EA Form R 1/2007

Montana Department of Natural Resources and Conservation Water Resources Division Water Rights Bureau
ENVIRONMENTAL ASSESSMENT **For Routine Actions with Limited Environmental Impact**

Part I. Proposed Action Description

1. *Applicant/Contact name and address:*

TERRY AND ASHLEY BICKERSTAFF PO BOX 1527 BOZEMAN, MT 59771-1527	FAIT, EVE LYNN 1990 TRUST PO BOX 2786 RANCHO SANTA FE, CA 92067

2. *Type of action:*

WATER RIGHT CHANGE APPLICATION (41H 30070964)

3. *Water source name:*

SOURDOUGH CREEK ALSO KNOWN AS BOZEMAN CREEK

4. *Location affected by project:*

Gallatin County, MT: Township 2S Range 6E Section 19

5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*

THE DNRC SHALL ISSUE A WATER RIGHT CHANGE APPLICATION IF THE APPLICANT PROVES THE CRITERIA IN 85-2-402 MCA ARE MET.

THIS APPLICATION AIMS TO CHANGE WATER RIGHTS 41H 117326 00 AND 41H 117327 00.

SPECIFICALLY THIS APPLICATION PROPOSES TO TEMPORARILY CHANGE THE PURPOSE OF THESE WATER RIGHTS. THE PURPOSE WOULD BE CHANGED FROM IRRIGATION TO INSTREAM FLOW IN ORDER TO ENHANCE THE FISHERY RESOURCE IN SOURDOUGH CREEK. AS PROPOSED WATER WOULD NO LONGER BE DIVERTED AT THE HEADGATE FOR IRRIGATION PURPOSES AND WOULD INSTEAD BE LEFT INSTREAM FOR THE BENEFIT OF THE FISHERY RESOURCE. THE APPLICANT PROPOSES TO PROTECT THE HISTORIC DIVERTED VOLUME AT THE PROPOSED NEW POINT OF

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DIVERSION AND ALSO TO PROTECT THE HISTORIC CONSUMED VOLUME IN A PROTECTED REACH OF SOURDOUGH CREEK.

THIS APPLICATION PROPOSES TO TEMPORARILY CHANGE THE PLACE OF USE FOR THE WATER RIGHTS. THE PLACE OF USE WOULD BE CHANGED FROM THE HISTORIC LOCATION WHICH WAS THE IRRIGATED GROUND TO A NEW PLACE OF USE WHICH WOULD BE A PROTECTED STRETCH OF SOURDOUGH CREEK.

THIS APPLICATION PROPOSES TO PERMANENTLY CHANGE THE POINT OF DIVERSION FOR THE WATER RIGHTS. THE POINT OF DIVERSION IS THE LOCATION WHERE WATER IS DIVERTED FROM THE WATER SOURCE. THE POINT OF DIVERSION WOULD BE CHANGED FROM A HEADGATE TO A NEWLY CONSTRUCTED PUMPING STATION LOCATED IN A DIFFERENT LOCATION ON THE SOURCE. THE PURPOSE OF THIS POINT OF DIVERSION IS TO DIVERT WATER FOR IRRIGATION PURPOSES IF AND WHEN THE PROPOSED CHANGE APPLICATION REVERTS BACK TO ITS ORIGINAL IRRIGATION PURPOSE.

6. Agencies consulted during preparation of the Environmental Assessment:

STATE HISTORICAL PRESERVATION OFFICE
MONTANA NATURAL HERITAGE PROGRAM
MONTANA ENVIRONET WEBSITE FOR WATER QUALITY
MONTANA FISHERIES INFORMATION SYSTEM WEBSITE
MONTANA NATURAL RESOURCES INFORMATION SYSTEM WEBSITE

