CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	**MMJ Ranch Irrigation Improvements**
Proposed Implementation Date:	March 2018
Proponent:	Steve Coale
Location:	8N 14E 16
County:	Wheatland
Trust:	Common

I. TYPE AND PURPOSE OF ACTION

The proponent has requested to install a 12" water conveyance pipeline across state land and to include about 6 acres of current State irrigated hayland under the new pivot that will mainly be used on private land. There will be a smaller pipeline to supply the pivot at the end of the run, south of the highway. Current method of water delivery is a ditch that is located on State land.

II. PROJECT DEVELOPMENT

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

Provide a brief chronology of the scoping and ongoing involvement for this project.

Department of Natural Resources and Conservation (DNRC)
Northeastern Land Office (NELO)
Montana Department of Transportation (MDOT)
Steve Coale (Lessee)

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

The DNRC, and NELO have jurisdiction over this proposed project.

It will be the proponent's responsibility to obtain permission to cross the highway from MDOT.

3. ALTERNATIVES CONSIDERED:

Alternative A (No Action) – Under this alternative, the Department does not grant permission to install the water pipeline.

Alternative B (the Proposed Action) – Under this alternative, the Department does grant permission to install water pipeline.

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 any cumulative impacts to soils.

Erosion Hazard (Off-Road, Off-Trail)

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Wheatland County Area, Montana
Survey Area Version and Date: 11 - 12/31/2013

Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
429C	Gerdrum-Vanda-Creed complex, 0 to 8 percent slopes, fan	Slight	Gerdrum 40% Vanda 30% Creed 20% Nobe 5% Ethridge 5%
470B	Verson loam, 0 to 4 percent slopes, fan	Slight	Verson 85% Ethridge 5% Attewan 5% Radersburg 5%
471C	Kobase silty clay loam, 0 to 4 percent slopes	Slight	Kobase 85% Richey 5% Rothiemay 5% Yamacall 5%
473C	Kobase-Megonot complex, 0 to 8 percent slopes	Slight	Kobase 50% Megonot 40% Yawdim 4% Yamacall 3% Delpoint 3%
476B	Ethridge clay loam, 1 to 4 percent slopes, fan	Slight	Ethridge 85% Evanston 5% Kobase 5% Verson 5%
481D	Megonot-Yawdim complex, 4 to 15 percent slopes, fan	Slight	Megonot 50% Cabbart 4% Kobase 3% Delpoint 3%
494C	Crago gravely loam, 0 to 8 percent slopes, fan	Slight	Crago 85% Binna 5% Musselshell 5% Niart 5%
496A	Crago-Musselshell-Attewan complex, 0 to 2 percent slopes	Slight	Crago 40% Musselshell 30% Attewan 20% Marias 5% Rothiemay 5%

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- All soils are rated as "slight" if regards to off trail erosion. Any erosion anticipated with the installation of the pipeline is minimal.

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 cumulative effects to water resources.

The new pipe to be installed for water conveyance will replace the current ditch conveyance method being used now.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- Water delivery will be more efficient with a shorter span and less water loss due to evaporation and seepage.

6. AIR QUALITY:
What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

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 cumulative effects to vegetation.

Current plant community is native short grass/shrubs associated with silty and clayey.

There will be some disturbance of the current plant community during the installation of this water pipeline. These areas will be prone to noxious weed infestations. Frequent scouting should occur until revegetation has occurred to suppress noxious weed establishment.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- Bare ground associated with the installation of a pipeline will revegetate with grass & shrubs in a few years. The Area of Potential Effect (APE) will remain visible for many years.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:
Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- The increase in efficiency may allow for more water in the two holding reservoirs located on state land. This would increase the habitat quality associated with the ponds for waterfowl and other species in the area.

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 cumulative effects to these species and their habitat.

A search was conducted of the potential "Species of Concern" that may be in the area.

