



APPLICATION TO CHANGE A WATER RIGHT
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.

HISTORICAL USE

Table with 2 columns: Questions, Narrative Responses, and Tables; Checkboxes. Row 1: Question 1 about water rights proposed for change. Row 2: Question 2 about water right number and historical use analysis, with a checkbox labeled 'A'.



Statement of Claim	Previous Change Authorization	Project Completion Notice	Previous Historical Use Analysis	Use Historical Use Analysis for Current Application

3. In the table below, write the water right number for each Provisional Permit proposed for change in the "Provisional Permit" column. If a Project Completion Notice has been submitted, write the date in the "Project Completion Notice" column, and if no Project Completion Notice has been submitted, write "none" instead. For each Provisional Permit proposed for change, if there are one or more previous change authorizations, write the application number for the change authorizations in the "Previous Change Authorization" column. If there are no previous change authorizations, write "none" in the "Previous Change Authorization" column and "NA" in all the remaining columns. Write the date of the Project Completion Notice for each previous change authorization in the "Previous Change Project Completion Notice" column and if the previous change authorization does not have a Project Completion Notice, write "none" instead. In the "Previous Change Historical Use Analysis" column, write "full" or "partial" if a historical use analysis was conducted for the previous change authorization, and "none" if no previous historical use analysis was conducted. In the "Use Historical Use Analysis for Current Application" column, write "yes" if the previous historical use analysis will be used for the current application, "no" if a new historical use analysis will be conducted.

A

Provisional Permit	Project Completion Notice	Previous Change Authorization	Previous Change Project Completion Notice	Previous Change Historical Use Analysis	Use Historical Use Analysis for Current Application

4. In the table below, write the water right number for each water right with another type proposed for change, the type of water right, and the date of issuance.

A

Other Water Right Type Number	Other Water Right Type Description	Date of Issuance



5. Are there previous Montana Water Court approved stipulations, Water Master reports, or prior Montana Water Court or Department decisions related to the water rights being changed?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, explain. <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<input type="checkbox"/> A
6. Fill in the table below based on ARM 36.12.1902(1) and the information provided in questions 1 to 5. In column "Water Right Number" list all water rights proposed for change. Select one of the three options from column "Historical Use Analysis Options" and fill in the "Information Required for Historical Use" associated with that option. Select "Full Historical Use Analysis NA" only if an unperfected Provisional Permit will be used to serve as historical use in lieu of analysis. If the "Existing Historical Use Analysis" or "Full Historical Use Analysis NA" option is selected, skip to question 22 because this section is complete.	<input type="checkbox"/> A

Water Right No. Proposed for Change	Historical Use Analysis Option and Information Required for Historical Use
	<input type="checkbox"/> New Historical Use Analysis. Date for new Historical Use Analysis: <hr/> <input type="checkbox"/> Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: <hr/> <input type="checkbox"/> Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: <hr/>
	<input type="checkbox"/> New Historical Use Analysis. Date for new Historical Use Analysis: <hr/> <input type="checkbox"/> Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: <hr/> <input type="checkbox"/> Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: <hr/>



	<input type="checkbox"/> New Historical Use Analysis. Date for new Historical Use Analysis: _____
	<input type="checkbox"/> Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	<input type="checkbox"/> Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____
	<input type="checkbox"/> New Historical Use Analysis. Date for new Historical Use Analysis: _____
	<input type="checkbox"/> Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	<input type="checkbox"/> Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____
	<input type="checkbox"/> New Historical Use Analysis. Date for new Historical Use Analysis: _____
	<input type="checkbox"/> Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	<input type="checkbox"/> Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____
	<input type="checkbox"/> New Historical Use Analysis. Date for new Historical Use Analysis: _____
	<input type="checkbox"/> Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	<input type="checkbox"/> Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____



7. Do you have actual knowledge of historical use?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes,	
i. Is this firsthand knowledge?	<input type="checkbox"/> Y <input type="checkbox"/> N
ii. Who has this knowledge and what was their role?	<input type="checkbox"/> A

b. If no,	
i. Where will the historical use data be derived?	<input type="checkbox"/> A

Historical Use: Place of Use

8. The historical use map submitted for Form 606 must clearly identify the entire place of use for each overlapping water right that intersects the historical place of use. Does your historical use map meet this requirement?	<input type="checkbox"/> Y <input type="checkbox"/> N
9. Are you proposing to change all water rights associated with the historical place of use?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If no, identify the water rights associated with the historical place of use that are not included in this application. Provide the priority date for each water right and explain why all overlapping water rights are not included in the application. Include water received via contract from a company, district, or water users' association.	<input type="checkbox"/> A

Water Right No.	Priority Date	Reason Not Included in Change

10. Answer the questions below related to the historical purpose for each of the water rights being changed.	
a. Irrigation	
i. Is the water right being changed a Statement of Claim?	<input type="checkbox"/> Y <input type="checkbox"/> N
1. If yes,	
a. Does the Water Resources Survey corroborate the acres irrigated listed on the abstract?	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If no, submit one or more aerial photographs that can corroborate the historical place of use.	<input type="checkbox"/> S



b. Does the legal land description from the abstract match the actual location of the historical place of use?	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If no, submit documentation of a written request submitted to the Water Court for amendment of the Claim as well as information to substantiate the requested amendment.	<input type="checkbox"/> S
2. If no, submit one or more aerial photographs that can corroborate the historical place of use.	<input type="checkbox"/> S
b. Lawn and garden	
i. Submit aerial photographs that can corroborate the historical place of use.	<input type="checkbox"/> S
c. Stock	
i. Submit aerial photographs, grazing records, or other records to corroborate the historical place of use.	<input type="checkbox"/> S
ii. Did the stock drink direct from source or direct from ditch?	<input type="checkbox"/> Y <input type="checkbox"/> N
1. If no, submit data sources that make clear the location of the stock watering infrastructure.	<input type="checkbox"/> S
d. Multiple domestic, domestic, municipal, mining, commercial, and other purposes	
i. Submit aerial photographs, deeds, other recorded documents or records, affidavits, or other published documents, such as magazine articles, to corroborate the historical place of use.	<input type="checkbox"/> S

Historical Use: Point of Diversion

11. For all historical points of diversion, identify the means, location (¼ ¼ ¼ section), and if they are proposed for change. Label using the same POD ID letter as for the Historical Use Map from Form 606.	<input type="checkbox"/> A
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POD ID	Means	Location (¼ ¼ ¼ Section)	Proposed for Change?