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity

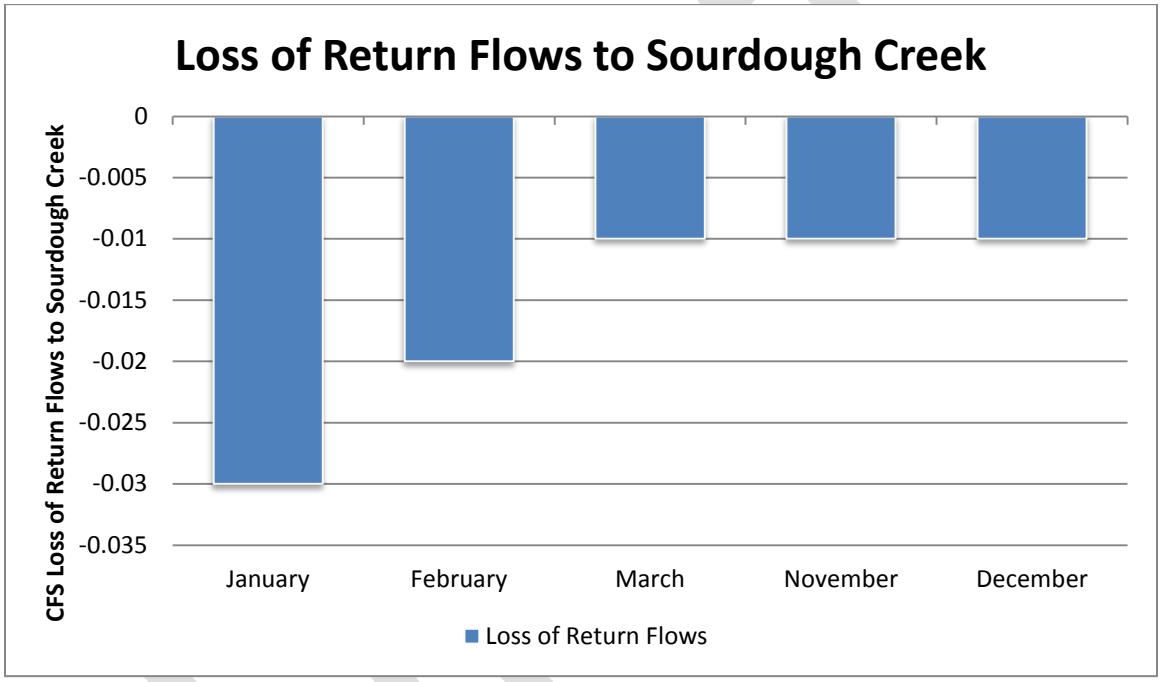
Determination: NO SIGNIFICANT IMPACT

MONTANA FISH WILDLIFE AND PARKS HAVE IDENTIFIED BOZEMAN CREEK AS BEING PERIODICALLY DEWATERED.

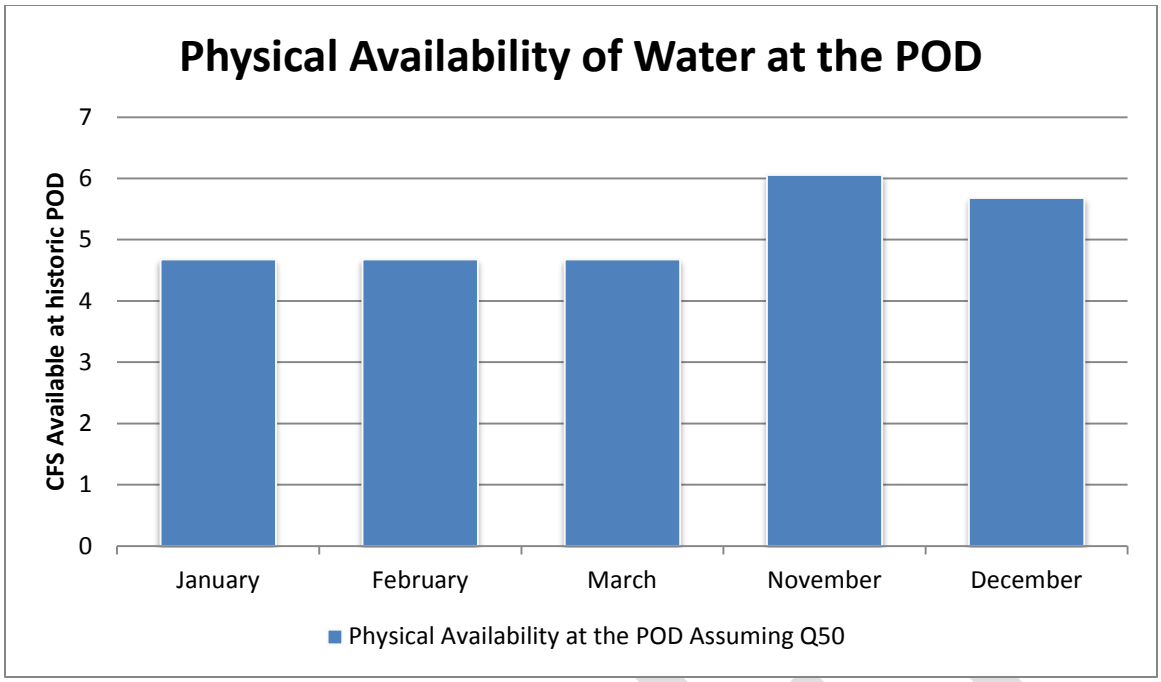
TROUT UNLIMITED WHO IS ONE OF THE APPLICANT'S CONSULTANTS ON THIS APPLICATION SUBMITTED INFORMATION AS PART OF THE WATER RIGHT APPLICATION AND THEY STATE THAT "ANY DIMINISHMENT OF STREAMFLOWS BELOW THE INSTREAM FLOW RESERVATION ESTABLISHED BY THE WETTED PERIMETER ANALYSIS WILL SIGNIFICANTLY SUPPRESS THE FISH POPULATION HEALTH AND SURVIVAL". THE INSTREAM FLOW RESERVATION REFERENCED

