysis can be performed by the DNRC. The pumping test was indicative of favorable supply and adequacy of diversion. It is understood that additional 8-hour drawdown tests are required to be submitted to the DNRC until the overall peak flow rate of 386 gpm for the subdivision is reached, but it is proposed that this be allowed by variance as a condition of the provisional permit.

Preapplication Materials

- Preapplication Meeting Request
- Preapplication Meeting Form
- All attachments
- All correspondence prior to application receipt

Preapplication Materials

PREAPPLICATION MEETING FORM: PART B
PERMIT

§ 85-2-302, MCA

Form No. 600P-B *(Revised 02/2025)*

For Department Use Only

Application # 30171432 Basin 43Q

Form Received 10/17/2025

Fee Rec'd $ $500 Check # 1523

Deposit Receipt # BLS 2607107

Payor In Site Engineering

Form Returned _____

Refund $ _____ Date _____

PREAPPLICATION MEETING FEE

$ 500

FILING FEE REDUCTION & EXPEDITED TIMELINE

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)).

The Applicant is responsible for providing a "Follow-up Responses" document for all follow-up identified in Preapplication Meeting Form Part A (Form 600P-A). The Applicant may not alter Form 600P-A. If a response has changed to a question answered at the preapplication meeting, the Applicant can provide a new response in a separate document entitled "Amended Responses" with the question number labeled.

The following guidelines are applicable to both the "Follow-up Responses" and "Amended Responses" documents. Clearly label all question numbers. Answer questions in the same format as Form 600P-A. For responses in the form of checkboxes, write "Y", "N", or "S". Constrain narrative responses to the specific question as is asked on the form; do not respond to multiple questions in one narrative. Label units in narrative responses and tables. Tables must have the exact headings found on the form. Questions that require items to be submitted to the Department may be marked "S" when the required item is included with the document.

1. ☐ **Y** ☒ **N** Are you submitting this form in response to a determination by the Department that a previously submitted Form 600P-B was inadequately completed?

   If yes,

   a. Date form was returned ("Form Returned" date found in "For Department Use Only" box on the previously submitted Form 600P-B): _____

   b. If a "Follow-up Responses" or "Amended Responses" document is required by questions 2 or 3, submit complete updated documents with responses that stand-alone. The Department will only use the most recently submitted "Follow-up Responses" and "Amended Responses" documents for departmental technical analyses or scientific credibility review; the Department will not use multiple versions of a document.

2. ☒ **Y** ☐ **N** Were any questions identified as requiring follow-up on Form 600P-A?

   If yes,

   a. ☒ **S** Submit "Follow-up Responses" document for all questions requiring follow-up.

3. ☐ Y ☒ N Are you submitting amended responses to any questions from Form 600P-A?

If yes,

a. ☐ **S** Submit “Amended Responses” document and record in the table below each question number with an amended response. The amended response will entirely replace the previous response; the amended response cannot build off the previous response.

Question No.	Question No.	Question No.	Question No.

FOLLOW-UP AND AMENDED RESPONSES AFFIDAVIT & CERTIFICATION

"I attest that this preapplication meeting form (Form 600P-A and Form 600P-B), follow-up, and amended responses accurately portray the proposed project. 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 change any element of the proposed application from the preapplication meeting form, amended responses, or follow-up materials (ARM 36.12.1302(6)(a))."

Applicant Signature — Date: 10/16/2025

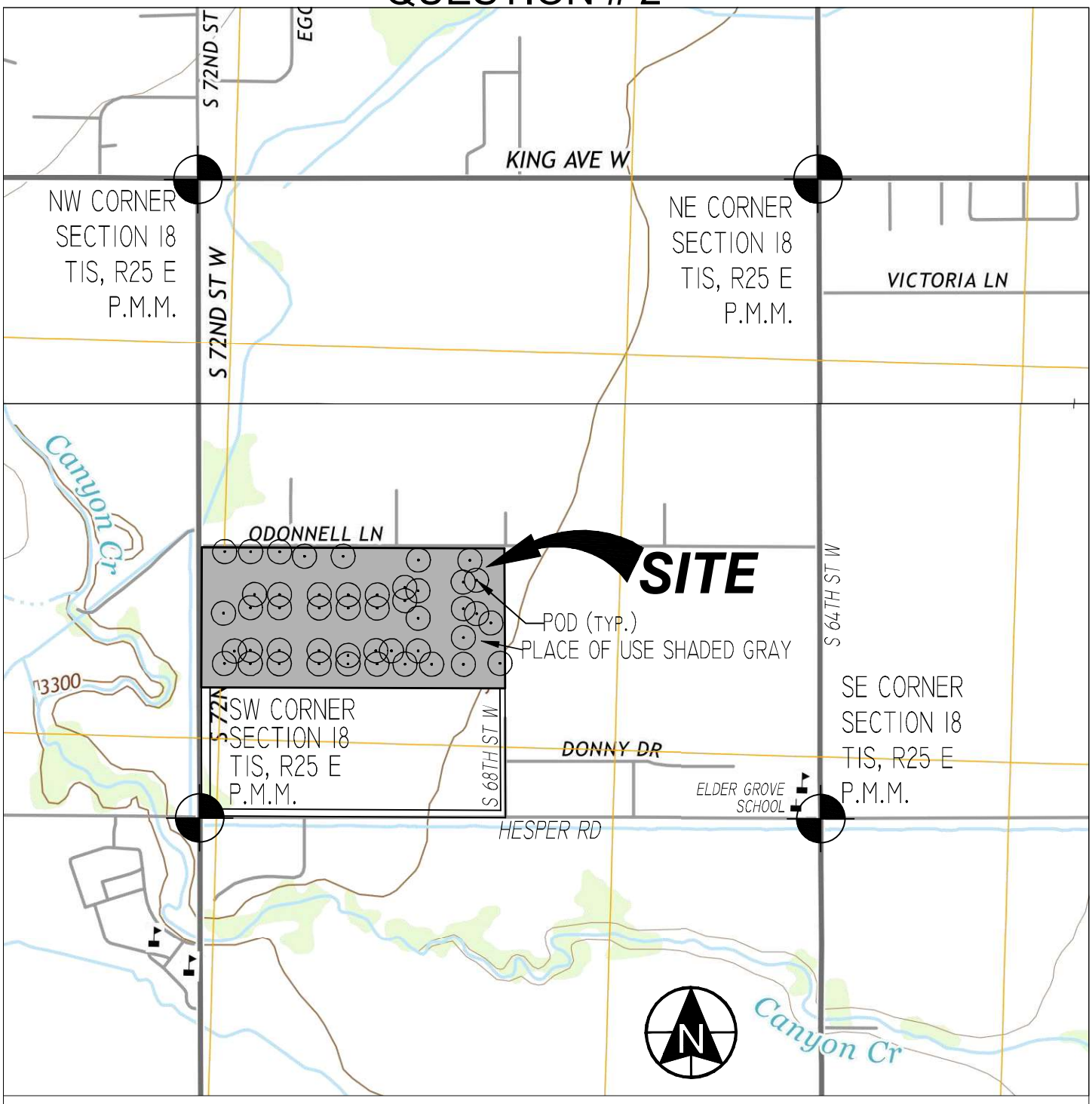
Applicant Signature — Date

"We confirm that the preapplication form (Form 600P-A and Form 600P-B), amended responses, and follow-up information are adequate for the Department to proceed with technical analyses in ARM 36.12.1303. Or, if the Applicant has elected to complete technical analyses, we confirm they have submitted each required element of technical analysis based on the proposed project and the Department is able to proceed with the scientific credibility review (ARM 36.12.1303(8))."

Department Signature — Date

Department Signature — Date

FOLLOW-UP RESPONSES DOCUMENT 43Q-30171432
QUESTION # 2

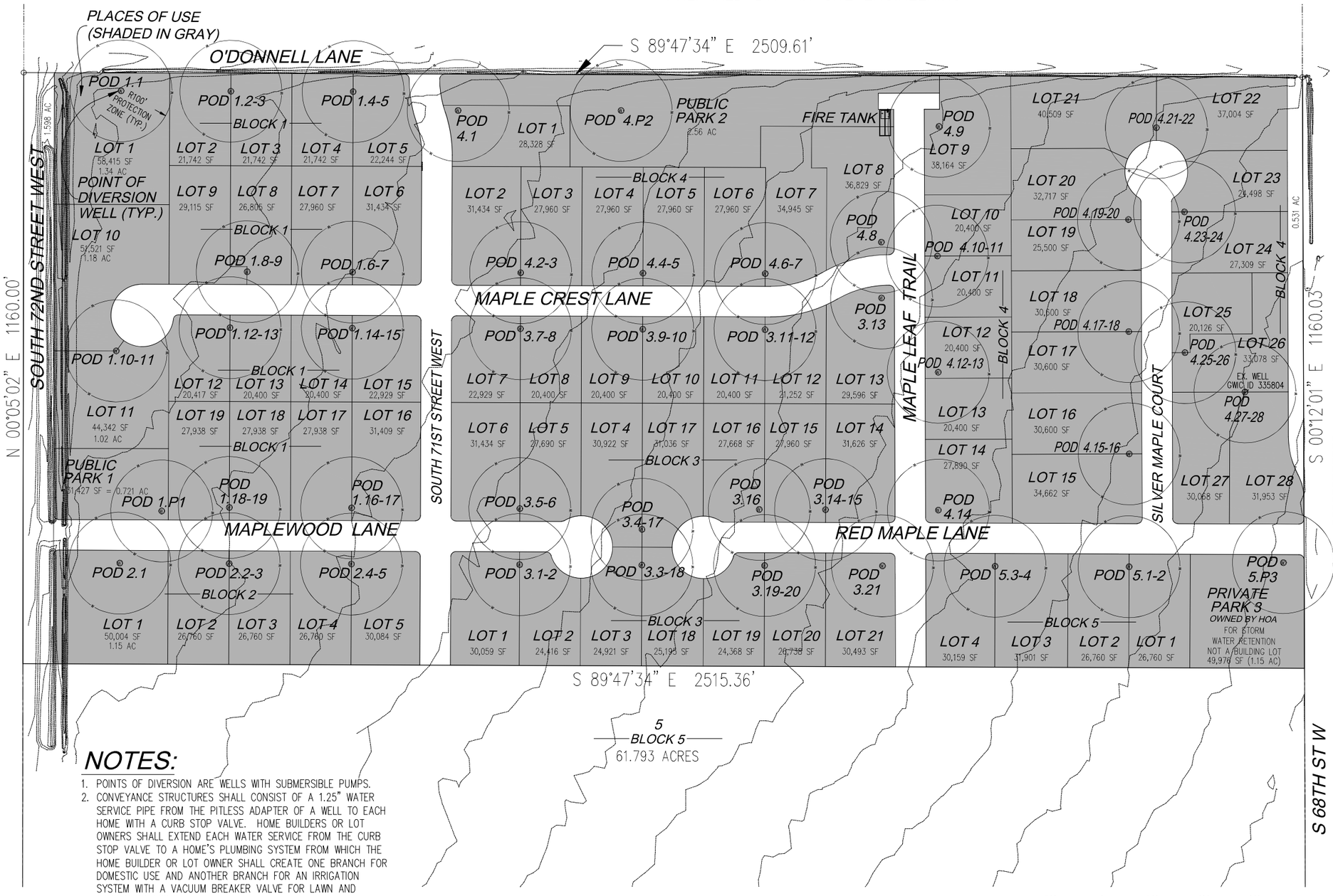


MAPLEWOOD ESTATES SUBDIVISION
LOCATION MAP

QUESTION # 2

MAPLEWOOD ESTATES - POINTS OF DIVERSION (WELLS) & PLACES OF USE

LOCATED IN SECTION 18, T01 S, R25 E, P.M.M. YELLOWSTONE COUNTY, MONTANA
PREPARED FOR: REGAL LAND DEVELOPMENT, INC.
PREPARED BY: IN SITE ENGINEERING



NOTES:

1. POINTS OF DIVERSION ARE WELLS WITH SUBMERSIBLE PUMPS.
2. CONVEYANCE STRUCTURES SHALL CONSIST OF A 1.25" WATER SERVICE PIPE FROM THE PITLESS ADAPTER OF A WELL TO EACH HOME WITH A CURB STOP VALVE. HOME BUILDERS OR LOT OWNERS SHALL EXTEND EACH WATER SERVICE FROM THE CURB STOP VALVE TO A HOME'S PLUMBING SYSTEM FROM WHICH THE HOME BUILDER OR LOT OWNER SHALL CREATE ONE BRANCH FOR DOMESTIC USE AND ANOTHER BRANCH FOR AN IRRIGATION SYSTEM WITH A VACUUM BREAKER VALVE FOR LAWN AND GARDEN WATERING.
3. THERE ARE NO PROPOSED PLACES OF STORAGE FOR GROUNDWATER.

100 0 100 200 300
SCALE 1" = 100' (24 x 36)
SCALE 1" = 200' (11 x 17)

DEVELOPMENT
Maplewood Estates Residential Subdivision

DEVELOPER
REGAL LAND DEVELOPMENT, INC.
P.O. BOX 80205
BILLINGS, MT 59108

CIVIL ENGINEER
IN SITE ENGINEERING, P.C.
4231 CREEKWOOD DR
BILLINGS, MT 59106
IN SITE ENGINEERING

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		

DATE: 8/20/2025

PROJECT
Maplewood Estates

DESCRIPTION
POINTS OF DIVERSION & PLACES OF USE

SHEET NAME	SHEET NUMBER
POD / POU	1

QUESTION # 7, 35.a.i, 35.a.iii, and 42

Follow-up to Questions 7, 35.a.i, 35.a.iii, and 42 of Form 600 P-A

Points of Diversion (POD) for Maplewood Estates Subdivision

Notes: Source Name for all points of diversion is the Yellowstone River Terrace Level 3 Aquifer

For POD #, the first digit indicates the block number, and the digit(s) after the . indicates the corresponding lot number(s) of the proposed Maplewood Estates Subdivision. A "P" after the . indicates parkland.

Shared wells are on common lot lines. Well easements will be defined with the final plat.