12. Do the legal land descriptions from the abstract match the actual locations of all historical points of diversion?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If no, do you have one or more aerial photographs that clearly show the location of the historical points of diversion that do not match their legal land descriptions?	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If yes,	
1. Submit the photograph(s).	<input type="checkbox"/> S
2. Submit an explanation for the discrepancy and, if a Statement of Claim, submit documentation of a written request submitted to the Water Court for amendment of the Claim.	<input type="checkbox"/> S
ii. If no, submit another data source to corroborate the location of the historical points of diversion that do not match their legal land description, an explanation for the discrepancy, and, if a Statement of Claim, submit documentation of a written request submitted to the Water Court for amendment of the Claim.	<input type="checkbox"/> S
13. Answer questions below related to the diversion means for each of the historical points of diversion.	



a. Headgate						
i. For each headgate, provide dimensions in feet (FT), slope of the channel at the headgate (%), material of the headgate, estimated historical capacity in gallons per minute (GPM) or cubic feet per second (CFS) and the method used to estimate historical capacity. Label using the same POD ID letter as for the Historical Use Map from Form 606.						<input type="checkbox"/> A
POD ID	Dimensions (FT)	Slope (%)	Material	Capacity (GPM or CFS)	Method	

b. Pump, dike, dam, or other surface water point of diversion			
i. For each pump, dike, dam, or other surface water point of diversion, provide an estimate of the historical capacity (GPM or CFS) and the method used to estimate the historical capacity. Label using the same POD ID letter as for the Historical Use Map from Form 606.			<input type="checkbox"/> A
POD ID	Estimated Capacity (GPM or CFS)	Method	

c. Well, pit, or other groundwater point of diversion			
i. For each well, pit, or other groundwater point of diversion, provide an estimate of the historical capacity (GPM or CFS) and the method used to estimate the historical capacity. Label using the same POD ID letter as for the Historical Use Map from Form 606.			<input type="checkbox"/> A
POD ID	Estimated Capacity (GPM or CFS)	Method	

14. Do other water rights share any of the points of diversion?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, list the water rights, their flow rates (GPM or CFS), and the nature of the relationship. Label using the same POD ID letter as for the Historical Use Map from Form 606.	<input type="checkbox"/> A



POD ID	Water Right No.	Flow (GPM or CFS)	Relationship

Historical Use: Period of Diversion

15. Are the period of diversion and the period of use the same?		<input type="checkbox"/> Y <input type="checkbox"/> N
a. If no,		<input type="checkbox"/> A
i. Why are they different?		
<hr/> <hr/> <hr/>		
ii. Is there a place of storage?		<input type="checkbox"/> Y <input type="checkbox"/> N
16. When was water diverted for the purposes of the water rights being changed?		
Start Date (Month (MM)/Day (DD))		End Date (MM/DD)

17. Does the Department have a standard, found in ARM 36.12.112, for the period of diversion for the purposes for which water is used?		<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, does the period of diversion fall within Department standards?		<input type="checkbox"/> Y <input type="checkbox"/> N
i. If no, or if the period of diversion falls outside Department standards, explain how the period of diversion is reasonable for the purpose.		<input type="checkbox"/> A
18. Do the water rights proposed for change have an irrigation purpose?		<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes,		
i. What were the crops grown?		



<p>1. If the crops grown include hay, how many cuttings were there per season and how many days did they last? If the crops did not include hay, write "N/A" instead.</p> <p>_____</p> <p>_____</p>	
<p>ii. Did diversions ever temporarily cease within the period of use? This may include water shortages or calls based on priority date.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>1. If yes, please explain.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A

Historical Use: Historical Diverted Volume

<p>19. Answer the questions below related to the historical purposes of the water rights being changed.</p>	
<p>a. Irrigation</p>	
<p>i. Do you want ARM 36.12.1902(11) to be used to calculate historical diverted volume?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>1. If no, submit a Historical Water Use Addendum (Form 606-HUA).</p>	<input type="checkbox"/> S
<p>b. Non-irrigation</p>	
<p>i. How often was water historically diverted?</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>ii. What was the duration of each historical diversion?</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>iii. Was wastewater historically discharged? If yes, what amount was discharged?</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>iv. What is the volume of water historically diverted (AF)?</p> <p>_____</p>	
<p>v. How did you determine the volume of water historically diverted?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A



vi. Did the historical diverted volume serve more than one purpose of use?	<input type="checkbox"/> Y <input type="checkbox"/> N
1. If yes, how much of the diverted volume served each purpose of use and how did you determine this?	<input type="checkbox"/> A

Historical Use: Historical Consumed Volume

20. Answer the questions below related to the historical purpose of the water rights being changed.	
a. Irrigation	
i. Will you use Department standards for historical consumptive use as defined in ARM 36.12.1902?	<input type="checkbox"/> Y <input type="checkbox"/> N
1. If no,	
a. Submit a Historical Water Use Addendum (Form 606-HUA) to the Department.	<input type="checkbox"/> S
2. If yes,	
a. What is the historical irrigation method type and subtype? Irrigation method types include flood and sprinkler. Flood irrigation subtypes include level border, graded border, furrow, contour ditch, or wild flood. Sprinkler subtypes include wheel line and center pivot.	<input type="checkbox"/> A

b. What was the slope of the historical place of use?	<input type="checkbox"/> A

c. Are there any factors beyond irrigation method type/subtype and place of use slope that may influence percent efficiency of irrigation?	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If yes, submit evidence to support the modified percent efficiency of irrigation in the Historical Water Use Addendum (Form 606-HUA).	<input type="checkbox"/> S
d. Based on answers to the above questions, what is the percent efficiency of irrigation?	

e. What is the County Management Factor?	

f. What is evapotranspiration (ET) based on the irrigation method and county?	



g. What percent of applied water are irrecoverable losses per ARM 36.12.1902(17)? _____	
h. Do other water rights supplement or overlap the historical place of use that contribute to the irrigation water demand?	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If yes,	
1. How were the water rights operated to serve the irrigation purpose? _____ _____ _____ _____ _____ _____ _____ _____ _____	<input type="checkbox"/> A
2. For each supplemental or overlapping water right, list the average period of diversion and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed to the total irrigation water demand.	<input type="checkbox"/> A

Water Right No.	Avg. Period of Diversion (MM/DD-MM/DD)	Avg. Period of Use (MM/DD-MM/DD)	Flow Rate (GPM or CFS)	Volume Contributed (AF)

b. Lawn and garden	
i. Will you use the Department standards for historical consumptive use volume for lawn and garden? Department standards include 2.5 acre-feet per acre, or a calculated volume based on Irrigation Water Requirements for turf grass.	<input type="checkbox"/> Y <input type="checkbox"/> N
1. If yes, which standard? _____	



