

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
WATER RESOURCES DIVISION
WATER RIGHTS BUREAU

ENVIRONMENTAL ASSESSMENT

PART I. PROPOSED ACTION DESCRIPTION

1. **Type of action:** WATER RIGHT PERMIT APPLICATION NO.
40S-P111325
2. **Applicant/Contact name and address:**
LYLE L. PICKTHORN
915 4TH AVE N.
WOLF POINT, MT 59201
3. **Water source name:** GROUNDWATER
4. **Location affected by action:** SWSESE SECTION 23, T27N, R46E, ROOSEVELT COUNTY
5. **Narrative summary of the proposed project and action to be taken:** THIS PROJECT IS TO CONSTRUCT A GROUNDWATER PIT (100' X 100' X 25' DEEP) TO PROVIDE SUPPLEMENTAL IRRIGATION ON 49.1 ACRES OF EXISTING IRRIGATION. THE WATER WILL BE PUMPED FROM THE PIT ONTO THE LAND ONCE A SEASON TO PROVIDE 6" OF WATER THAT WILL SUPPLEMENT THE EXISTING IRRIGATION WHICH COMES FROM SPRING SURFACE WATER RUNOFF. THE PUMP WILL BE SIZED TO MATCH THE FLOW THAT THE PIT WILL BE ABLE TO PRODUCE. THE DNRC SHALL ISSUE A WATER USE PERMIT IF AN APPLICANT PROVES THE CRITERIA IN 85-2-311, MCA ARE MET. THIS APPLICATION IS TO USE UP TO 25 ACRE-FEET.
6. **Agencies consulted during preparation of the environmental assessment:**
MONTANA NATURAL HERITAGE PROGRAM
MONTANA STATE HISTORIC PRESERVATION OFFICE
TOM PATTEN, BUREAU OF MINES AND GEOLOGY
SOIL SURVEY OF ROOSEVELT AND DANIELS COUNTIES MONTANA

PART II. ENVIRONMENTAL REVIEW

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

Soils/Geologic Features:

Degradation of soil quality or alteration of soil stability, moisture content, geologic substructure, unique geologic features?

NO SIGNIFICANT IMPACT-SIX INCHES OF WATER WILL BE APPLIED ONE TIME DURING THE SEASON TO SUPPLEMENT THE SPRING RUNOFF SURFACE IRRIGATION. THE SOILS TO BE IRRIGATED ARE PREDOMINATELY HARLEM SILTY CLAY LOAM. THIS DEEP, WELL DRAINED SOIL IS ON THE MISSOURI RIVER FLOOD PLAIN, FORMED IN ALLUVIUM AND PROTECTED FROM FLOODING BY FORT PECK DAM. RUNOFF IS SLOW AND THE HAZARD OF WATER AND WIND EROSION IS SLIGHT. ACCORDING TO THE SOIL SURVEY OF ROOSEVELT COUNTY, THIS TYPE OF SOIL IS SUITED TO IRRIGATED CROPS. WATER SHOULD BE APPLIED AT A SLOW RATE OVER A LONG PERIOD TO INSURE THAT THE ROOT ZONE IS PROPERLY WETTED.

IRRIGATION ENHANCES CROP COVER DURING THE GROWING SEASON AND PROVIDES MORE PROTECTION FROM WIND AND WATER EROSION. IRRIGATION ALSO INCREASES PLANT RESIDUES RETURNED TO THE SOIL. SOIL STRUCTURE IS IMPROVED, MICROBE POPULATIONS BENEFIT FROM THE ADDED FOOD SOURCE, AND NITROGEN FERTILITY IS ENHANCED.

Erosion:

Alteration of erosion or siltation patterns which modify stream beds or lake shores?

NO IMPACT-THIS PROJECT WILL BE UTILIZING GROUNDWATER.

Vegetation/Noxious weeds:

Change in or adverse affect on diversity and production of local plant species including any unique or endangered species (including trees, shrubs, grass, and aquatic plants)? Establishment or spread of noxious weeds?

NO SIGNIFICANT IMPACT-THE MONTANA NATURAL HERITAGE PROGRAM LISTS ONE PLANT SPECIES OF SPECIAL CONCERN WITHIN THE AREA. THE MENTZELIA NUDA IS NOT THREATENED OR ENDANGERED BUT IS ON THE BLM'S WATCH STATUS. THE NATURAL HERITAGE PROGRAM PLACES THE LOCATION OF THIS PLANT IN SECTION 25. AS THE PROPOSED PROJECT IS LOCATED IN SECTION 23 ON LAND THAT HAS BEEN CROPPED AND IRRIGATED FOR MANY YEARS, IT IS UNLIKELY THAT ANY IMPACT WOULD OCCUR.

DURING THE CONSTRUCTION OF THE GROUNDWATER PIT THERE WILL BE SOME GROUND DISTURBANCE THAT MAY ENCOURAGE NOXIOUS WEEDS BUT THE AREA WILL BE QUITE SMALL AND ANY WEEDS THAT DO APPEAR COULD BE EASILY CONTROLLED. THE DIKES ARE ALREADY IN PLACE BECAUSE OF THE EXISTING IRRIGATION AND WILL NOT BE CHANGED BY ADDING THIS ADDITIONAL SOURCE OF WATER.

Air:

Deterioration of air quality, or adverse effects on vegetation due to increased air pollutants.

NO IMPACTS

Water:

Alteration of surface water or groundwater quality including but not limited to temperature, dissolved oxygen or turbidity or quantity or distribution?

