RECLAMATION
Managing Water in the West

Municipal, Rural, and Industrial Water Supply Project, Crow Indian Reservation, Big Horn County, Montana

Crow Tribe Water Rights Settlement Act (Section 406, P.L. 111-291)

Finding of No Significant Impact

U.S. Department of the Interior
Bureau of Reclamation

January 2017

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Introduction

The Crow Indian Reservation (Reservation), the largest of Montana's reservations, is located on approximately 2.3 million acres in south-central Montana, with its southern border following the Montana-Wyoming state boundary. The Reservation is primarily rural with a number of dispersed small towns and includes portions of three mountain ranges and three major rivers, surrounded by rolling hills and semi-arid plains.

The Crow (Apsáalooke) Tribe (Tribe) is proposing to construct a municipal, rural, and industrial (MR&I) water system within the Reservation (proposed project/MR&I system). The proposed MR&I system will include facilities to collect, treat, and distribute water to end users throughout the Reservation. The system will provide potable water to communities and rural residents and is intended to meet both current and future water needs for domestic, commercial, and industrial uses.

The existing water facilities on the Reservation include public water systems in each of the communities and private groundwater wells serving most rural households. Crow Agency is served by two water treatment plants (WTPs) sourced by the Little Bighorn River, while other communities have groundwater systems. Existing water systems have ongoing problems with drinking water quality. The condition of the facilities varies; some are in good condition, others need improvements or have limited storage capacity. Several reports have detailed the condition of the existing facilities, with specific emphasis on the reduced capacity of the system, disrepair of system facilities, and operational inefficiencies. With the support of these reports, the *Crow Indian Reservation Municipal, Rural, and Industrial Water Supply Project* was authorized as a component of the Claims Resolution Act of 2010 (Settlement Act or Act). The Act authorized approximately $246 million for the design and construction of an MR&I system and directed the Secretary of the Interior, acting through the Bureau of Reclamation (Reclamation), to plan, design, and construct an MR&I system through an agreement(s) with the Tribe.

In implementing the Act, Reclamation has been designated the lead federal agency responsibility for administering the funding and providing technical oversight for the design and construction of the Crow MR&I system, including ensuring that the proposed project meets applicable industry standards, considering the equitable distribution of water, and improving the cost-effectiveness of the proposed project. The responsible official for making this federal decision is the Regional Director, Great Plains Region, Reclamation.

The Bureau of Indian Affairs (BIA) is a cooperating agency with the authority to facilitate legal access (such as issuance of easements for right-of-way and surface leases and/or permits) across lands held in trust by the United States for Crow MR&I system components. The responsible official for making this federal decision is the Superintendent, Crow Agency Office, Rocky

Mountain Region, BIA. The BIA will complete companion documentation to this FONSI providing site specific information related to land access for Crow MR&I system components.

Reclamation and the BIA also have a responsibility to protect and conserve trust assets of the Tribe and Tribal members. This responsibility extends into providing oversight of the expenditure of appropriated federal project funds to best serve the interests of the Tribe and its members. Project review ensures that collective government actions taken by Reclamation and BIA fulfill trust asset responsibilities while meeting environmental laws and regulations.

Environmental effects of the proposed MR&I system were evaluated under the provisions of the National Environmental Policy Act of 1969 (NEPA) and are documented in the Final *MR&I Water Supply System Environmental Assessment* (Final EA), dated November 2016. The Final EA was prepared by the Tribe and their consultants, Bartlett & West and Wenck Associates, Inc., for Reclamation and the BIA. Reclamation has reviewed the Final EA and determined that the document meets the quality and accuracy standards for an EA under 40 CFR 1508.9 and Reclamation's NEPA Handbook (February 2012). Reclamation and the BIA have utilized the Final EA to reach an environmental conclusion regarding the proposed MR&I system.

Coordination

Planning activities for the MR&I system, including interagency coordination, have been underway since late 2014. Initial public scoping began in September and October of 2014, with the development of a project website, distribution of mailings, and posting community notices. Four public input meetings and one separate meeting for interested government entities were held. In addition, Reclamation, BIA, and the Tribe entered into an agreement (Contract R12AV60002) to cooperatively plan and review proposed activities and the Tribe has a comprehensive role with the Project Management Committee created under the Act. While no formal cooperating agency agreement was implemented beyond the procedures described in a 2012 Memorandum of Understanding (R12MU60037), for all practical purposes, the BIA has participated in NEPA activities as a cooperating agency.