<p>2. If no, please provide an estimate of historical water use based on expert analysis and summarize the methods used to determine this estimate.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>c. Stock</p>	
<p>i. Which volume standard for animal units applies to historical use and why? The standards are either 15 or 30 gallons per animal unit per day.</p> <p>_____</p> <p>_____</p>	
<p>ii. How many animal units were historically served?</p> <p>_____</p>	
<p>iii. Did these animal units rely entirely on the water rights proposed for change for their full water demand?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>1. If no, explain.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>d. Domestic and multiple domestic</p>	
<p>i. How many households were served?</p> <p>_____</p>	
<p>ii. Will the Department standard of 1 acre-foot per household be used? The same standard shall be applied to historical and proposed uses.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>1. If no, what standard will be used?</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>iii. Did the historical use include wastewater disposal and treatment?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>1. If yes, which of the following best describes the wastewater disposal and treatment system? Individual drain fields, central treatment facility with minimal consumption, or evaporation basin or land application?</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>e. Municipal</p>	
<p>i. What is the volume of water (AF) historically consumed for municipal purposes?</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A



ii. Please submit evidence to support historical municipal use such as commercial, lawn and garden, and/or multiple domestic uses. The data sources may include records that tie water use to the U.S Census, estimates of historical system capacity and estimates of leakage.	<input type="checkbox"/> S
f. Other	
i. What is the volume of water (AF) historically consumed for other purposes? _____ _____	<input type="checkbox"/> A
ii. Submit evidence to support the volume of water historically consumed.	<input type="checkbox"/> S

Historical Use: Historical Places of Storage

21. Did the historical use include one or more places of storage, which may include reservoirs, ponds, and pits that are greater than 0.1 acre-feet in volume?	<input type="checkbox"/> Y <input type="checkbox"/> N			
a. If yes, for each historical place of storage please provide the surface area in acres (AC), capacity (AF), annual net evaporation (FT/year), and number of times per year the place of storage was filled.	<input type="checkbox"/> A			
ID	Surface Area (AC)	Capacity (AF)	Annual Net Evaporation (FT/YR)	# of Annual Fillings

SURFACE WATER

Applicable, move on to question 22. **Not Applicable**, skip to question 50.

The following questions are mandatory for changes to surface water rights.

Surface Water: Return Flow Analysis

<u>Questions, Narrative Responses, and Tables</u>	<u>Check-boxes</u>
22. Do the purposes of the water rights proposed for change include irrigation?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, does the proposed change include a change in place of use and/or a change in purpose? A change in place of use includes retiring acres in the historical place of use and adding any new acres outside the historical place of use.	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If yes, a return flow analysis is required. Move on to question 23.	
ii. If no, this section is complete, and you may skip to question 34.	
23. Does the proposed change include a change in purpose?	<input type="checkbox"/> Y <input type="checkbox"/> N



<p>a. If yes, list and explain the consumptive use for the proposed non-irrigation purpose.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>24. Does the proposed change include a change in place of use? If yes, move on to question 25. If no, skip to question 28.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>25. Submit a map showing the historical and proposed places of use created on an aerial photograph or topographic map with section corners, township and range, and a north arrow.</p>	<input type="checkbox"/> S
<p>26. How many acres, if any, will be retired from the historical place of use?</p> <p>_____</p>	
<p>27. Are irrigated acres proposed that are outside the historical place of use?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>a. If yes,</p>	
<p>i. How many acres? _____</p>	
<p>ii. What is the proposed irrigation method type (e.g., flood or sprinkler) and subtype (e.g., level border, graded border, furrow, contour ditch, wild flood, center pivot, or wheel line) for the new acres?</p> <p>_____</p>	<input type="checkbox"/> A
<p>iii. What is the slope of the new place of use?</p> <p>_____</p>	
<p>iv. Based on questions 27.a.ii to 27.a.iii, what is the percent efficiency of irrigation for the new acres?</p> <p>_____</p>	
<p>v. What is the County Management Factor for the new acres?</p> <p>_____</p>	
<p>vi. What is the ET based on the irrigation method and county for the new acres?</p> <p>_____</p>	
<p>vii. What percent of applied water are irrecoverable losses for new acres per ARM 36.12.1902(17)?</p> <p>_____</p>	
<p>viii. Do other water rights supplement or overlap the new place of use that contribute to the irrigation water demand?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N



1. If yes,	
a. How will the water rights be operated to serve the irrigation purpose? _____ _____ _____ _____ _____	<input type="checkbox"/> A
b. For each supplemental or overlapping water right, please list the average period of diversion and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed to the total irrigation water demand.	<input type="checkbox"/> A

Water Right No.	Avg. Period of Diversion (MM/DD-MM/DD)	Avg. Period of Use (MM/DD-MM/DD)	Flow Rate (GPM or CFS)	Volume Contributed (AF)

28. Did you elect on Form 606 to have the Department conduct the Technical Analyses?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes,	
i. Do you have information for the Department to consider about the source and location where return flows historically accrued?	<input type="checkbox"/> Y <input type="checkbox"/> N
1. If yes, explain. _____ _____ _____ _____	<input type="checkbox"/> A
ii. If an analysis of impacts to identified surface water rights is required as part of the return flow analysis, pursuant to ARM 36.12.1303(3)(c)(iii), do you elect for the Department to use publicly available water quantity data for the analysis of impacts to identified surface water rights? If the extended return flow analysis is required and sufficient publicly available water quantity data is not available, then the Department will not be able to conduct the extended analysis and the extended analysis will not be available for the Department to assess the adverse effect criterion pursuant to ARM 36.12.1903.	<input type="checkbox"/> Y <input type="checkbox"/> N
b. If no, do either of the following conditions apply to your return flow analysis? - Return flows enter back to the source upstream of or at the location of the next appropriator. - Water is left instream so historically diverted flows are available downstream of the point of diversion or upstream of the next appropriator.	<input type="checkbox"/> Y <input type="checkbox"/> N



i. If yes,	
1. List which conditions apply and explain why. _____ _____ _____ _____ _____ _____ _____ _____ _____	<input type="checkbox"/> A
2. Skip to question 34 because no analysis of impacts to identified surface water rights is required as part of the return flow analysis, pursuant to ARM 36.12.1303(3)(c)(iii).	
ii. If no, an analysis of impacts to identified surface water rights is required as part of the return flow analysis, pursuant to ARM 36.12.1303(3)(c)(iii). Answer the questions in the section "Evaluation of Impacts to Identified Surface Water Rights for Return Flow Analysis" (questions 29 to 33).	

