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 CHANGE APPLICATION NO. 40S-G(W)187281-01

2. Applicant/Contact name and address:
DELORES M. BAKER, LAURELIA .B SHAFER, MARLIN A. WERNER, LAWRENCE A. WERNER, BEVERLY A. BURROWES, RICHARD A. & RITA M. NYGAARD
114 B STREET E
POPLAR, MT 59255

3. Water source name: MISSOURI RIVER

4. Narrative Summary of the proposed project and action to be taken: THIS APPLICATION IS TO CHANGE THE POINT OF DIVERSION. THE NEW POINT OF DIVERSION WILL BE TRANSITORY ALONG THE MISSOURI RIVER WITHIN SECTION 13, T27N, R49E AND SECTIONS 16, 19 & 20, T27N, R50E. THE APPLICATION IS ALSO TO CHANGE THE PLACE OF USE FOR 260 ACRES OF IRRIGATION. THE NEW PLACE OF USE IS 80 ACRES IN THE W2NW OF SECTION 2 AND 180 ACRES IN THE E2 OF SECTION 3, T27N, R49E. THE APPLICANT IS IN THE PROCESS OF CONVERTING A LARGE AREA OF EXISTING FLOOD IRRIGATION TO CENTER PIVOT SPRINKLER IRRIGATION. THERE WILL BE NO INCREASE IN THE FLOW RATE OR VOLUME OF WATER USED. THE DNRC SHALL ISSUE AN AUTHORIZATION TO CHANGE IF THE APPLICANT PROVES THE CRITERIA IN 85-2-402, MCA ARE MET.

6. Agencies consulted during preparation of the environmental assessment:
MONTANA NATURAL HERITAGE PROGRAM
STATE HISTORIC PRESERVATION OFFICE
MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY-303D LIST (WEBSITE)

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-THE SOILS TO BE IRRIGATED ARE PREDOMINATELY HAVRELON SILT LOAM AND LOHLER SILTY CLAY. THESE DEEP, WELL DRAINED SOILS ARE 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 EROSION IS SLIGHT. THE HAZARD OF SOIL BLOWING IS MODERATE. ACCORDING TO THE SOIL SURVEY OF ROOSEVELT COUNTY, BOTH THESE TYPES OF SOIL ARE 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.

SEVERAL CHANGES OCCUR WHEN DRYLAND FARMING IS REPLACED BY IRRIGATION. WIND EROSION RATES DECREASE DURING THE IRRIGATION SEASON ON CULTIVATED FIELDS BECAUSE WET SOILS ARE MORE RESISTANT TO EROSION. IRRIGATION ENHANCES CROP COVER DURING THE GROWING SEASON AND PROVIDES MORE PROTECTION FROM WIND AND WATER EROSION THAN DRYLAND CROPS. 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?

THERE MAY BE SOME MINOR ALTERATION TO THE RIVER BANK WITH THE DEVELOPMENT OF THE PUMP SITE BUT THESE IMPACTS ARE NOT CONSIDERED SIGNIFICANT.

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?

A MINOR IMPACT TO VEGETATION WOULD OCCUR AS A RESULT OF THE TEMPORARY LOSS OF VEGETATION ALONG THE WATER SUPPLY PIPELINE ROUTE. DISTURBED AREAS ALONG THE PIPELINE ROUTE COULD BECOME INFESTED WITH WEEDS IF NOT PROMPTLY RECLAIMED AND SEEDED, PREFERABLY WITH NATIVE GRASSES. IT IS LIKELY THAT HERBICIDES WOULD BE USED TO CONTROL WEEDS. IF CARE WERE NOT TAKEN WHEN APPLYING THE HERBICIDES, NATIVE, NON-TARGET PLANTS COULD BE KILLED. ADDITIONALLY, DURING THE DEVELOPMENT OF THE PUMP SITE THERE MAY BE SOME GROUND DISTURBANCE WHICH MAY ENCOURAGE WEED GROWTH. THE AREA OF THE PUMP SITE IS SMALL, HOWEVER, AND ANY WEEDS THAT DO BECOME ESTABLISHED COULD BE EASILY CONTROLLED.

THE MONTANA NATURAL HERITAGE PROGRAM IDENTIFIED NO PLANT SPECIES OF SPECIAL CONCERN WITHIN THE PROJECT AREA.

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 MISSOURI RIVER IS LISTED BY DEQ AS BEING IN NEED OF TOTAL MAXIMUM DAILY LOAD (TMDL) DEVELOPMENT AND IS LISTED AS HIGH PRIORITY. PROBABLE CAUSES OF IMPAIRMENT ARE METALS, THERMAL MODIFICATIONS, FLOW ALTERATION, AND OTHER HABITAT ALTERATIONS. PROBABLE SOURCES OF IMPAIRMENT ARE EROSION AND SEDIMENTATION, AND FLOW REGULATION/MODIFICATION.