Throughout 2015 and 2016, the Tribe's consultants, Bartlett & West and Wenck Associates, Inc., developed a Draft EA. The Draft EA was made available to agencies, organizations and individuals for review and comment between June 22nd and August 19th, 2016. Comments received on the Draft EA were considered and addressed during preparation of the Final EA. Comments and responses can be found in Appendix B of the Final EA.

In addition to the scoping and public review process, several federal agencies provided information or assistance in preparing the Final EA related to federal laws and regulations: Reclamation (lead agency, federal trust land); BIA (cooperating agency, federal trust land); U.S. Fish and Wildlife Service (USFWS)(Consultation under Section 7 of the Endangered Species Act (ESA)); U.S. Army Corps of Engineers (Corps)(Clean Water Act (CWA) Section 404 permit); and U.S. Environmental Protection Agency (EPA)(CWA Section 401 permit and National Pollutant Discharge Elimination System permit).

Purpose and Need for the Project

The purpose of the MR&I system is to provide an adequate supply of quality potable water for municipal, rural, and industrial uses throughout the Reservation, as specified in the Settlement Act.

A high quality, reliable water system is needed on the Reservation because there are multiple deficiencies with the existing water systems serving communities. The MR&I system addresses the following concerns:

- **Impaired water quality.** Several existing systems throughout the Reservation have difficulties meeting primary and secondary Safe Drinking Water Act (SDWA) standards.
- **Inadequate capacity.** Existing water supply systems are inefficient and present persistent maintenance challenges that affect the capacity of the system. Peak use demands lead to a compromise between water quantity and quality. Current water supply and storage facilities were not designed or intended to support the current or future population of their respective communities.
- **Poor condition of facilities.** Lack of water level meters, deteriorating distribution pipes and storage tanks, and lack of maintenance create deficiencies and cause inefficiency, overfilling, leaks, and inadequate water treatment.
- **Groundwater limitations.** Local water sources used for community systems are poor in quality and deficient in quantity; typical shallow wells tend to produce hard, mineralized water.
- **Low water pressure.** Some of the local water systems lack sufficient pressure (less than 20 pounds per square inch) and are unreliable during periods of peak use. Water shortages have been experienced when systems have failed to keep up during peak demands.
- **Inadequate emergency storage.** Fire protection is less than adequate for the communities of Pryor, Crow Agency, Lodge Grass, and Wyola. Additional fire flows are needed to meet industry standards. Some systems do not have enough storage capacity to provide for emergency backup.
- **Underserved rural areas.** There are large areas of the Reservation that do not have a reliable source of water due to the low quality or quantity of groundwater.

Summary of the Proposed Action

The Proposed Action is to construct, operate, and maintain a Reservation-wide water system to provide reliable high quality water to residents and communities of the Reservation.

As described in the Final EA (pg. 2-7), the Reservation-wide water system will consist of the following eight major components:

1) Water intake structures. A raw water intake is proposed for construction on the bank of the Bighorn River.
2) WTP. A WTP is proposed near the town of St. Xavier.

3) Distribution system (pipeline). Approximately 750 miles of pipeline are needed to distribute water to three service areas on the Reservation.
4) Pump stations. Up to 50 pump stations will be needed to serve rural users. Pump stations will be above and below ground.
5) Storage facilities. Ten storage tanks (seven new tanks and replacement of three existing tanks) will be needed to store water and provide pressure to the system when pump stations are not in use.
6) Valves and accessory structures. To assist in operating and maintain the pipeline, several types of pipeline accessory structures will be installed along the length of the pipeline, including pressure reducing valves, flow control valves, air release valves, clean-out assemblies, flush hydrants, and booster chlorination stations.
7) Supervisory Control and Data Acquisition (SCADA) and electrical systems. Sensors throughout the system will convey information to a central control facility at the WTP, where trained personnel will operate the SCADA. Extensions to the electrical system will be needed to operate the SCADA and for some of the equipment at the intake and WTP.
8) Service connections. Preliminary system design includes water service connections to all 1,415 existing rural residences. Water meters will be provided for all users of the system to track water usage, prepare water bills, promote water conservation, and detect pipeline leaks.

As construction of MR&I system facilities are completed, the United States will convey title of those facilities to the Tribe for Operation, Maintenance, and Rehabilitation (OM&R). In addition to the components described above, the following components will be needed to complete OM&R of the system: an administration building, permanent storage facilities, staging and storage areas, and a maintenance shop, along with purchase of equipment such as operator pickup trucks, service vehicles, and excavators.