Evaluation of Impacts to Identified Water Rights for Return Flow Analysis

29. If you conducted the Technical Analyses and question 22 identified the need for a return flow analysis, did question 28.b identify that an evaluation of impacts to identified surface water rights is required for the return flow analysis? If yes, answer questions 30 to 33 one time for each surface water source receiving return flows that requires an evaluation of impacts to identified surface water rights. If there is more than one, use an "Additional Evaluation of Impacts for Return Flow Analysis Sheet (606-TAA, SW)" for each additional source. If no, this section is complete; skip to question 34.	<input type="checkbox"/> Y <input type="checkbox"/> N
30. What is the name of the surface water source receiving return flows for which you are answering questions 31 to 33? _____	
31. Is gage data available?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, answer the following questions for 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 months with a net loss of return flows? See 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, skip to question 33.	
b. If no, answer question 31.b.	
ii. More than one stream gage is available	
1. List the gage names. _____	
2. Who operates and maintains the gages? _____	
3. Is one stream gage upstream and one downstream of points of diversion?	<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 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 months with a net loss of return flows? See 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, skip to question 33.	



b. If no, answer question 31.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 measurements to the Department.	<input type="checkbox"/> S
2. Who collected the measurements? _____	<input type="checkbox"/> A
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
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 months with a net loss of return flows?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, skip to question 33.	
b. If no, answer question 32.	



<p>32. Does the available measurement data, gage and/or otherwise measured, include a minimum of high, moderate, and low flows to be used 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.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>a. If yes,</p>	
<p>i. Describe how your measurements are representative of high, moderate, and low flows.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<input type="checkbox"/> A
<p>ii. Summarize the estimation technique.</p> <hr/> <hr/> <hr/> <hr/>	<input type="checkbox"/> A
<p>b. If no, and one or more Department-accepted estimation techniques are appropriate for the source characteristics.</p>	
<p>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 Scientific Credibility Review of your Technical Analyses cannot commence until the Department receives measurements that meet these requirements or, in combination with an approved request to depart, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>1. If yes, submit a copy of the request to depart and, if available, the Department's decision.</p>	<input type="checkbox"/> S
<p>c. If no, and you have evidence that no Department-accepted estimation technique is appropriate for the source characteristics.</p>	
<p>i. Describe why no Department-accepted estimation technique is appropriate for the source characteristics.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<input type="checkbox"/> A



ii. Does available measurement data meet the Department's standard of monthly measurements throughout the period with a net loss of return flows?	<input type="checkbox"/> Y <input type="checkbox"/> N
1. If no, 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 Scientific Credibility Review of your Technical Analyses cannot commence until the Department receives measurements that meet these requirements or, in combination with an approved request to depart, 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 request to depart, and if available, the Department's decision.	<input type="checkbox"/> S
33. How did you define the Area of Potential Adverse Effect evaluating return flow impacts? _____ _____ _____ _____	<input type="checkbox"/> A

Surface Water: Mitigation Analysis

34. Are you changing the purpose to mitigation to meet the criteria of issuance for another application? If yes, answer the questions in this section (questions 35 to 43). If no, this section is complete, and you can skip to question 44.	<input type="checkbox"/> Y <input type="checkbox"/> N
35. Identify the water rights proposed for change to a mitigation purpose, the water rights identified as needing mitigation and the application number for the water rights identified as needing mitigation. _____ _____	<input type="checkbox"/> A
36. What sources have been identified as needing mitigation water? _____ _____	<input type="checkbox"/> A
37. By what means will mitigation water be made available (e.g., infiltration gallery, water left instream)? Submit a copy of all relevant discharge permits pursuant to §85-2-364, MCA. _____ _____ _____ _____ _____ _____	<input type="checkbox"/> S
38. What is the location (¼ ¼ ¼ section of start and end of reach) and length (FT) of the mitigation reach? _____ _____	<input type="checkbox"/> A



39. What is the amount, timing, and location (¼ ¼ ¼ section) of water needed for mitigation?							<input type="checkbox"/> A
Month	Days	Amount	Location	Month	Days	Amount	Location
January				July			
February				August			
March				September			
April				October			
May				November			
June				December			

40. How do the priority dates of the water rights proposed for change to mitigation compare to other water rights on the source? _____ _____ _____	<input type="checkbox"/> A
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41. Do you have measurement records or Water Commissioner records that show the reliability of the water rights proposed for change to a mitigation purpose? a. If yes, describe and submit them to the Department. _____ _____	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> S
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42. Do the water rights proposed for change to mitigation have a period of use that is greater than or equal to the period when mitigation is necessary? a. If no, how will mitigation water be made available during the entire period when mitigation is necessary? _____ _____	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> A
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43. Will other water rights contribute to mitigation water? a. If yes, what amount, at what timing, and at which location (¼ ¼ ¼ section) will they contribute?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> A
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Month	Days	Amount	Location	Month	Days	Amount	Location
January				July			
February				August			
March				September			
April				October			
May				November			
June				December			



Surface Water: Aquifer Recharge Analysis

<p>44. Are you changing the purpose to aquifer recharge to serve a current or future mitigation purpose? If yes, answer the questions in this section (questions 45 to 49). If no, this section is complete, and you can skip to question 50.</p>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
<p>45. Is this aquifer recharge for a current mitigation need or marketing for mitigation/aquifer recharge for a future mitigation need?</p> <p>_____</p> <p>_____</p>	<p><input type="checkbox"/> A</p>
<p>46. What sources have been identified as having net depletions in need of mitigation or as benefitting from marketing for mitigation/aquifer recharge water?</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p><input type="checkbox"/> A</p>
<p>47. By what means will aquifer recharge water be made available? Submit a copy of all relevant discharge permits pursuant to §85-2-364, MCA.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p><input type="checkbox"/> S</p>
<p>48. How do the priority dates of the water rights proposed for change to aquifer recharge compare to other water rights on the source?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p><input type="checkbox"/> A</p>
<p>49. Do you have measurement records or Water Commissioner records that show the reliability of the water rights proposed for change to an aquifer recharge purpose?</p>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
<p>a. If yes, describe and submit them to the Department.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p><input type="checkbox"/> S</p>



GROUNDWATER

Applicable, move on to question 50. **Not Applicable**, skip to question 91.
The following questions are mandatory for changes to groundwater rights.

