



**APPLICATION FOR BENEFICIAL WATER USE PERMIT
TECHNICAL ANALYSIS 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 checked when the required item is attached to the Technical Analysis 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. Label units in narrative responses. Responses in the form of a table may be entered into the table provided on this form or in an attachment. Responses in the form of a table that are larger than the table provided on this form should be placed 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. For tables on this form, circle correct unit at header of column when table has unit options. For tables in attachments, label all units.

SURFACE WATER

Applicable, move on to question 1. **Not Applicable**, skip to question 14.

The following questions are mandatory for applications for surface water.

Surface Water: Physical Availability

| Questions, Narrative Responses, and Tables | Check-boxes |
|--|----------------------------|
| 1. 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 (Form No. 600) to label each point of diversion. | <input type="checkbox"/> A |

| POD # | Flow Rate (GPM or CFS) | Volume (AF) | Period Start (MM/DD) | Period End (MM/DD) | Source Type |
|-------|------------------------|-------------|----------------------|--------------------|-------------|
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| 2. What is the source type of the surface water diversion? _____ | <input type="checkbox"/> A |
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|----------------------------------|-------------------------|------------------|-------------------------|-------------|-------------------|--------------|-------------------|
| Perennial or Intermittent | Answer questions 3 to 4 | Ephemeral | Answer questions 5 to 7 | Lake | Answer question 8 | Other | Answer question 9 |
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Surface Water: Physical Availability: Perennial or Intermittent

Applicable Not Applicable

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| 3. Is stream gage data available? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, answer the following questions related to the number of stream gages that are available. | |
| i. One stream gage is available | |
| 1. What is the gage name? _____ | |
| 2. Who operates and maintains the gage? _____ | |
| 3. Is the stream gage upstream or downstream of the points of diversion? _____ | |
| 4. Is there a limiting or controlling factor that would make the Drainage Area Method not practical? This includes dams that control the flow and streams with large gaining and/or losing reaches. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 5. Is the period of record greater than or equal to 10 years? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 6. How frequently is stage data recorded? _____ | |
| 7. If data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 8. 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? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 9. Were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 10. Does the gage 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? See the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, this section is complete. Skip to question 12. | |
| b. If no, answer question 3.b. | |
| ii. More than one stream gage is available | |
| 1. List the gage names. _____ _____ | <input type="checkbox"/> A |
| 2. Who operates and maintains the gages? _____ | |
| 3. Is one stream gage upstream and one downstream of the points of diversion? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 4. Do stream gages have similar periods of record? | <input type="checkbox"/> Y <input type="checkbox"/> N |



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| 5. Are the periods of record each greater than or equal to 10 years? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 6. How frequently is stage data recorded at each gage? _____ | |
| 7. For each gage, if data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 8. Were the rating curves established and maintained throughout the duration of the period of record using measurements taken near the reference gages and stage recorders according to USGS protocols? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 9. For each gage, were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 10. Does the gage 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? See the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, this section is complete. Skip to question 12. | |
| b. If no, answer question 3.b. | |
| b. If no gage data is available or if available gage data does 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? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| i. If yes, | |
| 1. Submit available measurements to the Department. | <input type="checkbox"/> S |
| 2. Who collected the measurements? _____ | |
| 3. With what method was the data collected? _____ _____ _____ _____ _____ _____ _____ | <input type="checkbox"/> A |
| 4. What is the period of record? _____ | |
| 5. What is the frequency of measurement? _____ | |
| 6. Are there gaps in the data? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality? _____ _____ _____ | <input type="checkbox"/> A |



| | |
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| 7. Is there a process for maintaining the data and meeting specified accuracy limits? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, explain. _____ _____ _____ _____ _____ | <input type="checkbox"/> A |
| 8. Does 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? See the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, this section is complete. Skip to question 12. | |
| b. If no, answer question 4. | |
| 4. Does the available measurement data, gage and/or otherwise measured, include a minimum of high, moderate, and low flows to be used for a Department-accepted estimation technique? If the Department finds that your measurements are not sufficient to validate an estimation technique or that no estimation technique is appropriate for the source characteristics, further measurements may be required. Refer to the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual for more information. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, | |
| i. Describe how your measurements are representative of high, moderate, and low flows. _____ _____ _____ _____ | <input type="checkbox"/> A |
| ii. If you conducted the Technical Analyses, summarize the estimation technique. If the Department will conduct the Technical Analyses, write N/A. _____ _____ _____ _____ | <input type="checkbox"/> A |
| b. If no, and one or more Department-accepted estimation techniques are appropriate for the source characteristics. | |
| i. Did you submit Form No. 653 to request a variance from the requirements of ARM 36.12.1702(1)(b)? Please note that the Department's Technical Analyses or Scientific Credibility Review of your Technical Analyses cannot commence until the Department receives measurements that meet the requirements of ARM 36.12.1702(1) 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. | <input type="checkbox"/> Y <input type="checkbox"/> N |