Upgrades to existing water supplies will be implemented as needed in communities that will not be reached by the regional pipe network for several years. Pryor, Wyola, and Lodge Grass upgrades will include replacing existing pipelines and associated accessory structures, installing new service lines to users, and rehabilitating or replacing the existing water source. Rehabilitation or replacement of the water source may include replacing or upgrading parts of a well such as a pump, valves, or equipment; drilling a new well(s); or installing a chemical feed system. The need for drilling new wells will be evaluated as a site-specific NEPA action.

Due to the project's anticipated 15-20 year timeframe, the large project area, and extensive facilities, the Proposed Action incorporates a phased approach for undertaking planning and construction activities. Design and construction of the Proposed Action will be guided by the engineering Master Plan, which contains technical details about location, design, materials, methods, testing, and operation of the MR&I system. Annual work plans or unit work plans will be prepared by the Tribe before the start of each construction season and will be reviewed by Reclamation, with involvement and input from an interagency environmental review team (IERT) (refer to Appendix D of the Final EA). This will allow for scheduling of site-specific field surveys and environmental review.

The Final EA (pg. 2-20 to 2-24) incorporates conservation measures for protecting a variety of resources, which will be applied to all activities, project-wide. During the IERT review, additional natural resource conservation measures may be applied based on site-specific conditions/needs and, when determined necessary by Reclamation, additional NEPA analysis will be prepared.

Summary of Environmental Impacts

The effects of implementing the proposed MR&I system, as described in the Proposed Action, have been analyzed and are summarized below:

Geology and Soil Resources

Disturbance and compaction of soils is almost certain to occur during construction activities. A maximum of 5,800 to 6,200 acres are expected to be disturbed during construction and, of that, 1,450 to 2,500 (25-40%) acres are expected to have undeveloped native soils. Installation of underground pipeline is the greatest cause of surface disturbance; of the total acres to be disturbed, an estimated 5,200 acres are attributed to the pipeline route.

In order to limit permanent disturbances whenever practicable, project facilities (including pipelines) will be placed in locations where soils have been previously disturbed, such as within rights-of-way of existing roads, pipelines, or other utilities, within city limits, or within cultivated agricultural fields. Vehicle and equipment use will be restricted to the construction easement to minimize soil compaction. Soils exposed during and after construction and reclamation are vulnerable to wind and water erosion until vegetation is established. Site-specific Storm-water Pollution Prevent Plans (SWPPPs) will be prepared and implemented for all construction activities. SWPPPs will outline measures and practices to control storm water runoff, sediment discharge, and erosion. With the use of these measures, surface disturbances will typically be limited to a timeframe of one to two growing season.

With the implementation of conservation measures, permanent, long-term disturbances to geology and soils are anticipated on less than 5 percent of the total disturbance area (70 to 300 acres). These disturbances are a result of proposed above-ground facilities such as the WTP, evaporation ponds, and administrative or storage buildings. Facility sites with permanent aboveground structures will be evaluated for prime or unique farmland to determine appropriate measures to avoid or mitigate effects.

Past and current activities, such as crop cultivation, roadway construction, ranching, and flood irrigation, have contributed to cumulative changes in soil properties and cumulative amounts of sedimentation, erosion, and other soil disturbances within the majority of the project area. Construction of a regional MR&I system will contribute to the ongoing soil disturbances in the project area. With the implementation of the measures described above and summarized in Table 2.8 of the Final EA, the effects to soils and geology are expected to be insignificant.

Water Resources

The Proposed Action will result in both temporary and permanent effects to water resources, but with the implementation of the conservation measures described below and summarized in Table 2.8 of the Final EA, the effects to water resources are expected to be insignificant.

Temporary Effects – Water Quality and Water Quantity
Initial construction activities and periodic repair and maintenance of facilities may temporarily impact water quality. Work near waterways creates potential for introduction of contaminants (sedimentation, petroleum and other fuels, lubricants, etc.) into waterways. To avoid or mitigate these effects, project facilities will be sited with appropriate buffers from waterways and implementation of site-specific SWPPPs and Spill Prevention Control and Countermeasure (SPCC) plans will be required. Following construction, disturbed areas will be reclaimed by replacing soils, grading, and seeding according to site-specific conditions. In areas where dewatering of construction sites is necessary, dewatering techniques will be outlined in SWPPP and SPCC plans and will comply with applicable state and federal regulations.