Groundwater: Adequacy of Diversion

<u>Questions, Narrative Responses, and Tables</u>				<u>Check-boxes</u>
50. What is the flow rate (GPM or CFS), volume (AF), and period of diversion (MM/DD-MM/DD) required at each new groundwater point of diversion? Label using the same POD ID number as the Proposed Use Map from Form 606 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)	

51. 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 monthly pumping schedule in the table below. Label using the same POD ID number as the Proposed Use Map from Form 606.				<input type="checkbox"/> A	
Month	POD #	Volume (AF)	Month	POD #	Volume (AF)
January			July		
February			August		
March			September		
April			October		
May			November		
June			December		

52. Answer the following questions specific to the means of groundwater diversion.					
Well/Pit	Questions 53 to 55	Developed Spring	Questions 56 to 58	Pond	Questions 59 to 63

Groundwater: Adequacy of Diversion: Well/Pit

Applicable Not Applicable

53. Submit an Aquifer Test Data Form (Form 633) and, if the form was submitted prior to this application, any available documentation of the Department's review.				<input type="checkbox"/> Y <input type="checkbox"/> N	
54. Are variances from ARM 36.12.121 needed?				<input type="checkbox"/> Y <input type="checkbox"/> N	
a. If yes,					
i. Do you have data for aquifer characteristics?				<input type="checkbox"/> Y <input type="checkbox"/> N	



1. If yes, submit the data to the Department.	<input type="checkbox"/> S
ii. Submit a Variance Request (Form 653) to the Department and, if the form was submitted prior to this application, a record of the Department's decision	<input type="checkbox"/> S
55. Have all the wells/pits been constructed?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, submit a map with the location of each well/pit labeled, the well/pit depth, and, if available, the GWIC ID. Create map on an aerial photograph or topographic map and include the following: well/pit location, well/pit depth, GWIC ID (if available), section corners, township and range, and a north arrow.	<input type="checkbox"/> S
b. If no,	
i. When will the wells/pits be constructed? _____	
ii. Do you have an initial map with the proposed location of wells/pits?	<input type="checkbox"/> Y <input type="checkbox"/> N
1. If yes, submit an initial map to the Department. Create map on an aerial photograph or topographic map and include the following: proposed well/pit location, section corners, township and range, and a north arrow.	<input type="checkbox"/> S
iii. What is the anticipated depth for each new well/pit? Label on the initial map if the proposed location is known. Otherwise provide the depths here: _____ _____	<input type="checkbox"/> S
iv. Is the requested volume for each new well/pit known?	<input type="checkbox"/> Y <input type="checkbox"/> N
1. If no, what is the total requested volume (AF) and the number of new PODs? _____	

Groundwater: Adequacy of Diversion: Developed Spring

Applicable Not Applicable

56. Submit your measurements of the source.	<input type="checkbox"/> S
57. With what method were measurements collected? _____ _____ _____ _____ _____ _____ _____	<input type="checkbox"/> A
58. What is the measurement interval? _____ _____	
a. Does the measurement interval meet the minimum of monthly measurements throughout the period of diversion? Please note technical analyses or scientific credibility reviews cannot commence until the Department has measurement data that meets these minimum requirements	<input type="checkbox"/> Y <input type="checkbox"/> N



Groundwater: Adequacy of Diversion: Pond

Applicable Not Applicable

59. 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 653) to apply for a variance from ARM 36.12.121 and, if the form was submitted prior to this application, a record of the Department's decision.	<input type="checkbox"/> S
60. Do you have measurements 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
61. Submit pond bathymetry data, survey, or engineering plans to the Department.	<input type="checkbox"/> S
62. Submit a map identifying the location of the proposed pond to the Department. Create map on an aerial photograph or topographic map and include the following: pond location, section corners, township and range, and a north arrow.	<input type="checkbox"/> S
63. If you conducted Technical Analyses, summarize how you determined depth, surface area, and net evaporation of the pond. If DNRC is conducting Technical Analyses, write "N/A" instead. _____ _____	

Groundwater: Adverse Effect to Existing Groundwater Rights

All information to calculate the one-foot drawdown contour was collected in previous questions.

Groundwater: Adverse Effect to Surface Water Rights

Groundwater: Adverse Effect to Surface Water Rights: Surface Water Depletion Analysis

64. Does the proposed change include a change in point of diversion, or a change in place of use or purpose that will lead to a change in consumptive use or pumping schedule? If yes, a surface water depletion analysis is required; move on to question 65. If no, this section is complete; skip to question 69.	<input type="checkbox"/> Y <input type="checkbox"/> N
65. Did you elect on Form 606 for the Department to conduct the Technical Analyses?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, the information required to answer questions 66 to 68 is not available prior to the Technical Analyses. In lieu of answering questions 66 to 68, do you elect for the Department to use publicly available water quantity data for the analysis of impacts to identified surface water rights for the surface water depletion analysis? If this extended surface water depletion analysis is required and sufficient publicly available water quantity data is not available, then the Department will not be able to conduct the analysis of impacts to identified surface water rights and will not have this extended analysis available for criteria assessment. This section is complete, skip to question 69.	<input type="checkbox"/> Y <input type="checkbox"/> N
b. If no, list the hydraulically connected surface water sources and answer questions 66 to 68 one time per source. Use the "Additional Hydraulically Connected Source Sheet (606-TAA)" for each additional source. _____ _____ _____	<input type="checkbox"/> A



66. Name the hydraulically connected surface water source for which you are answering questions 67 to 68. _____	
67. Is stream gage data available?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, answer the following questions for the number stream gages 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 start of the depletion? _____	
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 69.	
b. If no, answer question 67.b.	
ii. More than one stream gage is available	
1. List the gage names. _____ _____	
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 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 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 69.	
b. If no, answer question 67.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 months of depletion, 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? _____ _____	<input type="checkbox"/> A
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



<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> <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> <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 69.</p>	
<p>b. If no, answer question 68.</p>	
<p>68. 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.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>a. If yes,</p>	
<p>i. Describe how your measurements are representative of high, moderate, and low flows.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A



<p>ii. If you conducted the Technical Analyses, summarize the estimation technique. If the Department will conduct the Technical Analyses, write N/A.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<input type="checkbox"/> A
<p>b. If no, and one or more Department-accepted estimation techniques are appropriate for the source characteristics.</p>	
<p>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 request to depart, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>1. If yes, submit a copy of the request to depart and, if available, the Department's decision.</p>	<input type="checkbox"/> S
<p>c. If no, and you have evidence that no Department-accepted estimation technique is appropriate for the source characteristics.</p>	
<p>i. Describe why no Department-accepted estimation technique is appropriate for the source characteristics.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<input type="checkbox"/> A
<p>ii. Does available measurement data meet the Department's standard of monthly measurements throughout the period of net depletion for groundwater permits?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>1. If no, 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 request to depart, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>a. If yes, submit a copy of the request to depart and, if available, the Department's decision.</p>	<input type="checkbox"/> S



Groundwater: Adverse Effect to Surface Water Rights: Return Flow Analysis

69. Do the purposes of the water rights proposed for change include irrigation?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, does the proposed change include a change in place of use <i>and/or</i> a change in purpose? A change in place of use includes retiring acres in the historical place of use and adding any new acres outside the historical place of use.	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If yes, a return flow analysis is required. Move on to answer question 70.	
ii. If no, this section is complete, and you may skip to question 81.	
70. Does the proposed change include a change in purpose?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, what is the consumptive use for the proposed non-irrigation purpose? Explain.	<input type="checkbox"/> A

71. Does the proposed change include a change in place of use? If yes, move on to question 72. If no, skip to question 75.	<input type="checkbox"/> Y <input type="checkbox"/> N
72. Submit a map showing the historical and proposed places of use. Create map on an aerial photograph or topographic map that shows the following: section corners, township and range, and a north arrow.	<input type="checkbox"/> S
73. How many acres, if any, will be retired from the historical place of use?	

