BUREAU OF RECLAMATION

Appendix G

Environmental Commitments

Final Environmental Assessment
Dry-Redwater Rural Water Project, Montana
Montana Area Office – Missouri Basin Region

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Montana Area Office – Missouri Basin Region

prepared by:

United States Department of the Interior
Bureau of Reclamation
Montana Area Office

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Abbreviations and Acronyms

APE	Area of Potential Effect
BLM	U.S. Bureau of Land Management
DRWA	Dry Redwater Regional Water Authority
HDD	horizontal directional drilling
MDEQ	Montana Department of Environmental Quality
PFYC	Potential Fossil Yield Classification
Reclamation	U.S. Bureau of Reclamation
ROW	right of way
SHPO	State Historic Preservation Office
SPCC	Spill Prevention and Control Plan
SUT	Seasonal use timeframe
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

Environmental Commitments

Environmental commitments are implemented to avoid, minimize, or monitor environmental impacts associated with the Proposed Action. These commitments have been developed in coordination with federal, state, and local agencies. If authorized, a more detailed identification of resources and development of site-specific measures would be developed to minimize, avoid, or mitigate impacts during subsequent design and planning efforts.

Vegetation

Prior to construction and all other surface-disturbing activities, the Applicant shall conduct and submit an inventory (including field surveys) of biological resources within the Project study area, including vegetation communities, Waters of the U.S. (including wetlands), locations of noxious weed populations, and special-status species. If changes are made to the extent or alignment of the Proposed Action following the completed field surveys, additional field surveys would be conducted within the Project study area, as refined during final design and permitting.

- A Biological Resources Report describing vegetation, fish, and wildlife resources shall be submitted to the U.S. Bureau of Reclamation (Reclamation) and cooperating agencies for review at least 120 days before the start of construction, and shall be modified in response to agency comments, with the final report completed at least 60 days before the first ground disturbance.

- Prior to mobilization of construction equipment and supplies the Area of Direct Impact shall be identified with flagging, lathe stakes, or wildlife exclusion fencing consistent with agency and landowner requirements. The access routes to the Area of Direct Impact, staging areas, and material storage areas shall be delineated prior to mobilization of construction equipment or supplies. Flagging, stakes, or fencing shall be maintained throughout the duration of construction activities.

- All equipment, vehicles, and construction work shall be confined within delineated areas. Signage shall be used to direct construction traffic to and from approved access routes.

- A noxious weed control plan shall be submitted to applicable agencies consistent with applicable permit or right-of-way (ROW) conditions.

- Minimum bore depths shall be determined when boring under sensitive communities and special-status plant occurrences to prevent damage or plant mortality.

Appendix G – Environmental Commitments

- Ground disturbance and vegetation clearing shall be limited to the minimum extent practicable. Open excavations shall be backfilled with native soil and recompacted after installation of the conduit.

- At locations where the excavated material is not adequate for backfilling, construction crews shall remove it from the project workspaces and dispose of at a pre-approved location within the Project study area. In areas where backfill material must be imported (e.g., areas where excavated material has high rock content), soils shall be obtained from weed seed-free, commercially available sources.

- Site Restoration

    - A biologist(s) with expertise in eastern Montana ecosystems and native plant revegetation techniques shall prepare and implement a Revegetation and Restoration Plan for review and approval by appropriate federal, state, and trustee agencies. Approval of the plan shall be completed before construction starts. Implementation of the plan shall commence within one year of construction's conclusion. Annual monitoring reports shall be prepared by Reclamation and the Dry-Redwater Regional Water Authority (DRWA) and submitted to the applicable federal and state agencies.

    - After completion of project activities, all temporarily disturbed work areas shall be restored to their pre-construction contours, and areas of exposed soils shall be stabilized and re-seeded with native seed mixes appropriate to the habitat type. Broadcast seed where appropriate in order to minimize visual impacts.

    - Minimize disturbance to sagebrush (*Artemisi* spp.) plants. In the event sagebrush plants are removed or killed, plants would be reestablished through seeding or replanting.

- Avoid and minimize effects on special-status plants

    - Locations of special-status plant populations shall be identified in the field by staking, flagging, or fencing a minimum 50-foot-wide buffer around them before activities that may cause disturbance. No construction activities shall occur within the buffer area unless such activities are approved by federal and state botanists.