Some construction activities will cross drainages and streams. To reduce direct impacts to flowing water and potential modification of streambeds, directional drilling techniques will be used when technically and economically feasible. When directional drilling is not practicable, drainages will be trenched. In addition to the commitments described above, temporarily diverted water will be returned to natural flow patterns when construction is complete, with no long-term effects to hydrology. To minimize surface disturbance, the shortest practicable alignment will be used, trenching will occur during dry or low-flow conditions, and will be in compliance with all applicable state and federal regulations.

Construction of the preferred intake type, riverbank filtration, will have no direct disturbance of the Bighorn River riverbed or surface waters. If a surface water intake or infiltration gallery is used, disturbance to the riverbed and nearby bank will occur. In addition to the conservation measures described above, all appropriate permits for work in the Bighorn River will be obtained prior to design and construction.

Permanent Effects – Water Quantity
The Tribe will permanently dedicate 250,000 acre-feet per year of their water right to instream flow of the Bighorn River for the water supply purposes. The intake will use a maximum of 13 cubic feet per second (cfs) of Bighorn River water for MR&I continuous operation, regardless of location or type. At minimum instream flows, 13 cfs represents approximately 0.9 percent of the instream flow. Because MR&I diversion is such a small percentage of instream flow, even during low flow conditions, MR&I withdrawals are not anticipated to cause adverse effects to water supply.

Upon completion of the MR&I system, an estimated one to two million gallons per day (mgd) of water will no longer be withdrawn from groundwater and surface water sources to meet community drinking water needs. Reduced use of these water sources will result in greater aquifer recharge and increase the quantity of ground water and in-stream flows.

The use of the MR&I system to create livestock connections/watering tanks will likely reduce the use of riparian areas as a water source, thus reducing sedimentation and nutrient loading. The magnitude of these effects will depend on the number of livestock users that tie into the system, their current water source, and herd size.

Completion of the MR&I system may spur commercial and residential development which has the potential to require large volumes of water. Water demands for future bulk water users were considered during design of the proposed project and are addressed in Chapter 2 of the Final EA. The effects of these activities are too speculative to analyze as part of the Proposed Action.

Permanent Effects – Water Quality
The proposed water treatment process will result in a waste water stream of approximately 0.6 to 0.9 mgd and containing approximately five times the concentration of contaminants in the raw water. The disposal alternative evaluated in the Final EA that will be implemented involves discharge into the Bighorn River which will result in localized decreased water quality near the discharge location. The discharge concentration will reach ambient conditions within a range of 60 to 160 meters (about 200 to 530 feet) downstream. To mitigate water quality impacts, diffusers will be installed at the end of the discharge pipe to increase mixing and dispersion. With the use of diffusers, contaminant concentrations will reach ambient conditions within an even shorter distance. Localized reductions in water quality will not change state water quality designations of the Bighorn River and will not have measurable effects downstream.

In addition to discharge to the Bighorn River, a portion of the wastewater stream may be contained in evaporation ponds rather than discharged. This will affect an area of up to 190 acres of land. The site will be chosen to avoid highly permeable soils and high groundwater tables. To prevent leaching of the waste and effects to groundwater quality, liners will be installed in the ponds.

Regardless, the disposal of wastewater, both to the Bighorn River or evaporation ponds, will be done according to EPA and other regulatory limitations and requirements and, therefore, will not prevent attainment of water quality standards or cause water resource impairments.

Between 70 to 300 acres will be developed into impermeable or semi-impermeable surfaces (e.g., building foundations, evaporation ponds, parking areas, graveled access road, etc.), causing an increase in surface runoff with the potential to cause erosion or alter hydrology of nearby surface waters. To prevent or minimize these effects, project facilities will be designed to handle anticipated storm water by contouring, slope design, and placement of downspouts, catch basins, and culverts, etc.

Wetlands and Floodplains

The Proposed Action will implement avoidance and mitigation measures through delineation surveys, proposed project design, conservation measures, and permitting, as described below, which will result in no measurable or significant effects to wetlands or floodplains in the project area.

Effects to Wetlands
A general review of presence/absence of wetlands will be completed prior to on-the-ground activities and, if necessary, a certified wetland scientist will complete a wetland delineation for areas exhibiting wetland characteristics within and adjacent to the construction easement. Using the results of each site-specific survey, wetlands will be avoided by adjusting pipeline routes and facility sites. In cases where re-routing is not practical, wetlands will either be trenched or bored. Trenching will result in direct, short-term disturbance of soils and vegetation, lasting about one growing season for each segment of pipeline installed. If trenched, all appropriate permits will be obtained prior to construction, existing basin contours will be restored to pre-project conditions, and trenches will be sufficiently compacted to prevent any drainage along the trench or through bottom seepage. Wetlands will be crossed during dry conditions (e.g., winter months), when practical. Directional drilling, dewatering, storm water management, and erosion control methods will be implemented as necessary. Additional mitigation measures, such as restoration or creation of mitigation wetlands, may be deemed necessary during the Corps' CWA approval and permitting process. With the use of these measures, direct effects to wetlands will be avoided or minimized.