74. Are irrigated acres proposed that are outside the historical place of use?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes,	
i. How many acres? _____	
ii. What is the proposed irrigation method type and subtype (e.g., level border, graded border, furrow, contour ditch, or wild flood) for the new acres?	<input type="checkbox"/> A

iii. What is the slope of the new place of use?	

iv. Based on question 74.a.ii to 74.a.iii, what is the percent efficiency of irrigation for the new acres?	

v. What is the County Management Factor for the new acres?	

vi. What is the ET based on the irrigation method and county for the new acres?	



vii. What percent of applied water are irrecoverable losses for new acres? _____	
viii. Do other water rights supplement or overlap the new place of use that contribute to the irrigation water demand?	<input type="checkbox"/> Y <input type="checkbox"/> N
1. If yes,	
a. How will the water rights be operated to serve the irrigation purpose? _____ _____ _____ _____	<input type="checkbox"/> A
b. For each supplemental or overlapping water right, please list the average period of diversion and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed to the total irrigation water demand.	<input type="checkbox"/> A

Water Right No.	Avg. Period of Diversion (MM/DD-MM/DD)	Avg. Period of Use (MM/DD-MM/DD)	Flow Rate (GPM or CFS)	Volume Contributed (AF)

75. Did you elect on Form 606 to have the Department conduct the Technical Analyses?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes because the Department will conduct the Technical Analyses,	
i. Do you have information for the Department to consider about the source and location where return flows historically accrued?	<input type="checkbox"/> Y <input type="checkbox"/> N
1. If yes, explain. _____ _____ _____	<input type="checkbox"/> A
ii. If an analysis of impacts to identified surface water rights is required as part of the return flow analysis, pursuant to ARM 36.12.1303(3)(c)(iii), do you elect for the Department to use publicly available water quantity data for the analysis of impacts to identified surface water rights? If the extended return flow analysis is required and sufficient publicly available water quantity data is not available, then the Department will not be able to conduct the extended analysis and the extended analysis will not be available for the Department to assess the adverse effect criterion pursuant to ARM 36.12.1903.	<input type="checkbox"/> Y <input type="checkbox"/> N
b. If no because you conducted the Technical Analyses, do either of the following conditions apply to your return flow analysis? - Return flows enter back to the source upstream of or at the location of the next appropriator. - Water is left instream so historically diverted flows are available downstream of the point of diversion or upstream of the next appropriator.	<input type="checkbox"/> Y <input type="checkbox"/> N



i. If yes because one or more of the conditions apply,	
1. List which conditions apply and explain why. _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	<input type="checkbox"/> A
2. Skip to question 81 because no analysis of impacts to identified surface water rights is required as part of the return flow analysis, pursuant to ARM 36.12.1303(3)(c)(iii).	
ii. If no because one or more of the conditions do not apply, an analysis of impacts to identified surface water rights is required as part of the return flow analysis, pursuant to ARM 36.12.1303(3)(c)(iii). Answer the questions in the section "Evaluation of Impacts to Identified Surface Water Rights for Return Flow Analysis" (questions 76 to 80).	

Evaluation of Impacts to Identified Water Rights for Return Flow Analysis

76. If you conducted the Technical Analyses and question 69 identified the need for a return flow analysis, did question 75.b identify that an evaluation of impacts to identified surface water rights is required for the return flow analysis? If yes, answer questions 77 to 80 one time for each surface water source receiving return flows that requires an evaluation of impacts to identified surface water rights. If there is more than one, use an "Additional Evaluation of Impacts for Return Flow Analysis Sheet (606-TAA, GW)" for each additional source. If no, this section is complete; skip to question 81.	<input type="checkbox"/> Y <input type="checkbox"/> N
77. What is the name of the surface water source receiving return flows for which you are answering questions 78 to 80? _____	
78. Is gage data available?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, answer the following questions for 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 months with a net loss of return flows? See 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, skip to question 80.	
b. If no, answer question 78.b.	
ii. More than one stream gage is available	
1. List the gage names. _____ _____	
2. Who operates and maintains the gages? _____ _____	
3. Is one stream gage upstream and one downstream of points of diversion?	<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 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 months with a net loss of return flows? See 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, skip to question 80.	
b. If no, answer question 78.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 measurements to the Department.	<input type="checkbox"/> S
2. Who collected the measurements? _____	<input type="checkbox"/> A
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
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 months with a net loss of return flows?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, skip to question 80.	
b. If no, answer question 79.	
79. Does the available measurement data, gage and/or otherwise measured, include a minimum of high, moderate, and low flows to be used 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.	<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. Summarize the estimation technique. _____ _____ _____ _____	<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 Scientific Credibility Review of your Technical Analyses cannot commence until the Department receives measurements that meet these requirements or, in combination with an approved request to depart, 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.	



<p>i. Describe why no Department-accepted estimation technique is appropriate for the source characteristics.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>ii. Does available measurement data meet the Department's standard of monthly measurements throughout the period with a net loss of return flows?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>1. If no, 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 Scientific Credibility Review of your Technical Analyses cannot commence until the Department receives measurements that meet these requirements or, in combination with an approved request to depart, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>a. If yes, submit a copy of the request to depart, and if available, the Department's decision.</p>	<input type="checkbox"/> S
<p>80. How did you define the Area of Potential Adverse Effect evaluating return flow impacts?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A

Groundwater: Mitigation

<p>81. Do you require mitigation water to meet the criteria of issuance for this change application or for a different application? If yes, answer the questions in this section (questions 82 to 90). If no, this section is complete, and you can skip to question 91.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>82. Please identify the water rights proposed for change to a mitigation purpose and the water rights identified as needing mitigation.</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>83. What sources have been identified as needing mitigation water?</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A



84. By what means will mitigation water be made available?	<input type="checkbox"/> A
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	
85. What is the location (¼ ¼ ¼ section) and length (feet) of the mitigation reach?	
<hr/> <hr/>	
86. What is the amount, timing, and location (¼ ¼ ¼ section) of water needed for mitigation?	<input type="checkbox"/> A

Month	Days	Amount	Location	Month	Days	Amount	Location
January				July			
February				August			
March				September			
April				October			
May				November			
June				December			