DURING CONSTRUCTION OF THE WATER DIVERSION SYSTEM (PUMP SITE) FOR THE PROJECT, THERE WOULD BE SHORT-TERM INCREASES IN TOTAL SUSPENDED SEDIMENT (TSS) IN THE MISSOURI RIVER. HOWEVER, THE TOTAL AMOUNT OF SEDIMENT THAT WOULD BE ADDED TO THE MISSOURI RIVER DURING CONSTRUCTION SHOULD BE MINOR. NO ALTERATION TO WATER QUALITY SHOULD OCCUR ONCE THE PUMP IS SET INTO OPERATING POSITION.

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

NO IMPACTS-THE FLOODPLAIN IS PROTECTED BY FORT PECK DAM.

Wildlife Habitat/Migration:
Deterioration of critical fish or wildlife habitat? Creation of a barrier to the migration or movement of fish or wildlife?

MOVEMENT OF THE PUMP SITE TO ACCOMMODATE THE CHANGING RIVER BANK SHOULD NOT CREATE ANY ADDITIONAL DETERIORATION TO HABITAT OR BARRIER TO MOVEMENT OF WILDLIFE. ADDITIONALLY, ADDING IRRIGATION TO THE EXISTING DRYLAND FARM GROUND SHOULD HAVE NO IMPACT TO WILDLIFE MOVEMENT.

Endangered Species:
Adverse effects on any unique or endangered species?

A REPORT RECEIVED FROM THE MONTANA NATURAL HERITAGE PROGRAM INDICATES THERE ARE TWO SPECIES OF CONCERN WITHIN THE GENERAL AREA OF THE PROJECT. THE INTERIOR LEAST TERN AND THE PALLID STURGEON ARE LISTED AS ENDANGERED. HABITAT FOR THESE SPECIES EXTENDS OVER MULTIPLE TOWNSHIPS.

THE LEAST TERN TYPICALLY NESTS ON ISLANDS AND BARREN SANDBARS AND SHOULD NOT BE IMPACTED BY THIS CHANGE. PUMP SITES ARE TYPICALLY CHOSEN FOR DEEPER WATER AND AVOID SANDBARS WHICH CAN MAKE THE SITE UNUSABLE. THE PUMP IS SCREENED AND MOVING IT FROM ONE LOCATION TO ANOTHER SHOULD NOT CREATE ANY ADDITIONAL IMPACT ON THE PALLID STURGEON.

THE MONTANA NATURAL HERITAGE PROGRAM REPORTS NO SPECIES OF SPECIAL CONCERN IN THE VICINITY OF THE ACRES TO BE IRRIGATED (SECTIONS 2 & 3, T27N, R49E).

HUMAN ENVIRONMENT

Existing Land Use:
Alteration of or interference with the productivity or profitability of the existing land use of an area?

THIS APPLICATION WILL ALLOW THE APPLICANT TO MOVE HIS PUMP SITE TO ACCOMMODATE THE CHANGING BANKS OF THE MISSOURI RIVER. THE ADDITION OF IRRIGATION SHOULD INCREASE THE PRODUCTIVITY AND PROFITABLITY TO THE EXISTING DRYLAND ACRES.

Historical Significance:
Destruction or alteration of a natural area of scientific or educational value or prehistoric, archeological importance?

ACCORDING TO THE MONTANA STATE HISTORIC PRESERVATION OFFICE, THERE ARE NO PREVIOUSLY RECORDED CULTURAL SITES IN THE PROJECT AREA. ONE CULTURAL RESOURCE INVENTORY WAS CONDUCTED IN SECTION 3, T27N, R49E. AS THE PROJECT IS LOCATED ON PRIVATE PROPERTY, NO RECONNAISSANCE SURVEY IS REQUIRED.

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

THERE WILL BE NO ALTERATION IN THE HUMAN POPULATION OR SOCIAL STRUCTURE WITH THE MOVEMENT OF THIS PUMP SITE OR THE CHANGE IN THE PLACE OF USE.

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 IMPACTS

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 IMPACTS

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

NO IMPACTS

Other:

NO IMPACTS

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2. **Secondary and cumulative impacts:** NONE-THERE WILL BE NO INCREASE IN THE FLOW RATE OR VOLUME OF WATER USED.

3. **Reasonable alternatives to the proposed action, including the no action alternative:** NO SIGNIFICANT IMPACTS HAVE BEEN IDENTIFIED. IF THE CHANGE AUTHORIZATION WERE NOT ISSUED, THE APPLICANT COULD NOT BENEFIT FROM HAVING THE ABILITY TO MOVE HIS PUMP SITE IN RESPONSE TO THE CHANGING RIVER AND TO CHANGE THE LOCATION OF THE ACRES TO BE IRRIGATED.

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: SEPTEMBER 12, 2000