At less than one percent of the Bighorn River's typical range of instream flow, the water required for the MR&I system is not expected to be of sufficient magnitude to indirectly affect riverine wetlands within or hydrologically connected to the project area.

Effects to Floodplains
The proposed project will not result in any changes in flood zone designations. The proposed project will be designed to avoid construction in 100-year floodplains and/or to minimize interference with the above ground movement of floodwaters. If construction in floodplains cannot be avoided in a particular area, measures will be taken to minimize effects of potential floods to project infrastructure, including elevating structures, sealing of components, or waterproof-rated enclosures. Pipelines will be installed at depths of six feet or more below channel beds at waterway crossings to prevent exposure from erosion during periods of high flow.

Aesthetic and Visual Resources

The Proposed Action is concentrated near developed areas, however, the project also parallels roads that cross expanses of open, undeveloped land with scenic views. Of the eight major components of the Proposed Action, most will be installed underground, including the preferred intake along the Bighorn River, the pipeline network, pressure reducing valves, and most service connection facilities. During construction of underground facilities and pipelines, soil excavation and vegetation removal will cause temporary disruption to views and scenery. Re-vegetation efforts will reestablish views and scenery within one to two growing seasons after reclamation. The Proposed Action will potentially result in new visual impacts to the landscape with the addition of the storage tanks and electric lines. These impacts will be minimized through project-specific siting, painting facilities to blend with the sky and surrounding landscape, underground installations if site conditions are appropriate, and other conservation measures identified during IERT review.

Fisheries and Aquatic Life

The Proposed Action will implement avoidance and mitigation measures as described below and summarized in Table 2.8 of the Final EA, which will ensure impacts to fisheries and aquatic life remain at an insignificant level.

A short term increase in sedimentation is likely to occur during and immediately following construction work within or near waterways, however, most streams in the area have a naturally high sediment load, with the exception of the trout fishery below the Yellowtail Dam on the Bighorn River. Implementation of standard construction best management practices, such as those identified within all required SWPP and SPCCC Plans, will help ensure sedimentation impacts are minimized and localized to the immediate work area. Additionally, pipeline trenching and other facility construction will be avoided in fishery-supporting streams during the spawning period. These streams will be crossed later in the year when flows are low or the stream is dry, or directional drilling will be used. All crossings of the Bighorn River will be directionally drilled to limit potential effects.

The preferred type of intake, riverbank filtration, will avoid direct disturbance to the Bighorn River riverbed and surface waters. If a non-preferred intake type becomes necessary, open trench excavation will be required within the riverbed and along the riverbank. A surface water intake, if used, will consist of a screened inlet placed at the deepest part of the river bottom. Screen mesh size openings and intake velocities will be designed and implemented in accordance with USFWS and Corps criteria for minimizing fish entrainment and impingement. On the Bighorn River, state laws pertaining to construction work within the river channel will be applicable and all necessary permits will be obtained prior to initiation of work; any permit issued by the State will include requirements to minimize impacts to fish and other aquatic life.

During periods of low flow in the Bighorn River, side channel habitat is unprotected and fish populations will decline. The effects of low flows to fisheries will occur independent of the Proposed Action; any additional effects to fish populations as a result of the Proposed Action will be indistinguishable from effects of releases from Yellowtail Dam.

The degree of potential impacts to the trout fishery and other fish and aquatic life depend, in part, on the intake location. The highest number of trout are within the first 13 miles downstream of the Afterbay Dam; the preferred intake location is roughly 14.5 miles downstream of the Afterbay Dam and thus, is of minimal concern to the cold water fishery.

The water treatment process will produce approximately 0.6 to 0.9 mgd (1.0 to 1.4 cfs) of wastewater. The preferred method of disposal will return all or a portion of the wastewater to the Bighorn River near the WTP and downstream of the intake. A localized decrease in water quality will occur near the discharge location and extend 160 meters downstream. Reduced water quality within the discharge plume will affect fish and other aquatic life within the localized area of the plume. The use of a diffuser will help to mitigate the water quality impacts by reducing the plume length and thus reducing the exposure of fish and aquatic life to discharge contaminants above ambient conditions. All discharges will be in accordance with appropriate permitting.

