



United States Department of the Interior



FISH AND WILDLIFE SERVICE Mountain-Prairie Region

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AUG 03 2009



Rena Brand, Regulatory Specialist
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Dear Ms. Brand:

The U.S. Fish and Wildlife Service (USFWS) received the Army Corps of Engineers' (COE) public notice dated May 8, 2009, advising your intent to prepare an Environmental Impact Statement (EIS) for the proposed Regional Watershed Supply Pipeline and soliciting input on issues and alternatives. This project proposes the construction and operation of an 578-mile long water conveyance pipeline, 2 water withdrawal facilities, 16 natural gas powered pump stations, 3 water storage reservoirs, and ancillary facilities (access roads, transmission lines, etc.) in order to divert an estimated 250,000 acre-feet of water from Flaming Gorge Reservoir and the Green River to southeastern Wyoming and the Front Range of Colorado. We are providing the following comments for your consideration.

Pursuant to the National Environmental Policy Act (NEPA), the Migratory Bird Treaty Act (MBTA), the Bald and Golden Eagle Protection Act (BGEPA), the Endangered Species Act (ESA) of 1973, and the Fish and Wildlife Coordination Act (FWCA), we are identifying issues that we request be addressed relative to fish and wildlife resources for this project. In Section 1 of this letter, we address potential impacts to federally listed species and species of concern. Section 2 of this letter conveys additional concerns that should be addressed in the NEPA compliance document for this project.

Section 1 – Federally Listed Species

This project has the potential to alter hydrological, fluvial geomorphic, and ecological processes downstream in both the Green and Colorado Rivers to Lake Powell, affecting riverine and riparian species and habitats. The proposed project would deplete large amounts of water from the Green River system using intake points at Flaming Gorge Reservoir and the Green River downstream of Seedskadee National Wildlife Refuge, reducing water available in all downstream portions through an inter-basin transport of water. Included in the set of potentially

affected species and habitats are federally listed species, designated critical habitats, species that are candidates for Federal listing, and State-sensitive species. The project should analyze the direct, indirect, and cumulative threats, including interrelated and interdependent effects upon the following endangered and sensitive species.

Endangered Colorado River Fishes

The Colorado pikeminnow (*Ptychocheilus lucius*), razorback sucker (*Xyrauchen texanus*), humpback chub (*Gila cypha*), and bonytail (*G. elegans*) are federally listed endangered fishes endemic to the Colorado Basin. On March 21, 1994 (59 FR 13374), critical habitat for these species was established, including portions of the Green and Colorado Rivers and their 100-year floodplains (Appendix A). The Draft EIS should analyze project effects on instream flows of the Green and Colorado Rivers to Lake Powell and how changes to flows would affect primary constituent elements of critical habitat, and eventual recovery of these species. Threats to these species include stream flow regulation and habitat modification; competition with and predation by nonnative fishes; and pesticides and pollutants (USFWS 2002 a-d).

Effects to Streamflow

Maintaining adequate streamflow is paramount to the survival and recovery of the four endangered fishes. Historically, the Colorado and Green Rivers and their tributaries produced high spring turbid flows that maintained habitat by inundating floodplains, maintaining side channels, and creating backwaters. However, numerous upstream reservoirs and water projects, many of which transport large volumes of water out of the Colorado River basin, have altered flow regimes significantly in these river systems. Physical changes in the habitat from these water development projects have degraded the habitat of rare native fishes while increasing the habitat quality for invasive fish species that compete with, and prey on existing native fishes. Additional water depletions from the Green River, such as the proposed project, may adversely affect critical habitat by negatively impacting critical habitat for listed fishes while at the same time improving the environment for competing invasive fishes.

All four of the listed Colorado River fishes require the same primary habitat components essential for survival: water, physical habitat, and the biological environment. A minimum quantity and quality of water is necessary during each of the hydrologic seasons for each life stage of the four species. The physical habitat needed includes areas of the Colorado River system that are inhabited or potentially habitable for use in spawning, rearing and feeding, or serve as corridors between these areas. In addition, oxbows, backwaters, and other areas in the 100-year floodplain, when inundated, provide access to spawning, nursery, feeding, and rearing habitats. The reduction of available habitats through water depletions directly affects individuals of all four species by decreasing reproductive potential and foraging and sheltering opportunities, and reduces their ability to compete with invasive species. Many of the habitats required for breeding and rearing become severely diminished when flows are reduced.

Upper Colorado River Endangered Fish Recovery Program

Currently, the recovery of these four species is organized under the "Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin" (Recovery Program) (USFWS 1987), which is a co-signed agreement between the Secretary of the Department of the

Interior; the Governors of Wyoming, Colorado, and Utah; and the Administrator of the Western Area Power Administration. An objective of the Recovery Program was to recover the listed species while providing for new water development in the Upper Basin.