																Domestic	Domestic	Domestic		Irrigated	Irrigation	Irrigation	Irrigation		Combined (Peak)	Combined		
																Flow Rate	Volume	Period of Diversion		Area	Flow Rate	Volume	Period of Diversion		Flow Rate	Volume	Depth	Estimated
POD #	1/4	1/4	1/4	Sec	Twp	Rge	County	Lot	Block	Tract	Subdivision	Gov Lot	SW or GW	Means	Constructed?	(GPM)	(AF)	From	To	(Acres)	(GPM)	(AF)	From	To	(GPM)	(AF)	(FT)	or Measured
1.1	NW	NW	SW	18	1S	25E	Yellowstone	1	1	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	1.006	7.6	2.51	04/15	10/15	8.5	2.85	60	estimated
1.2-3	NW	NW	SW	18	1S	25E	Yellowstone	2-3	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.749	5.7	1.87	04/15	10/15	7.4	2.54	60	estimated
1.4-5	NE	NW	SW	18	1S	25E	Yellowstone	4-5	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.757	5.7	1.89	04/15	10/15	7.4	2.57	60	estimated
1.6-7	SE	NW	SW	18	1S	25E	Yellowstone	6-7	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.023	7.7	2.56	04/15	10/15	9.4	3.23	60	estimated
1.8-9	SW	NW	SW	18	1S	25E	Yellowstone	8-9	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.963	7.3	2.41	04/15	10/15	9.0	3.08	60	estimated
1.10-11	SW	NW	SW	18	1S	25E	Yellowstone	10-11	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.651	12.5	4.13	04/15	10/15	14.2	4.80	60	estimated
1.12-13	SW	NW	SW	18	1S	25E	Yellowstone	12-13	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.943	7.1	2.36	04/15	10/15	8.8	3.03	60	estimated
1.14-15	SW	NW	SW	18	1S	25E	Yellowstone	14-15	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.746	5.6	1.87	04/15	10/15	7.4	2.54	60	estimated
1.16-17	SW	NW	SW	18	1S	25E	Yellowstone	16-17	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.022	7.7	2.55	04/15	10/15	9.4	3.23	60	estimated
1.18-19	SW	NW	SW	18	1S	25E	Yellowstone	18-19	1	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.962	7.3	2.41	04/15	10/15	9.0	3.08	60	estimated
1.P1	SW	NW	SW	18	1S	25E	Yellowstone	Park 1	1	N/A	Maplewood Est.	N/A	GW	pump	no	0	0	01/01	12/31	0.714	5.4	1.79	04/15	10/15	5.4	1.79	60	estimated
2.1	NW	SW	SW	18	1S	25E	Yellowstone	1	2	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.861	6.5	2.15	04/15	10/15	7.4	2.49	60	estimated
2.2-3	NW	SW	SW	18	1S	25E	Yellowstone	2-3	2	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.921	7.0	2.30	04/15	10/15	8.7	2.98	60	estimated
2.4-5	NE	SW	SW	18	1S	25E	Yellowstone	4-5	2	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.979	7.4	2.45	04/15	10/15	9.1	3.12	60	estimated
3.1-2	NE	SW	SW	18	1S	25E	Yellowstone	1-2	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.938	7.1	2.34	04/15	10/15	8.8	3.02	60	estimated
3.3-18	NE	SW	SW	18	1S	25E	Yellowstone	3-18	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.863	6.5	2.16	04/15	10/15	8.2	2.83	60	estimated
3.4-17	SE	NW	SW	18	1S	25E	Yellowstone	4-17	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.067	8.1	2.67	04/15	10/15	9.8	3.34	60	estimated
3.5-6	SE	NW	SW	18	1S	25E	Yellowstone	5-6	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.018	7.7	2.54	04/15	10/15	9.4	3.22	60	estimated
3.7-8	SE	NW	SW	18	1S	25E	Yellowstone	7-8	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.746	5.6	1.87	04/15	10/15	7.4	2.54	60	estimated
3.9-10	SE	NW	SW	18	1S	25E	Yellowstone	9-10	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.702	5.3	1.76	04/15	10/15	7.0	2.43	60	estimated
3.11-12	SW	NE	SW	18	1S	25E	Yellowstone	11-12	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.717	5.4	1.79	04/15	10/15	7.1	2.47	60	estimated
3.13	SW	NE	SW	18	1S	25E	Yellowstone	13	3	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.510	3.8	1.27	04/15	10/15	4.7	1.61	60	estimated
3.14-15	SW	NE	SW	18	1S	25E	Yellowstone	14-15	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.026	7.8	2.56	04/15	10/15	9.5	3.24	60	estimated
3.16	SW	NE	SW	18	1S	25E	Yellowstone	16	3	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.476	3.6	1.19	04/15	10/15	4.5	1.53	60	estimated
3.19-20	NW	SE	SW	18	1S	25E	Yellowstone	19-20	3	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.880	6.6	2.20	04/15	10/15	8.4	2.87	60	estimated
3.21	NW	SE	SW	18	1S	25E	Yellowstone	21	3	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.525	4.0	1.31	04/15	10/15	4.8	1.65	60	estimated
4.1	NE	NW	SW	18	1S	25E	Yellowstone	1	4	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.488	3.7	1.22	04/15	10/15	4.5	1.56	60	estimated
4.P2	NE	NW	SW	18	1S	25E	Yellowstone	Park 2	4	N/A	Maplewood Est.	N/A	GW	pump	no	0	0	01/01	12/31	2.292	17.3	5.73	04/15	10/15	17.3	5.73	60	estimated
4.2-3	SE	NW	SW	18	1S	25E	Yellowstone	2-3	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.023	7.7	2.56	04/15	10/15	9.4	3.23	60	estimated
4.4-5	SE	NW	SW	18	1S	25E	Yellowstone	4-5	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.963	7.3	2.41	04/15	10/15	9.0	3.08	60	estimated
4.6-7	SW	NE	SW	18	1S	25E	Yellowstone	6-7	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.083	8.2	2.71	04/15	10/15	9.9	3.38	60	estimated
4.8	SW	NE	SW	18	1S	25E	Yellowstone	8	4	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.634	4.8	1.59	04/15	10/15	5.6	1.92	60	estimated
4.9	NW	NE	SW	18	1S	25E	Yellowstone	9	4	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.657	5.0	1.64	04/15	10/15	5.8	1.98	60	estimated
4.10-11	SW	NE	SW	18	1S	25E	Yellowstone	10-11	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.702	5.3	1.76	04/15	10/15	7.0	2.43	60	estimated
4.12-13	SW	NE	SW	18	1S	25E	Yellowstone	12-13	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.702	5.3	1.76	04/15	10/15	7.0	2.43	60	estimated
4.14	SW	NE	SW	18	1S	25E	Yellowstone	14	4	N/A	Maplewood Est.	N/A	GW	pump	no	0.86	0.336	01/01	12/31	0.480	3.6	1.20	04/15	10/15	4.5	1.54	60	estimated
4.15-16	SE	NE	SW	18	1S	25E	Yellowstone	15-16	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.124	8.5	2.81	04/15	10/15	10.2	3.48	60	estimated
4.17-18	SE	NE	SW	18	1S	25E	Yellowstone	17-18	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.054	8.0	2.63	04/15	10/15	9.7	3.31	60	estimated
4.19-20	SE	NE	SW	18	1S	25E	Yellowstone	19-20	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.002	7.6	2.51	04/15	10/15	9.3	3.18	60	estimated
4.21-22	NE	NE	SW	18	1S	25E	Yellowstone	21-22	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.335	10.1	3.34	04/15	10/15	11.8	4.01	60	estimated
4.23-24	SE	NE	SW	18	1S	25E	Yellowstone	23-24	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.892	6.7	2.23	04/15	10/15	8.5	2.90	60	estimated
4.25-26	SE	NE	SW	18	1S	25E	Yellowstone	25-26	4	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.916	6.9	2.29	04/15	10/15	8.6	2.96	60	estimated
4.27-28	SE	NE	SW	18	1S	25E	Yellowstone	27-28	4	N/A	Maplewood Est.	N/A	GW	pump	yes	1.71	0.673	01/01	12/31	1.120	8.5	2.80	04/15	10/15	10.2	3.47	61	measured
5.P3	NE	SE	SW	18	1S	25E	Yellowstone	Park 3	5	N/A	Maplewood Est.	N/A	GW	pump	no	0	0	01/01	12/31	1.136	8.6	2.84	04/15	10/15	8.6	2.84	60	estimated
5.1-2	NE	SE	SW	18	1S	25E	Yellowstone	1-2	5	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	0.921	7.0	2.30	04/15	10/15	8.7	2.98	60	estimated
5.3-4	NE	SE	SW	18	1S	25E	Yellowstone	3-4	5	N/A	Maplewood Est.	N/A	GW	pump	no	1.71	0.673	01/01	12/31	1.069	8.1	2.67	04/15	10/15	9.8	3.34	60	estimated
															Totals:	66	25.9	01/01	12/31	42.356	320	105.9	04/15	10/15	386	131.8		

QUESTION # 9

Follow-up to Question 9 of Form 600 P-A

Places of Use (POU) for Maplewood Estates Subdivision

Lot	Block	Subdivision	Lot Area (Sq. Ft.)	Irrigated Area (Acres)	1/4	1/4	1/4	Sec	Twp	Rge	County
1	1	Maplewood Estates	58,415	1.006	NW	NW	SW	18	1S	25E	Yellowstone
2	1	Maplewood Estates	21,742	0.374	NW	NW	SW	18	1S	25E	Yellowstone
3	1	Maplewood Estates	21,742	0.374	NW	NW	SW	18	1S	25E	Yellowstone
4	1	Maplewood Estates	21,742	0.374	NW	NW	SW	18	1S	25E	Yellowstone
5	1	Maplewood Estates	22,244	0.383	NE	NW	SW	18	1S	25E	Yellowstone
6	1	Maplewood Estates	31,434	0.541	SE	NW	SW	18	1S	25E	Yellowstone
7	1	Maplewood Estates	27,960	0.481	SW	NW	SW	18	1S	25E	Yellowstone
8	1	Maplewood Estates	26,805	0.462	SW	NW	SW	18	1S	25E	Yellowstone
9	1	Maplewood Estates	29,115	0.501	SW	NW	SW	18	1S	25E	Yellowstone
10	1	Maplewood Estates	51,521	0.887	SW	NW	SW	18	1S	25E	Yellowstone
11	1	Maplewood Estates	44,342	0.763	SW	NW	SW	18	1S	25E	Yellowstone
12	1	Maplewood Estates	20,417	0.352	SW	NW	SW	18	1S	25E	Yellowstone
13	1	Maplewood Estates	20,400	0.351	SW	NW	SW	18	1S	25E	Yellowstone
14	1	Maplewood Estates	20,400	0.351	SW	NW	SW	18	1S	25E	Yellowstone
15	1	Maplewood Estates	22,929	0.395	SE	NW	SW	18	1S	25E	Yellowstone
16	1	Maplewood Estates	31,409	0.541	SE	NW	SW	18	1S	25E	Yellowstone
17	1	Maplewood Estates	27,938	0.481	SW	NW	SW	18	1S	25E	Yellowstone
18	1	Maplewood Estates	27,938	0.481	SW	NW	SW	18	1S	25E	Yellowstone
19	1	Maplewood Estates	27,938	0.481	SW	NW	SW	18	1S	25E	Yellowstone
Park 1	1	Maplewood Estates	31,427	0.714	SW	NW	SW	18	1S	25E	Yellowstone
1	2	Maplewood Estates	50,004	0.861	NW	SW	SW	18	1S	25E	Yellowstone
2	2	Maplewood Estates	26,760	0.461	NW	SW	SW	18	1S	25E	Yellowstone
3	2	Maplewood Estates	26,760	0.461	NW	SW	SW	18	1S	25E	Yellowstone
4	2	Maplewood Estates	26,760	0.461	NW	SW	SW	18	1S	25E	Yellowstone
5	2	Maplewood Estates	30,084	0.518	NE	SW	SW	18	1S	25E	Yellowstone
1	3	Maplewood Estates	30,059	0.518	NE	SW	SW	18	1S	25E	Yellowstone
2	3	Maplewood Estates	24,416	0.420	NE	SW	SW	18	1S	25E	Yellowstone
3	3	Maplewood Estates	24,921	0.429	NE	SW	SW	18	1S	25E	Yellowstone
4	3	Maplewood Estates	30,922	0.532	SE	NW	SW	18	1S	25E	Yellowstone
5	3	Maplewood Estates	27,690	0.477	SE	NW	SW	18	1S	25E	Yellowstone
6	3	Maplewood Estates	31,434	0.541	SE	NW	SW	18	1S	25E	Yellowstone
7	3	Maplewood Estates	22,929	0.395	SE	NW	SW	18	1S	25E	Yellowstone
8	3	Maplewood Estates	20,400	0.351	SE	NW	SW	18	1S	25E	Yellowstone
9	3	Maplewood Estates	20,400	0.351	SE	NW	SW	18	1S	25E	Yellowstone
10	3	Maplewood Estates	20,400	0.351	SW	NE	SW	18	1S	25E	Yellowstone
11	3	Maplewood Estates	20,400	0.351	SW	NE	SW	18	1S	25E	Yellowstone
12	3	Maplewood Estates	21,252	0.366	SW	NE	SW	18	1S	25E	Yellowstone
13	3	Maplewood Estates	29,596	0.510	SW	NE	SW	18	1S	25E	Yellowstone
14	3	Maplewood Estates	31,626	0.545	SW	NE	SW	18	1S	25E	Yellowstone

QUESTION # 9 (continued)

15	3	Maplewood Estates	27,960	0.481	SW	NE	SW	18	1S	25E	Yellowstone
16	3	Maplewood Estates	27,668	0.476	SW	NE	SW	18	1S	25E	Yellowstone
17	3	Maplewood Estates	31,036	0.534	SW	NE	SW	18	1S	25E	Yellowstone
18	3	Maplewood Estates	25,195	0.434	NW	SE	SW	18	1S	25E	Yellowstone
19	3	Maplewood Estates	24,368	0.420	NW	SE	SW	18	1S	25E	Yellowstone
20	3	Maplewood Estates	26,738	0.460	NW	SE	SW	18	1S	25E	Yellowstone
21	3	Maplewood Estates	30,493	0.525	NW	SE	SW	18	1S	25E	Yellowstone
Park 2	4	Maplewood Estates	111,460	2.533	NW	NE	SW	18	1S	25E	Yellowstone
1	4	Maplewood Estates	28,328	0.488	NE	NW	SW	18	1S	25E	Yellowstone
2	4	Maplewood Estates	31,434	0.541	SE	NW	SW	18	1S	25E	Yellowstone
3	4	Maplewood Estates	27,960	0.481	SE	NW	SW	18	1S	25E	Yellowstone
4	4	Maplewood Estates	27,960	0.481	SE	NW	SW	18	1S	25E	Yellowstone
5	4	Maplewood Estates	27,960	0.481	SW	NE	SW	18	1S	25E	Yellowstone
6	4	Maplewood Estates	27,960	0.481	SW	NE	SW	18	1S	25E	Yellowstone
7	4	Maplewood Estates	34,945	0.602	SW	NE	SW	18	1S	25E	Yellowstone
8	4	Maplewood Estates	36,829	0.634	NW	NE	SW	18	1S	25E	Yellowstone
9	4	Maplewood Estates	38,164	0.657	NW	NE	SW	18	1S	25E	Yellowstone
10	4	Maplewood Estates	20,400	0.351	SW	NE	SW	18	1S	25E	Yellowstone
11	4	Maplewood Estates	20,400	0.351	SW	NE	SW	18	1S	25E	Yellowstone
12	4	Maplewood Estates	20,400	0.351	SW	NE	SW	18	1S	25E	Yellowstone
13	4	Maplewood Estates	20,400	0.351	SW	NE	SW	18	1S	25E	Yellowstone
14	4	Maplewood Estates	27,890	0.480	SW	NE	SW	18	1S	25E	Yellowstone
15	4	Maplewood Estates	34,662	0.597	SE	NE	SW	18	1S	25E	Yellowstone
16	4	Maplewood Estates	30,600	0.527	SE	NE	SW	18	1S	25E	Yellowstone
17	4	Maplewood Estates	30,600	0.527	SE	NE	SW	18	1S	25E	Yellowstone
18	4	Maplewood Estates	30,600	0.527	SE	NE	SW	18	1S	25E	Yellowstone
19	4	Maplewood Estates	25,500	0.439	SE	NE	SW	18	1S	25E	Yellowstone
20	4	Maplewood Estates	32,717	0.563	NE	NE	SW	18	1S	25E	Yellowstone
21	4	Maplewood Estates	40,509	0.697	NE	NE	SW	18	1S	25E	Yellowstone
22	4	Maplewood Estates	37,004	0.637	NE	NE	SW	18	1S	25E	Yellowstone
23	4	Maplewood Estates	24,498	0.422	NE	NE	SW	18	1S	25E	Yellowstone
24	4	Maplewood Estates	27,309	0.470	SE	NE	SW	18	1S	25E	Yellowstone
25	4	Maplewood Estates	20,126	0.347	SE	NE	SW	18	1S	25E	Yellowstone
26	4	Maplewood Estates	33,078	0.570	SE	NE	SW	18	1S	25E	Yellowstone
27	4	Maplewood Estates	33,068	0.569	SE	NE	SW	18	1S	25E	Yellowstone
28	4	Maplewood Estates	31,953	0.550	SE	NE	SW	18	1S	25E	Yellowstone
Park 3	5	Maplewood Estates	49,976	1.136	NE	SE	SW	18	1S	25E	Yellowstone
1	5	Maplewood Estates	26,760	0.461	NE	SE	SW	18	1S	25E	Yellowstone
2	5	Maplewood Estates	26,760	0.461	NE	SE	SW	18	1S	25E	Yellowstone
3	5	Maplewood Estates	31,901	0.549	NE	SE	SW	18	1S	25E	Yellowstone
4	5	Maplewood Estates	30,159	0.519	NW	SE	SW	18	1S	25E	Yellowstone