Socioeconomics and Environmental Justice

Cumulatively, the proposed project would provide a measureable, positive increase in the local economy, potentially on individual household income and prosperity in the short- and long-term, and would contribute to other foreseeable projects affecting socioeconomics on the Reservation. The Reservation largely consists of an American Indian population at an economic disadvantage compared to surrounding communities. A stable water supply will benefit community schools, government, hospitals, businesses, and local industries on the Reservation by increasing private investments, improving property values, increasing property tax revenues, and providing opportunities for future population growth. Revenues of current industries and businesses of the Reservation will also be strengthened, including agriculture (livestock production, in particular), coal mining, recreation, tourism, and other smaller businesses. Temporary reductions in farm revenue as a result of project construction disturbance will be offset by reimbursement for crop and hay loss until the impacted acreages are reclaimed.

The Proposed Action will also provide a direct economic benefit to a number of individual tribal members, households, and Indian-owned businesses. The Tribal Employment Rights Office (TERO) has implemented an ordinance for the Reservation that requires employment and contracting preference is given to Native Americans, especially those that live locally. The TERO ordinance is applicable to the proposed project.

The Tribe plans to charge a monthly water bill to water users. Lower household and per capita incomes on the Reservation, along with the higher poverty rates, underscore the importance of affordable water bills and avoiding disproportionately high adverse impacts on minority or low-income populations on the Reservation. Preliminary pricing studies completed by the Tribe indicate that, on average, affordable rates can be established for all water users and monthly water bills will generate the revenue necessary to complete annual OM&R. A more detailed rate study will be conducted later in the design of the proposed project and will identify strategies for assisting low-income households with affordable water bills, such as conservation actions and bill averaging.

Attempts to inform, solicit comments, and ensure the meaningful involvement of the Tribe and general public in the decision making process of the Proposed Action are detailed in Chapter 5.0 of the Final EA.

Cultural and Trust Assets

The proposed project is being initiated and completed by the Tribe with the broad purpose of benefitting the Tribe and its members. The proposed project will utilize tribal water rights and water resources to address poor water systems and increase the proportion of the Reservation with access to improved quality drinking water. The Tribe as a whole, and individual members, will benefit economically from the MR&I system.

Reclamation, BIA, the Tribe, and the Tribal Historic Preservation Officer (THPO) entered into a Programmatic Agreement (PA) which identified appropriate mitigation for adverse effects to

historic properties, established procedures for cultural resource inventory and consultation on the various phases of the project, and established procedures for the inadvertent discovery of cultural resources during construction.

The Apsáalooke consider human remains and burial sites sacred; disturbing or removing any remains will be prohibited. Proposed project workers are prohibited from collecting artifacts or disturbing cultural resources in any area, under any circumstances. In conjunction with consultation requirements and commitments made in the PA, the Proposed Action is not expected to have significant impacts to historic properties, cultural resources, or inhibit the access or use of ceremonial or sacred sites. As discussed in Section 3.8.3 of the EA, the Proposed Action will also not have any significant effect on Indian Trust Assets (ITA), and may have a positive cumulative effect on trust water resources.

Public Health and Safety

The Proposed Action will provide a measureable positive improvement to public health, safety, and well-being of the Reservation in the short- and long- term by providing a safe and reliable source of water which complies with primary SDWA standards. The proposed system treatment and design includes several features to ensure public health and safety, including corrosion control, chlorine monitoring, and backflow/cross contamination prevention. Potential exposure to pesticides and other pollutants in the drinking water supply will be measurably reduced under the Proposed Action. Proper fire control flows will be provided to communities and rural areas through improved on-site storage and reliable, sufficient supplies of water.

During operation, the proposed water treatment process will require the use of chemicals and will produce residual wastes at each step of treatment. The storage, handling, recovery, and disposal of chemicals and solid sludge wastes will follow EPA regulations to avoid potential impacts to the environment or public health.

Site specific SPCC plans will be prepared and implemented to prevent, properly contain, and direct the clean-up of spills of fuels, oils, lubricants, and hazardous materials used for construction or operation activities. The Tribe will develop and implement safety plans for work crews and will comply with all Occupational Safety and Health Administration regulations. A safety inspector will monitor for implementation of safety measures. With the use of these measures, the risk of spills will be minimized and safe environmental and working conditions will be maintained.

