

# NATURAL RESOURCES AND CONSERVATION



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## STATE OF MONTANA

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### FINAL - No Significant Impact ENVIRONMENTAL ASSESSMENT CHECKLIST

<b>Project Name:</b>	Davies family, Replace long open irrigation ditch with buried irrigation
<b>Proposed Implementation Date:</b>	Fall 2022
<b>Proponent:</b>	Davies Family
<b>Location:</b>	45.313372, -109.274015
<b>County:</b>	Stillwater

#### I. TYPE AND PURPOSE OF ACTION

The Davies family (hereon, the proponent) is proposing to use Montana Department of Natural Resources and Conservation (DNRC) Conservation and Resource Development (CARDD) Irrigation Development Program grant funding to convert an open canal irrigation system to a buried pipeline.

The proponent proposes to convert an open irrigation canal to a buried pipeline. The project would propose to use a shorter line pathway, but it involves acquiring an easement along the private road belonging to the local Homeowner's Association (HOA). The proposed easement is occupied with utilities and the Ditch company is reluctant to grant a head gate location that would feed that shorter line.

The proposed new head gate and vented buried pipe will maximize direct water flow to the proposed pasture with little to no loss. Implementing a buried pipe also allows the other landowners to still use their property without having an open ditch. The project engineer proposed a shorter, more direct line, but there were conflicts with existing easements and lack of permission from the Ditch Company.

The property is surrounded entirely by private, agricultural properties. The proposed area is located at 45.313372, -109.274015, Township 3S Range 18E, Section 36, outside of the town of Absarokee, Stillwater County, Montana. The proponent has begun initial easement negotiations, but they expect construction to begin Fall 2022, or upon funding approval and supplies.

Responsibly irrigating the property will reduce water waste, prevent soil erosion, reduce fuel for fires, reduce noxious weed growth, and improve wildlife habitat (including fowl, deer and honeybees).

DNRC will approve the grant to provide funding for the Davies family irrigation ditch conversion project.

## II. PROJECT DEVELOPMENT

### 1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

*Provide a brief chronology of the scoping and ongoing involvement for this project. List number of individuals contacted, number of responses received, and newspapers in which notices were placed and for how long. Briefly summarize issues received from the public.*

The proponent did not submit letters of support or provide public comment. The proposed action is occurring on their private lands, and it is unknown to what extent their water development may impact surrounding lands.

DNRC will post a draft of this Environmental Assessment for public comment for two weeks on the DNRC – Public Notices webpage. In addition, the MEPA Coordinator will provide a letter of notice for public comment to the applicant and send notice to applicable/affected entities.

For any comments submitted by the public, the MEPA Coordinator will review and work with the Grant Manager and applicant to adequately address those comments.

### 2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

*Examples: cost-share agreement with U.S. Forest Service, 124 Permit, 3A Authorization, Air Quality Major Open Burning Permit.*

The proposed project area (POU) will be within a former open canal irrigation ditch. The irrigation water rights are deeded from the Ditch company, who would control the water right.

### 3. ALTERNATIVE DEVELOPMENT:

*Describe alternatives considered and, if applicable, provide brief description of how the alternatives were developed. List alternatives that were considered but eliminated from further analysis and why. Include the No Action alternative.*

- 1) Alternative 1 (Proposed Alternative): Install buried pipeline
  - a. Irrigation pipelines are generally more efficient as they distribute water more uniformly while using less water overall. This more efficient distribution increases crop production but allows for less manual labor.
  - b. The pipeline will cause some initial soil disturbance due to construction and digging.
  - c. This option would be more favorable for instream flows as compared to flood irrigation, because there is no ditch loss or evaporation in the pipeline. Thus, more water would be returned to the stream.
- 2) Alternative 2: No Action
  - a. The applicant would continue to use current open canal system for irrigation. Crop production would also decrease if the applicant used inefficient water distribution methods.
  - b. This solution does not meet the goals of the applicant in terms obtaining more efficient irrigation waters.

### III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

#### 4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

*Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify direct, indirect, and cumulative effects to soils.*

The location of the proposed area is within the Quaternary alluvium sedimentary geologic units (USGS Geologic Mapping tool, date accessed: 8/19/2022). DNRC used the NRCS Web Soil Survey mapping application and identified Lohler clay loams (69.3% of drawn area; 0 to 2% slopes) and Grail clay loam (30.7% of drawn area; 4 to 8% slopes; see attached NRCS Soil Report, date accessed: 8/19/2022). The Lohler clay loams are considered prime farmland if irrigated and well-drained. The Grail clay loams are considered Farmland of statewide importance, well-drained, and nonsaline to very slightly saline.

*Proposed Alternative* – Potentially minor, short-term, adverse impacts to the soils during the construction of the pipeline. Cumulative adverse impacts may occur if the proponent installs future pivot installation; however, the effects are likely to be minimal given the canal has been formerly used for irrigation.