Total Irrigated Area (Acres): 42.357

QUESTION # 32

(also ATA.2.c)

DNRC/DEQ Form No. 633 Revised 5/2024

Grey Cells Require User Input

Form No. 633 Aquifer Test Data

Water-Right Applicant:	Regal Land Development, c/o Dan Wells				DNRC Application #:	43Q-30171432	DEQ Application #:	
Applicant Address:	5847 Whisperingwoods Drive, Billings, MT 59106				County:	Yellowstone		
Test Site Location:	NE 1/4	SW 1/4	Section:	18	Township (#, N/S):	1S	Range (#, E/W):	25E
Date(s) Aquifer Test Conducted (MM/YY - MM/YY):	03/25 - 04/25			Test Type:		Constant Rate		
Person(s) Conducting Test:	Philip Botch			Company Conducting Test:		Aaqua Drilling / Agri Industries		
Production Well ID:	POD 4.27-28			Pumping Rates (gpm):		220 GPM		
Production Well GWIC ID:	335804	Depth (feet):	61	Diameter (inches):	8	Perf. Zone(s):	46.5 - 56.5 FEET	
Production Well GPS Coordinates:	Latitude:	45.7449	Longitude:	-108.690317	Datum	WGS84		
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)**
		Latitude	**Longitude**	**(feet)**	**(inches)**			
NA (variance requested)								

Specify Water-Level Monitoring Equipment:	Electronic pressure transducer/data logger	Vented Logger:	YES
Specify Monitoring Equipment Model:	In-Situ Level TROLL 700 Data Logger		

Production Well Water-Level Data

Static Water Level (swl) to 0.01 ft:	16.49
Date/Time (MM/DD/YY HH:MM) Measured:	3/31/25 9:57 AM
How swl Measured:	Data Logger
Measurement Point (MP) ID:	Top of Well
MP elevation (feet):	3303.0
How MP Measured:	Survey GPS

Aquifer Test Time Data

Pumping Start Date/Time (MM/DD/YY HH:MM)	3/31/25 9:57
Pumping End Date/Time (MM/DD/YY HH:MM)	4/3/25 10:52
Recovery End Date/Time (MM/DD/YY HH:MM)	4/5/25 13:53

Aquifer-Test Duration:	
Pumping (HH:MM)	72:55
Recovery (HH:MM)	51:01
Pumping (total minutes)	4375
Recovery (total minutes)	3061

Discharge Information

Specify method of discharge conveyance, distance and direction of the discharge point from the pumping well:

Water from pump discharge was conveyed 200 feet southeast of the well via 4.5" diameter PVC pipe where it flowed into a drainage ditch conveying it south along 68th Street West.

Specify Discharge Measurement Equipment:

McCrometer 4" propeller style flow meter, 20 inches in length.

Notes:

QUESTION # 32 (continued)

Background Water Levels					
Production Well			Observation Well 1		
Date/Time (MM/DD/YY HH:MM)	Elapsed time (minutes)	Depth to water from MP (to 0.01 foot)	Date/Time (MM/DD/YY HH:MM)	Elapsed time (minutes)	Depth to water from MP (to 0.01 foot)
3/29/25 9:57 AM	0	16.52			
3/29/25 10:57 AM	60	16.54			
3/29/25 11:57 AM	120	16.49			
3/29/25 12:57 PM	180	16.48			
3/29/25 1:57 PM	240	16.48			
3/29/25 2:57 PM	300	16.47			
3/29/25 3:57 PM	360	16.52			
3/29/25 4:57 PM	420	16.49			
3/29/25 5:57 PM	480	16.42			
3/29/25 6:57 PM	540	16.48			
3/29/25 7:57 PM	600	16.45			
3/29/25 8:57 PM	660	16.52			
3/29/25 9:57 PM	720	16.52			
3/29/25 10:57 PM	780	16.46			
3/29/25 11:57 PM	840	16.51			
3/30/25 12:57 AM	900	16.54			
3/30/25 1:57 AM	960	16.47			
3/30/25 2:57 AM	1020	16.51			
3/30/25 3:57 AM	1080	16.52			
3/30/25 4:57 AM	1140	16.47			
3/30/25 5:57 AM	1200	16.49			
3/30/25 6:57 AM	1260	16.50			
3/30/25 7:57 AM	1320	16.45			
3/30/25 8:57 AM	1380	16.41			
3/30/25 9:57 AM	1440	16.50			
3/30/25 10:57 AM	1500	16.45			
3/30/25 11:57 AM	1560	16.49			
3/30/25 12:57 PM	1620	16.49			
3/30/25 1:57 PM	1680	16.52			
3/30/25 2:57 PM	1740	16.48			
3/30/25 3:57 PM	1800	16.45			
3/30/25 4:57 PM	1860	16.47			
3/30/25 5:57 PM	1920	16.53			
3/30/25 6:57 PM	1980	16.45			
3/30/25 7:57 PM	2040	16.56			
3/30/25 8:57 PM	2100	16.51			
3/30/25 9:57 PM	2160	16.45			
3/30/25 10:57 PM	2220	16.49			
3/30/25 11:57 PM	2280	16.46			
3/31/25 12:57 AM	2340	16.51			
3/31/25 1:57 AM	2400	16.47			
3/31/25 2:57 AM	2460	16.46			
3/31/25 3:57 AM	2520	16.46			
3/31/25 4:57 AM	2580	16.51			
3/31/25 5:57 AM	2640	16.44			
3/31/25 6:57 AM	2700	16.48			
3/31/25 7:57 AM	2760	16.52			
3/31/25 8:57 AM	2820	16.52			
3/31/25 9:57 AM	2880	16.49			

QUESTION # 32 (continued)

		Measured Discharge		
		Aquifer Test Discharge Data		
Date/Time (MM/DD/YY HH:MM)	Elapsed time (minutes)	Measured discharge (gallons per minute)	Deviation from average measured discharge (percent)*	Totalizer Readings (gallons)
3/31/25 9:57 AM	0	220	0.0%	
3/31/25 10:00 AM	3	220	0.0%	
3/31/25 10:05 AM	8	220	0.0%	
3/31/25 10:10 AM	13	220	0.0%	
3/31/25 10:15 AM	18	220	0.0%	
3/31/25 10:30 AM	33	220	0.0%	
3/31/25 10:45 AM	48	220	0.0%	
3/31/25 11:00 AM	63	220	0.0%	
3/31/25 11:15 AM	78	220	0.0%	
3/31/25 11:30 AM	93	220	0.0%	
3/31/25 11:45 AM	108	220	0.0%	
3/31/25 12:00 PM	123	220	0.0%	
3/31/25 12:15 PM	138	220	0.0%	
3/31/25 12:30 PM	153	220	0.0%	
3/31/25 12:45 PM	168	220	0.0%	
3/31/25 1:00 PM	183	220	0.0%	
3/31/25 2:00 PM	243	220	0.0%	
3/31/25 3:00 PM	303	220	0.0%	
3/31/25 4:00 PM	363	220	0.0%	
3/31/25 5:00 PM	423	220	0.0%	
3/31/25 6:00 PM	483	220	0.0%	
3/31/25 7:00 PM	543	220	0.0%	
3/31/25 8:00 PM	603	220	0.0%	
3/31/25 9:00 PM	663	220	0.0%	
3/31/25 10:00 PM	723	220	0.0%	
3/31/25 11:00 PM	783	220	0.0%	
4/1/25 12:00 AM	843	220	0.0%	
4/1/25 1:00 AM	903	220	0.0%	
4/1/25 2:00 AM	963	220	0.0%	
4/1/25 3:00 AM	1023	220	0.0%	
4/1/25 4:00 AM	1083	220	0.0%	
4/1/25 5:00 AM	1143	220	0.0%	
4/1/25 6:00 AM	1203	220	0.0%	
4/1/25 7:00 AM	1263	220	0.0%	
4/1/25 8:00 AM	1323	220	0.0%	
4/1/25 9:00 AM	1383	220	0.0%	
4/1/25 10:00 AM	1443	220	0.0%	
4/1/25 1:00 PM	1623	220	0.0%	
4/1/25 4:00 PM	1803	220	0.0%	
4/1/25 7:00 PM	1983	220	0.0%	
4/1/25 10:00 PM	2163	220	0.0%	
4/2/25 1:00 AM	2343	220	0.0%	
4/2/25 4:00 AM	2523	220	0.0%	
4/2/25 7:00 AM	2703	220	0.0%	
4/2/25 10:00 AM	2883	220	0.0%	
4/2/25 1:00 PM	3063	220	0.0%	
4/2/25 4:00 PM	3243	220	0.0%	
4/2/25 7:00 PM	3423	220	0.0%	
4/2/25 10:00 PM	3603	220	0.0%	
4/3/25 1:00 AM	3783	220	0.0%	
4/3/25 4:00 AM	3963	220	0.0%	
4/3/25 7:00 AM	4143	220	0.0%	
4/3/25 10:00 AM	4323	220	0.0%	
4/3/25 10:52 AM	4375			

QUESTION # 32 (continued)

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)	Depth to water from MP (to 0.01 foot)	Drawdown (to 0.01 foot)*	Test Comments
3/31/25 9:57 AM	30 seconds	0.5	23.81	7.31	Pump on at 9:57:05 AM (this entry is 9:57:35 AM)
3/31/25 9:58 AM		1	26.08	9.58	
3/31/25 9:58 AM		1.5	26.65	10.16	
3/31/25 9:59 AM		2	26.92	10.42	
3/31/25 9:59 AM		2.5	27.07	10.58	
3/31/25 10:00 AM		3	27.14	10.65	
3/31/25 10:00 AM		3.5	27.22	10.73	
3/31/25 10:01 AM		4	27.27	10.78	
3/31/25 10:01 AM		4.5	27.31	10.82	
3/31/25 10:02 AM		5	27.34	10.84	
3/31/25 10:02 AM		5.5	27.36	10.87	
3/31/25 10:03 AM		6	27.39	10.89	
3/31/25 10:03 AM		6.5	27.40	10.91	
3/31/25 10:04 AM		7	27.39	10.90	
3/31/25 10:04 AM		7.5	27.43	10.94	
3/31/25 10:05 AM		8	27.46	10.97	
3/31/25 10:05 AM		8.5	27.46	10.97	
3/31/25 10:06 AM		9	27.51	11.02	
3/31/25 10:06 AM		9.5	27.51	11.02	
3/31/25 10:07 AM	2 minutes	10	27.50	11.01	
3/31/25 10:09 AM		12	27.54	11.04	
3/31/25 10:11 AM		14	27.58	11.09	
3/31/25 10:13 AM		16	27.67	11.18	
3/31/25 10:15 AM		18	27.64	11.15	
3/31/25 10:17 AM	5 minutes	20	27.66	11.17	
3/31/25 10:22 AM		25	27.71	11.22	
3/31/25 10:27 AM		30	27.76	11.27	
3/31/25 10:32 AM		35	27.78	11.29	
3/31/25 10:37 AM		40	27.81	11.32	
3/31/25 10:42 AM		45	27.83	11.34	
3/31/25 10:47 AM		50	27.90	11.40	
3/31/25 10:52 AM		55	27.95	11.46	
3/31/25 10:57 AM	10 minutes	60	27.96	11.47	
3/31/25 11:07 AM		70	28.01	11.52	
3/31/25 11:17 AM		80	27.98	11.49	
3/31/25 11:27 AM		90	28.00	11.50	
3/31/25 11:37 AM		100	28.16	11.67	
3/31/25 11:47 AM		110	28.14	11.65	
3/31/25 11:57 AM	20 minutes	120	28.10	11.61	
3/31/25 12:17 PM		140	28.15	11.66	
3/31/25 12:37 PM		160	28.23	11.74	
3/31/25 12:57 PM	30 minutes	180	28.28	11.79	
3/31/25 1:27 PM		210	28.31	11.82	
3/31/25 1:57 PM		240	28.38	11.89	
3/31/25 2:27 PM		270	28.43	11.93	
3/31/25 2:57 PM	1 hour	300	28.49	12.00	
3/31/25 3:57 PM		360	28.53	12.04	
3/31/25 4:57 PM		420	28.58	12.09	
3/31/25 5:57 PM		480	28.67	12.18	(8 hours of pumping)
3/31/25 6:57 PM		540	28.71	12.22	
3/31/25 7:57 PM		600	28.83	12.34	
3/31/25 8:57 PM		660	28.8728	12.38	
3/31/25 9:57 PM		720	28.91	12.41	
3/31/25 10:57 PM		780	28.95	12.45	
3/31/25 11:57 PM		840	28.93	12.44	
4/1/25 12:57 AM		900	29.01	12.52	
4/1/25 1:57 AM		960	29.16	12.66	
4/1/25 2:57 AM		1020	29.13	12.63	
4/1/25 3:57 AM		1080	29.10	12.61	
4/1/25 4:57 AM		1140	29.16	12.67	
4/1/25 5:57 AM		1200	29.23	12.73	
4/1/25 6:57 AM		1260	29.24	12.75	
4/1/25 7:57 AM		1320	29.28	12.79	
4/1/25 8:57 AM		1380	29.33	12.84	
4/1/25 9:57 AM	3 hours	1440	29.33	12.84	(24 hours of pumping)
4/1/25 12:57 PM		1620	29.40	12.91	
4/1/25 3:57 PM		1800	29.46	12.97	
4/1/25 6:57 PM		1980	29.58	13.09	
4/1/25 9:57 PM		2160	29.68	13.19	
4/2/25 12:57 AM		2340	29.80	13.30	
4/2/25 3:57 AM		2520	29.86	13.37	
4/2/25 6:57 AM		2700	29.92	13.42	
4/2/25 9:57 AM		2880	30.01	13.51	(48 hours of pumping)
4/2/25 12:57 PM		3060	30.06	13.57	
4/2/25 3:57 PM		3240	30.21	13.71	
4/2/25 6:57 PM		3420	30.24	13.75	
4/2/25 9:57 PM		3600	30.32	13.82	
4/3/25 12:57 AM		3780	30.37	13.88	
4/3/25 3:57 AM		3960	30.45	13.96	
4/3/25 6:57 AM		4140	30.49	13.99	
4/3/25 9:57 AM		4320	30.49	14.00	(72 hours of pumping)
4/3/25 10:52 AM		4375	30.53	14.04	(Pump off at 10:52:56 AM)