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| 1. If yes, submit a copy of the variance request form and, if available, the Department's decision. | <input type="checkbox"/> S |
| c. If no, and you have evidence that no Department-accepted estimation technique is appropriate for the source characteristics. | |
| i. Describe why no Department-accepted estimation technique is appropriate for the source characteristics. _____ _____ _____ _____ _____ | <input type="checkbox"/> A |
| ii. Does available measurement data meet the Department's standard of monthly measurements throughout the period of diversion for surface water permits? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 1. If no, did you submit Form No. 653 to request a variance from the requirements of ARM 36.12.1702(4)? Please note that the Department's Technical Analyses or Scientific Credibility Review of your Technical Analyses cannot commence 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. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, submit a copy of the variance request form and, if available, the Department's decision. | <input type="checkbox"/> S |

Surface Water: Physical Availability: Ephemeral

Applicable Not Applicable

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| 5. If you have conducted Technical Analyses, summarize the method used to calculate mean annual runoff. If DNRC will conduct Technical Analyses, write N/A. _____ _____ _____ | <input type="checkbox"/> A |
| 6. Submit climate and drainage area data. | <input type="checkbox"/> S |
| 7. Identify and provide the legal land description for the most downstream point of diversion. This point is used to delineate the drainage basin. _____ _____ | <input type="checkbox"/> A |

Surface Water: Physical Availability: Lake

Applicable Not Applicable

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| 8. Do you have a design plan? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, submit the design plans to DNRC | <input type="checkbox"/> S |



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| b. If no, has the lake volume been quantified by a qualified entity based on bathymetric data? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| i. If yes, submit this information to DNRC. | <input type="checkbox"/> S |

Surface Water: Physical Availability: Other

Applicable Not Applicable

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| 9. Submit measurements of the source to the Department. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 10. With what method was the measurement data collected? _____ _____ _____ _____ | <input type="checkbox"/> A |
| 11. What is the measurement interval? _____ | |
| a. Does the interval meet the requirements of 36.12.1702(4)? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| i. If no, did you submit Form No. 653 to request a variance from measurement requirements pursuant to ARM 36.12.1702(4)? Please note that the Department's Technical Analyses or Scientific Credibility review of your Technical Analyses cannot commence 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. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 1. If yes, submit a copy of the variance request form and the Department's decision. | <input type="checkbox"/> S |

Surface Water: Identification of Legal Demands in Area of Potential Impact

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| 12. If you conducted Technical Analysis, describe how you defined the Area of Potential Impact. If Department will conduct Technical Analyses, write N/A. _____ _____ _____ _____ _____ _____ | <input type="checkbox"/> A |
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Surface Water: Basin Closure Area

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| <p>13. Is the project located in a Basin Closure Area? If yes, list the Basin Closure Area and answer the follow-up question for Basin Closure Areas in the “Project-Specific Questions: Controlled Groundwater Areas and Basin Closures” section (question 41). More information about basin closures online at: https://dnrc.mt.gov/Water-Resources/Water-Rights/Basin-Closures-Stream-Depletion-Controlled-Ground-Water-Areas.</p> <p>_____</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
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GROUNDWATER

Applicable, move on to question 14. **Not Applicable**, skip to question 37.
The following questions are mandatory for applications for groundwater.

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| <u>Questions, Narrative Responses, and Tables</u> | <u>Check-boxes</u> |
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Groundwater: Physical Availability

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| <p>14. What is the type of groundwater diversion?</p> <p>_____</p> | | | | | |
| <p>Well/Pit</p> | <p>Answer questions 15 to 18</p> | <p>Developed Spring</p> | <p>Answer questions 19 to 23</p> | <p>Pond</p> | <p>Answer questions 24 to 28</p> |