*No Action* – There will be no impacts to the project plot; however, there may be some continued and/or increased erosion with the current irrigation of the irrigated area.

#### 5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

*Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify direct, indirect, and cumulative effects to water resources.*

The applicant is proposing to use water rights shares deeded from the local ditch company. The ditch company receives its waters from the Stillwater River. The Stillwater River ranges from 507 ft<sup>3</sup> s<sup>-1</sup> to 1468 ft<sup>3</sup> s<sup>-1</sup> (years 1936 and 1975, respectively; USGS 06205000 Stillwater River near Absarokee MT annual mean data).

The Stillwater River (HUC 10070005) is within the Upper Yellowstone watershed – Yellowstone River basin. Montana Department of Environmental Quality (DEQ) lists the river as a class B-1 stream, or those waters which are ‘are to be maintained suitable for drinking, culinary and food processing purposes after conventional treatment; bathing, swimming and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.’ (DEQ Montana Water Quality Standards Attainment Record, 2020).

Groundwater depths in the immediate project area are shallow, ranging from 18 to 50 ft in depth (static water level; Montana Bureau of Mines and Geology, Groundwater Information Center (GWIC)

mapping application - [http://mbmg.mtech.edu/mapper/mapper.asp?view=Wells&";](http://mbmg.mtech.edu/mapper/mapper.asp?view=Wells&) date accessed: 8/19/2022).

*Proposed Alternative* – Potentially adverse, cumulative, but minimal water quality, quantity, or distribution as the proponent would be using ditch company water rights shares. These shares over time may become over-appropriated as the Stillwater River basin is experiencing increasing drought conditions and population growth. However, there are generally beneficial impacts to the water quantity and quality as installing a buried pipeline is more efficient and can provide a more uniform application of water, which may produce less irrigation runoff, and subsequently any excess sediment or nutrients/pathogens potentially introduced to any nearby water sources will likely be lessened.

*No Action* – No impacts to the supply, quality, or distribution of water as the project proponent would not implement an irrigated cropland area.

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## **6. AIR QUALITY:**

*What pollutants or particulate would be produced (i.e. particulate matter from road use or harvesting, slash pile burning, prescribed burning, etc)? Identify the Airshed and Impact Zone (if any) according to the Montana/Idaho Airshed Group. Identify direct, indirect, and cumulative effects to air quality.*

There are no expected impacts to the surrounding air quality.

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## **7. VEGETATION COVER, QUANTITY AND QUALITY:**

*What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify direct, indirect, and cumulative effects to vegetation.*

The project area is primarily within private, cultivate cropland, Great Plains Mixed Grass Prairie, and developed open space with introduced upland vegetation (at least >90% drawn area of interest; Montana Natural Heritage Program Map Environmental Summary Report attached below – date retrieved 8/19/2022). There is one plant Potential Species of Concern that may occur in the project area, the Slim-pod Venus'-looking-glass (*Triodanis leptocarpa*; Montana Natural Heritage Program Map Environmental Summary Report attached below – date retrieved 8/19/2022).

*Proposed Alternative* – Potentially limited to no adverse, long-term impacts as the proponent will continue to use the irrigated area for cultivated cropland, reducing any potential beneficial habitat for native plant species. However, there may be beneficial impacts as targeted crop production may in turn protect sensitive or fragile plant species by reducing extensive erosion associated with other equine grazing and movements.

*No Action* – The current vegetation may not be significantly impacted if there was no change to the environment.

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## **8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:**

*Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify direct, indirect, and cumulative effects to fish and wildlife.*

As summarized in the previous section, is primarily within private, cultivate cropland, Great Plains

Mixed Grass Prairie, and developed open space with introduced upland vegetation (at least >90% drawn area of interest; Montana Natural Heritage Program Map Environmental Summary Report attached below – date retrieved 8/19/2022). Cultivated cropland and low intensity residential/roads make up much of the surrounding area, with minimal Great Plains Mixed Grass Prairie making up the remainder of the land cover types for the drawn area of interest. There is one plant Potential Species of Concern that may occur in the project area, the Slim-pod Venus'-looking-glass (*Triodanis leptocarpa*; Montana Natural Heritage Program Map Environmental Summary Report attached below – date retrieved 8/19/2022).

The project area does not fall within an Executive Order – General/Priority habitat area for Sage Grouse, and therefore will not likely impact sage grouse habitat (DNRC Montana Sage Grouse Habitat Conservation Map). The project area does not appear to be impacting any Federal crucial and/or critical habitat areas; <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>) however, there have been Great Blue Heron (*Ardea herodias*) and Golden Eagles (*Aquila chrysaetos*) observed in the nearby vicinity of the project area which fall under the Migratory Bird Treaty Act. The region is in the Pacific Flyway for migratory birds (Montana Fish, Wildlife and Parks, Migratory Bird Flyways web mapping application. Date Accessed: 8/19/2022).