REFERS TO AN INSTREAM WATER RIGHT HELD BY MONTANA FISH WILDLIFE AND PARKS FOR YEAR ROUND FLOWS IN SOURDOUGH CREEK OF 11 CUBIC FEET PER SECOND (CFS).

THE AIM OF THIS APPLICATION IS TO LEAVE INCREASED AMOUNTS OF WATER INSTREAM DURING THE IRRIGATION SEASON TO BENEFIT THE FISHERY RESOURCE. AS A RESULT OF THIS PROPOSAL THE FIELDS HISTORICALLY IRRIGATED BY THE WATER RIGHTS BEING PROPOSED FOR CHANGE WILL NO LONGER RECEIVE WATER FOR IRRIGATION AS THE WATER WILL INSTEAD BE LEFT INSTREAM. THE DEPARTMENT IS AWARE THAT THIS WILL RESULT IN A LOSS OF RETURN FLOWS DURING THE NON-IRRIGATION SEASON. THE AMOUNT OF RETURN FLOWS THAT WILL NO LONGER RETURN TO SOURDOUGH CREEK AS MODELED BY THE DEPARTMENT IS SHOWN IN THE FOLLOWING CHART.



THE AMOUNT OF WATER THAT IS PHYSICALLY AVAILABLE AT THE HISTORIC POINT OF DIVERSION DURING THE NON-IRRIGATION SEASON IS SUMMARIZED IN THE FOLLOWING CHART.



THIS APPLICATION DOES NOT APPEAR TO RESULT IN A SIGNIFICANT IMPACT TO THE WATER QUANTITY OF SOURDOUGH CREEK.

<u>Water quality</u> -

Determination: NO SIGNIFICANT IMPACT

THE DEPARTMENT OBTAINED A WATER QUALITY STANDARDS ATTAINMENT RECORD FOR SOURDOUGH CREEK (BOZEMAN CREEK) IN ORDER TO ASSESS WATER QUALITY. THE MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) COMPLETED THIS REPORT IN 2012.

OF INTEREST IN THE REFERENCED REPORT IS THE FOLLOWING FINDING:

"Nutrients: The sampling results for "Total Nitrogen", TKN , and Total Phosphorus at both sampling sites indicate Severe Impairment of Aquatic Life and Cold Water Fishery uses. For Recreation and Aesthetics use: At the lower site, the reported TKN concentration was over 250% of the reference value. The TP concentration there is equivalent to over 400% of the 80th percentile for Middle Rockies reference sites. This nutrient data is used in conjunction with the accompanying benthic chlorophyll-a data, which was 112 mg/sq meter at the lower site, a value that is comparatively high in comparison to reference conditions. These findings indicate Severe Impairment of Contact Recreation uses by Total Phosphorus and Total Kjeldahl Nitrogen".