    - Avoidance of special-status plant populations shall be achieved where feasible by minor rerouting of pipelines in the ROW corridor, by directional drilling under the population, or by other means agreed to by agency botanists.

Wetlands

Jurisdictional wetlands are protected under Section 404 of the Clean Water Act; therefore, disturbance to wetlands would be avoided whenever possible. In the event that impacts to wetlands cannot be avoided, the following environmental commitments would be incorporated into the Proposed Action.

- Delineate wetlands in accordance with the 1987 Corps of Engineers Wetland Delineation Manual and Data Forms. Results would be documented consistent with requirements for a 404 Permit, consistent with guidance established by the U.S. Army Corps of Engineers (USACE), Omaha District.

- The Applicant shall avoid directly affecting wetlands, streams, and Waters of the U.S. using horizontal directional drilling (HDD) or other suitable trenchless technology, or by rerouting around resources. Reclamation and DRWA shall ensure that each HDD is at a sufficient depth to prevent draining of waters and to minimize the risk of a frac-out.

- The results of a geotechnical investigations shall be included in the Surface Spill and Hydrofracture Contingency Plan prepared for the Project which shall address the risk of a frac out during HDD operations and contingency measures to take in the event of a frac out. The federal and state resource agencies shall review and approve of the Surface Spill and Hydrofracture Contingency Plan prior to commencement of HDD operations.

- Use silt barriers when disturbance areas occur adjacent to wetlands in order to control sediment.

Fish and Wildlife

Prior to construction and all other surface-disturbing activities, the Applicant shall conduct and submit an inventory (including field surveys) of significant biological resources within the Project study area, including special-status species. If any changes are made to the extent or alignment of the Proposed Action following the completed field surveys, more field surveys would be conducted within the Project study area.

- Consult with the U.S. Fish and Wildlife Service (USFWS) regarding proposed activities or potential impacts to federally listed species and/or critical habitat.

- For any project activity that involves construction or ground-disturbing activities, all construction workers will be required to participate in environmental awareness training. The training will educate workers on: (1) special-status species that may occur in the work area, (2) procedures to follow if a special-status species is observed during construction, and (3) other environmental best management practices and emergency response protocols.

- Protect aquatic resources for fish and wildlife by implementing measures described above in previous sections.

- The design of new power lines or lines in need of modification would comply with Avian Power Line Interaction Committee's Suggested Practices on Power Lines: The State of the Art in 2006 (APLIC 2006), and be constructed using the techniques in "Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996."

- No construction activities would be allowed within 4 miles of a sharp-tailed grouse (*Tympanuchus phasianellus*) or a greater sage-grouse (*Centrocercus urophasianus*) lek during periods of breeding or nesting (Manier et al., 2014).

- Before any construction between March 31 and October 31 adjacent to major rivers, initial project screening and surveys of suitable habitat for federally endangered northern long-eared bat roosting in riparian habitat and fissures on cut banks shall be conducted. If northern long-eared bats are detected, construction shall be delayed until bats depart, or until November 1 of that year (beginning of inactive season).

- Before any construction during May-August in or adjacent to large wetlands, surveys for federally threatened rufa red knot shall be conducted by a qualified wildlife biologist. If rufa red knots are detected, construction shall be delayed until the biologist confirms that the observed birds have departed the area.

- Before any construction during May-July in the Missouri River channel or Fort Peck Reservoir, surveys for federally threatened piping plover shall be conducted by a qualified biologist. If piping plovers are detected, construction shall be delayed until the biologist confirms that the observed birds have departed the area.

- Implement applicable whooping crane protection measures:

    - To the extent possible, avoid construction of overhead power lines within 5.0 miles of designated critical habitat and documented high use areas (these locations can be obtained from the local USFWS office).

    - To the extent possible, bury all new power lines, especially those within 1.0 mile of potentially suitable habitat.

    - If it is not economically or technically feasible to bury lines, the following conservation measures be implemented:

        - Within the 95-percent sighting corridor:

- Mark new lines within 1.0 mile of potentially suitable habitat and an equal amount of existing line within 1.0 mile of potentially suitable habitat according to USFWS recommendations described in Avian Power Line Interaction Committee (APLIC) 2006 (as amended).