A section 7 Agreement (Agreement) and a Recovery Implementation Program Recovery Action Plan were developed by the USFWS in 1993 and has been reviewed and updated annually. The Agreement established a framework for conducting all future section 7 consultations on depletion impacts related to new projects and all impacts associated with historic projects in the Upper Colorado River Basin. Procedures outlined in the Agreement are used to determine if sufficient progress is being accomplished in the recovery of the endangered fishes, which enables the Recovery Program to serve as a reasonable and prudent alternative to avoid jeopardy.

In accordance with the 1993 Agreement, the USFWS annually assesses the impacts of projects that require section 7 consultation and determines if progress toward recovery has been sufficient for the Recovery Program to serve as a reasonable and prudent alternative. If sufficient progress is being achieved, biological opinions (BO) are written to identify activities and accomplishments of the Recovery Program that support it as a reasonable and prudent alternative. If sufficient progress in the recovery of the endangered fishes has not been achieved by the Recovery Program, actions from the Recovery Implementation Program Recovery Action Plan are identified which must be completed to avoid jeopardy to the endangered fishes. For new projects, these actions serve as the reasonable and prudent alternative as long as they were completed before the impact of the project occur.

After many years of successful implementation of the Recovery Program and Agreement, Federal action agencies can now anticipate Recovery Program activities that must be included in their project planning to avoid jeopardy to listed species. Thus, the reasonable and prudent alternative has essentially become part of the proposed action. The Recovery Program now serves as a conservation measure within the proposed action and in many cases minimizes adverse effects to listed species or critical habitat.

However, it is important to note that allowing the Recovery Program to serve as a conservation measure for proposed actions is contingent on appropriate legal protection of the instream flow needs of the endangered Colorado River fishes. The Recovery Program states:

“ . . . it is necessary to protect and manage sufficient habitat to support self-sustaining populations of these species. One way to accomplish this is to provide long term protection of the habitat by acquiring or appropriating water rights to ensure instream flows. Since this program sets in place a mechanism and a commitment to assure that the instream flows are protected under state law, the USFWS will consider these elements under section 7 consultation as offsetting project depletion impacts.”

Therefore, maintaining legal protection for flows in the Green and Colorado Rivers is the foundation for the Recovery Program to continue to serve as a conservation measure for section 7 consultations on future water development projects.

Water depletions in the Green River Basin have become more common, with many large water projects in various stages of development. The size of the depletion associated with the proposed Regional Watershed Supply Project (up to 250,000 acre-feet), combined with other historic, in progress, and proposed water development projects, threatens the ability of the Green River system to provide adequate instream flows for federally listed fishes. Therefore, the proposed project should determine if the Green River system can accommodate the proposed diversion and maintain suitable flows for listed fish species.

Operations of Flaming Gorge Dam for Endangered Fishes

In their February 16, 2006 Record of Decision (ROD), the Bureau of Reclamation (Reclamation) agreed to select the Action Alternative of their November 15, 2005, Final EIS, to modify the operations of Flaming Gorge Dam, to the extent possible, to achieve flow and temperature recommendations identified in the Upper Colorado River Endangered Fish Recovery Program report, "Flow and Temperature Recommendations for Endangered Fishes in the Green River Downstream of Flaming Gorge Dam" (Muth et al. 2000). Currently, Reclamation operates water flows out of Flaming Gorge Dam under the ROD in order to assist in the recovery of four endangered fishes.

The final USFWS BO (September 6, 2005), on the preferred/action alternative of the EIS, concluded that the proposed action was not likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, razorback sucker, or Ute ladies'-tresses (*Spiranthes diluvialis*), and would not result in the destruction or adverse modification of endangered fish critical habitat. Implementation of the proposed action was expected to result in overall beneficial effects to the species and critical habitat in the Green River downstream of Flaming Gorge Dam and induce a positive population response.

The proposed Regional Watershed Supply Pipeline project has the potential to disrupt Reclamation's operation of Flaming Gorge Dam under the ROD. Therefore, appropriate analyses should be conducted to document the effects of proposed water depletions from the Green River upstream of Flaming Gorge Reservoir on operations of Flaming Gorge Dam (pursuant to the EIS/BO/ROD) to achieve the downstream flow and temperature recommendations for the endangered fishes. The analyses also should consider the need to ensure that, with the proposed depletions, sufficient flexibility in dam operations is available to allow for real-time, adaptive management of flows and temperatures. More specifically, these analyses should describe how the proposed depletions would affect Reclamation's ability to: a) deliver the magnitude, duration and frequency of recommended peak flows during the spring, and, b) provide base flows over the entire recommended ranges in a given hydrologic category (Muth et al. 2000). In other words, simply meeting the minimum recommended flows in all years is not adequate for recovery of the endangered fishes.

Additionally, the Reinitiation Notice of the USFWS' Final Programmatic BO (Yampa PBO) on the Management Plan for Endangered Fishes in the Yampa River Basin (January 10, 2005) assumed operation of Flaming Gorge Dam would meet the flow recommendations for the Green River according to the ROD on the Flaming Gorge Operations EIS. Failure to achieve the Green River flow recommendations due to the proposed water depletions would trigger reinitiation of consultation on the Yampa PBO.