THE AIM OF THIS APPLICATION IS TO LEAVE INCREASED AMOUNTS OF WATER INSTREAM DURING THE IRRIGATION SEASON TO BENEFIT THE FISHERY RESOURCE. AS A RESULT OF THIS PROPOSAL THE FIELDS HISTORICALLY IRRIGATED BY THE WATER RIGHTS BEING PROPOSED FOR CHANGE WILL NO

LONGER RECEIVE WATER FOR IRRIGATION AS THE WATER WILL INSTEAD BE LEFT INSTREAM. THE DEPARTMENT IS AWARE THAT THIS WILL RESULT IN A LOSS OF RETURN FLOWS DURING THE NON-IRRIGATION SEASON MONTHS OF THE YEAR AS EXPLAINED IN THE WATER QUANTITY SECTION OF THIS EA.

THIS APPLICATION DOES NOT APPEAR TO RESULT IN A SIGNIFICANT IMPACT TO THE WATER QUALITY OF SOURDOUGH CREEK.

Groundwater

Determination: NO SIGNIFICANT IMPACT

THE CHANGES TO THE WATER RIGHTS PROPOSED IN THIS APPLICATION WOULD NOT BE EXPECTED TO IMPACT ANY GROUNDWATER SOURCE.

DIVERSION WORKS

Determination: NO SIGNIFICANT IMPACT

CHANGING THE PURPOSE, PLACE OF USE AND POINT OF DIVERSION OF THE WATER RIGHTS AS PROPOSED IN THIS APPLICATION SHOULD NOT RESULT IN ANY SIGNIFICANT IMPACTS.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species

Determination: NO SIGNIFICANT IMPACT

THE MONTANA NATURAL HERITAGE CREATED A SPECIES OF CONCERN DATA REPORT FOR THIS EA. THE REPORT SHOWED THAT THE FOLLOWING SPECIES OF CONCERN MAY RESIDE IN THE AREA OF THIS PROJECT: VARIED THRUSH, BOBOLINK, CASSIN'S FINCH, EVENING GROSBEAK, LITTLE BROWN MYOTIS, HOOKED SNOWFLY.

THERE SHOULD BE NO SIGNIFICANT IMPACT ON THE SPECIES OF SPECIAL CONCERN FROM THIS PROPOSED USE.

Wetlands *- Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: NO SIGNIFICANT IMPACT

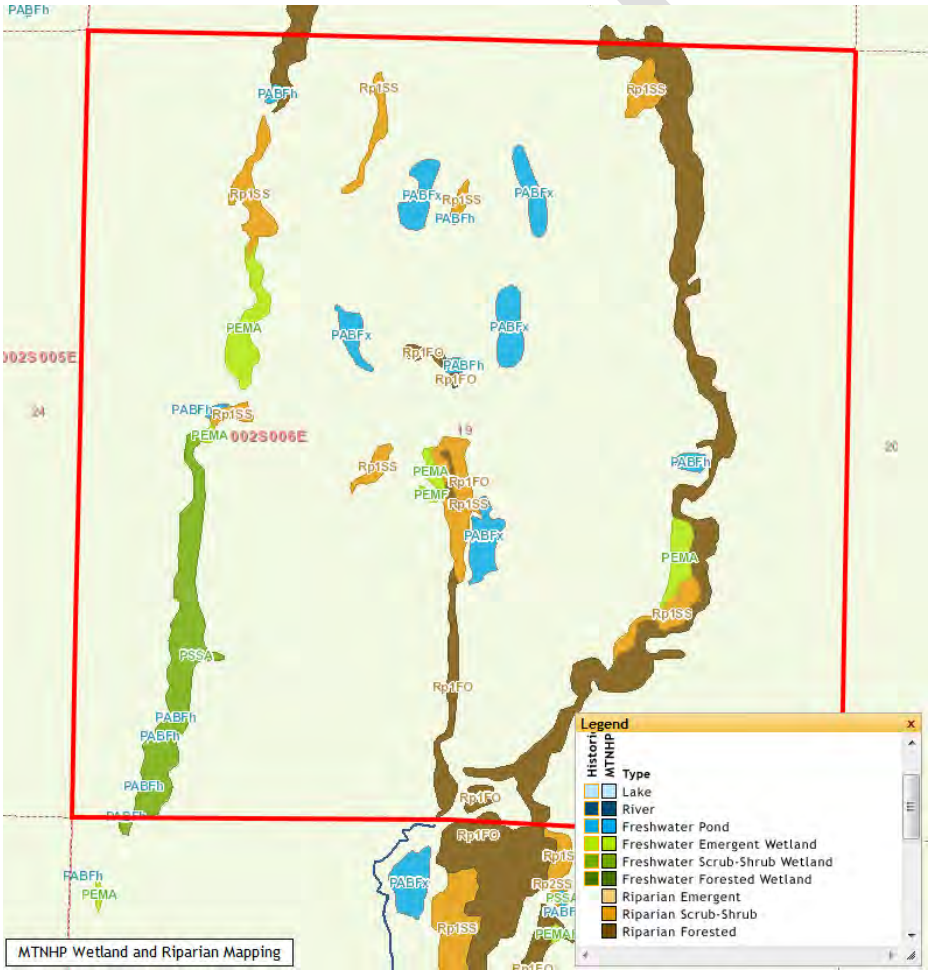
THE MONTANA STATE LIBRARIES NATURAL HERITAGE MAP VIEWER WAS REFERENCED IN ORDER TO ASSESS IMPACTS TO WETLANDS RESULTING FROM