QUESTION # 32 (continued)

Recovery Phase of Aquifer Test — Grey Cells Require User Input

Date/Time (MM/DD/YY HH:MM)	Time Increment	Elapsed time (t) since pumping start (minutes)	Elapsed time (t') since pumping end (minutes)	Depth to water from MP (to 0.01 foot)	Residual drawdown (to 0.01 foot)*	Test comments
4/3/25 10:53 AM	30 seconds	4375.5	0.5	18.77	2.28	Pump off at 10:52:56 AM (this entry is 10:53:26 AM)
4/3/25 10:54 AM		4376	1	18.64	2.15	
4/3/25 10:54 AM		4376.5	1.5	19.92	3.43	
4/3/25 10:55 AM		4377	2	19.98	3.48	
4/3/25 10:55 AM		4377.5	2.5	19.94	3.45	
4/3/25 10:56 AM		4378	3	19.93	3.44	
4/3/25 10:56 AM		4378.5	3.5	19.90	3.41	
4/3/25 10:57 AM		4379	4	19.87	3.38	
4/3/25 10:57 AM		4379.5	4.5	19.84	3.35	
4/3/25 10:58 AM		4380	5	19.82	3.33	
4/3/25 10:58 AM		4380.5	5.5	19.81	3.32	
4/3/25 10:59 AM		4381	6	19.76	3.27	
4/3/25 10:59 AM		4381.5	6.5	19.74	3.25	
4/3/25 11:00 AM		4382	7	19.72	3.23	
4/3/25 11:00 AM		4382.5	7.5	19.71	3.22	
4/3/25 11:01 AM		4383	8	19.68	3.19	
4/3/25 11:01 AM		4383.5	8.5	19.66	3.17	
4/3/25 11:02 AM		4384	9	19.67	3.18	
4/3/25 11:02 AM		4384.5	9.5	19.66	3.17	
4/3/25 11:03 AM	2 minutes	4385	10	19.68	3.19	
4/3/25 11:05 AM		4387	12	19.61	3.12	
4/3/25 11:07 AM		4389	14	19.56	3.07	
4/3/25 11:09 AM		4391	16	19.52	3.03	
4/3/25 11:11 AM		4393	18	19.51	3.02	
4/3/25 11:13 AM	5 minutes	4395	20	19.43	2.94	
4/3/25 11:18 AM		4400	25	19.35	2.86	
4/3/25 11:23 AM		4405	30	19.23	2.74	
4/3/25 11:28 AM		4410	35	19.26	2.77	
4/3/25 11:33 AM		4415	40	19.23	2.74	
4/3/25 11:38 AM		4420	45	19.20	2.70	
4/3/25 11:43 AM		4425	50	19.19	2.70	
4/3/25 11:48 AM		4430	55	19.15	2.66	
4/3/25 11:53 AM	10 minutes	4435	60	19.15	2.66	
4/3/25 12:03 PM		4445	70	19.11	2.62	
4/3/25 12:13 PM		4455	80	19.09	2.60	
4/3/25 12:23 PM		4465	90	19.06	2.57	
4/3/25 12:33 PM		4475	100	18.98	2.49	
4/3/25 12:43 PM		4485	110	18.98	2.49	
4/3/25 12:53 PM	20 minutes	4495	120	18.96	2.46	
4/3/25 1:13 PM		4515	140	18.89	2.40	
4/3/25 1:33 PM		4535	160	18.88	2.39	
4/3/25 1:53 PM	30 minutes	4555	180	18.85	2.36	
4/3/25 2:23 PM		4585	210	18.80	2.31	
4/3/25 2:53 PM		4615	240	18.79	2.29	
4/3/25 3:23 PM		4645	270	18.70	2.20	
4/3/25 3:53 PM	1 hour	4675	300	18.63	2.14	
4/3/25 4:53 PM		4735	360	18.61	2.12	
4/3/25 5:53 PM		4795	420	18.50	2.01	
4/3/25 6:53 PM		4855	480	18.44	1.95	
4/3/25 7:53 PM		4915	540	18.38	1.89	
4/3/25 8:53 PM		4975	600	18.32	1.83	
4/3/25 9:53 PM		5035	660	18.26	1.77	
4/3/25 10:53 PM		5095	720	18.24	1.75	
4/3/25 11:53 PM		5155	780	18.17	1.67	
4/4/25 12:53 AM		5215	840	18.15	1.66	
4/4/25 1:53 AM		5275	900	18.12	1.62	
4/4/25 2:53 AM		5335	960	18.06	1.57	
4/4/25 3:53 AM		5395	1020	18.01	1.52	
4/4/25 4:53 AM		5455	1080	18.02	1.53	
4/4/25 5:53 AM		5515	1140	17.96	1.47	
4/4/25 6:53 AM		5575	1200	17.91	1.42	
4/4/25 7:53 AM		5635	1260	17.86	1.37	
4/4/25 8:53 AM		5695	1320	17.84	1.35	
4/4/25 9:53 AM		5755	1380	17.84	1.35	
4/4/25 10:53 AM	3 hours	5815	1440	17.83	1.34	
4/4/25 1:53 PM		5995	1620	17.72	1.23	
4/4/25 4:53 PM		6175	1800	17.65	1.16	
4/4/25 7:53 PM		6355	1980	17.57	1.08	
4/4/25 10:53 PM		6535	2160	17.55	1.06	
4/5/25 1:53 AM		6715	2340	17.42	0.93	
4/5/25 4:53 AM		6895	2520	17.44	0.95	
4/5/25 7:53 AM		7075	2700	17.37	0.88	
4/5/25 10:53 AM		7255	2880	17.33	0.84	
4/5/25 1:53 PM		7435	3060	17.25	0.75	Recovery to within 95% of swl at 51 hours after pump shutoff
4/5/25 4:53 PM		7615	3240	17.21	0.72	
4/5/25 7:53 PM		7795	3420	17.19	0.69	
4/5/25 10:53 PM		7975	3600	17.19	0.70	
4/6/25 1:53 AM		8155	3780	17.14	0.65	
4/6/25 4:53 AM		8335	3960	17.12	0.63	
4/6/25 7:53 AM		8515	4140	17.06	0.56	
4/6/25 10:53 AM		8695	4320	17.02	0.53	72 hours after pump shutoff

QUESTION # 33

Form No. 600/606-ATA *(02/2025)* **Applicant Name**

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 ☐ 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 ☐ Provide a map with labeled location of production and observation wells.

ATA.2.b ☐ Provide well logs of production and observation wells.

ATA.2.c ☐ Provide Form No. 633, in electronic format, with all information and data provided.

ATA.2.d ☐ 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 ☒ 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 ☐ 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. Proposed flow rate is for multiple wells and cannot be reasonably obtained from one well (see Variance that was granted)

ATA.3.c YES ☐ NO ☐ NA ☒ 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. (see Variance that was granted)

ATA.3.d YES ☒ 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.

QUESTION # 33 (continued)

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. Variance granted to allow 8-hr tests after provisional permit and prior to project completion until proposed peak flow rate is reached.

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. Variance granted to waive the requirement of an 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. For production well, yes. Variance granted to waive the requirement of an observation well.

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). For production well, yes. Variance granted to waive the requirement of an observation well.

MONTANA WELL LOG REPORT

This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is compiled electronically from the contents of the Ground Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.

Other Options

Go to GWIC website
Plot this site in State Library Digital Atlas
Plot this site in Google Maps

Site Name: REGAL LAND DEVELOPMENT
GWIC Id: 335804

Section 1: Well Owner(s)

1) REGAL LAND DEVELOPMENT (MAIL)
5847 WHISPERING WOODS DRIVE
BILLINGS MT 59106 [03/12/2025]
2) REGAL LAND DEVELOPMENT (WELL)
7001 HESPER ROAD
BILLINGS MT 59106 [03/12/2025]

Section 2: Location

Township	Range	Section	Quarter Sections
01S	25E	18	SE¼ NE¼ SW¼

County	Geocode
YELLOWSTONE	03-0926-18-3-01-01-0000

Latitude	Longitude	Geomethod	Datum
45.7449	-108.690317	NAV-GPS	WGS84

Ground Surface Altitude	Ground Surface Method	Datum	Date

Addition	Block	Lot

Section 3: Proposed Use of Water

PUBLIC WATER SUPPLY (1)

Section 4: Type of Work

Drilling Method: ROTARY
Status: NEW WELL

Section 5: Well Completion Date

Date well completed: Wednesday, March 12, 2025

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	25	12.3
25	56.5	9.9
56.5	61	7.6

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2	47	8	0.25		WELDED	A53B STEEL
56.5	61	6	0.25		WELDED	A53B STEEL

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
46.5	56.5	8		.50TH SLOTS	SCREEN-CONTINUOUS-STAINLESS

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	25	BENTONTIE	

Section 7: Well Test Data

Total Depth: 61
Static Water Level: 16.5
Water Temperature:

Air Test *

300 gpm with drill stem set at 61 feet for 6 hours.
Time of recovery 0.08 hours.
Recovery water level 16.5 feet.
Pumping water level _ feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log

Geologic Source

Unassigned

From	To	Description
0	3	TAN/TOPSOIL/SOFT
3	16	TAN/SANDY LOAM/SOFT
16	35	TAN/SILT/SOFT
35	56.5	TAN/GRAVEL/MEDIUM
56.5	61	DARK/SHALE/MEDIUM

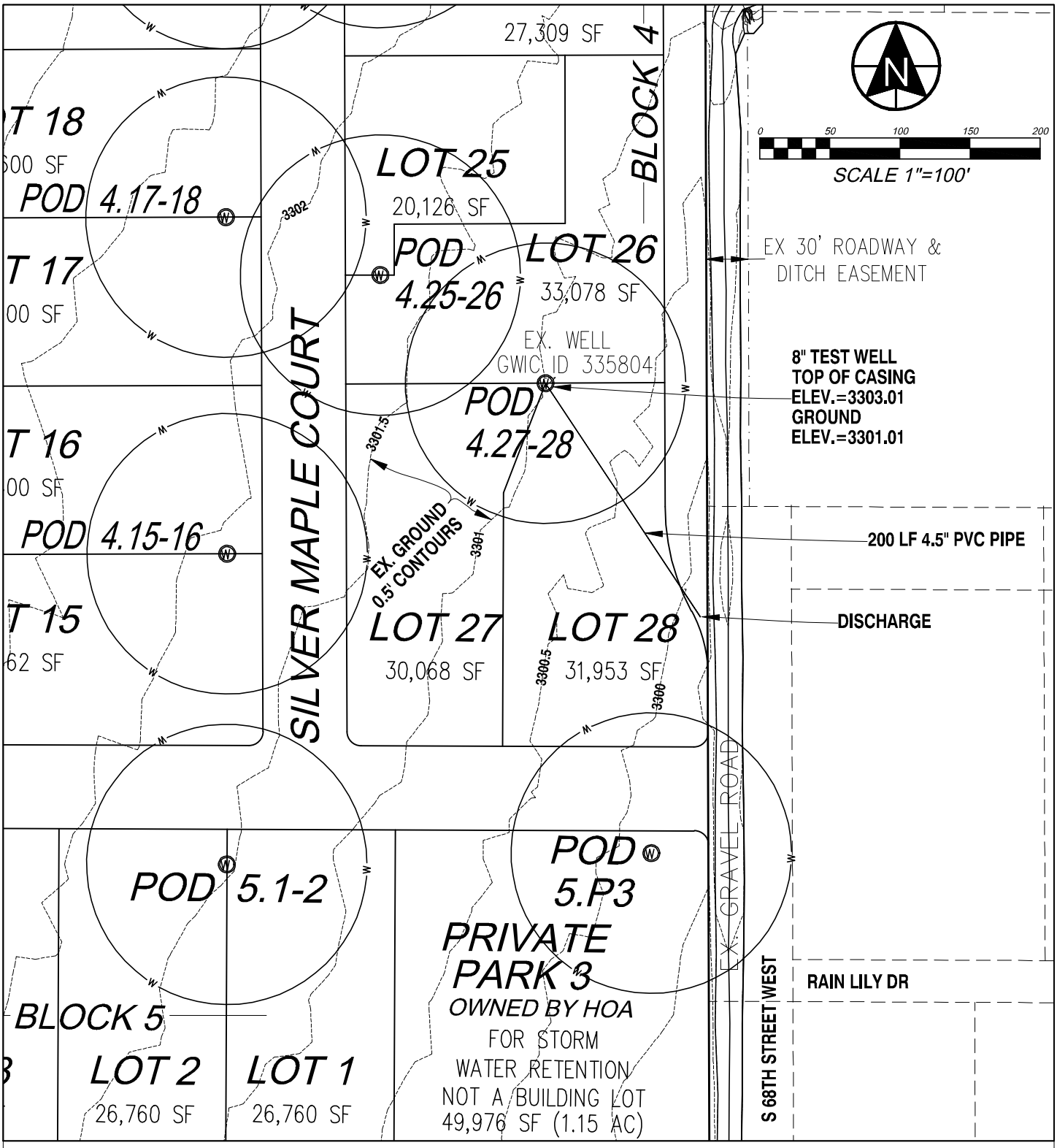
Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: PAUL STEINMETZ
Company: AAQUA DRILLING INC
License No: WWC-542
Date Completed: 3/12/2025

QUESTION # 33 (continued)

ATA.2.a



MAPLEWOOD ESTATES SUBDIVISION

72-HOUR PUMPING TEST SITE MAP FOR FORM 600-ATA

QUESTION # 33 (continued)

ATA.2.d

DESCRIPTION OF TESTING METHOD

The total peak flow rate for Maplewood Estates Subdivision is 386 gpm. Water for domestic and lawn and irrigation uses is to be provided by way of individual and shared wells, totaling 46 points of diversion. Thus, the average peak flow rate for each well is 8.4 gpm. The following describes the pumping test that was performed: the pumping rate for the aquifer test performed was 220 gpm. This is over half of the overall peak flow rate for the development and 26 times the peak flow rate for any given well. Because the overall peak flow rate is greater than 150 gpm and the annual volume is greater than 50 acre-feet, a 72-hour pumping test was done. No observation well was used as this has been requested to be waived by variance. All other requirements of ARM 36.12.121 were satisfied. The total depth of the well is 61 feet. The static water level was 16.49 feet below the top of casing or 14.49 feet below the ground surface. The drawdown for the 72-hour test was 14.04 feet, leaving an available water column of 32.47 feet, and the aquifer recovered in 51 hours. This test demonstrates both the adequacy of the groundwater supply and the adequacy of diversion of the proposed shared and individual wells of the subdivision, which will have an average flow rate of 8.4 gpm each, far less than that of the pumping test performed.

QUESTION 34.a

VARIANCE REQUEST

ARM 36.12.123

Form No. 653 *(Revised 08/2025)*

For Department Use Only

Application # _____ Basin _____

Received Date _____

Received By _____

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.