Vegetation and Land Use

The maximum area of temporary construction disturbance will total approximately 5,800 to 6,200 acres. An estimated 25 to 40 percent of the project area will require disturbance of native vegetation. Removal of native vegetation in previously undisturbed areas presents a permanent impact since restoration to a native community is difficult to achieve. These long-term impacts will be minimized by limiting construction, as practicable, to areas that have previously been

disturbed, such as within rights-of-way along roads, within city limits, and within cultivated agricultural fields.

Developed areas disturbed by the proposed project (e.g., parks, lawns, etc.) will be returned to their original condition. Natural and semi-natural vegetated areas disturbed by proposed project activities (e.g., pastureland, native prairie, wetlands) will be seeded during the first appropriate season after redistribution of topsoil and erosion control measures will be implemented to limit soil loss. The preferred seed mixture will be comprised of native species and may include a cover crop, according to local Natural Resources Conservation Service guidelines.

There are no plants listed as threatened or endangered under the ESA present within the project area. Rare or culturally significant plants may be present in natural or native habitats, whereas the majority of construction disturbance will occur in previously disturbed areas such as road ditches that have low quality, often non-native, perennial vegetation. Pre-construction surveys within native communities targeted for new construction will be done as recommended by the IERT to identify rare plant populations. Routes and designs will be modified accordingly to avoid impacts to rare or culturally significant plants.

Bare ground and disturbed soils, which are common in construction work areas, present an excellent opportunity for noxious weeds to become established and thrive. The effects of noxious weeds or invasive species infestations are likely long-term. Mitigation measures and practices, such as inspection and cleaning of equipment, have been included in the Proposed Action to prevent or minimize the opportunities for spread of noxious weeds or aquatic invasive species.

The proposed project could result in additional new land development once a consistent source of potable water is available. The majority of land conversion for development will likely occur near existing, developed communities where there is a source of drinking water from the proposed project. With the implementation of the mitigation measures described above and in Table 2.8 of the Final EA, Reclamation believes impacts to vegetation and land use will not rise to the level of significance.

Wildlife Resources

The Proposed Action will have temporary and localized impacts to wildlife and terrestrial habitat. Pre-construction surveys, timing restrictions, and other conservation measures are included in the Proposed Action to minimize or avoid adverse impacts to wildlife species and their habitat areas (including nesting locations), as well as culturally important wildlife resources. Additionally, coordination and consultation with any appropriate wildlife agencies will occur, as necessary, during the site-specific IERT review process, thus resulting in insignificant effects to wildlife resources.

Construction activities and increased human presence may result in temporary impacts to wildlife such as displacement, nest or den abandonment, decreased reproductive rates, or other behavioral or stress responses. These impacts will be limited to the duration of each site-specific project, generally one or two reproductive seasons. Increased vehicle traffic could result in

increased collisions, causing mortality or permanent injury to wildlife. Construction in undisturbed, native habitat will result in a permanent loss of habitat or permanent reductions in quality of habitat. The reclamation process will re-establish vegetation and habitat in these areas, but it will not be possible to restore the quality or diversity of native areas. Permanent habitat loss will occur on 70 to 300 acres as a result of permanent buildings or above ground features. Because the MR&I system location is generally in areas where farming, ranching, recreation, and other human activities occur regularly, construction activities will be similar to existing conditions and are not expected to result in population level impacts.

In order to comply with the Migratory Bird Treaty Act and protect Montana bird species, strategies recommended by the USFWS will be implemented to avoid impacts to migratory birds. Typical strategies include construction timing limitations, removal of nesting habitat prior to construction, and nest surveys. Construction or modification of overhead powerlines will follow the techniques outlined by the Avian Power Line Interaction Committee to minimize avian collisions.

Threatened and Endangered Wildlife Species (Black-footed Ferret)

Pre-construction surveys and coordination with USFWS will occur when project activities are planned to occur within one mile of black-tailed prairie dog complexes greater than 80 acres in size. Additionally, the Tribe will remain in compliance with the Black-footed Ferret Safe Harbor Agreement and Incidental Take Permit, granted under the authority of the ESA. Reclamation has determined that the Proposed Action may affect, but is not likely to adversely affect the black-footed ferret. The USFWS provided concurrence with this determination on November 4th, 2016.