- Mark replacement or upgraded lines within 1.0 mile of potentially suitable habitat according to the USFWS recommendations described in APLIC 2006 (as amended).

▪ Outside the 95-percent sighting corridor within a State's borders:

- Mark new lines within 1.0 mile of potentially suitable habitat at the discretion of the local USFWS field office, based on the biological needs of the whooping crane.

▪ Develop compliance monitoring plans. Provide written confirmation to USFWS that power lines have been or will be marked and maintained.

- Implement applicable pallid sturgeon protection measures:

  - In-water construction and other in-water work activities should not occur from April 15 – July 1.

  - Water intakes should be screened with a maximum mesh size of 6.35 mm (¼-inch), although 1.75 mm (2.38 mm profile bar) is preferred.

  - Maximum flow velocity upstream of and across the water intake screen should be 0.12 meters per second (0.4 feet per second) or less.

  - Water intakes should be installed outside of the river thalweg and as far away from the thalweg as practicable.

  - Water intakes should operate above the lower 25% of the water column and at least one meter above the channel bed throughout the year.

- Implement applicable bald and golden eagles protection measures:

  - Prior to each construction season, the pipeline route will be surveyed for the presence of bald and golden eagles. The surveyor will be provided a current list of all known nests.

  - To avoid potential disturbance of occupied eagle nests during construction, the USFWS recommends avoiding construction activities between January 1 and August15 (or until eaglets have fledged the nest and left the immediate area or the

nest has failed). The actual buffer for each nest would be selected based on site-specific conditions, including history, demonstrated tolerance, screening, topography, etc.

- Permanent development changes or habitat alterations within 2-miles of an active nest must be coordinated with the USFWS and Reclamation. This may require design changes, or mitigation.

- Implement applicable greater sage grouse protection measures:
  - "Seasonal use timeframe" (SUT) is the sage grouse breeding, nesting, and early brood-rearing period from March 15 to July 15. To the extent practicable, all ground-disturbing construction activities would occur outside the SUT.
  - Lek buffers entail 4-mile radii for leks in Core Habitat, and 2-mile radii for leks in General Habitat. Project construction activities shall occur outside of the SUT to the greatest extent practicable.

Hydrology and Water Quality

- Conform to federal and state standards for all crossing of jurisdictional waters and be consistent with any permits and/or authorizations.
- Place silt barriers to control sediment on slopes in excess of five percent at all crossings of jurisdictional waters (e.g., riverine, riparian wetlands).
- Stockpile soil from trenches beyond the boundary of a jurisdictional water and replace after construction.
- Select sites for crossing jurisdictional waters to maximize stability of the bed/banks (avoid areas where active erosion of bed or banks is observed).
- Construct crossings of channelized jurisdictional waters perpendicular to the flow line, where feasible.
- Minimize or avoid impacts to jurisdictional waters, where required, by using underground construction activities such as HDD technology, as applicable for the width and depth of specific jurisdictional water.
- Complete open-trench methods of crossing jurisdictional waters in those situations where trenching and reclamation would occur during a period in which water would not be encountered in surface or subsurface conditions.

- Restore the bed and banks of the jurisdictional feature to original contours and stabilize with appropriate erosion control measures, where permitted.

- Service and refuel construction equipment a minimum of 500 feet from all waters.

- Follow American Water Works Association C651 for Disinfecting Water Mains and C655 for Field Dechlorination of the chlorinated water in the section of pipeline being tested and disinfected per Montana Department of Environmental Quality (MDEQ).

- Obtain and comply with federal and state permits necessary to construct and operate the Proposed Action, including required pre-construction surveys, construction monitoring and post-construction monitoring of reclamation efforts.

- Coordinate with U.S. Geological Survey (USGS) prior to construction in the event the existing stream gage on the Missouri River near Wolf Point (06177000), operated by the USGS, is subject to disturbance or disruption.

Geology, Soils, and Paleontological Resources

- Maximize construction of pipelines and electrical lines next to existing roads to eliminate or reduce the need for new maintenance or access roads.

- Use appropriate measures for dust control (e.g., periodic water trucks) to minimize impact on soil resources and air quality.

- Return topography to preconstruction contours and mound soil over buried project features (e.g., waterline, power lines) to allow settling.

