

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: George A. and Ellen A. Berg  
1698 Hwy 360  
White Sulphur Springs, MT 59645
2. Type of action: Application To Change A Water Right No. 41J 30025236
3. Water source name: Camas Creek and two unnamed tributaries to the Smith River  
(a/k/a Spring Creek and Soldiers Lake Creek)
4. Location affected by project: Sections 25 & 36, T11N, R4E; and Section 31, T11N, R5E,  
all in Meagher County
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

The application proposes to change four claimed water rights by changing a point of diversion on Soldier Lake Creek, and changing 230 acres of former flood irrigation to 230 acres of center pivot sprinkler irrigation (additional acres will be converted from flood to sprinkler irrigation on existing places of use). The means of diversion will be a combination of existing headgates and ditch systems, and pumps to supply three center pivots. The sources involved include Camas Creek, Spring Creek, and Soldier Lake Creek. The volume of water solely associated with the changing place of use will be 349.6 acre-feet per year. The proposed place of use for the three center pivots is located in Sections 25 and 36, T11N, R4E; and Section 31, T11N, R5E, Meagher County.

The following claimed water rights are proposed to be changed or modified to include the new point of diversion and places of use: 41J-123729, 41J-128602, 41J-128603, 41J-128604. If the change application is authorized, the existing water rights will include a total of 350 acres of center pivot sprinkler irrigation, and 100 acres of flood irrigation.

The DNRC shall issue a change authorization if an applicant proves the criteria in 85-2-402 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:  
(include agencies with overlapping jurisdiction)

MT Fish, Wildlife & Parks - Montana Fisheries Information System  
MT Dept. of Environmental Quality Website - TMDL 303d listing  
MT National Heritage Program Website - Species of Concern  
USDI Fish & Wildlife Service Website - Endangered and Threatened Species Meagher County, MT  
MT State Historic Preservation Office - Archeological/Historical Sites  
USDA Natural Resources Conservation Service – Web Soil Survey  
USDI Fish & Wildlife Service – Wetlands Online Mapper

## **Part II. Environmental Review**

### **1. Environmental Impact Checklist:**

<b>PHYSICAL ENVIRONMENT</b>
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#### **WATER QUANTITY, QUALITY AND DISTRIBUTION**

**Water quantity** - Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.

*Determination:* Minor Impact

The MT Department of Fish, Wildlife and Parks identifies Camas Creek as chronically dewatered, and the Smith River below the mouth of Camas Creek as periodically dewatered. If this application increases the historic consumptive water use; there could be a minor impact to the sources identified above.

**Water quality** - Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.

*Determination:* Minor Impact

Camas Creek and the Smith River have been included on the 2000 303d list. Primary Contact (Recreation) is the only beneficial use listed as not supported on Camas Creek due to pathogens. While a source of this impairment has not been identified, it is unlikely that the project would impact pathogens in Camas Creek.

The Smith River listing includes Aquatic Life Support, Cold Water Fishery – Trout, and Primary Contact (Recreation) as beneficial uses that are classified as only partially supported. The probable causes of this partial support are listed as dewatering, flow alteration, nutrients, pathogens, and phosphorus. The impact on overall water quality, including nutrient levels, may improve slightly due to decreased leaching of salts, fertilizer and pesticides associated with the conversion to sprinkler irrigation. However, the project may contribute to dewatering and flow alteration.

**Groundwater** - Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.

*Determination: Minor Impact*

Groundwater elevations would generally increase slightly in those areas not previously irrigated and decrease in those areas no longer irrigated.

**DIVERSION WORKS** - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

*Determination: Low Likelihood of Impact*

Two diversion points remain unchanged, and one has changed locations on Soldier Lake Creek approximately 1/3 mile downstream. A portion of the change has already taken place, although an additional pump will be located adjacent to the existing pumping site.

**UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES**

**Endangered and threatened species** - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any “species of special concern,” or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or “species of special concern.”*

*Determination: Low Likelihood of Impact*

The Montana National Heritage Program lists 1 bird species as a “Species of Concern” within Township 11 North Range 5 East. The common name for this species is Greater Sage Grouse. No known species of concern were listed in Township 11 North Range 4 East. The USDI Fish & Wildlife Service Website shows that Meagher County has 2 species listed as threatened; the Bald Eagle and the Canada Lynx. The projects are largely in place and are consistent with other agricultural developments in the area; it is unlikely that any threatened species or species of concern would be further impacted.

**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: Minor Impact*

The USDI Fish & Wildlife Service – Wetlands Online Mapper has no data available for the project location. It appears that portions of the 230 acres of existing flood irrigated land to be removed from production are located adjacent to riparian areas that may have historically benefited from both flood irrigation and natural sub-irrigation. It’s unclear how removal of the flood water component will affect the existing water table elevation in these areas.

**Ponds** - *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

*Determination: No Impact*

A pond is not involved in this project.

**GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE** - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

*Determination:* Low Likelihood of Impact

The soils in this area are generally suited for irrigation. The projects are largely in place and are consistent with other agricultural developments in the area; it's unlikely that any unnatural degradation of soil characteristics would occur.

**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:* Minor Impact

Little disturbance of vegetative cover is expected, as much of the project has been in place for several years. Normal weed management practices will be employed to control noxious weeds in 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 Impact

No portions of the project are identified that could impact air quality.

**HISTORICAL AND ARCHEOLOGICAL SITES** - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

*Determination:* Low Likelihood of Impact

The MT State Historic Preservation Office lists one previously recorded historic site in the area: Site 24ME0253 is historic Fort Logan. There should be no disturbance to historic Fort Logan. Since the project is largely complete, and the place of use which is not presently authorized is currently under wheel line sprinkler irrigation; it is unlikely that any cultural resources would be further impacted by the conversion to a center pivot.

**DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY** - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

*Determination:* Low Likelihood of Impact

No other impacts have been identified.

## **HUMAN ENVIRONMENT**

**LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS** - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

*Determination:* Low Likelihood of Impact

No local environmental plans or goals have been identified.

**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:* Low Likelihood of Impact

The project is consistent with agricultural development in the area, and would not place additional impacts on access or quality of recreational activities.

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

*Determination:* Low Likelihood of Impact

No impacts to human health have been identified.

**PRIVATE PROPERTY** - *Assess whether there are any government regulatory impacts on private property rights.*

Yes\_\_\_ No X\_\_\_ *If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

*Determination:* Low Likelihood of Impact

**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
- (b) Local and state tax base and tax revenues? No
- (c) Existing land uses? No
- (d) Quantity and distribution of employment? No
- (e) Distribution and density of population and housing? No
- (f) Demands for government services? No

- (g) Industrial and commercial activity? No
- (h) Utilities? No
- (i) Transportation? No
- (j) Safety? No
- (k) Other appropriate social and economic circumstances? No

**2. Secondary and cumulative impacts on the physical environment and human population:**

Secondary Impacts: No secondary impacts anticipated.

Cumulative Impacts: The *Smith River Permit and Change Applications: Supplemental Environmental Assessment*, in its addendum completed by the DNRC in 2003, concluded that applications to change from flood to sprinkler irrigation contributed to cumulative impacts to Land Use, Ground-Water Resources, Surface-Water Resources, Water Quality, Fisheries and Economics. None of the cumulative impacts were determined to be significant. This application would slightly increase the cumulative impacts.

**3. Describe any mitigation/stipulation measures:**

**4. 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:**

No action alternative. Since the conversion from flood to sprinkler irrigation is largely complete, this alternative would require conversion back to flood irrigation. This would likely result in an economic impact to the applicant, due to a decrease in crop production and increase in labor costs.

**PART III. Conclusion**

**1. Preferred Alternative:** Project as proposed or modified after the water right application process.

**2. Comments and Responses:** No comments have been received.

**3. 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:

None of the identified impacts for any of the alternatives are significant as defined in ARM 36.2.524.

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

*Name:* Douglas D. Mann

*Title:* Water Resources Specialist

*Date:* May 1, 2007