*Proposed Alternative* – Potentially limited adverse, long-term impacts as the proponent continue using the cultivated cropland area, reducing any potential beneficial habitat for native plant species. However, there may be beneficial impacts as targeted crop production may in turn protect sensitive or fragile plant and animal species by reducing extensive erosion.

*No Action* – No impact to terrestrial, avian, or aquatic life and habitats.

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**9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:**

*Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify direct, indirect, and cumulative effects to these species and their habitat.*

DNRC used the National Wetlands Inventory (NWI) website to determine if wetlands were present within the lands adjacent to the project location (map attached in this assessment). This search indicated there are wetlands present within one (1) mile of the proposed project area.

There have been seven species of concern listed as potentially using the area as viable habitat. (Source: Montana Natural Heritage Program Environmental Summary – date accessed 8/19/2022). DNRC also used the U.S. Fish and Wildlife Service IPaC tool to generate a resource list summarizing any endangered or threatened species that are known or expected to be on or near the project area. The IPaC list generated four (4) Federally listed species as potentially occurring in the greater project area: the Grizzly Bear (*Ursus arctos horribilis*), North American wolverine (*Gulo gulo luscus*), and Monarch Butterfly (*Danaus plexippus*; USFWS IPaC report. Date accessed: 8/19/2022).

*Proposed Alternative* – Potentially minimal beneficial and adverse impacts as the project would install a buried irrigation pipeline on a previously open canal, which may serve as beneficial habitat in its current state. The wetlands in are not within the immediate vicinity of the proposed location and are not likely to be impacted given the distance and usage of the project area.

*No Action* – Likely no impact to current unique, endangered, or fragile species.

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**10. HISTORICAL AND ARCHAEOLOGICAL SITES:**

*Identify and determine direct, indirect, and cumulative effects to historical, archaeological or paleontological resources.*

The project area is primarily on private, grasslands and cropland with no known historic or archeological resources in the area.

*Proposed Alternative* – No impact is expected as there have been no historic or archaeological resources identified in the proposed project area; however, given there has never been a SHPO survey, it is unknown if there are potential cultural resources that could be disturbed while installing the pipeline. If previously unknown cultural or paleontological materials are identified during project related activities, the DNRC grant manager will be notified, and all work will cease until a professional assessment of such resources can be made.

*No Action* – No impact to historical or archaeological sites.

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**11. AESTHETICS:**

*Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify direct, indirect, and cumulative effects to aesthetics.*

The project area is on rural private property which is comprised primarily of cultivated cropland and/or Rocky Mountain Lower Montana, Foothill, and Valley Grassland. In addition, the project area is approximately one mile northwest from the town of Absarokke and well outside the more populated, residential areas.

*Proposed Alternative* – No impact is expected to visual quality, nor will the project cause nuisance (e.g., glare, fumes) as the proposed area is on private lands.

*No Action* – no impact to aesthetics.

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**12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:**

*Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify direct, indirect, and cumulative effects to environmental resources.*

The project area is primarily on private pastureland and will not be changing its current use of irrigated water.

*Proposed Alternative* – Potentially adverse impacts as using the continued water use creates a demand on water resources.

*No Action* – There would continue to be a demand on land resource use with the continued equine grazing of the proposed area.

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**13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:**

*List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.*

- Any documents pertinent to the water rights shares the proponent uses from the ditch company.

**IV. IMPACTS ON THE HUMAN POPULATION**

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

**14. HUMAN HEALTH AND SAFETY:**

*Identify any health and safety risks posed by the project.*

DNRC does not expect an impact to human health and safety given the project is within private lands.

**15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:**

*Identify how the project would add to or alter these activities.*

The proposed area is currently defined as non-qualified agricultural land. The total acreage of the proposed pivot location is approximately 20.165 acres, for a total land market value of \$33,916 (2021 and 2022; Montana Cadastral Property Record Card; <https://svc.mt.gov/msl/mtcadastral/>; date accessed: 8/19/2022).

*Proposed Alternative* – Potentially beneficial as a project proponent intends to continue using the irrigated area for cropland production.

*No Action* – There would be no change in the current revenues from current production on the proposed area, and thus any increase in profits would be if the market prices of the applicant's various crops were to increase. The no action alternative may be cumulatively adverse if the costs of labor were to increase and the revenues from this production area to remain constant.

**16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:**

*Estimate the number of jobs the project would create, move or eliminate. Identify direct, indirect, and cumulative effects to the employment market.*

DNRC does not expect an impact to employment as the proposed project would be implemented by the applicant/private landowner.