87. How do the priority dates of the water rights proposed for change to mitigation compare to other water rights on the source?	<input type="checkbox"/> A
<hr/> <hr/> <hr/>	
88. Do you have measurement records or Water Commissioner records that show the reliability of the water rights proposed for change to a mitigation purpose?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, describe and submit them to the Department.	<input type="checkbox"/> S
<hr/> <hr/> <hr/> <hr/>	
89. Do the water rights proposed for change to mitigation have a period of use that is greater than or equal to the period when mitigation is necessary?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If no, how will mitigation water be made available during the entire period when mitigation is necessary?	<input type="checkbox"/> A
<hr/> <hr/> <hr/> <hr/> <hr/>	



90. Will other water rights contribute to mitigation water?							<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, what amount, at what timing, and at which location (1/4 1/4 1/4 section) will they contribute?							<input type="checkbox"/> A
Month	Days	Amount	Location (1/4 1/4 1/4 Section)	Month	Days	Amount	Location (1/4 1/4 1/4 Section)
January				July			
February				August			
March				September			
April				October			
May				November			
June				December			

PROJECT-SPECIFIC QUESTIONS

Temporary Change

<u>Questions, Narrative Responses, and Tables</u>	<u>Check-boxes</u>
91. Does the proposal include a temporary change? <i>This includes proposing to add a place of use on State of Montana Trust Land. A change authorization to add a place of use on Trust Land will be temporary for the duration of the lease term.</i> If yes, please answer the questions in this section (questions 92 to 97) for each water right being changed. If no, this section is complete, and you can skip to question 98.	<input type="checkbox"/> Y <input type="checkbox"/> N
92. What elements of the water rights are being temporarily changed? _____	<input type="checkbox"/> A
93. For how many years will the water rights be temporarily changed? _____	
94. Will the temporary change be intermittent over the years? a. If yes, explain. _____ _____	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> A
95. For what purpose will the water rights be temporarily used? _____	<input type="checkbox"/> A
96. Is the quantity of water subject to the temporary change being made available from the development of a new water conservation or storage project? a. If yes, explain the water conservation or storage project. _____ _____ _____ _____ _____ _____	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> A



97. Are you proposing to add a place of use on State of Montana Trust Land?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, you must submit an Authorization for Temporary Change in Appropriation Right Consent Form from the DNRC Trust Lands Management Division.	<input type="checkbox"/> S

Change in Purpose

98. Does the project involve a change in purpose? If yes, answer the questions in this section (questions 99 to 100). If no, this section is complete, and you can skip to question 101.	<input type="checkbox"/> Y <input type="checkbox"/> N
99. Identify the proposed new purpose, flow rate (GPM or CFS), volume (AF), and period of use (MM/DD-MM/DD) for each purpose.	<input type="checkbox"/> A

Purpose	Flow Rate (GPM or CFS)	Volume (AF)	Period of Use Start (MM/DD-MM/DD)	Period of Use End (MM/DD-MM/DD)

100. Explain why the requested flow rate and volume is the amount needed for the purpose.	<input type="checkbox"/> A
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	

Change in Place of Storage

101. Does the project involve a change in place of storage? If yes, answer the questions in this section (questions 102 to 109) for each individual place of storage. Use the "Additional Change in Place of Storage Sheet (606-TAA)" for additional places of storage. If no, this section is complete, and you can skip to question 110.	<input type="checkbox"/> Y <input type="checkbox"/> N
102. Submit a map showing the location of the place of storage. Create map on an aerial photograph or topographic map that shows the following: place of storage, section corners, township and range, and a north arrow.	<input type="checkbox"/> S
103. Is this application to add a new place of storage or change an existing place of storage?	
<hr/>	
a. If you propose to change an existing place of storage, list the water rights that include the place of storage and a short description of the proposed change.	<input type="checkbox"/> A
<hr/> <hr/> <hr/> <hr/> <hr/>	



104. Is the place of storage located on-stream?	<input type="checkbox"/> Y <input type="checkbox"/> N
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. _____ _____ _____ _____	<input type="checkbox"/> A
105. What is the proposed capacity of the place of storage? 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> _____	<input type="checkbox"/> S
106. Will the place of storage include primary and/or emergency spillways?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, submit the preliminary design specifications.	<input type="checkbox"/> S
107. Will the place of storage be lined?	<input type="checkbox"/> Y <input type="checkbox"/> N
108. What is the annual net evaporation of water from the place of storage using the standards in ARM 36.12.116(1) and the Department's Gridded Net Evaporation Layer? _____ _____	<input type="checkbox"/> A
109. Is the place of storage capacity calculated to be greater than 50 acre-feet?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N

Ditch-Specific Questions

110. Does the historical use of water include at least one conveyance ditch? If yes, answer questions 111 to 112. If no, skip to question 113.	<input type="checkbox"/> Y <input type="checkbox"/> N
111. Submit a Historical Use Ditch Map that shows every ditch conveying water for the historical use of all water rights proposed for change. Label the ditch names, PODs, the POU's, and the ditch measurement locations (requested in question 112.d). The map should be created on an aerial photograph or topographic map with the following: section corners, township and range, and a north arrow.	<input type="checkbox"/> S
112. Answer questions 112.a to 112.h one time for each historical conveyance ditch. If there is more than one historical conveyance ditch, use an "Additional Historical Ditch Sheet (606-TAA)" for each additional ditch.	
a. What is the ditch name? _____	
b. List the water rights proposed for change that were conveyed by the ditch. _____ _____	<input type="checkbox"/> A



<p>c. What is the distance water was historically 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>d. Provide at least one set of ditch measurements, which include width (FT), depth (FT), and slope (%). Include the location of each measurement, labeled with the 2-digit measurement ID number, used on the map submitted for question 111.</p>	<input type="checkbox"/> A