Applicant Name Regal Land Development, Inc. c/o Dan Wells (358029)

Mailing Address 5847 Whisperingwoods Drive

City Billings State MT Zip 59106

Home Phone 406-672-3390 Other Phone _____

Email: dan@wellsbuilt.com

Representative Name (if other than Applicant) In Site Engineering, PC c/o Scott Worthington (367933)

☒ Representative is Consultant ☐ Representative is Attorney ☐ Representative is Other (describe) _____

Mailing Address 4231 Creekwood Drive

City Billings State MT Zip 59106

Home Phone 406-591-4355 Other Phone _____

Email: siteproscott@gmail.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

QUESTION 34.a (continued)

For each variance requested explain why the requirement was not met and why testing data are still usable and reliable. If applicable, specify alternative testing methodology or aquifer test data, to support your request. Add attachments if needed.

Because the project area is within the boundaries of the Yellowstone River Terrace Level 3 Aquifer, one can request a variance from the exact aquifer testing requirements of ARM 36.12.121. The total peak flow rate for the subdivision is 386 gpm. Water for domestic use and for lawn and garden irrigation use is to be provided by way of mostly shared wells with a few individual wells, totaling 46 points of diversion. Thus, the average peak flow rate for each well is 8.4 gpm. The following describes the pumping test that was performed, and a variance is requested for the requirement of having an observation well: The pumping rate for the aquifer test was 220 gpm. This is over half of the overall peak flow rate for the development and 26 times the average flow rate for any given well. Because the overall peak flow rate is greater than 150 gpm and the annual volume is greater than 50 acre-feet, a 72 hour pumping test was done. The total depth of the test well is 61 feet. The static water level prior to pumping was 16.49 feet below the measuring point (top of casing) or 14.49 feet below the ground surface. The maximum drawdown during the 72-hour test was 14.04 feet, leaving an available water column of 32.47 feet. Recovery was reached 51 hours after pump shutoff. No observation well was used, so it is requested that this deviation be granted by variance. All other requirements of ARM 36.12.121 for which a variance is not requested were satisfied. It is proposed that the aquifer properties of the DNRC's Yellowstone River Terrace Level 3 Memo be used for modeling and technical analysis.

☐ ARM 36.12.1702 Physical Surface Water Availability
- ☐ (1)(b) at a minimum, three measurements that reflect high, moderate, and low flows during the period of diversion
- ☐ (4) once monthly measurements at department-approved intervals during the proposed period of diversion

Explain the specific variance you are requesting and the reason for requesting it. Also identify your proposed alternative measurement methodology, if applicable. Attach additional sheets if necessary.

The specific variances requested are to 1) Waive the requirement of an observation well; and, 2) Allow the pumping test performed as described herein and reported on Form 633 submitted herewith to suffice in completing the aquifer testing requirements of this application so that the technical analysis can be performed by the DNRC. The pumping test was indicative of favorable supply and adequacy of diversion. It is understood that additional 8-hour drawdown tests are required to be submitted to the DNRC until the overall peak flow rate of 386 gpm for the subdivision is reached, but it is proposed that this be allowed by variance as a condition of the provisional permit.

DNRC Water Resources
Billings Regional Office
1371 Rimtop Dr.
Billings, MT 59105-1978

October 6, 2025

Regal Land Development Inc
% Dan Wells
Po Box 80445
Billings, MT 59108

Subject: Variance Request Dated September 18, 2025 – 43Q 30171432

The Department of Natural Resources and Conservation (Department or DNRC) has reviewed the September 18, 2025, request for a variance from the Aquifer Testing Requirements under ARM 36.12.121.

Variances requested from the Aquifer Testing Requirements found in ARM 36.12.121 are as follows:

- (c) 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).
- (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 acre-feet, or 72 hours for a proposed pumping rate and volume greater than 150 GPM or 50 acre-feet.
    - (i) At a minimum, an eight-hour drawdown and yield test is required on all new production wells.
    - (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.
    - (iii) The testing procedures for a minimum eight-hour drawdown and yield test performed on any production well must follow (a), (d), and (h).
- (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.
- (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 Form No. 633.

The proposed project is within the boundaries of the Yellowstone River Terrace Level 3 Aquifer Properties as discussed in the March 1, 2022, Technical Memorandum (Aquifer Properties Memo). The provided 72-hour aquifer test submitted on Form 633 is sufficient for the Department to

evaluate adequacy of diversion under ARM 36.12.121(3)(c), and in conjunction with the aquifer properties discussed in the Aquifer Properties Memo, is sufficient for the Department to evaluate the aquifer properties and forward modeling.

However, the Department will require 8-hour drawdown and yield tests to be completed on all production wells until the proposed flow rate is met. The average pumping rate during the 72-hour test was 220 GPM. The proposed flow rate is 386 GPM. These 8-hour drawdown and yield tests may be conducted at any time prior to project completion.

Therefore, the Department **grants** the September 18, 2025, variance request.

As a reminder, a variance request approval does not mean that the Department can grant a water right. All criteria for the issuance of a water right must still be met before it can be granted.

If you have any questions, please call me anytime.

Sincerely,

Kathy Olsen | Regional Operations Manager
Water Resources Division
1424 9th Ave | Helena MT 59601
DESK: 406-444-0022 EMAIL: kolsen@mt.gov

cc: In Site Engineering, P.C. c/o Scott Worthington

PREAPPLICATION MEETING FORM: PART A
PERMIT

§ 85-2-302, MCA
Form No. 600P-A *(Revised 03/2025)*

For Department Use Only

Application # 30171432 Basin # 43Q
Meeting Date 7/23/2025 Time 13:00
Variance Request Deadline December 8, 2025
Completed Form Deadline January 19, 2026

PREAPPLICATION MEETING FEE

$ 500

FILING FEE REDUCTION & EXPEDITED TIMELINE

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)).

The Department will fill out Permit Preapplication Meeting Form Part A (Form 600P-A) and will identify items for follow-up during the preapplication meeting. The Department and Applicant will sign the Preapplication Meeting Affidavit and Certification within 10 business days. Within 180 days of the preapplication meeting, the Applicant will complete Preapplication Meeting Form Part B (Form 600P-B), including identified follow-up, any amended responses, and Follow-up and Amended Responses Affidavit & Certification. Variance requests must be submitted on Form 653 to the Department on or before the Variance Request Deadline, which is day 138 of the 180 day-deadline for a completed preapplication meeting form. Form 653 may be submitted earlier than the Variance Request Deadline. The Department has 30 business days to process the Form 653.

Applicant Information: *Add more as necessary.*

Applicant Name Regal Land Development Inc c/o Dan Wells (358029)
Mailing Address 5847 Whispering Woods Dr City Billings State MT Zip 59106
Phone Numbers: Home 406-672-3390 Work _____ Cell _____
Email Address dan@wellsbuilt.com

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 (describe) _____
Contact/Representative Name In Site Engineering, PC c/o Scott Worthington, PE (367933)
Mailing Address 4231 Creekwood Dr City Billings State MT Zip 59106
Phone Numbers: Home 406-591-4355 Work _____ Cell _____
Email Address siteproscott@gmail.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 applicant will receive all correspondences, and a copy may be sent to the contact person (ARM 36.12.122(3)).*

Meeting Attendees: *Add more as necessary.*

Name	Role	Name	Role
Scott Worthington	Consultant	Heath Geil-Haggerty	DNRC
Chris Schweigert	DNRC		
Veronica Corbett	DNRC		
Cassey Strebeck	DNRC		
Dave Parmalee	DNRC		

Table of Contents

APPLICATION DETAILS

The following questions are mandatory and must be filled out before the Preapplication Meeting Form is determined to be complete. Narrative responses that are larger than the space provided can be answered in an attachment. If an attachment is used, mark the see attachment ("A") checkbox 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 the see attachment ("A") checkbox must be marked. Label units in narrative responses and tables. Questions that require Applicant to submit items to the Department have a submitted ("S") checkbox, which is marked when the required item is attached to the Preapplication Meeting Form. Label all submitted items with the question number for which they were submitted. For all questions where follow-up is necessary, mark the "F" checkbox in the "Follow-Up" column and write the question number on the "Follow-Up Page".

S = Submitted. *Use when required item is included with form.*

A = See attachment. *Use when additional space is needed to answer a question.*

F = Follow-up. *Use when follow-up is necessary.*

Questions, Narrative Responses, and Tables	**Check-boxes**	**Follow-up**
1. Do you elect to have DNRC conduct Technical Analyses?	■ Y ☐ N	☐ F
2. Provide a map created on an aerial photograph or topographic map that shows the following: section corners, township and range, scale bar, north arrow, all proposed points of diversion labeled with a unique POD ID number (include GWIC ID, if available, for wells), all proposed places of use, all proposed conveyance structures (including ditches and pipelines), all proposed places of storage, and places of use for all overlapping water rights. More than one map may be submitted, if necessary to clearly convey all required information.	☐ S	■ F
3. Is the project located in a Controlled Groundwater Area or Basin Closure Area? If yes, immediately go to Mandatory Project-Specific questions 54 to 56 because Form 600 may be the incorrect form, or this project may not meet the requirements for the Department to accept a Form 600.	☐ Y ■ N	☐ F
4. Is the proposed use temporary?	☐ Y ■ N	☐ F
a. If yes, when will the appropriation cease? _____	☐ A	☐ F

5. Describe the proposed purpose information, including period of diversion (MM/DD-MM/DD), period of use (MM/DD-MM/DD), flow rate (GPM or CFS) and volume (AF). ☐ A ☐ F

Purpose	Period of Diversion	Period of Use	Flow Rate			Volume
	(MM/DD-MM/DD)	*(MM/DD-MM/DD)*	*Flow Rate*	*GPM*	*CFS*	*(AF)*
Multiple Domestic	01/01-12/31	01/01-12/31	66	☑	☐	25.9
Lawn & Garden	04/15-10/15	04/15-10/15	320	☑	☐	105.9
				☐	☐	
				☐	☐	
				☐	☐	
		Total	386	☑	☐	131.8

6. Does the proposed use include one or more of the following purposes: domestic, multiple domestic, stock, or irrigation? If yes, fill out the following table, where applicable. ☒ Y ☐ N ☐ F

Purpose	Requested Information	Response
Domestic or multiple domestic	Number of dwellings	77
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)	Sprinkler
Irrigation (flood only)	Design slope	

7. Describe the proposed location of the point(s) diversion to the nearest 10 acres, if source is groundwater (GW) or surface water (SW), source name, and means of diversion (e.g., pump, headgate, well). Label each POD with the POD # used for the project map (question 2). ☐ A ☒ F

POD #	¼	¼	¼	Sec	Twp	Rge	County	Lot	Block	Tract	Subdivision	Gov Lot	SW or GW	Source Name	Means

8. What are the geocodes of the place of use?	☐ A	☐ F

03-0926-18-3-01-01-0000 (To be subdivided later)	

9. Describe the legal land description for the proposed place of use and, if an irrigation or lawn and garden purpose, list the number of irrigated acres.	☐ A	☒ F

Acres	Gov't Lot	Block	¼	¼	¼	Sec	Twp	Rge	County
	Total								

10. Will other water rights supplement or overlap the place of use to contribute to the purpose(s)?	☐ Y ☒ N	☐ F
a. If yes, summarize how the water rights will be operated as a whole to serve the purpose(s). Historically irrigated acres used shares from Big Ditch Co. This water will not be used to contribute to the subdivision once completed. Block 5, Lot 5 of the subdivision will continue to be used for agricultural purposes and will not be owned by the Applicant (because of subd. requirements from Yellowstone Co).	☐ A	☐ F

11. For each supplemental or overlapping water right, please list the water right number, purpose, typical period of diversion and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed.	☐ A	☐ F

Water Right No.	**Avg. Period of Diversion**	**Avg. Period of Use**	**Flow Rate**			**Volume Contributed**
	MM/DD-MM/DD	*MM/DD-MM/DD*	*Flow Rate*	*GPM*	*CFS*	*AF*
43QJ 10198-00	04/01-11/04	04/01-11/04	0	☐	☐	0
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	

12. Will this application supplement contract water from a Federal Project, ditch company, or other source?	☐ Y ☒ N	☐ F
a. If yes, explain. (See Q10 explanation)	☐ A	☐ F
13. Does the project involve one or more places of storage? 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)). If yes, answer the following questions once for each place of storage. Use an "Additional Place of Storage (600P)" sheet if more than one. Additionally, you may choose to answer non-mandatory questions 76 to 80 for place of storage.	☐ Y ☒ N	☐ F
a. Is this application to enlarge an existing reservoir? If yes, list the water right numbers for the existing reservoir.	☐ Y ☐ N	☐ F
b. Is the place of storage located on-stream?	☐ Y ☐ N	☐ F
c. What is the capacity of the proposed place of storage or the existing place of storage after it is enlarged? Use bathymetry data, survey, or engineering plans for capacity. Submit the data source used with this form. In lieu of these data sources, use the following equation: *Surface Acres x Maximum Depth (FT) x 0.5 = Capacity (AF)*	☐ A	☐ F

d. What is the surface area of the place of storage? _____ _____	☐ A	☐ F
14. Will your system be designed to discharge water from the project?	☐ Y ■ N	☐ F
a. If yes, explain the wastewater disposal method. A discharge permit may be required to comply with §§ 75-5-410 and 85-2-364, MCA. _____ _____ _____	☐ A	☐ F
15. Does the project involve an appropriation that is greater than 5.5 CFS and 4,000 AF? If yes, you must submit a Criteria Addendum Application for Beneficial Water Use Permit for Appropriations Greater than 5.5 CFS and 4,000 AF (Form 600-B) with application submittal. The criteria are found in §85-2-311(3), MCA.	☐ Y ■ N	☐ F
16. Will you be transporting water for use outside of Montana? If yes, you must submit an Out-of-State Use Addendum (Form 600/606-OSA) with the application. The out-of-state use criteria are outlined in §85-2-402(6), MCA.	☐ Y ■ N	☐ F
17. Does the project include the water marketing purpose? If yes, you may choose to answer non-mandatory questions 81 to 85 for water marketing. A Water Marketing Purpose Addendum (Form 600/606-WMA) will be required with application submittal.	☐ Y ■ N	☐ F
18. Are you proposing a point of diversion and/or place of use on State of Montana Trust Land? If yes, documentation of consent from the DNRC Trust Lands Management Division will be required at application submittal.	☐ Y ■ N	☐ F
19. Is the project located in designated sage grouse habitat? If yes, a review letter from the Montana Sage Grouse Habitat Conservation Program will be required at application submittal.	☐ Y ■ N	☐ F

SURFACE WATER

☐ **Applicable**, move on to question 20. ⬓ **Not Applicable**, skip to question 30.

The following questions are mandatory for surface water permit applications and must be filled out before the Preapplication Meeting Form is determined to be complete.