- Control erosion by reseeding areas disturbed by underground construction during acceptable dryland seeding periods in either fall or spring, consistent with specific requirements of federal, state, and local state agencies and private landowners.

- Separate and stockpile topsoil on-site as the first step in any underground excavation. If pipeline or conduits are plowed in or trenched (18 inches wide or less), the topsoil may be incorporated with other fill as part of backfilling efforts. Install silt barriers to reduce surface erosion on slopes greater than five percent.

- Replace the topsoil as the last step in backfilling process, so the protective soils would be returned to the soil horizon.

- Leave buffer strips of undisturbed vegetation adjacent to waterways.

- Scarify topsoil before seeding, where necessary, to prevent compaction or crusting. Leave soil in a roughened condition until it is seeded to prevent wind erosion.

- Hydromulch slopes steeper than 15 percent.

- Install water bars as necessary to divert runoff from disturbed areas.

- Consult with staff from lead and cooperating agencies for technical assistance in avoiding, minimizing, and monitoring for lost or degraded soil and water resource values.

- Prior to construction and all other surface-disturbing activities, the Applicant shall have conducted and submitted an inventory (including field surveys) of significant paleontological resources within the Project study area on federal lands for any locations within the Project study area with a Potential Fossil Yield Classification (PFYC) of high or very high.

- A Paleontological Resources Report documenting the results of the field surveys shall be submitted to Reclamation and applicable cooperating agencies for review at least 120 days before the start of construction, and shall be modified in response to agency comments, with the final report completed at least 60 days before the first ground disturbance.

- Following completion and approval of the Paleontological Resources Report and prior to the start of ground-disturbing construction, the Applicant shall prepare and submit to Reclamation and applicable cooperating agencies for review and approval, a Paleontological Resources Mitigation and Monitoring Plan. The Plan shall include a site-specific investigation to identify construction effect areas of high (PFYC 4) and very high (PFYC 5) sensitivity for encountering significant resources and the approximate depths at which those resources are likely to be encountered for each component of each segment of the Proposed Action. The Plan shall define monitoring procedures and methodology. The Plan shall also detail methods of recovery, preparation and analysis of specimens, final curation of specimens at a federally accredited repository, data analysis, and reporting.

- All construction personnel shall be trained regarding the recognition of possible subsurface paleontological resources and protection of all paleontological resources during construction. Upon discovery of paleontological resources by paleontologists or construction personnel, work in the immediate area of the find shall be halted and the Applicant's paleontologist notified.

- The Applicant shall conduct full-time construction monitoring through its qualified paleontological monitor in areas determined to have high (PFYC 4) to very high (PFYC 5) sensitivity.

Cultural Resources

As suggested by Montana State Historic Preservation Office, cultural resources would be protected by implementing the following measures:

- Reclamation, DRWA and any other applicable agency or Tribe shall develop and implement a Programmatic Agreement for cultural resources consultation and protection. This document would line out survey requirements, consultation requirements, and avoidance requirements for the project. This plan must be finalized and implement prior to final design and construction of the project.

- Prior to final design and construction of a project, a Class III Pedestrian archaeological survey would be performed under the direction of a Principal Investigator that meets the Department of Interior qualifications for the entire Area of Potential Effect (APE). Surveys, including site recordation, would be commensurate with Montana State Historic Preservation Office (SHPO) requirements and documented in an Archaeological Survey Report; the final report would be submitted to the Montana SHPO, other federal and state agencies, and interested parties as necessary to support compliance with Section 106 of the National Historic Preservation Act. Within the report, identified resources would be documented consistent with Montana SHPO, Reclamation, and USACE/U.S. Bureau of Land Management (BLM) requirements, recommendations would be made for a resource's potential eligibility to the National Register of Historic Places, and project effects would be identified. The report would serve as a baseline for understanding activities that might result in adverse, permanent, localized damage to the historic properties in the APE.

- Reclamation would prepare a Monitoring and Unanticipated Discoveries Plan in consultation with participating Native American tribes prior to the initiation of the Proposed Action. Protocols for monitoring, such as scheduling, personnel responsibilities, chain of command, and reporting would be detailed in the Monitoring and Unanticipated Discoveries Plan.

Visual Resources

- Develop a visual resource plan that includes avoidance, minimization, and rectification measures to ensure that objectives for Visual Resource Management Class II lands are achieved.