THIS APPLICATION. AS SHOWN IN THE FOLLOWING OVERVIEW OF TOWNSHIP 2S RANGE 6E SECTION 19 THERE APPEARS TO BE NUMEROUS WETLANDS AND FRESHWATER PONDS IN THE VICINITY OF THIS APPLICATION.

AS A RESULT OF GRANTING THIS APPLICATION MORE WATER WILL BE LEFT INSTREAM IN SOURDOUGH CREEK DURING THE IRRIGATION SEASON.

AS A RESULT OF CEASING IRRIGATION PRACTICES WATER WILL NO LONGER BE SPREAD OVER THE LANDSCAPE TO IRRIGATE THE HISTORICALLY IRRIGATED 60 ACRES. THIS WILL RESULT IN LESS WATER MOVING THROUGH THE SYSTEM FROM THE IRRIGATED GROUND AND TO BACK TO THE SOURCE OF SUPPLY. THIS WILL ALSO RESULT IN A REDUCTION IN RETURN FLOWS MOVING THROUGH THE SYSTEM AND BACK TO THE SOURCE OF SUPPLY.

THIS APPLICATION DOES NOT APPEAR TO RESULT IN A SIGNIFICANT IMPACT TO THE WETLANDS IN THE AREA.



<u>Ponds</u> -

Determination: NO SIGNIFICANT IMPACT

PONDS WERE CONSIDERED IN MUCH THE SAME WAY WETLANDS WERE CONSIDERED FOR PURPOSES OF THIS EA. BASED ON THE REASONING PRESENTED IN THE WETLANDS SECTION OF THIS EA IT IS UNLIKELY THAT THE PROPOSED ACTION WILL CREATE A SIGNIFICANT IMPACT ON PONDS IN THE AREA.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE

Determination: NO SIGNIFICANT IMPACT

WHILE PART OF THE PROPOSED CHANGE APPLICATION INVOLVES RETIRING 60 ACRES OF IRRIGATED GROUND IT IS UNLIKELY THAT THIS WILL HAVE A SIGNIFICANT IMPACT ON THE GEOLOGY/SOIL QUALITY OR STABILITY OF THE AREA. THERE WILL BE LESS MOISTURE BEING APPLIED TO THE GROUND DURING THE IRRIGATION SEASON AS THIS WATER WILL INSTEAD BE LEFT INSTREAM TO PROTECT THE FISHERY RESOURCE. IT IS NOT LIKELY THAT THIS CHANGE IN WATER UTILIZATION WILL CREATE A SIGNIFICANT IMPACT TO THE SOILS/GEOLOGY IN THE AREA.

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

Determination: NO SIGNIFICANT IMPACT

PART OF THE PROPOSED CHANGE APPLICATION INVOLVES RETIRING 60 ACRES OF IRRIGATED GROUND AND IT IS POSSIBLE THAT CESSATION OF IRRIGATION MAY CAUSE WEEDS TO INHABIT PREVIOUSLY IRRIGATED LANDS. IT IS UNLIKELY THAT THIS WILL HAVE A SIGNIFICANT IMPACT ON THE VEGETATIVE QUANTITY OR QUALITY OF THE AREA.

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

Determination: NO SIGNIFICANT IMPACT

NO DETERIORATION OF AIR QUALITY OR ADVERSE EFFECTS ON VEGETATION DUE TO INCREASED AIR POLLUTANTS FROM THIS PROJECT ARE EXPECTED.