Surface Water Analysis

Questions, Narrative Responses, and Tables	**Check-boxes**	**Follow-up**
20. What is the flow rate (GPM or CFS), volume (AF), period of diversion start date and end date (MM/DD-MM/DD), and source type (e.g., perennial, ephemeral) at each point of diversion? Use the same POD # as the project map (question 2) to label each point of diversion.	☐ A	☐ F

POD #	**Flow Rate**			**Volume**	**Period Start**	**Period End**
	Flow Rate	*GPM*	*CFS*	*AF*	*MM/DD*	*MM/DD*
		☐	☐			
		☐	☐			
		☐	☐			
		☐	☐			
		☐	☐			

21. Is the source type of the diversion perennial or intermittent, ephemeral, lake, or other? _____	☐ A	☐ F

Perennial or intermittent	Answer questions 22 to 25	**Ephemeral**	Answer question 26	**Lake**	Answer question 27	**Other**	Answer questions 28 to 29

Surface Water Analysis: Perennial or Intermittent

☐ **Applicable** ☐ **Not Applicable**

22. Are stream gage data available?	☐ Y ☐ N	☐ F
a. If yes, answer question 23.		
b. If no, answer question 24.		

23. Stream gage data are available.		
a. Is one stream gage located above the most upstream POD and one stream gage located below the most upstream POD?	☐ Y ☐ N	☐ F
i. If no, is only one stream gage located near the most upstream POD?	☐ Y ☐ N	☐ F
1. If yes, is the stream gage located upstream or downstream? _____		☐ F
b. List the gage name(s). Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____		☐ F
c. What is the distance between the gage(s) and the most upstream POD? Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____		☐ F
d. Is there a limiting or controlling factor on the source between the stream gage(s) and the most upstream POD? This includes dams that control the flow and streams with large gaining and/or losing reaches. If you have questions about this, the Regional Office may provide assistance.	☐ Y ☐ N	☐ F
i. If yes, explain. _____ _____ _____	☐ A	☐ F
e. How long is the period of record? Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____		☐ F
f. Who operates and maintains the gage(s)? Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____		☐ F

g. Is each available stream gage operated and maintained by USGS or DNRC?	☐ Y ☐ N	☐ F
i. If yes, skip to question 23.h.		
ii. If no, answer the following questions for each gage not operated and maintained by USGS or DNRC.		
1. How frequently are stage data recorded? Write "N/A" for Gage 2 if only one gage is not operated or maintained by USGS. Gage 1: _____ Gage 2: _____		☐ F
2. If data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods?		
a. Gage 1._____	☐ Y ☐ N	☐ F
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N	☐ F
3. Was the rating curve established and maintained throughout the duration of the period of record using measurements taken near the reference gage and stage recorder according to USGS protocols?		
a. Gage 1._____	☐ Y ☐ N	☐ F
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N	☐ F
4. Were requirements established and followed for maintaining a permanent gage datum and meeting specified accuracy limits?		
a. Gage 1._____	☐ Y ☐ N	☐ F
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N	☐ F

h. Do the data for one or more available stream gages meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N	☐ F
i. If yes, record how many meet the standard, then skip to question 54 because this section is complete. _____		☐ F
ii. If no, answer question 24.		
24. If no gage data are available or if available gage data do not meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion, is the source otherwise measured?	☐ Y ☐ N	☐ F
a. If no, measurements may be necessary. The Department cannot deem the preapplication meeting form adequately completed until the Department receives gage data and/or measurements that meet the requirements of ARM 36.12.1702 or, in combination with an approved variance request, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria. Skip to question 25.		
b. If yes,		
i. Submit available measurements to the Department.	☐ S	☐ F
ii. Who collected the measurements? _____	☐ A	☐ F
iii. With what method were the data collected? _____ _____	☐ A	☐ F
iv. What is the period of record? _____		☐ F
v. What is the frequency of measurement? _____		☐ F
vi. Are there gaps in the data?	☐ Y ☐ N	☐ F

1. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality? _____ _____ _____	☐ A	☐ F
vii. Is there a process for maintaining the data and meeting specified accuracy limits?	☐ Y ☐ N	☐ F
1. If yes, explain. _____ _____ _____	☐ A	☐ F
viii. Do available measurement data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N	☐ F
1. If yes, this section is complete. Skip to question 54.		
2. If no, answer question 25.		
25. Do the available measurement data, gage and/or otherwise measured, meet the Department's standard of including a minimum of high, moderate, and low flows to be sufficient to use for validation of a Department-accepted estimation technique?	☐ Y ☐ N	☐ F
a. If yes,		
i. Describe how the measurements are representative of high, moderate, and low flows. _____ _____ _____ _____	☐ A	☐ F
ii. Describe the estimation technique. _____ _____ _____ _____ _____ _____	☐ A	☐ F
b. If no, but a Department-accepted estimation technique will be appropriate for the source:		

i. Will measurements be collected prior to submission of Form 600P-B that meet the Department's standard of including a minimum of high, moderate, and low flows to be sufficient to use for calibration of a Department-accepted estimation technique?	☐ Y ☐ N	☐ F
1. If yes,		
a. With what method will the data be collected? _____ _____	☐ A	☐ F
b. What will be the interval of measurement? _____		☐ F
c. Describe the proposed estimation technique. _____ _____ _____ _____ _____	☐ A	☐ F
2. If no, do you plan on requesting a variance from measurement requirements pursuant to ARM 36.12.1702(1)(b)? If you plan to request a variance, you must submit Form 653 on or before the Variance Request Deadline. The Department cannot deem the preapplication meeting form adequately completed until the Department receives measurements that meet the requirements of ARM 36.12.1702(1)(b) or, in combination with an approved variance request, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N	☐ F
c. If no, because no Department-accepted estimation technique will be appropriate for the source:		
i. Describe why no Department-accepted estimation technique is appropriate for the source characteristics. _____ _____ _____	☐ A	☐ F
ii. Do the available measurement data, gage and/or otherwise measured, meet the Department's standard for monthly measurements throughout the proposed period of diversion pursuant to ARM 36.12.1702(4)?	☐ Y ☐ N	☐ F

1. If no, will measurements be collected prior to submission of a completed Form 600P that meet the Department's standard of monthly measurements throughout the proposed period of diversion?	☐ Y ☐ N	☐ F
a. If yes, with what method will the data be collected? _____ _____	☐ A	☐ F
b. If no, do you plan on requesting a variance from measurement requirements pursuant to ARM 36.12.1702(4)? If you plan to request a variance, you must submit Form 653 on or before the Variance Request Deadline. The Department cannot deem the preapplication meeting form adequately completed until the Department receives measurements that meet the requirements of ARM 36.12.1702(4) or, in combination with an approved variance request, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N	☐ F

Surface Water Analysis: Ephemeral

☐ **Applicable** ☐ **Not Applicable**

26. Did you elect for the Department to conduct the Technical Analyses?	☐ Y ☐ N	☐ F
a. If yes, do you have climate or drainage area data you would like the Department to consider during Technical Analyses?	☐ Y ☐ N	☐ F
i. If yes, submit this information to the Department.	☐ S	☐ F
b. If no,		
i. Describe the estimation technique you propose to use to estimate physical availability at the point of diversion. _____ _____ _____	☐ A	☐ F
ii. What is the net annual precipitation? Include the source of this information. _____ _____	☐ A	☐ F

iii. What is the drainage area upstream of the point of diversion and how was this figure calculated? _____ _____ _____	☐ A	☐ F

Surface Water Analysis: Lakes

☐ **Applicable** ☐ **Not Applicable**

27. Has the lake volume been quantified by a qualified entity based on bathymetric data?	☐ Y ☐ N	☐ F
a. If yes, provide this information to DNRC.	☐ S	☐ F
b. If no, answer the following questions,		
i. When do you plan to collect this information? _____		☐ F
ii. What data collection method will you use? _____ _____	☐ A	☐ F

Surface Water Analysis: Other

☐ **Applicable** ☐ **Not Applicable**

28. Explain why the source type is “other”. _____ _____	☐ A	☐ F
29. Have you measured the source?	☐ Y ☐ N	☐ F
a. If yes, answer the following questions,		
i. With what method was the measurement data collected? _____ _____	☐ A	☐ F

ii. What is the measurement interval? _____		☐ F
1. Does the interval meet the Department's standard for monthly measurements throughout the proposed period of diversion pursuant to ARM 36.12.1702(4)?	☐ Y ☐ N	☐ F
a. If no, do you plan on requesting a variance from measurement requirements pursuant to ARM 36.12.1702(4)? If you plan to request a variance, you must submit Form 653 on or before the Variance Request Deadline.	☐ Y ☐ N	☐ F
b. If no,		
i. When do you plan to measure? _____		☐ F
ii. What data collection method will be used? _____ _____ _____	☐ A	☐ F
iii. Do you plan on requesting a variance from measurement requirements pursuant to ARM 36.12.1702(4)? If you plan to request a variance, you must submit Form 653 on or before the Variance Request Deadline. The Department cannot deem the preapplication meeting form adequately completed until the Department receives measurements that meet the requirements of ARM 36.12.1702(4) or, in combination with an approved variance request, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N	☐ F

Area of Potential Impact Analysis

No additional information needed for Technical Analyses.

GROUNDWATER

■ **Applicable**, move on to question 30. ☐ **Not Applicable**, skip to question 54.

The following questions are mandatory for groundwater permit applications and must be filled out before the Preapplication Meeting Form is determined to be complete.

Groundwater Analysis for Permits

Questions, Narrative Responses, and Tables	**Check-boxes**	**Follow-up**
30. What is the type of groundwater diversion? Wells	☐ A	☐ F

Well/Pumping Pit	Answer questions 31 to 35	**Developed Spring**	Answer question 36	**Pond**	Answer questions 37 to 39

Groundwater Analysis for Permits: Well/Pumping Pit

■ Applicable ☐ Not Applicable

31. Per ARM 36.12.121 a 24- or 72-hour aquifer test is required; do you propose not to conduct the test? An 8-hour test will be required, if no aquifer test is completed.	☐ Y ■ N	☐ F
a. If yes, explain. The Department will let you know if the request is reasonable and identify additional data needs. _____ _____ _____ _____ _____	☐ A	☐ F

32. Submit Aquifer Test Data Form (Form 633). If a variance is requested, Form 633 must be submitted on or before the Variance Request Deadline. If no variance is requested, Form 633 is due by the time the preapplication meeting form is complete but may be submitted earlier. However, if the Department determines a variance is needed and the Variance Request Deadline has passed, to submit the Form 653 you must reschedule the preapplication meeting or submit the application without expedited fees and timelines (ARM 36.12.1302(6)).	☐ S	◼ F
33. Submit the Aquifer Testing Addendum (Form 600/606-ATA) and associated materials (e.g., well logs). If you request a variance, Form 600/606-ATA must be submitted on or before the Variance Request Deadline. If no variance is requested, Form 600/606-ATA is due by the time the preapplication meeting form is complete but may be submitted earlier. However, if the Department determines a variance is needed and the Variance Request Deadline has passed, to submit the Form 653 you must reschedule the preapplication meeting or submit the application without expedited fees and timelines (ARM 36.12.1302(6)).	☐ S	◼ F
34. Are you requesting a variance from ARM 36.12.121? If you are unsure if a variance request will be needed, mark follow-up and answer this question once Form 600/606-ATA and Form 633 are complete. A variance must be requested by the Variance Request Deadline.	◼ Y ☐ N	☐ F
a. If yes, submit Form 653, Form 600/606-ATA, and Form 633 together on or before the Variance Request Deadline.	☐ S	◼ F
b. If no, you may choose to submit Form 600/606-ATA and Form 633 before the Variance Request Deadline, and the Department will review these two forms. However, if the Department determines a variance is needed after the Variance Request Deadline, to submit the Form 653 you must reschedule the preapplication meeting or submit the application without expedited fees and timelines (ARM 36.12.1302(6)).		
35. Have all proposed wells/pumping pits been constructed?	☐ Y ◼ N	☐ F
a. If no, answer the following questions:		
i. Submit a list of the POD IDs for all wells/pumping pits and mark whether they have or have not been constructed.	☐ S	◼ F
ii. When will all proposed wells/pumping pits be constructed? By project completion (est. 10 years)		☐ F
iii. Is the requested volume for each proposed well/pumping pit known?	◼ Y ☐ N	☐ F
1. If yes, list the flow rate and volume requested for each proposed well/pumping pit. Label with POD ID.	☐ A	◼ F

2. If no, what is the total requested volume (AF) and the number of proposed PODs? _____		☐ F

Groundwater Analysis for Permits: Developed Spring

☐ Applicable ■ Not Applicable

36. Have you measured the source?	☐ Y ☐ N	☐ F
a. If yes, submit the measurements and answer the following questions,	☐ S	☐ F
i. Do you have flow rate (GPM or CFS) and volume measurements?	☐ Y ☐ N	☐ F
ii. With what method were measurements collected? _____ _____	☐ A	☐ F
iii. What is the interval of measurements? _____		☐ F
iv. Is the interval of measurements sufficient to comply with ARM 36.12.1703(1)?	☐ Y ☐ N	☐ F
b. If no, or if measurements do not comply with ARM 36.12.1703(1), answer the following questions. The Department cannot deem the preapplication meeting form adequately completed until the Department receives measurements that meet the requirements of ARM 36.12.1703(1). Variances from ARM 36.12.1703(1) are not allowed.		
i. When do you plan to measure? _____		☐ F
ii. With what method and at what interval will measurements be collected? _____ _____	☐ A	☐ F

Groundwater Analysis for Permits: Pond

☐ Applicable ■ Not Applicable

37. Submit Form 653 to apply for a variance from ARM 36.12.121 for the Aquifer Test on or before the Variance Request Deadline.	☐ S	☐ F
38. Submit pond bathymetry data, survey, or engineering plans to the Department.	☐ S	☐ F
39. Is the pond fed or drained by surface water?	☐ Y ☐ N	☐ F
a. If yes,		
i. Explain. _____ _____ _____	☐ A	☐ F
ii. Submit measurements of the connected surface water source. These may include inflow and outflow measurements.	☐ S	☐ F

Surface Water Depletion Analysis

40. Is the type of groundwater diversion for your proposed project a developed spring? If yes, skip to question 45 because this section is complete. If no, move onto question 41.	☐ Y ■ N	☐ F
41. Is the type of groundwater diversion for your proposed project a pond? If yes, answer question 41.a, then skip to question 45 because this section is complete. If no, move onto question 42.	☐ Y ■ N	☐ F
a. Will any of the ponds have diversions for out-of-pond use that differ from, if year-round use, an allocation of diverted volume by the number of days in the month, or, if irrigation/lawn and garden use, the 80% dry year net irrigation requirement (IWR, NRCS 2003)?	☐ Y ☐ N	☐ F
i. If yes, provide a schedule of the diversions for out-of-pond use in the table below. Use the same POD # as the project map (question 2). Attach any additional schedules with POD # labeled.	☐ A	☐ F

POD #			
Month	**Diversions for Out-of-Pond Use Volume (AF)**	**Month**	**Diversions for Out-of-Pond Use Volume (AF)**
January		July	
February		August	
March		September	
April		October	
May		November	
June		December	

42. What is the flow rate (GPM or CFS), volume (AF), and period of diversion required (MM/DD-MM/DD) at each well/pumping pit? What is the well/pumping pit depth (FT), if available, or estimated well/pumping pit depth (FT). Please use the same POD # as the project map (question 2) to match this information with the location information.	☐ A	■ F

POD #	Flow Rate			Volume	Period of Diversion	Depth	Measured or Estimated
	Flow Rate	*GPM*	*CFS*	*AF*	*MM/DD-MM/DD*	*FT*	
		☐	☐				
		☐	☐				
		☐	☐				
		☐	☐				
		☐	☐				

43. Will any of the *new* wells/pumping pits have a monthly pumping schedule that differs from, if year-round use, an allocation of diverted volume by the number of days in the month, or, if irrigation/lawn and garden use, the 80% dry year net irrigation requirement (IWR, NRCS 2003)?	☐ Y ■ N	☐ F
a. If yes, provide the alternative pumping schedule(s) in the table below. Use the same POD # as the project map (question 2). Attach any additional pumping schedules with POD # labeled.	☐ A	☐ F