Species of Concern
10 Species
Filtered by the following criteria:
MT Status = Species of Concern
Township = 02SN014E (based on mapped Species Occurrences)

Scientific Name / Common Name / Taxa Sort	Family (Scientific) / Family (Common)	Global Rank	State Rank	USFWS	USFS	BLM	FWP SWAP	% of Global Breeding Range in MT	% of MT that is Breeding Range	Habitat
Lasiurus cinereus Hoary Bat	*Vespertilionidae* Bats	G3G4	S3				SGCN3	2%	100%	Riparian and forest
		Species Occurrences verified in these Counties: [illegible]								
Ardea herodias Great Blue Heron	*Ardeidae* Bitterns / Egrets / Herons / Night-Herons	G5	S3	MBTA			SGCN3	3%	100%	Riparian forest
		Species Occurrences verified in these Counties: [illegible] State Rank Reason: [illegible]								
Buteo regalis Ferruginous Hawk	*Accipitridae* Hawks / Kites / Eagles	G4	S3B	MBTA; BCC10; BCC17		SENSITIVE	SGCN3	11%	95%	Sagebrush grassland
		Species Occurrences verified in these Counties: [illegible]								
Calcarius ornatus Chestnut-collared Longspur	*Calcariidae* Longspurs and Snow Buntings	G5	S2B	MBTA; BCC11; BCC17		SENSITIVE	SGCN2	32%	67%	Grasslands
		Species Occurrences verified in these Counties: [illegible] State Rank Reason: [illegible]								
Catharus fuscescens Veery	*Turdidae* Thrushes	G5	S3B	MBTA		SENSITIVE	SGCN3	6%	100%	Riparian forest
		Species Occurrences verified in these Counties: [illegible]								
Charadrius montanus Mountain Plover	*Charadriidae* Plovers	G3	S2B	MBTA; BCC11; BCC17		SENSITIVE	SGCN2	20%	73%	Grasslands
		Species Occurrences verified in these Counties: [illegible]								
Numenius americanus Long-billed Curlew	*Scolopacidae* Sandpipers	G5	S3B	MBTA; BCC10; BCC11; BCC17		SENSITIVE	SGCN3	19%	100%	Grasslands
		Species Occurrences verified in these Counties: [illegible]								
Rhynchophanes mccownii McCown's Longspur	*Calcariidae* Longspurs and Snow Buntings	G4	S3B	MBTA; BCC10; BCC11; BCC17		SENSITIVE	SGCN3	41%	79%	Grasslands
		Species Occurrences verified in these Counties: [illegible] State Rank Reason: [illegible]								
Chrosomus eos Northern Redbelly Dace	*Cyprinidae* Minnows	G5	S3				SGCN3	4%	17%	Small prairie rivers
		Species Occurrences verified in these Counties: [illegible] State Rank Reason: [illegible]								
Chrosomus eos x Chrosomus neogaeus Northern Redbelly X Finescale Dace	*Cyprinidae* Minnows	GNA	S3			SENSITIVE	SGCN3		10%	Small prairie streams
		Species Occurrences verified in these Counties: [illegible] State Rank Reason: [illegible]								

Alternative A (No Action)-No effect anticipated

Alternative B (the Proposed Action)- There may be some temporary displacement of the potential SOC's in the area but no population effect is anticipated.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

Identify and determine effects to historical, archaeological or paleontological resources.

A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search revealed that *Antiquities* have not been identified in the APE. No additional archaeological investigative work will be conducted in response to this proposed development. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

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 cumulative effects to aesthetics.

This project will be located adjacent to the highway and will be visible to the public. This type of project is not new to the area.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

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 cumulative effects to environmental resources.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

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.

Alternative A (No Action)-No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

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.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:
Identify how the project would add to or alter these activities.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:
Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:
Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

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 cumulative effects of this and other projects on government services

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

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.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

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 cumulative effects to recreational and wilderness activities.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:
Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- No effect anticipated.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:
Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

The pipeline conveyance will allow for a pivot to be added and will change the current flood irrigating technique.

Alternative A (No Action)- No effect anticipated.

Alternative B (the Proposed Action)- Slightly better production can be expected with the increased efficiency of the pivot with betting water timing and distribution. But I don't expect it to be significant.

EA Checklist Prepared By:	**Name:**	Brandon Sandau
	Title:	Land Use Specialist
Signature:		**Date**: February 22, 2018

V. FINDING

25. ALTERNATIVE SELECTED:

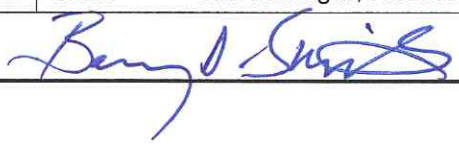
Under this alternative, the Department does grant permission to install water pipeline.