Groundwater: Physical Availability: Well/Pit
 Applicable Not Applicable

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| <p>15. Submit the Aquifer Testing Addendum (Form No. 600-ATA).</p> | <input type="checkbox"/> S |
| <p>16. Submit the Aquifer Test Data Form (Form No. 633).</p> | <input type="checkbox"/> S |
| <p>17. Are variances from the requirements of ARM 36.12.121 needed?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>a. If yes,</p> | |
| <p>i. Submit the Variance Request (Form No. 653) to the Department and a record of the Department decision if the form was submitted prior to this application.</p> | <input type="checkbox"/> S |
| <p>ii. Do you have aquifer characteristic data available to you that you would like the Department to consider in its decision on the variance request?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>1. If yes, submit the data.</p> | <input type="checkbox"/> S |
| <p>18. Do you have a map with the location of each well/pit labeled and, if available, with the GWIC ID?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>a. If no, have all the wells/pits been constructed?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>i. If yes, submit a map with the wells/pits labeled and, if available, with the GWIC ID. Create map on an aerial photograph or topographic map that also includes the following: section corners, township and range, and a north arrow.</p> | <input type="checkbox"/> S |
| <p>ii. If no, answer the following questions,</p> | |



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| 1. When will the wells/pits be constructed? _____ | |
| 2. Do you have an initial map with the proposed location of wells/pits? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, submit an initial map to the Department. Create map on an aerial photograph or topographic map that also includes the following: section corners, township and range, and a north arrow. | <input type="checkbox"/> S |
| 3. Is the requested volume for each new well/pit known? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If no, what is the total requested volume (AF) and the number of new wells? _____ _____ | <input type="checkbox"/> A |

Groundwater: Physical Availability: Developed Spring

Applicable Not Applicable

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| 19. Submit your measurements of the source. | <input type="checkbox"/> S |
| 20. Do the measurements include flow rate (GPM or CFS) and volume measurements? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 21. With what method were measurements collected? _____ _____ _____ _____ _____ _____ | <input type="checkbox"/> A |
| 22. What is the interval of measurements? _____ | |
| 23. Is the interval of measurements sufficient to comply with ARM 36.12.1703(1)? Please note technical analyses or scientific credibility reviews cannot commence until the Department has measurement data that meets the requirements of ARM 36.12.1703(1). | <input type="checkbox"/> Y <input type="checkbox"/> N |

Groundwater: Physical Availability: Pond

Applicable Not Applicable

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| 24. Do you require a variance from the requirements of ARM 36.12.121? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, submit a Variance Request (Form No. 653) to the Department and a record of the Department decision if the form was submitted prior to this application. | <input type="checkbox"/> S |
| 25. Do you have measurements available for pond physical availability? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, submit the measurements to the Department. | <input type="checkbox"/> S |
| 26. Submit pond bathymetry data, survey, or engineering plans to the Department. | <input type="checkbox"/> S |
| 27. Submit a map identifying the location of the proposed pond. Create map on an aerial photograph or topographic map that also includes the following: section corners, township and range, and a north arrow. | <input type="checkbox"/> S |



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| <p>28. If you conducted Technical Analyses, how did you determine depth, surface area, and net evaporation of the pond? If DNRC will conduct Technical Analyses, write N/A.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
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Groundwater: Identification of Groundwater Legal Demands

All information to calculated Zone of Influence was collected in previous questions.

Groundwater: Adverse Effect to Existing Groundwater Rights

All information to calculate One-Foot Drawdown Contour was collected in previous questions.

Groundwater: Physical Availability of Depleted Surface Water Sources

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| <p>29. If you submitted Technical Analyses with this application, list the hydraulically connected surface water sources and answer questions 30 to 31 one time per source. Use the "Additional Hydraulically Connected Source Sheet (600-TAA)" for each additional source. If you have elected for the Department to conduct the Technical Analyses after application submittal, write N/A and skip to question 33 because the information required to answer questions 30 to 32 is not yet available. If measurements are required to determine availability of depleted surface water sources, you are required to submit measurements sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>30. Name the hydraulically connected surface water source for which you are answering questions 31 and 32.</p> <p>_____</p> | |
| <p>31. Is stream gage data available?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>a. If yes, answer the following questions for the number of stream gages that are available.</p> | |
| <p>i. One stream gage is available</p> | |
| <p>1. What is the gage name?</p> <p>_____</p> | |
| <p>2. Who operates and maintains the gage?</p> <p>_____</p> | |
| <p>3. Is the gage upstream or downstream of the start of the depletion?</p> <p>_____</p> | |