ID #	Width (FT)	Depth (FT)	Slope (%)	Date of Measurement

<p>e. What is a reasonable Manning's n value? List the factors used for estimation.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
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<p>f. What type of soils compose the historical conveyance ditch? For lined ditches, write "lined" instead.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
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<p>g. Are other water rights conveyed by the historical conveyance ditch?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
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<p>i. If yes,</p>	
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<p>1. What are the water right numbers?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
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<p>2. What is the sum of the flow rates (GPM or CFS) for all water rights conveyed?</p> <p>_____</p> <p>_____</p>	
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<p>3. Submit a map with your best estimate of the historical POU's for the other water rights conveyed by the historical conveyance ditch. Include only POU's between the historical POD and your historical POU. If you do not know this information, the Department can help you create the map. The map should be created on an aerial photograph or topographic map and show the following: section corners, township and range, and a north arrow.</p>	<input type="checkbox"/> S
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h. Were any water rights proposed for change part of one historical water right that was split?	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If yes, were all split water rights split in such a way to ensure each post-split water right could stand alone and not be reliant on the others for carriage water?	<input type="checkbox"/> Y <input type="checkbox"/> N
1. If no, do any of the water rights proposed for change have a carriage water requirement?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes,	
i. List the water rights with a carriage water requirement _____	<input type="checkbox"/> A
ii. Update your Historical Use Ditch Map to label the ditch segments where a carriage water requirement exists for a water right proposed for change. Also, use your best estimate to label the POUs for all water rights included in the carriage water requirement.	<input type="checkbox"/> S
113. Does the proposed use include at least one existing or new conveyance ditch? If yes, answer questions 114 to 115. If no, skip to question 116.	<input type="checkbox"/> Y <input type="checkbox"/> N
114. Submit a Proposed Use Ditch Map that shows every ditch conveying the water rights proposed for change, including any unchanged portions. Label all unchanged and proposed PODs, all unchanged and proposed POUs, and additional ditch measurement locations (requested in question 115.e). The map should be created on an aerial photograph or topographic map with the following: section corners, township and range, and a north arrow.	<input type="checkbox"/> S
115. Answer questions 115.a to 115.i one time for each proposed use conveyance ditch. If there is more than one proposed use conveyance ditch, use an "Additional Proposed Use Ditch Sheet (606-TAA)" for each additional ditch.	
a. What is the ditch name? _____	
b. Is this ditch a historical conveyance ditch detailed in questions 110 to 112?	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If yes, have any of the following details changed, to the best of your knowledge, from historical conditions: ditch length, distance water conveyed, ditch lining, or water rights conveyed by the ditch?	<input type="checkbox"/> Y <input type="checkbox"/> N
1. If yes, answer questions 115.c to 115.i using current data.	
2. If no, do not answer questions 115.c to 115.i for this ditch because the information remains unchanged. Move on to the next proposed use conveyance ditch, or if none remain, skip to question 116.	
c. List the water rights proposed for change that are going to be conveyed by the ditch. _____ _____	<input type="checkbox"/> A
d. 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. _____ _____ _____	



e. Provide at least one set of ditch measurements, which include width (FT), depth (FT), and slope (%). Include the location of each measurement, labeled with the 2-digit measurement ID number, used on the map submitted for question 114.				<input type="checkbox"/> A
ID #	Width (FT)	Depth (FT)	Slope (%)	Date of Measurement

f. What is a reasonable Manning's n value? List the factors used for estimation. _____	<input type="checkbox"/> A
g. What type of soils compose the proposed conveyance ditch? For lined ditches, write "lined" instead. _____	<input type="checkbox"/> A
h. Are other water rights conveyed by the proposed conveyance ditch?	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If yes,	
1. What are the water right numbers? _____	<input type="checkbox"/> A
2. What is the sum of the flow rates (GPM or CFS) for all water rights conveyed? _____	
3. Submit a map with your best estimate of the current POUs for the other water rights conveyed by the proposed conveyance ditch. Include only POUs between the POD and your proposed POU. If you do not know this information, the Department can help you create the map. The map should be created on an aerial photograph or topographic map and show the following: section corners, township and range, and a north arrow.	<input type="checkbox"/> S
i. Were any water rights proposed for change identified as having a carriage water requirement in question 112.h.i.1?	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If yes, update your Proposed Use Ditch Map to label the ditch segments where a carriage water requirement exists for a water right proposed for change. Also, use your best estimate to label the POUs for all water rights included in the carriage water requirement.	<input type="checkbox"/> S



Water Marketing

116. Does this project involve water marketing? If yes, answer the questions in this section (questions 117 to 122). If no, this section is complete, and you can skip to question 123.	<input type="checkbox"/> Y <input type="checkbox"/> N
117. Identify the flow rate (GPM or CFS) and volume of water (AF) that will be marketed. _____	
118. Will the marketed water return to the source?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, explain how that determination was made. _____ _____ _____ _____ _____ _____ _____	<input type="checkbox"/> A
119. For what purposes will the marketed water be used? _____ _____ _____ _____	<input type="checkbox"/> A
120. How will you control or limit access to the water? _____ _____ _____ _____ _____ _____	<input type="checkbox"/> A
121. Do you have contracts for the entire volume and flow rate sought?	<input type="checkbox"/> Y <input type="checkbox"/> N
122. 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.	<input type="checkbox"/> S

Instream Flow Change

123. Does the project involve an instream flow change? If yes, answer the questions in this section (questions 124 to 132). If no, this section is complete, and you can skip to question 133.	<input type="checkbox"/> Y <input type="checkbox"/> N
124. Is the proposal to retire all the use from the historical purpose throughout the entire period of use?	<input type="checkbox"/> Y <input type="checkbox"/> N



<p>a. If no, describe why not in detail.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<input type="checkbox"/> A
<p>125. What is the name of the source of water where streamflow will be maintained or enhanced?</p> <hr/>	
<p>126. Provide specific information on the location ($\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ section of start and end of reach) and length (FT) of the stream reach in which the streamflow is to be maintained or enhanced.</p> <hr/> <hr/>	
<p>127. Does the protected reach begin at the existing point of diversion?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>a. If no, does the proposed protected reach begin upstream of or downstream from the existing point of diversion?</p> <hr/>	
<p>128. Describe any information you have for the Department to consider about whether unconsumed water returned to the source of supply. If you do not have any information for consideration, write "N/A" instead.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<input type="checkbox"/> A
<p>129. Describe the way the streamflow is to be maintained or enhanced.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<input type="checkbox"/> A



130. Describe your streamflow measuring plan, including the points where measurements occur, the interval of measurement, and the methods and equipment used.

A

131. Describe your operation plan, including the proposed flow rate (GPM or CFS) to be protected up to the proposed volume (AF) and the period when protection is to occur. If there is a "trigger flow" associated with your operation plan, please explain.

A

132. Is the amount of water proposed for change in the application made available through creation of a "water saving method," as defined in ARM 36.12.101?

Y N

a. If yes, complete the Salvage Water section (questions 133 to 136).



Salvage Water

133. Does this project involve salvage water? Salvage water does not include destroying phreatophytes, removing vegetation, converting to a less consumptive crop, or converting to a partial irrigation schedule. If yes, answer the questions in this section (questions 134 to 136). If no, this section is complete.	<input type="checkbox"/> Y <input type="checkbox"/> N
134. What water saving method was implemented? This may include lining an unlined ditch or canal, converting unlined ditch or canal to pipeline, converting high profile or high-pressure sprinklers to low pressure, and others. Explain. _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	<input type="checkbox"/> A
135. How much water was salvaged from creation of the water saving method? Include flow rate (GPM or CFS) and volume (AF). _____ _____	
136. How did you determine the amount of water salvaged? _____	<input type="checkbox"/> A

