APPLICATION FOR BENEFICIAL WATER USE PERMIT

TECHNICAL ANALYSES ADDENDUM

ADDITIONAL HYDRAULICALLY CONNECTED SOURCE SHEET (600-TAA)

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 Additional Sheet. 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.

34. Name the hydraulically connected surface water source for which you are answering questions 35 to 38. _____	
35. Are stream gage data available?	☐ Y ☐ N
a. If yes, answer question 36.	
b. If no, answer question 37.	
36. 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
i. If no, is only one stream gage located near the start of the depleted reach?	☐ Y ☐ N
1. If yes, is the stream gage located upstream or downstream? _____	
b. List the gage name(s). Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____	
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 is available. Gage 1: _____ Gage 2: _____	
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.	☐ Y ☐ N

i. If yes, explain. _____ _____ _____ _____	☐ A
e. How long is the period of record? Write “N/A” for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____	
f. Who operates and maintains the gage(s)? Write “N/A” for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____	
g. Is each available stream gage operated and maintained by USGS or DNRC?	☐ Y ☐ N
i. If yes, skip to question 36.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: _____	
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
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
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
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
4. Were requirements established and followed for maintaining a permanent gage datum and meeting specified accuracy limits?	
a. Gage 1.	☐ Y ☐ N
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
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? See the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual.	☐ Y ☐ N

i. If yes, record how many meet the standard, then skip to question 37 because this section is complete. _____	
ii. If no, answer question 37.	
37. 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
a. If no, the Department requires 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 38.	
b. If yes,	
i. Submit available measurements to the Department.	☐ S
ii. Who collected the measurements? _____	☐ A
iii. With what method were the data collected? _____ _____ _____	☐ A
iv. What is the period of record? _____	
v. What is the frequency of measurement? _____	
vi. Are there gaps in the data?	☐ Y ☐ N
1. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality? _____ _____ _____	☐ A
vii. Is there a process for maintaining the data and meeting specified accuracy limits?	☐ Y ☐ N
1. If yes, explain. _____ _____ _____	☐ A
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? See the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual.	☐ Y ☐ N
1. If yes, this section is complete.	
2. If no, answer question 38.	
38. 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? 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.	☐ Y ☐ N

a. If yes,	
i. Describe how the measurements are representative of high, moderate, and low flows. _____ _____ _____ _____	☐ A
ii. Describe the estimation technique. _____ _____ _____ _____ _____ _____ _____ _____	☐ A
b. If no, but a Department-accepted estimation technique will be appropriate for the hydraulically connected surface water source:	
i. Submit a request 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.	☐ S
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
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? Refer to the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual for more information.	☐ Y ☐ N
1. If no, submit a request 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.	☐ S