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| 4. Is there a limiting or controlling factor that would make the Drainage Area Method not practical? This includes dams that control the flow and streams with large gaining and/or losing reaches. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 5. Is the period of record greater than or equal to 10 years? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 6. How frequently is stage data recorded? _____ | |
| 7. If data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 8. 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? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 9. Were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 10. Does the gage 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 depletion? See the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, this section is complete. Skip to question 33. | |
| b. If no, answer question 31.b. | |
| ii. More than one stream gage is available | |
| 1. List the gage names. _____ _____ | <input type="checkbox"/> A |
| 2. Who operates and maintains the gages? _____ | |
| 3. Is one stream gage upstream and one downstream of the start of the depletion? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 4. Do the stream gages have similar periods of record? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 5. Are the periods of record greater than or equal to 10 years? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 6. How frequently is stage date recorded at each gage? _____ | |
| 7. For each gage, if data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 8. Were the rating curves established and maintained throughout the duration of the period of record using measurements taken near the reference gages and stage recorders according to USGS protocols? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 9. For each gage, were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 10. Does the gage 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 depletion? If you have questions about this, consult the "Department Standard Practice for Determining Physical Surface Water Availability" found in the Permit Manual. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, this section is complete. Skip to question 33. | |
| b. If no, answer question 31.b. | |



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| <p>b. If no gage data is available or if available gage data does not meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the months of depletion, is the source otherwise measured?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>i. If yes,</p> | |
| <p>1. Submit available measurements to the Department.</p> | <input type="checkbox"/> S |
| <p>2. Who collected the measurements?</p> <p>_____</p> | |
| <p>3. With what method was the data collected?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>4. What is the period of record?</p> <p>_____</p> | |
| <p>5. What is the frequency of measurement?</p> <p>_____</p> | |
| <p>6. Are there gaps in the data?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>a. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>7. Is there a process for maintaining the data and meeting specified accuracy limits?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>a. If yes, explain.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>8. Does 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 of depletion? See the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual.</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>a. If yes, this section is complete. Skip to question 33.</p> | |



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| b. If no, answer question 32. | |
| 32. Does the available measurement data, gage and/or otherwise measured, include a minimum of high, moderate, and low flows to be used for a Department-accepted estimation technique? If the Department finds that your measurements are not sufficient to validate an estimation technique or that no estimation technique is appropriate for the source characteristics, further measurements may be required. Refer to the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual for more information. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, | |
| i. Describe how your measurements are representative of high, moderate, and low flows. _____ _____ _____ | <input type="checkbox"/> A |
| ii. If you conducted the Technical Analyses, summarize the estimation technique. If the Department will conduct the Technical Analyses, write N/A. _____ _____ _____ | <input type="checkbox"/> A |
| b. If no, and one or more Department-accepted estimation techniques are appropriate for the source characteristics. | |
| i. Did you request to depart from the requirements of "Department Standard Practice for Determining Physical Surface Water Availability" found in the Permit Manual? Please note that the Department's Technical Analyses or Scientific Credibility Review of your Technical Analyses cannot commence until the Department receives measurements that meet these requirements 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. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 1. If yes, submit a copy of the request to depart and, if available, the Department's decision. | <input type="checkbox"/> S |
| c. If no, and you have evidence that no Department-accepted estimation technique is appropriate for the source characteristics. | |
| i. Describe why no Department-accepted estimation technique is appropriate for the source characteristics. _____ _____ _____ _____ _____ | <input type="checkbox"/> A |



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| ii. Does available measurement data meet the Department's standard of monthly measurements throughout the period of net depletion for groundwater permits? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 1. If no, did you submit Form No. 653 to request a variance from the requirements of ARM 36.12.1702(4)? Please note that the Department's Technical Analyses or Scientific Credibility Review of your Technical Analyses cannot commence 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. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, submit a copy of the variance request form and, if available, the Department's decision. | <input type="checkbox"/> S |

Groundwater: Legal Availability of Depleted Surface Water Source(s)

All information to determine legal demands for depleted surface water source(s) was collected in previous questions.