Air Quality, Noise, and Traffic

The Proposed Action will result in temporary, intermittent releases of emission from sources such as construction equipment exhaust and suspended dust generated from vehicle traffic. Conservation measures including road watering, implementing speed limits, and general equipment maintenance will be utilized to control emissions. Construction noise including heavy equipment operation and human voices will likely be heard above ambient conditions but will not be at levels harmful to human health. Maintenance and operator vehicles are currently used for existing water treatment facilities in the project area, thus, the transition to a region-wide MR&I system will not result in a significant increase from current traffic levels.

Based on existing air quality in the region and the control of noise, traffic, and temporary fugitive emissions during construction, the proposed project will not lead to measurable increases in criteria pollutants or disruptive levels of noise and traffic in the project area.

Climate Change

Emissions of greenhouse gases will occur as a result of construction equipment operation and increased vehicle traffic. Operation of the MR&I system will consume energy likely produced by fossil fuels. Emission reduction strategies may be employed for the project, such as the use of

low carbon fuels and fuel-efficient vehicles for the project fleet. The Proposed Action will not measurably increase fossil fuel consumption in comparison to existing conditions, nor will the project contribute significantly to emissions of greenhouse gasses affecting local or regional climate.

Increased evapotranspiration in the region due to climate change will likely result in increased water demands for residential purposes and livestock in the project area. Warmer temperatures are expected to increase in the 21st century, likely resulting in changes in precipitation regimes and shifts in runoff, which will affect the potential water available in the Bighorn River for the MR&I system water supply. Within the project area, the Bighorn River is the least sensitive to increased spring runoff and decreased summer flows; Yellowtail Dam holds runoff and water is released in a relatively more continuous flow throughout the growing season, making the continuity of the water supply less susceptible to fluctuations from natural precipitation regimes.

Executive Orders

The Proposed Action is in compliance with Executive Orders 11593 (Protection and Enhancement of the Cultural Environment), 11988 (Floodplain Management), 11990 (Protection of Wetlands), 12898 (Environmental Justice), 13007 (Indian Sacred Sites), 13112 (Invasive Species Control), and 13186 (Protection of Migratory Birds).

No significant impacts are expected to the resources covered in each.

Cumulative Impacts

For each resource area, the Final EA included analysis of cumulative effects or impacts from past, present, and reasonably foreseeable future actions. The Proposed Action will not result in any significant adverse impacts to the environment, and therefore will not result in significant cumulative impacts.

Finding

Based on the analysis of the environmental impacts and the effectiveness of the conservation measures in the Proposed Action, as described in the Final EA and in the preceding sections of this document, Reclamation has determined that the Proposed Action will not have significant or highly uncertain impacts on the quality of the human environment. Consequently, Reclamation has prepared this Finding of No Significant Impact and will not prepare an Environmental Impact Statement.

Decision

Reclamation has selected the Proposed Action for implementation. Conservation measures contained in the Final EA (Section 2.4.5, pg. 2-23) are incorporated into this decision. The conservation measures are reasonable, appropriate, and based on recommendations commonly used for resource protection.

Implementation of this Federal action may proceed following approval of this document. Project work will proceed through the site-specific review process, summarized below and more fully described in Appendix D of the Final EA.

Implementation Instructions and Recommendations

1. Annual funding plans, draft construction plans, or other work proposals will be screened to identify any necessary subsequent reviews. The screening process will allow sufficient time for an appropriate level of review and preparation of environmental analysis and documentation, including any field surveys, if required.

2. Reclamation requires that an IERT approach be used to screen and review MR&I work activities and to finalize application of site-specific environmental management practices and conservation measures. While the exact makeup and composition of the team can be tailored based on need, efficiency, and cost-savings, the core team should include representation from the following entities:
    a. Reclamation
    b. Crow Tribe Water Resource Department
    c. BIA
    d. THPO
    e. Subject matter experts, as needed.

3. Conservation measures identified in the Final EA will be applied based on need at the site-specific level, as determined by the IERT. Differences among sites within the MR&I system area may have unique features that will not require the full complement of practices and measures.

4. Over the course of project implementation, Reclamation, BIA, and the Tribe shall review the status of environmental reviews and record findings for compliance with NEPA. An annual

or periodic monitoring report shall be made part of the NEPA project record/administrative files.

5. Revisions to the Master Plan are anticipated and subject to environmental reviews, as noted above. Revisions may include updates to the conservation measures included as an Appendix to the Master Plan.

This concludes Reclamation's decision to implement the Proposed Action for the *Crow Indian Reservation Municipal, Rural, and Industrial Water Supply Project.*

Responsible Official: _____ 1/5/17

Michael J. Ryan
Regional Director, Great Plains Region,
Bureau of Reclamation

Date