HISTORICAL AND ARCHEOLOGICAL SITES

Determination: NO SIGNIFICANT IMPACT

THE SCOPE OF THIS PROJECT WILL NOT CREATE A DEGRADATION OF UNIQUE ARCHEOLOGICAL OR HISTORICAL SITES. THE WATER RIGHTS PROPOSED FOR CHANGE HAVE BEEN IRRIGATING THE AREA SINCE AROUND 1872. AS PROPOSED THE APPLICATION AIMS TO CEASE IRRIGATION PRACTICES TO LEAVE MORE

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WATER INSTREAM. THERE APPEARS TO BE NO CHANGES PROPOSED WHICH WOULD SIGNIFICANTLY IMPACT HISTORICAL AND ARCHEOLOGICAL SITES.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY

Determination: NO SIGNIFICANT IMPACT

THERE SHOULD BE NO SIGNIFICANT IMPACTS ON THE ENVIRONMENTAL RESOURCES OF LAND, WATER AND ENERGY AS A RESULT OF THE PROPOSED USE OF WATER.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS

Determination: NO SIGNIFICANT IMPACT

THERE SHOULD BE NO SIGNIFICANT IMPACT ON LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS FROM THIS PROPOSED USE.

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

Determination: NO SIGNIFICANT IMPACT

THERE SHOULD BE NO SIGNIFICANT IMPACTS ON RECREATIONAL OR WILDERNESS ACTIVITIES FROM THIS PROPOSED USE.

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

Determination: NO SIGNIFICANT IMPACT

THERE SHOULD BE NO SIGNIFICANT IMPACT ON HUMAN HEALTH FROM THIS PROPOSED USE.

PRIVATE PROPERTY

*Yes___ No **(x)** If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

Determination: NO SIGNIFICANT IMPACT

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

Impacts on:

(a) *Cultural uniqueness and diversity?* NO SIGNIFICANT IMPACT

(b) *Local and state tax base and tax revenues?* NO SIGNIFICANT IMPACT

(c) *Existing land uses?* NO SIGNIFICANT IMPACT

(d) *Quantity and distribution of employment?* NO SIGNIFICANT IMPACT

(e) *Distribution and density of population and housing?* NO SIGNIFICANT IMPACT

(f) *Demands for government services?* NO SIGNIFICANT IMPACT

(g) *Industrial and commercial activity?* NO SIGNIFICANT IMPACT

(h) *Utilities?* NO SIGNIFICANT IMPACT

(i) *Transportation?* NO SIGNIFICANT IMPACT

(j) *Safety?* NO SIGNIFICANT IMPACT

(k) *Other appropriate social and economic circumstances?* NO SIGNIFICANT IMPACT

Secondary and cumulative impacts on the physical environment and human population:

Secondary Impacts: NO SIGNIFICANT IMPACT

Cumulative Impacts: NO SIGNIFICANT IMPACT

Describe any mitigation/stipulation measures:

SHOULD THE PROPOSED USE BE GRANTED A CONDITION WILL BE PLACED ON THE AUTHORIZATION TO CHANGE THE WATER RIGHTS TO ENSURE THAT THE WATER RIGHTS WILL NOT BE INCREASED IN SIZE (FLOW RATE, VOLUME, AND CONSUMPTIVE USE). THIS CONDITION WILL BE ADDED IN ORDER TO PROTECT EXISTING WATER RIGHT USERS FROM ADVERSE EFFECT.

Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:

THE NO ACTION ALTERNATIVE WOULD BE TO NOT ALLOW THE PROPOSED USE. WATER RIGHTS AND RELATED ELEMENTS WOULD NOT BE ALLOWED

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TO BE CHANGED TO PROTECT THIS WATER INSTREAM. THE WATER RIGHTS WOULD INSTEAD BE LEFT ALONE AS IRRIGATION WATER RIGHTS.

PART III. Conclusion

Preferred Alternative

NA

Comments and Responses

Finding:

*Yes___ No **(X)** Based on the significance criteria evaluated in this EA, is an EIS required?*

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

An Environmental Assessment is the appropriate level of analysis for the proposed action. No significant environmental impacts were identified. Furthermore, the Department must adhere to statutory timelines in processing water right change applications which do not allow or create enough time to complete and EIS.

Name of person(s) responsible for preparation of EA:

Name: Jamie Ellis
Title: Water Resources Technology Liaison.
Date: 4-20-2016

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