Groundwater: Adequacy of Diversion

| <u>Questions, Narrative Responses, and Tables</u> | | | | | | <u>Check-boxes</u> |
|---|------------------------|-------------|-----------------------------------|-----------------|-----------------------|----------------------------|
| 33. What is the flow rate (GPM or CFS), volume (AF), and period of diversion required (MM/DD-MM/DD) at each groundwater point of diversion? If the POD is a well, provide the well depth (FT), if available, or estimated well depth (FT). Please use the same POD # as the project map (Form No. 600) to match this information with the location information. | | | | | | <input type="checkbox"/> A |
| POD # | Flow Rate (GPM or CFS) | Volume (AF) | Period of Diversion (MM/DD-MM/DD) | Well Depth (FT) | Measured or Estimated | |
| | | | | | | |
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| 34. Will the monthly pumping schedule differ from an allocation of diverted volume by the number of days in the month for year-round uses or the IWR 80% net irrigation requirements for irrigation/lawn & garden uses (IWR, NRCS 2003)? | | | | | | <input type="checkbox"/> Y <input type="checkbox"/> N |
|--|-------|-------------|-----------|-------|-------------|---|
| a. If yes, provide the alternative pumping schedule in the table below. Use the same POD # as the project map (Form No. 600). | | | | | | <input type="checkbox"/> A |
| Month | POD # | Volume (AF) | Month | POD # | Volume (AF) | |
| January | | | July | | | |
| February | | | August | | | |
| March | | | September | | | |
| April | | | October | | | |
| May | | | November | | | |
| June | | | December | | | |



Groundwater: Basin Closure or Controlled Groundwater Area

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| 35. Are any of the points of diversion located in a basin closure area? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, | |
| i. Submit the Basin Closure Area Addendum (Form 600-BCA), Hydrogeologic Report Addendum (Form 600-HRA), and Hydrogeologic Report. | <input type="checkbox"/> S |
| ii. If the Hydrogeologic Report indicates that the proposed groundwater use will impact a surface water source, which of the following three options best describe your plan to mitigate depletions of hydraulically connected surface water? | |
| 1. Application to Change a Water Right to mitigate the adverse effects created. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 2. Alternative mitigation plan. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 3. Documentation to show a mitigation plan is not required. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 36. Are any of the points of diversion located in a controlled groundwater area? If yes, answer "Project-Specific Questions: Controlled Groundwater Areas and Basin Closures" section (questions 37 to 40). | <input type="checkbox"/> Y <input type="checkbox"/> N |

PROJECT-SPECIFIC QUESTIONS

Controlled Groundwater Areas and Basin Closures

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| 37. Is the project located in the East Valley Controlled Groundwater Area? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, | |
| i. Do you have written approval from (1) Lewis and Clark County Board of Health, (2) Lewis and Clark County Water Quality Protection Bureau, (3) the U.S. Environmental Protection Agency, (4) the Montana State Dept. of Environmental Quality and (5) the Montana State Dept. of Natural Resources and Conservation? If the agencies have established a Technical Advisory Group, prior approval by the Technical Advisory Group satisfies this requirement. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| ii. Is the project in Zone 2? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 1. If yes, submit in the written approval the following recommendations which will also be included as conditions on the appropriation. <ul style="list-style-type: none"> a. Well design and construction requirements necessary to measure the water level and water quality for any well; b. Water level measurement and water quality sample reporting requirements for any new well; c. Any other requirements necessary to ensure new wells can be operated in a manner consistent with purpose of the EVCGWA. | <input type="checkbox"/> S |
| iii. Is the project in Zone 1? If yes, a Form No. 600 cannot be accepted by the Department. | <input type="checkbox"/> Y <input type="checkbox"/> N |
| 38. Is the project located in the South Pine Controlled Groundwater Area? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| a. If yes, submit the Application for Beneficial Water Use Permit South Pine Controlled Groundwater Area Addendum. | <input type="checkbox"/> S |
| 39. Is the project located in the Yellowstone Controlled Groundwater Area? | <input type="checkbox"/> Y <input type="checkbox"/> N |
| i. If yes, submit a Yellowstone Controlled Groundwater Area Addendum (Form No. 600-Y over35). | <input type="checkbox"/> S |
| 40. Is the project located in one of the other Controlled Groundwater Areas listed on the Department's website (https://dnrc.mt.gov/Water-Resources/Water-Rights/Basin-Closures-Stream-Depletion-Controlled-Ground-Water-Areas)? | <input type="checkbox"/> Y <input type="checkbox"/> N |



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| <p>a. If yes, list which one and describe how the proposed project meets the requirements of the Controlled Groundwater Area.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> | <input type="checkbox"/> A |
| <p>41. Is the project located in one of the basin closures or stream depletion zones listed on the Department's website (https://dnrc.mt.gov/Water-Resources/Water-Rights/Basin-Closures-Stream-Depletion-Controlled-Ground-Water-Areas)?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>a. If yes, list which one and describe how the proposed project meet the requirements of the basin closure or stream depletion zone.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> | <input type="checkbox"/> A |