POD #				POD #			
Month	**Volume (AF)**	**Month**	**Volume (AF)**	**Month**	**Volume (AF)**	**Month**	**Volume (AF)**
January		July		January		July	
February		August		February		August	
March		September		March		September	
April		October		April		October	
May		November		May		November	
June		December		June		December	

44. Will one or more *existing* wells/pumping pits be used for the proposed project?	■ Y ☐ N	☐ F
a. If yes, will any of the *existing* wells/pumping pits have a monthly pumping schedule, before or after the proposed project, that differs from an allocation of diverted volume by the number of days in the month (if year-round use) or the 80% dry year net irrigation requirement (if irrigation/lawn and garden use) (IWR, NRCS 2003)?	☐ Y ■ N	☐ F
i. If yes, provide the pumping schedules before and after the proposed project in the table below. Use the same POD # as the project map (question 2). Attach any additional pumping schedules with POD # and before/after proposed project labeled.	☐ A	☐ F

Before proposed project: POD #				**After proposed project: POD #**			
Month	**Volume (AF)**	**Month**	**Volume (AF)**	**Month**	**Volume (AF)**	**Month**	**Volume (AF)**
January		July		January		July	
February		August		February		August	
March		September		March		September	
April		October		April		October	
May		November		May		November	
June		December		June		December	

Surface Water Analysis of Depleted Surface Water

45. Based on the preliminary net depletion data provided by the Department at this preapplication meeting, what are the hydraulically connected surface water source(s)? **Net depletion data provided by the Department at the preapplication meeting is preliminary and is subject to change during Technical Analyses. If the source or location of net depletion data changes during Technical Analyses, then surface water analysis of depleted surface water source(s) will reflect the Technical Analyses; this will not constitute a change of any element to the proposed application pursuant to ARM 36.12.1302(6)(a).* If the type of groundwater diversion for your proposed project is a developed spring, write "NA" and skip to question 51 because this section is complete. Canyon Creek	☐ A	☐ F
46. Answer the questions in this section one time for each hydraulically connected source. Use the "Additional Hydraulically Connected Source (600P)" sheet, as necessary. For which hydraulically connected source are you answering questions 47 to 50? Canyon Creek		☐ F
47. Are stream gage data available?	■ Y ☐ N	☐ F
a. If yes, answer question 48.		
b. If no, answer question 49.		

48. Stream gage data are available		
a. Is one stream gage located above and one stream gage located below the start of the depleted reach?	☐ Y ■ N	☐ F
i. If no, is only one stream gage located near the start of the depleted reach?	■ Y ☐ N	☐ F
1. If yes, is the stream gage upstream or downstream? Downstream		☐ F
b. List the gage name(s). Write "N/A" for Gage 2 if one gage available. Gage 1: Canyon Creek @ ZooMontana 43Q 05900 Gage 2: N/A		☐ F
c. What is the distance between the gage(s) and the start of the depleted reach? Write "N/A" for Gage 2 if one gage available. Gage 1: 4.5mi Gage 2: N/A		☐ F
d. Is there a limiting or controlling factor on the source between the stream gage(s) and the start of the depleted reach? This includes dams that control the flow and streams with large gaining and/or losing reaches. If you have questions about this, the Regional Office may provide assistance.	☐ Y ■ N	☐ F
i. If yes, explain.	☐ A	☐ F
e. How long is the period of record? Write "N/A" for Gage 2 if one gage is available. Gage 1: May 2016 Gage 2: N/A		☐ F
f. Who operates and maintains the gage(s)? Write "N/A" for Gage 2 if one gage is available. Gage 1: DNRC Gage 2: N/A		☐ F
g. Is each available stream gage operated and maintained by USGS or DNRC?	■ Y ☐ N	☐ F
i. If yes, skip to question 48.h.		
ii. If no, answer the following questions for each gage not operated and maintained by USGS or DNRC.		

1. How frequently is stage data recorded? Write "N/A" for Gage 2 if only one gage is not operated or maintained by USGS. Gage 1: _____ Gage 2: _____		☐ F
2. If data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods?	☐ Y ☐ N	☐ F
a. Gage 1._____	☐ Y ☐ N	☐ F
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N	☐ F
3. Was the rating curve established and maintained throughout the duration of the period of record using measurements taken near the reference gage and stage recorder according to USGS protocols?	☐ Y ☐ N	☐ F
a. Gage 1._____	☐ Y ☐ N	☐ F
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N	☐ F
4. Were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	☐ Y ☐ N	☐ F
a. Gage 1._____	☐ Y ☐ N	☐ F
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N	☐ F
h. Do the data for one or more available stream gages meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the months with net depletions?	■ Y ☐ N	☐ F
i. If yes, record how many meet the standard, then skip to question 54 because this section is complete. 1		
ii. If no, answer question 49.		
49. If no gage data are available or if available gage data do not meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the months with net depletions, is the source otherwise measured?	☐ Y ☐ N	☐ F

a. If no, measurements may be necessary. The Department cannot deem the preapplication meeting form adequately completed until the Department receives gage data and/or measurements that meet the Department's measurement standards or, in combination with an approved request to deviate from the Department's standards, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria. Skip to question 50.		
b. If yes,		
i. Submit measurements to the Department.	☐ S	☐ F
ii. Who collected the measurements? _____	☐ A	☐ F
iii. With what method was the data collected? _____ _____	☐ A	☐ F
iv. What is the period of record? _____		☐ F
v. What is the frequency of measurement? _____		☐ F
vi. Are there gaps in the data?	☐ Y ☐ N	☐ F
1. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality? _____ _____ _____	☐ A	☐ F
vii. Is there a process for maintaining the data and meeting specified accuracy limits?	☐ Y ☐ N	☐ F
1. If yes, explain. _____ _____ _____	☐ A	☐ F
viii. Do available measurement data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the months with net depletions?	☐ Y ☐ N	☐ F
1. If yes, this section is complete. Skip to question 54.		
2. If no, answer question 50.		

50. Do the available measurement data, gage and/or otherwise measured, meet the Department's standard of including a minimum of high, moderate, and low flows to be sufficient to use for calibration of a Department-accepted estimation technique?	☐ Y ☐ N	☐ F
a. If yes,		
i. Describe how the measurements are representative of high, moderate, and low flows. _____ _____ _____ _____	☐ A	☐ F
ii. Describe the estimation technique. _____ _____ _____ _____ _____ _____	☐ A	☐ F
b. If no, but a Department-accepted estimation technique will be appropriate for the hydraulically connected surface water source:		
i. Will measurements be collected prior to submission of a completed Form 600P-B that meet the Department's standard of including a minimum of high, moderate, and low flows to be sufficient to use for calibration of a Department-accepted estimation technique?	☐ Y ☐ N	☐ F
1. If yes,		
a. With what method will the data be collected? _____ _____	☐ A	☐ F
b. What will be the interval of measurement? _____		☐ F

c. Describe the proposed estimation technique. _____ _____ _____ _____ _____	☐ A	☐ F
2. If no, do you plan on requesting to deviate from the Department's standard of including a minimum of high, moderate, and low flows to be sufficient to use for calibration of a Department-accepted estimation technique? The Department's technical analyses or scientific credibility review of your technical analyses cannot commence until the Department receives measurements that meet Department measurement standards, or in combination with a request to deviate, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N	☐ F
c. If no, because no Department-accepted estimation technique will be appropriate for the hydraulically connected surface water source:		
i. Describe why no Department-accepted estimation technique is appropriate for the source characteristics. _____ _____ _____	☐ A	☐ F
ii. Do the available measurement data, gage and/or otherwise measured, meet the Department's standard for monthly measurements throughout the months with net depletions?	☐ Y ☐ N	☐ F
1. If no, will measurements be collected prior to submission of a completed Form 600P that meet the Department's standard of monthly measurements throughout the months with net depletions?	☐ Y ☐ N	☐ F
a. If yes, with what method will the data be collected? _____ _____	☐ A	☐ F

b. If no, do you plan on requesting to deviate from the Department's standard for monthly measurements throughout the months with net depletions? The Department's technical analyses or scientific credibility review of your technical analyses cannot commence until the Department receives measurements that meet Department measurement standards, or in combination with a request to deviate, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N	☐ F

Area of Potential Impact Analysis of Depleted Surface Water

All information for area of potential impact of depleted surface water was collected in previous questions.

Hydrogeologic Report

51. Does your project include one or more wells, pumping pits, or ponds that are in a basin closure area? If yes, fill out questions 52 to 53. Your project must have a Hydrogeologic Report that conforms with § 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.	☐ Y ☐ N	☐ F
52. Did you elect in question 1 for the Department to conduct the Technical Analyses?	☐ Y ☐ N	☐ F
a. If yes, the Basin Closure Area Addendum (Form 600-BCA), Form 600-HRA, and Hydrogeologic Report are not required at this time. The Department's Technical Analyses will meet requirements of §85-2-360, MCA for a Hydrogeologic Report and Form 600-HRA. Form 600-BCA will be required with application submittal.		
b. If no, submit the Basin Closure Area Addendum (Form 600-BCA) and Hydrogeologic Report Addendum (600-HRA) with your Technical Analyses.	☐ S	☐ F
53. If the Hydrogeologic Report indicates that the proposed groundwater use will impact a surface water source, identify and explain which of the following three options best describes your plan to mitigate depletions of hydraulically connected surface water and respond to the relevant questions below. ☐ Application to Change a Water Right to mitigate the adverse effects created ☐ Alternative mitigation plan ☐ Documentation to show a mitigation plan is not required		
a. Application to Change a Water Right to mitigate the adverse effects created: Submit a summary of your initial proposal. *A separate Preapplication Meeting will be required for each Application to Change a Water right to a mitigation or aquifer recharge purpose to qualify for expedited timelines and reduced filing fees for the project per ARM 36.12.1302(7)(a).*	☐ S	☐ F
b. Alternative mitigation plan: Submit a summary of your initial proposal.	☐ S	☐ F

i. Do you propose to use water with a marketing for mitigation/aquifer recharge purpose?	☐ Y ☐ N	☐ F
1. If yes,		
a. List the change authorization number(s) for all water rights proposed for use. _____	☐ A	☐ F
b. What is the area defined for marketing for all water rights proposed for use? _____	☐ A	☐ F
c. If Marketing for aquifer recharge, submit the analysis of the monthly accretions to hydraulically connected surface water(s); otherwise write “NA”. _____	☐ S	☐ F
c. Documentation to show a mitigation plan is not required: Submit all documentation.	☐ S	☐ F

MANDATORY PROJECT-SPECIFIC QUESTIONS

The following questions are mandatory when applicable and must be filled out before the Preapplication Meeting Form is determined to be complete.

Project-Specific Questions: Controlled Groundwater Areas and Basin Closures

Questions, Narrative Responses, and Tables	Check-boxes	Follow-up
54. Does the project include one or more groundwater points of diversion located in the East Valley Controlled Groundwater Area (EVCGWA)?	☐ Y ■ N	☐ F
a. If yes, is the use over 35 GPM or 10 AF/YR?	☐ Y ☐ N	☐ F
i. If no, this is the incorrect form. Use instead Form 600-EVCGWA: East Valley Controlled Groundwater Area Permit Application.		
ii. If yes, how does this project meet the specific requirements of the East Valley Controlled Groundwater Area? Include any relevant documentation. _____ _____ _____ _____	☐ A	☐ F
b. If no, skip to question 55.		
55. Does the project include one or more groundwater points of diversion located in the Yellowstone Controlled Groundwater Area?	☐ Y ■ N	☐ F
a. If yes, is the proposed flow rate and volume over 35 GPM or 10 AF/YR?	☐ Y ☐ N	☐ F
i. If no, this is the incorrect form. Use instead Form 600-YCGA: Yellowstone Controlled Groundwater Area Permit Application.		
ii. If yes, answer the remaining parts of question 55 and submit *Form 600 YCGA: A Yellowstone Controlled Groundwater Area Addendum Over 35 gallons per minute* with the application.		
1. Does the proposed use require a point of diversion with water temperature of 60 degrees Fahrenheit or more?	☐ Y ☐ N	☐ F
2. If an application is in a basin tributary to a category 3 or 4 stream (generally in or upstream of Yellowstone National Park), submit with the application a report prepared by a qualified professional verifying that the appropriation is not hydrologically connected to surface flow that is tributary to the reserved portion of category 3 or 4 streams.		
b. If no, skip to question 56.		

56. Is the project for surface water or groundwater and subject to one or more of the Controlled Groundwater Areas; administrative, Department ordered, or legislative basin closures; or compact closures listed on the Department's website (https://dnrc.mt.gov/Water-Resources/Water-Rights/Basin-Closures-Stream-Depletion-Controlled-Ground-Water-Areas) not covered in questions 54 to 55?	☐ Y ☒ N	☐ F
a. If yes, identify each area and describe how the proposed project meets its requirements. An application must meet the specific requirements of the Controlled Groundwater Area or closure to be accepted by the Department. _____ _____ _____ _____ _____ _____ _____ _____ _____	☐ A	☐ F

NON-MANDATORY QUESTIONS FOR CRITERIA ANALYSIS

The following questions are not mandatory. They should be discussed in the Preapplication Meeting, but do not need to be filled out before the Preapplication Meeting Form is determined to be complete.