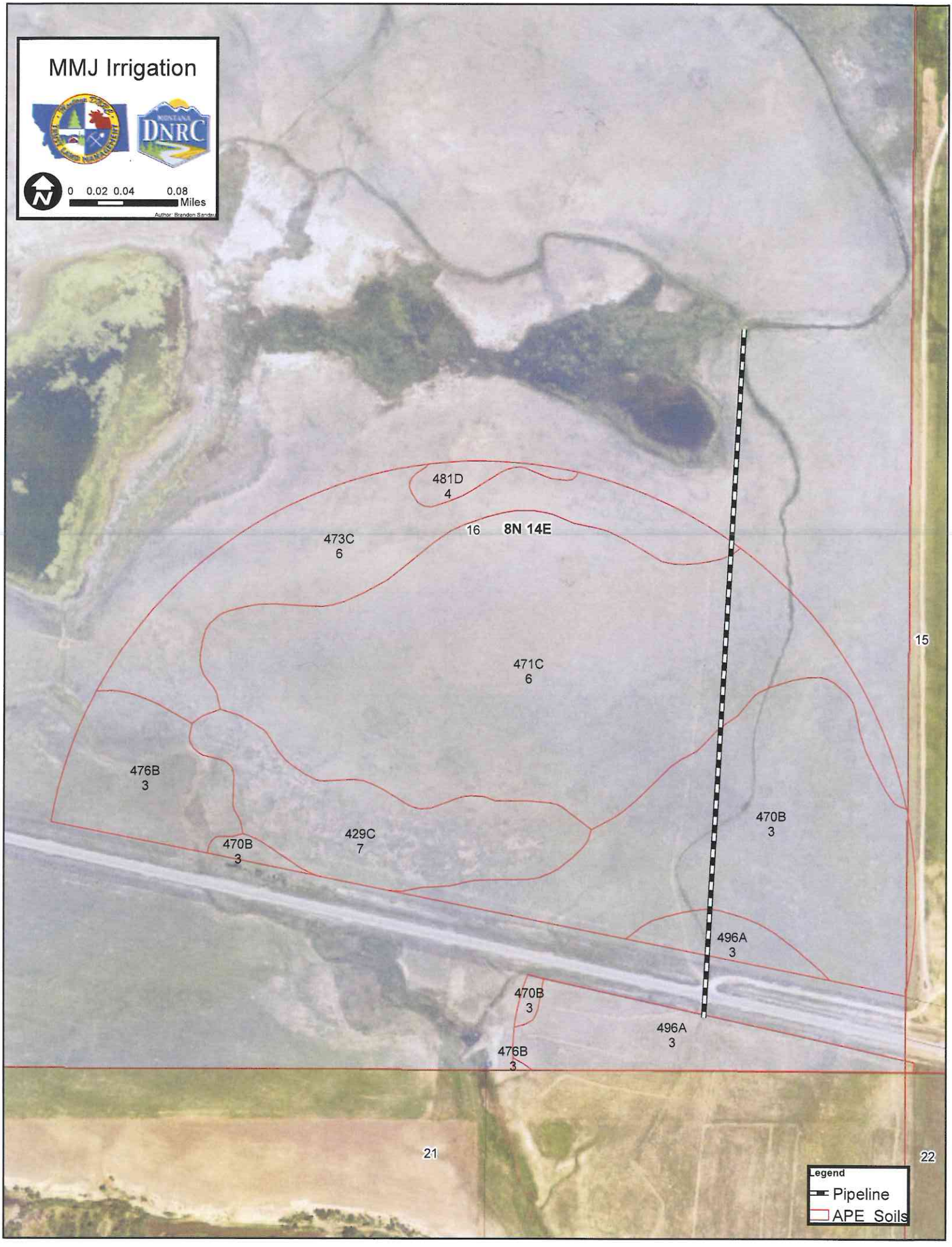
26. SIGNIFICANCE OF POTENTIAL IMPACTS:

Minimal impacts anticipated.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

	EIS		More Detailed EA	XXX	No Further Analysis

EA Checklist Approved By:	**Name:**	Barny D. Smith
	Title:	Unit Manager, Northeastern Land Office
Signature:		**Date**: February 22, 2018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Author: Brandon Sandau
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