Place of Storage

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| <p>42. Does the proposal include at least one place of storage? If yes, answer questions 43 to 50 for each individual place of storage (use "Additional Place of Storage Sheet (600-TAA)" for additional places of storage). If no, this section is complete, and you can skip to question 51.</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>43. Submit a map showing the location of the place of storage. Create map on an aerial photograph or topographic map that also includes the following: section corners, township and range, and a north arrow.</p> | <input type="checkbox"/> S |
| <p>44. Is this application to enlarge an existing reservoir?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>a. If yes, what is the water right number for the existing reservoir?</p> <hr/> | |
| <p>45. Is the place of storage located on-stream?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |



| | |
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| <p>a. If no, explain the conveyance means to and from the off-stream place of storage and any losses that may occur with that conveyance.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>46. 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: <i>Surface Acres x Maximum Depth (FT) x 0.5 (0.4-0.6 depending on side slope) = Capacity (AF)</i></p> <p>_____</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>47. Will the place of storage include primary and/or emergency spillways?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>a. If yes, submit preliminary design specifications for primary and emergency spillways (ARM 36.12.113).</p> | <input type="checkbox"/> S |
| <p>48. Will the place of storage be lined?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>49. What is the annual net evaporation of water from the place of storage using the standards in ARM 36.12.116(1)? Gridded net evaporation layer is available from DNRC upon request.</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>50. Is the place of storage capacity calculated to be greater than 50 acre-feet?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>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?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |

Ditch-Specific Questions

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| <p>51. Does the proposal include at least one conveyance ditch? If yes, answer question 52 and, for each ditch, answer question 53. If no, this section is complete, and you can skip to question 54.</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>52. Submit a Ditch Map that shows every ditch conveying water for the proposed project. Label the ditch name(s), POD(s), the POU(s), and the ditch measurement locations (requested in question 53.c). The map should be created on an aerial photograph or topographic map with the following: section corners, township and range, and a north arrow.</p> | <input type="checkbox"/> S |
| <p>53. For each conveyance ditch, answer the following. If there is more than one conveyance ditch, use an "Additional Ditch Sheet (600-TAA)" for each additional conveyance ditch.</p> | |
| <p>a. What is the ditch name?</p> <p>_____</p> | |



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| <p>b. What is the distance water will be carried by the conveyance ditch? Only include segments between the POD and start of the POU; do not include segments within the POU.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>c. Provide at least one set of ditch measurements, which include width (FT), depth (FT), and slope (%). Discuss ditch characteristics with DNRC to determine the minimum number of ditch measurements. Include the location of each measurement, labeled with the 2-digit measurement ID number, used on the map submitted for question 52.</p> | <input type="checkbox"/> A |

| ID # | Width (FT) | Depth (FT) | Slope (%) | Date of Measurement |
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| <p>d. What is a reasonable Manning's n value? List the factors used for estimation. If you do not know this value, please work through estimation with the Department.</p> <p>_____</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>e. What type of soils compose the proposed conveyance ditch? For lined ditches, write "lined" instead.</p> <p>_____</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>f. Are other water rights conveyed by the conveyance ditch?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>i. If yes,</p> | |
| <p>1. List the water right numbers.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>2. What is the sum of the flow rates (GPM or CFS) for water rights conveyed?</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |



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| <p>3. Submit a map with your best estimate of where the existing POUs begin for the other water rights conveyed by the conveyance ditch for all POUs between the proposed POD and your proposed POU. Create map on an aerial photograph or topographic map that also includes the following: section corners, township and range, and a north arrow.</p> | <input type="checkbox"/> S |
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Water Marketing

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| <p>54. Does the proposal include water marketing? If yes, please answer the questions in this section (questions 55 to 60). If no, this section is complete.</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>55. Identify the flow rate (GPM or CFS) and volume (AF) of water that will be marketed.</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>56. Will the marketed water return to the source?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>a. Explain how this determination was made.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>57. For what purposes will the marketed water be used?</p> <p>_____</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>58. How will you control or limit access to the water?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> | <input type="checkbox"/> A |
| <p>59. Do you have contracts for the entire volume and flow rate sought?</p> | <input type="checkbox"/> Y <input type="checkbox"/> N |
| <p>60. Submit a service area map. Create map on an aerial photograph or topographic map and shows the following: general service area boundary, section corners, township and range, and a north arrow.</p> | <input type="checkbox"/> S |