THE APPLICANT BELIEVES THE LOCATION OF THE PROPOSED PIT TO BE WITHIN AN OLD MISSOURI RIVER MEANDER. TOM PATTEN OF THE BUREAU OF MINES AND GEOLOGY AGREES THAT IT APPEARS TO BE LOCATED IN AN OLD CHANNEL. TOM BELIEVES THAT THE WATER IS AVAILABLE FOR THIS PROJECT. ONCE THE PIT IS COMPLETED, THE APPLICANT WILL NEED TO UTILIZE THE CORRECT SIZE PUMP THAT WILL CLOSELY MATCH THE RECHARGE OF THE PIT.

THERE ARE THREE EXISTING WELLS WITHIN A 1 MILE RADIUS OF THE PROPOSED PIT. WELL LOGS ARE NOT AVAILABLE FOR THESE WELLS AND THE DEPTHS ARE UNKNOWN. THE WELLS ARE LOCATED ON A TERRACE ABOVE THE FLOODPLAIN AND IT IS UNKNOWN WHETHER THEY ARE LOCATED IN THE SAME AQUIFER AS THE PROPOSED GROUNDWATER PIT.

THE APPLICANT HAS A 25' STOCK WELL VERY NEAR TO THE PROPOSED IRRIGATION PIT. WATER QUALITY TESTS CONDUCTED ON THIS WELL SEVERAL YEARS AGO SHOWED THE CHARACTERISTICS OF THE WATER TO BE VERY SIMILAR TO THAT OF THE MISSOURI RIVER AND SUITABLE FOR IRRIGATION.

THE POTENTIAL FOR GROUNDWATER CONTAMINATION EXISTS, AS IT WILL BE A GROUNDWATER PIT, OPEN TO THE ELEMENTS. THESE PITS CAN LEGALLY BE CONSTRUCTED AND ARE EXEMPT FROM THE GROUNDWATER PROTECTION REQUIREMENTS ASSOCIATED WITH WELLS.

Floodplain:

Changes in drainage patterns, course or magnitude of flood flows, or exposure of people/property to hazards (flood)?

NO IMPACT

Wildlife Habitat/Migration:

Deterioration of critical fish or wildlife habitat? Creation of a barrier to the migration or movement of fish or wildlife?

NO IMPACT-THE ACRES ARE ALREADY IRRIGATED CROPLAND SO THERE WILL BE NO BARRIER TO MIGRATION OR MOVEMENT FOR THE WILDLIFE. THE PIT WILL PROBABLY BENEFIT THE WILDLIFE AS AN ADDITIONAL WATER SOURCE FOR MOST OF THE YEAR.

Endangered Species:

Adverse effects on any unique or endangered species?

NO IMPACT-ACCORDING TO THE MONTANA NATURAL HERITAGE PROGRAM, THERE ARE NO ANIMAL SPECIES OF SPECIAL CONCERN WITHIN THE PROJECT AREA. SEE THE VEGETATION SECTION OF THIS DOCUMENT FOR INFORMATION ON THE PLANT SPECIES.

HUMAN ENVIRONMENT

Existing Land Use:

Alteration of or interference with the productivity or profitability of the existing land use of an area?

NO IMPACT-THE ACRES TO BE IRRIGATED WITH THIS PERMIT ARE CURRENTLY UNDER IRRIGATION (WATER RIGHT # 40S-W016418). THIS APPLICATION IS TO PROVIDE SUPPLEMENTAL IRRIGATION TO THE CURRENT SURFACE WATER RIGHT. BY PROVIDING THE ADDITIONAL 6 INCHES OF WATER PER YEAR FROM THIS GROUNDWATER SOURCE, THE PRODUCTIVITY AND PROFITABILITY OF THE LAND USE SHOULD INCREASE.

Historical Significance:

Destruction or alteration of a natural area of scientific or educational value or prehistoric or paleontological or archaeological importance?

THE STATE HISTORIC PRESERVATION OFFICE WAS CONTACTED. THEIR REPORT STATES THAT "BASED ON THE PREVIOUS CULTURAL INVENTORIES AND THE KNOWN SITES IN THE AREA THAT THE LIKELIHOOD OF CULTURAL PROPERTIES BEING AFFECTED IS LOW". THERE HAVE BEEN THREE PREVIOUS INVENTORIES CONDUCTED IN THIS AREA, SO IT IS UNLIKELY THAT UNRECORDED OR UNKNOWN CULTURAL PROPERTIES WOULD BE PRESENT.

Populace:

Alteration of the location, distribution, density, or growth rate of the human population of an area?
Alteration of social structure of community?

NO IMPACT

Transportation:

Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?

NO IMPACT

Safety:

Creation of any health hazard or affect on existing emergency response or evacuation plans?

NO IMPACT

Public Services:

Have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? Have an effect upon local or state tax base?

NO IMPACT

Utilities:

Creates need for new or altered facilities for any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?

NO IMPACT

Aesthetics:

Alteration of any scenic vista or recreation opportunity or creation of an aesthetically offensive site to the public?

NO IMPACT

Other:

NO

2. Secondary and cumulative impacts: NONE

3. Reasonable alternatives to the proposed action, including the no action alternative: NO SIGNIFICANT IMPACTS HAVE BEEN IDENTIFIED. IF THE USE OF THIS WATER WERE NOT APPROVED, THE APPLICANT WOULD NOT HAVE THE USE OF THE WATER TO SUPPLEMENT HIS IRRIGATION AND THE ASSOCIATED INCREASE IN CROP VALUE.

PART III. CONCLUSION

Based on the significance criteria evaluated in this EA, is an EIS required? NO

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

AN EA IS ADEQUATE FOR THIS ACTION. THERE WILL BE NO SIGNIFICANT IMPACTS, THEREFORE, NO EIS IS REQUIRED.

PREPARED BY:

NAME: DENISE BIGGAR
TITLE: WATER RESOURCES SPECIALIST
DATE: [Automatic date code removed]