**17. LOCAL AND STATE TAX BASE AND TAX REVENUES:**

*Estimate tax revenue the project would create or eliminate. Identify direct, indirect, and cumulative effects to taxes and revenue.*

The proposed area is currently defined as non-qualified agricultural land. The total acreage of the proposed pivot location is approximately 20.165 acres, for a total land market value of \$33,916 (2021 and 2022; Montana Cadastral Property Record Card; <https://svc.mt.gov/msl/mtcadastral/>; date accessed: 8/19/2022).

*Proposed Alternative* – There may be potentially beneficial, minimal impacts to the local tax base and tax revenues if the project proponent continues or sells crops to local markets.



No Action – No impact to local or state tax base/revenues.

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**18. DEMAND FOR GOVERNMENT SERVICES:**

*Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify direct, indirect, and cumulative effects of this and other projects on government services*

DNRC does not expect an impact to governmental services as the project would occur entirely on private pastureland.

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**19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:**

*List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.*

DNRC does not expect an impact to locally adopted environmental plans or goals as the project would occur entirely on private cropland.

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**20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:**

*Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify direct, indirect, and cumulative effects to recreational and wilderness activities.*

DNRC does not expect an impact to access or quality of recreational areas as the project would occur entirely on private pastureland. While the ditch is near a baseball field, there are other access areas the project would not interfere on.

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**21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:**

*Estimate population changes and additional housing the project would require. Identify direct, indirect, and cumulative effects to population and housing.*

DNRC does not expect an impact to density or distribution of population or housing as the project would be converting an open canal to a buried pipeline and would not be building any additional housing.

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**22. SOCIAL STRUCTURES AND MORE:**

*Identify potential disruption of native or traditional lifestyles or communities.*

The proposed area is surrounded entirely by cultivated cropland and agricultural lifestyles. No impact to social structures and more.

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**23. CULTURAL UNIQUENESS AND DIVERSITY:**

*How would the action affect any unique quality of the area?*

Similar to the 'Archaeological Resources' section above, DNRC does not expect any impacts to cultural uniqueness or diversity.

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**24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:**

*Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify direct, indirect, and cumulative economic and social effects likely to occur as a result of the proposed action.*

DNRC does not expect additional impact to other social or economic circumstances.

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**25. DRINKING WATER AND/OR CLEAN WATER**

*Identify potential impacts to water and/or sewer infrastructure (e.g., community water supply, stormwater, sewage system, solid waste management) and identify direct, indirect, and cumulative effects likely to occur as a result of the proposed action.*

DNRC used the Montana DEQ data mapping application and did not find any drinking water and/or clean water services or hazards in the immediate area. In addition, given the proponent uses the water for irrigation purposes, DNRC does not expect any impacts to drinking water and/or clean water infrastructure.

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**25. ENVIRONMENTAL JUSTICE**

*Will the proposed project result in disproportionately high or adverse human health or environmental effects on minority or low-income populations per the Environmental Justice Executive Order 12898? Identify potential impacts to and identify direct, indirect, and cumulative effects likely to occur as a result of the proposed action.*

DNRC does not expect any impacts to environmental justice given the project is located entirely within private lands.

<b>EA Prepared By:</b>	<b>Name:</b> Demitra Blythe	<b>Date:</b> 8/19/2022
	<b>Title:</b> MEPA/NEPA Coordinator	
	<b>Email:</b> Demitra.Blythe@mt.gov	

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**V. FINDING**

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**26. ALTERNATIVE SELECTED:**

Alternative 1 (Proposed Alternative): Install buried pipeline

- 1) Irrigation pipelines are generally more efficient as they distribute water more uniformly while using less water overall. This more efficient distribution increases crop production but allows for less manual labor.
- 2) The pipeline will cause some initial soil disturbance due to construction and digging.
- 3) This option would be more favorable for instream flows as compared to flood irrigation, because there is no ditch loss or evaporation in the pipeline. Thus, more water would be returned to the stream.

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**27. SIGNIFICANCE OF POTENTIAL IMPACTS:**

DNRC does not expect any significant adverse impacts and any impacts associated with construction of the pipeline will likely be minimal and relegated to the immediate area.

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**28. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:**

EIS       More Detailed EA       No Further Analysis

<b>EA Approved By:</b>	<b>Name:</b> Mark Bostrom
	<b>Title:</b> CARD Division Administrator
<b>Signature:</b> <i>Mark W Bostrom</i>	<b>Date:</b> 9/12/2022   8:14:07 AM MDT

Additional Environment Review Documents that accompany this Decision Notice are available to the public by request at the Department of Natural Resources and Conservation (DNRC), Conservation and Resource Development Division (CARDD) at 1529 11th Ave., Helena, MT. Phone (406) 444-6619; Attn: Demi Blythe, MEPA/NEPA Coordinator.