- Opportunities to screen permanent facilities using topographic or vegetation screening would be incorporated into final design, construction, and operational aspects of the Proposed Action. In addition, minimization measures such as painting the structures to

match the background and minimize visual contrast with the existing landscape would be implemented.

- Revegetation of the disturbed area would be incorporated into the final design, construction, and operation of these facilities.

Traffic

- A Traffic Management Plan would be developed to identify specific measures (e.g., speed limits, detours, delays) that may be necessary to avoid or minimize disruption in traffic patterns and reduce delay times.

- Keep disruptions of traffic to a minimum (less than a 10-minute delay at any given time). All crossings or construction within ROWs would require permit/permission of appropriate federal, state, or local agency.

Hazardous Materials

- A phase 1 Environmental Site Assessment would be conducted by a qualified inspector prior to ground breaking activities. If found, hazardous material features would not be disturbed during construction activities.

- Cease construction if contaminated soils/sites are unexpectedly encountered and consult with a qualified hazardous materials professional to comply with applicable laws, rules, and regulations. As appropriate, the MDEQ and other applicable federal, state, and local agencies would be contacted and consulted prior to reinitiating construction activities.

- Complete a spill prevention and clean-up plan (SPCC) to minimize potential effects.

- Provide mineral materials (e.g., sand and gravel) from approved sources; no new mineral material sites would be developed.

BLM-Specific Environmental Commitments

The following environmental commitments were excerpted from the BLM's 2015 Miles City Resource Management Plan and would be applicable to Project activities proposed for lands administered by the BLM, Miles City District.

- The total disturbance area would be minimized to the extent possible.

- Surface disturbances would be co-located in areas of previous or existing disturbance to the extent technically feasible.

- Linear facilities would be located in the same trenches (or immediately parallel to) and when possible, installed during the same period of time.

- Plan of development would be required for major ROWs. Such a plan would identify measures for reducing impacts.

- Vegetation would be removed only when necessary. Mowing would be preferred. If mowed, possible work would be performed when vegetation is dormant.

- Two-track (primitive roads) would be used when possible.

- Utilities would be ripped or wheel-trenched whenever practical.

- Remote telemetry would be used to reduce vehicle traffic to the extent technically feasible.

- Perennial streams would be crossed using trenchless crossings or other environmentally sound methods.

- For activities resulting in major surface-disturbance as determined by the BLM's Authorizing Officer, a mitigation monitoring and reporting strategy would be developed and implemented.

- Accelerated erosion, soil loss and impacts to water quality would be reduced by diverting stormwater and trapping sediment during activity.

- Fertilizer would not be applied within 500 feet of wetlands and water bodies.

- Vehicle and equipment servicing and refueling activities would take place 500 feet from the outer edge of riparian areas, wet areas, and drainages.

- Emission reduction measures and conservation actions will be considered during project-level planning.

- Activities may be restricted during wet or frozen conditions. Mechanized equipment use would be avoided if equipment causes rutting to a depth of 4 inches or greater.

- Vehicle cleaning stations would be used prior to entering or leaving disturbance to reduce the transport and establishment of invasive weed species.

- Invasive plant parts would not be transported off site without appropriate disposal measures.

- Overhead power lines would follow the recommendation in the most recent guidance from the Avian Power Line Interaction Committee (2006, as amended).

- Weed management prescriptions would be included in all new treatment projects.

- Whenever possible, ROWs would be constructed within or next to compatible ROWs such as roads and pipelines.

- The operator shall be responsible for locating and protecting existing pipelines, power lines, communication lines and other related infrastructure.

References

Avian Power Line Interaction Committee (APLIC). 2006. Suggested Practices on Power Lines: the State of the Art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C. and Sacramento, CA

Manier, D.J., Z.H. Bowen, M.L. Brooks, M.L. Casazza, P.S. Coates, P.A. Deibert, S.E. Hanser, and D.H. Johnson. 2014. Conservation buffer distance estimates for Greater Sage-Grouse—A review: U.S. Geological Survey Open-File Report 2014–1239, 14 p., Available at: https://dx.doi.org/10.3133/ofr20141239.

U.S. Bureau of Land Management (BLM). 2015. Miles City Field Office Approved Resource Management Plan.