Adverse Effect

Questions, Narrative Responses, and Tables	Check-boxes
57. Describe your plan to ensure that existing water rights will be satisfied during times of water shortage. Applicant may impose a lawn and garden watering schedule. Applicant may restrict watering to only domestic and no lawn and garden. Applicant can cease diversion if valid call is made	☐ A
58. Explain how you can control your diversion in response to call being made. Wells can be shut off	☐ A
59. Are you aware of any calls that have been made on the source of supply or depleted surface water source?	☐ Y ☒ N
a. If yes, explain.	☐ A
60. Does a water commissioner distribute water or oversee water distribution on your proposed source or depleted surface water source?	☐ Y ☒ N

61. Will the point of diversion or conveyance infrastructure be shared with one or more existing water rights?	☐ Y ☒ N
a. If yes, explain how capacity of the shared point of diversion and/or conveyance infrastructure is sufficient for all water rights. _____ _____ _____ _____ _____	☐ A

Adequate Diversion Means and Operation

62. Submit a diagram of how you will operate your system from the point of diversion to the place of use.	☐ S
63. Describe specific information about the capacity of the diversionary structure(s). This may include, where applicable: pump curves and total dynamic head calculations, headgate design specifications, and dike or dam height and length. _____ _____ _____ _____ _____ _____ _____	☐ A

64. Describe the size, materials, capacity, and configuration of infrastructure to convey water from point of diversion to place 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. You may work with the Department to estimate ditch conveyance losses but will need to provide sufficient baseline information; which includes ditch slope, dimensions, length, lining material, soil type, and location.	☐ A
65. 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.	☐ A
66. 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.	☐ A

67. Does the proposed conveyance require easements?	■ Y ☐ N
a. If yes, explain. Shared well agreements and utility easements for lots with shared wells	☐ A
68. Do you own the land where all proposed points of diversion are located?	☐ Y ■ N
a. If no, documentation to show you have the right to use all points of diversion located on each property you do not own will be required upon application submittal. 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.	
69. Describe any places of storage, including whether drainage devices will be installed, and provide preliminary designs, if available. Preliminary designs will be required at application submittal.	☐ A
70. Do you have any plans to measure your diversion and use?	☐ Y ☐ N
a. If yes, describe the plan and the type of measurements you will take.	☐ A

Beneficial Use

71. Does the Department have a standard for any of the purposes for which water is used? Department standards can be found in ARM 36.12.112 and ARM 36.12.115.	■ Y ☐ N
a. If yes, list the purposes for which the Department has a standard and note whether the proposed use falls within or outside the standard. Within	

72. If no Departmental standard exists for any proposed purpose, or if any proposed purpose falls outside of Department standards, explain how the use is reasonable for that purpose. _____ _____ _____ _____ _____ _____ _____	☐ A
73. Will your proposed project be subject to DEQ requirements for a public water supply (PWS) system or Certificate of Subdivision Approval (COSA)?	☐ Y ■ N
a. If yes,	
i. Have you researched or consulted with DEQ regarding those requirements?	☐ Y ☐ N
74. Are you proposing to use surface water for in-house domestic use?	☐ Y ■ N
a. If yes, does a COSA exist for the proposed place of use?	☐ Y ☐ N
i. If yes, please submit the COSA.	☐ S
ii. If no, have you researched or consulted with DEQ regarding their requirements?	☐ Y ☐ N

Possessory Interest

75. 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.	☐ Y ◉ N
a. If yes, explain. _____ _____ _____ _____	☐ A

b. If no,	
i. Do you own all proposed places of use?	☐ Y ☐ N
1. If no,	
a. Explain. Documentation that shows you either have possessory interest or written permission of the parties with possessory interest of the place of use will be required at application submittal. _____ _____ _____ _____	☐ A
b. 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.	☐ Y ☐ N
i. If no, explain. _____ _____ _____	☐ A

Non-Mandatory Project Specific Questions

Place of Storage

76. Does the proposal include at least one place of storage? If yes, answer questions 77 to 80 for each individual place of storage (use "Additional Place of Storage (600P)" sheet for additional places of storage). A Permit Storage Addendum (Form 600-SA) will be required at application submittal. If no, this section is complete, and you can skip to question 81.	☐ Y ■ N
77. Are preliminary designs available? Preliminary designs will be required at application submittal.	☐ S
a. If yes, submit preliminary designs.	☐ Y ☐ N
78. Will the place of storage be lined?	☐ Y ☐ N
79. What is the annual net evaporation of water from the place of storage, based on the Department's gridded net evaporation layer? If you propose a different method, attach an explanation and justification of the method. _____	☐ A

80. Is the place of storage capacity calculated to be greater than 50 AF?	☐ Y ☐ N
a. If yes, have you made an application to the DNRC Water Operations Bureau for a determination of whether the dam or reservoir is a high-hazard dam? This will be required by application submittal.	☐ Y ☐ N

Project-Specific Questions: Water Marketing

81. Does the proposal include water marketing? If yes, please answer the questions in this section (questions 82 to 85). A Water Marketing Addendum Purpose Addendum (600/606-WMA) will be required at application submittal. If no, this section is complete.	☐ Y ■ N
82. For what purpose(s) will the marketed water be used? _____ _____ _____	☐ A
83. How will you control or limit access to the water? _____ _____ _____	☐ A
84. Do you have contracts for the entire volume and flow rate sought?	☐ Y ☐ N
85. Provide a service area map. Create map on an aerial photograph or topographic map and show the following: general service area boundary, section corners, township and range, scale bar, and north arrow.	☐ S

FOLLOW-UP

The tables below will identify all questions marked for follow-up. Applicant follow-up will be submitted with the completed Preapplication Meeting Form: Part B (Form 600P-B). Applicant will provide all responses to questions marked for follow-up on a separate document entitled "Follow-up Responses." At the preapplication meeting, the Department may offer to provide the Applicant with information pertinent to identified follow-up. In this case, record in the notes column what information the Department will provide and the date by which the Department will email this information to the Applicant. This information will supplement but not replace Applicant follow-up. It is the responsibility of the Applicant to provide all follow-up, including questions supplemented by Department information, in the "Follow-up Responses" document.

The "Follow-up Responses" document must conform to the following standards. Label all responses with the question number. Answer questions in the same format as the form. For responses in the form of checkboxes, write "Y", "N", "S". Constrain narrative responses to the specific question as is asked on the form; do not respond to multiple questions in one narrative. Label units in narrative responses and tables. Tables must have the exact headings found on the form. Questions that require items to be submitted to the Department may be marked "S" when the required item is attached to the Preapplication Meeting Form. Label all submitted items with the question number for which they were submitted.

***The Applicant may not alter the Preapplication Meeting Form: Part A (Form 600P-A) signed at the Preapplication Meeting**. Instead, the Applicant must use the Amended Responses procedure defined in Form 600P-B. Do not include additional information for questions that were not marked for follow-up on this table; instead include any additional information pursuant to the process for amending responses defined in Form 600P-B.*

QUESTION #	NOTES
2	Map meeting all criteria
7	PODs for all wells with explanation of PODs on lot line boundaries, POD IDs matching Map POD Ids (#2)
9	POU for all lots with lawn & garden acreage listed
32	Form 633s
33	Form 600-ATA
34.a	Form 653 Variance Request (Cumulatively the "Variance Bundle")
35.a.i	Well construction on POD list (#7)
35.a.iii	POD flow rate and volume on POD list (#7)
42	Additional well info on POD list (#7)

PREAPPLICATION MEETING AFFIDAVIT & CERTIFICATION

"We attest that the information on this form accurately describes the proposed project discussed during the preapplication meeting, and that the items marked for follow-up will require the Applicant to provide additional information before the form is deemed complete."

"Applicant acknowledges that any information provided by the Department during the preapplication meeting is preliminary and subject to change."

"Applicant acknowledges that if the follow-up information provided to the Department substantially changes the proposed project, for example in a way that alters which sections of the form are applicable or which technical analyses are required, or who is to complete the technical analyses, the applicant will need to schedule a new preapplication meeting so that the Department can identify any additional information necessary for completion of the technical analyses (ARM 36.12.1302(3)(c))."

Upon Department receipt of the completed form (within 180 days following the meeting), the Department reserves five business days to return the form to the applicant if:

1 – the completed form does not include all necessary follow-up information identified in the meeting, OR
2 – the completed form is not adequate for the Department to proceed with technical analyses, OR
3 – the applicant has elected to complete technical analyses and has not submitted each piece of technical analysis required, OR
4 – the applicant has substantially changed the details of the proposed project, such as in a way that alters which sections of the form are applicable, which technical analyses are required, or who is to complete the technical analyses.

If the Department returns the form to the Applicant within these five days due to reasons 1-3 above, the Applicant can use the balance of their 180-day period in ARM 36.12.1302(4) or (5) to gather the remaining follow-up information needed. If there is no time remaining in the 180-day period, the Applicant can submit a written request for a new preapplication meeting, pursuant to ARM 36.12.1302(2). Even if there is still time remaining, the Applicant can choose to schedule a new preapplication meeting. The Department shall transfer the $500 payment received to the new preapplication meeting or refund the payment to the Applicant if the Applicant desires. If the Department returns the form to the Applicant within these five days due to reason (4) above, the Applicant must submit a written request for a new preapplication meeting, pursuant to ARM 36.12.1302(2). The Department shall transfer the $500 payment received to the new preapplication meeting or refund the payment to the Applicant if the Applicant desires.

Dan Wells	Owner	Regal Land Inc. Wells Built, Aquanet,	7/23/2025
Applicant Signature			Date

Applicant Signature	Date

Christine Schweigert	Hydrologist	7/30/2025
Department Signature		Date

REQUEST FOR PREAPPLICATION MEETING

ARM 36.12.1302(2)

(Revised 01/2024)

Instructions

Use this optional form to submit a written request for a preapplication meeting, as required in ARM 36.12.1302(2) for applicants electing to complete a preapplication meeting with the department prior to submitting an application for a beneficial water use permit or change in appropriation right pursuant to §85-2-302, MCA. Use additional sheets as necessary.

Submit this form to the appropriate regional office; see contact information on the last page of this form.

For Department Use Only

Date Received 7/18/2025

Received By CS

Scheduled Meeting Date 7/23/2025

1. Applicant Name Regal Land Development, Inc., c/o Dan Wells

Mailing Address 5847 Whisperingwoods Dr

City Billings State MT Zip 59106

Home Phone _____ Other Phone (406) 672-3390

Email: Dan@WellsBuilt.com

2. Representative Name (if other than Applicant) In Site Engineering, P.C., c/o Scott Worthington

☒ Representative is Consultant ☐ Representative is Attorney ☐ Representative is Other

Mailing Address 4231 Creekwood Dr

City Billings State MT Zip 59106

Home Phone _____ Other Phone (406) 591-4355

Email: siteproscott@gmail.com

3. Are you requesting a preapplication meeting for a permit or change application?

☒ Permit ☐ Change

4. Identify the following elements of the proposed permit or change in appropriation.

a) The flow rate and volume of water required:

Flow Rate 386 ☒ GPM ☐ CFS Volume 131.732 Acre-Feet

b) The point of diversion:

Point of Diversion #1 ____1/4 ____1/4 SW 1/4 Section 18, Township 1 ☐ N ☒ S, Range 25 ☒ E ☐ W

County Yellowstone

Lot/Tract (unplatted) Block_____ Subdivision Name Maplewood Estates

Point of Diversion #2 - 46 1/4 ____1/4 SW 1/4 Section 18, Township 1 ☐ N ☒ S, Range 25 ☒ E ☐ W

County (note: there are 46 P.O.D. (shared wells), all located in SW4 1/4 of Sec. 18)

Lot/Tract _____ Block_____ Subdivision Name_____

c) The place of use: Geocode 03-0926-18-3-01-01-0000

_____Acres ____ Lot ____ Block_____1/4 _____1/4 SW 1/4 Sec 18, Twp ____ ☐ N ☒ S, Rge 25 ☒ E ☐ W

_____Acres ____ Lot ____ Block_____1/4 _____1/4 _____1/4 Sec ____, Twp ____ ☐ N ☐ S, Rge ____ ☐ E ☐ W

_____Acres ____ Lot ____ Block_____1/4 _____1/4 _____1/4 Sec ____, Twp ____ ☐ N ☐ S, Rge ____ ☐ E ☐ W

_____Acres ____ Lot ____ Block_____1/4 _____1/4 _____1/4 Sec ____, Twp ____ ☐ N ☐ S, Rge ____ ☐ E ☐ W

PRELIMINARY PLAT OF MAPLEWOOD ESTATES - A RESIDENTIAL SUBDIVISION

LOCATED IN SECTION 18, T01 S, R25 E, P.M.M. YELLOWSTONE COUNTY, MONTANA
PREPARED FOR: REGAL LAND DEVELOPMENT, INC.
PREPARED BY: IN SITE ENGINEERING
APRIL 2025

NOTES

1. WATER SUPPLIED BY SHARED WELLS.
2. WELL PROTECTION ZONES HAVE A 100' RADIUS.
3. WELLS TO BE SETBACK AT LEAST 25' FROM STORM WATER SWALES & 100' FROM IRRIGATION DITCHES
4. WASTEWATER HANDLED BY INDIVIDUAL SEPTIC SYSTEMS WITH LEVEL 2 TREATMENT.
5. DIRECTION OF GROUNDWATER FLOW IS ACCORDING TO MBMG STUDY: HYDROGEOLOGY OF THE WEST BILLINGS AREA (OLSON & REITEN, 2002).
6. DRAIN FIELDS SETBACK AT LEAST 100' FROM IRRIGATION DITCHES, 25' FROM STORM WATER SWALES, & 10' FROM SIDE AND REAR PROPERTY LINES.
7. 780 FEET OF IRRIGATION DITCH ALONG NORTH SUBDIVISION BOUNDARY SHALL BE PIPED (18" ø)
8. STORM WATER TO BE CHANNELED THROUGH STORM DRAIN SWALES AND CULVERTS TO A RETENTION POND IN AN EASEMENT ON PRIVATE PARK 3.

5
BLOCK 5
61.793 ACRES

100 0 100 200 300
SCALE 1" = 100' (24 x 36)
SCALE 1" = 200' (11 x 17)

DEVELOPMENT
Maplewood Estates Residential Subdivision

DEVELOPER
REGAL LAND DEVELOPMENT, INC.
P.O. BOX 80205
BILLINGS, MT 59108

CIVIL ENGINEER
IN SITE ENGINEERING, P.C.
4231 CREEKWOOD DR
BILLINGS, MT 59106
IN SITE ENGINEERING

NO.	DATE	DESCRIPTION
1	4/1/2025	Submit for C&S Rev.
2	4/19/2025	Shared Wells Rev.
3	5/1/2025	Submit Prelim. Plat
4	5/21/2025	Resubmit Prelim. Plat
5		
6		
7		

DATE 5/21/2025

PROJECT
Maplewood Estates

DESCRIPTION
PRELIMINARY WATER, WASTEWATER, AND STORM DRAIN PLAN

SHEET NAME	SHEET NUMBER
WATER	1

_____Acres ____ Lot ____ Block_____1/4 _____1/4 _____1/4 Sec ____, Twp ____ ☐ N ☐ S, Rge ____ ☐ E ☐ W

d) The source of water: groundwater

e) The proposed purpose: domestic + lawn & garden watering

f) For a change in appropriation right, the water right(s) proposed for change:

Type of water right _____ Basin _____ Water Right # _____

Type of water right _____ Basin _____ Water Right # _____

Type of water right _____ Basin _____ Water Right # _____

g) For a change in appropriation right, an explanation of historical use of the right(s) proposed for change:

h) Any proposed place of storage, if applicable (only if storage capacity is greater than 0.1 acre-feet):

#1 Capacity: Surface Acres _____ x Max Depth (feet) _____ x (.4 for dams/.5 for pits) = _____Acre-Feet

Location: ____1/4 ____1/4 ____1/4 Section ___, Township ___ ☐ N ☐ S, Range ___ ☐ E ☐ W

#2 Capacity: Surface Acres _____ x Max Depth (feet) _____ x (.4 for dams/.5 for pits) = _____Acre-Feet

Location: ____1/4 ____1/4 ____1/4 Section ___, Township ___ ☐ N ☐ S, Range ___ ☐ E ☐ W

#3 Capacity: Surface Acres _____ x Max Depth (feet) _____ x (.4 for dams/.5 for pits) = _____Acre-Feet

Location: ____1/4 ____1/4 ____1/4 Section ___, Township ___ ☐ N ☐ S, Range ___ ☐ E ☐ W

i) For applications proposing a new well or wells, the well depth(s) and location:

New Well #1 ____1/4 ____1/4 SW 1/4 Section 18, Township 1 ☐ N ■ S, Range 25 ■ E ☐ W

County Yellowstone

Lot/Tract (unplatted) Block_____ Subdivision Name Maplewood Estates

Estimated Well Depth 55 Feet

New Well #2 - 46 1/4 ____1/4 SW 1/4 Section 18, Township 1 ☐ N ■ S, Range 25 ■ E ☐ W

County (note: there are 46 wells (shared), all located in SW4 1/4 of Sec. 18)

Lot/Tract _____ Block_____ Subdivision Name_____

Estimated Well Depth 55 (all) Feet