Global Climate Change and Altered Hydrologic Regime

Changes in global water cycles are expected to accompany predicted global climate warming (Milly et al. 2005). In the western United States, these changes can manifest as a decrease in annual mean precipitation (Christensen 2007), more precipitation falling as rain instead of snow (Knowles et al. 2006), reduced snowpack (Pierce et al. 2008), and earlier snowmelt runoff (Stewart et al. 2004), affecting the timing of spring runoff (Vicuna and Dracup 2007).

All of these potential changes in the region's water cycle can have profound impacts on water availability, operations, and management. Increased average daily temperatures (Meehl et al. 2007) may increase evaporation from reservoirs or increase the amount of water needed to maintain stream temperatures that support endangered fish populations. Increased probability of drought and flood events (Meehl et al. 2007) may mean that reservoirs are not capable of storing or releasing water with the same frequency. All of these potential changes should be analyzed before large-scale water projects are developed.

It is imperative that decisions concerning future water supplies account for changing climatic conditions, including precipitation and temperature. Water supply planning can no longer rely on assumptions of a stationary climate. In other words, the past hydrology of the Green and Colorado River systems may not be an accurate predictor of future conditions.

Conclusion: Streamflow Impact Analysis

Analyses should be performed to determine if the Green River system can accommodate this project after the following water considerations have been met:

1. Maintenance of suitable flows for federally listed fish species;
2. Operations of Flaming Gorge Dam under the ROD; and
3. Incorporation of climate change models predicting an altered hydrologic regime in the Colorado River Basin.

This analysis is vital for the preservation of the current management, recovery, and consultation system for the federally listed fishes. If the Green River system becomes over-developed, not only would the Recovery Program's sufficient progress designation be threatened, but the recovery of the four federally endangered fish species may be at risk.

Effects of Altered Flows on Native vs. Invasive Fishes

The modification of flow regimes, water temperatures, sediment levels, and other habitat conditions caused by water depletions, has contributed to the establishment of invasive fishes in the Green and Colorado Rivers and their tributaries. Under natural flow and habitat conditions, invasive fish populations are at an ecological disadvantage in these rivers. However, reductions of flows have contributed to altered flow regimes and habitat conditions. Under these non-natural conditions, invasive fish can out-compete native fish for habitat and resources, while also causing direct losses through predation. As a result of current river conditions, predation and competition from invasive fish species have been identified as factors in the decline of the endangered fishes.

Water depletions also reduce the ability of the river to create and maintain the biological environment that defines critical habitats for the four endangered fishes. For example, reduced flows alter food supply, a function of nutrient supply and productivity. Similarly, reduced flows alter the water temperature of the river. These attributes should be investigated to ensure they will not be negatively affected by the project.

Recently, the Recovery Program has worked with Reclamation (operating Flaming Gorge Dam) to create flow regimes that place invasive fish at a competitive disadvantage. This cooperative effort has yielded positive results and has limited the competitive ability of invasive fish (Badame and Jones 2008). The ability of Reclamation to continue to assist in these invasive control efforts may be limited or may no longer be feasible because of the proposed project. As part of the previously requested analysis of possible impacts to the operation of Flaming Gorge Dam, the ability of Reclamation to continue invasive fish control flows should be determined.

Effects to Water Quality

The proposed depletion could affect water quality in the action area by increasing concentrations of heavy metals, selenium, salts, pesticides, and other contaminants. Increases in water depletions will cause associated reductions in assimilative capacity and dilution potential for contaminants that enter the river. The proposed project depletions would cause a proportionate decrease in dilution, which in turn would cause a proportionate increase in heavy metal, selenium, salts, pesticides, and other contaminant concentrations in the Green and Colorado Rivers to Lake Powell. In addition, a disproportionate concentration of salts would be delivered from the Colorado River Basin to the eastern Wyoming and Colorado watersheds. The impacts of reduced water volume in the Colorado River Basin on salt concentrations downstream of Flaming Gorge Dam and the increased concentration of salts into eastern Wyoming and Colorado watersheds should be analyzed.

Increases in contaminant concentrations in the rivers would likely result in an increase in the bioaccumulation of these contaminants in the food chain which could adversely affect the endangered fishes, particularly the predatory Colorado pikeminnow. Selenium is of particular concern due to its effects on fish reproduction and its tendency to concentrate in low velocity areas that are important habitats for Colorado pikeminnow and razorback suckers. Mercury also is a concern, as recent research has shown elevated levels of mercury in Colorado pikeminnow in the Green River system (Osmundson 2009).

Ute ladies'-tresses

The Ute ladies'-tresses orchid (*Spiranthes diluvialis*), a plant listed as threatened under the ESA, may be affected by the proposed project through water depletions. Ute ladies'-tresses is a perennial, terrestrial orchid, 8 to 20 inches tall, with white or ivory flowers clustered into a spike arrangement at the top of the stem. Ute ladies'-tresses orchid typically blooms from late July through August; however, depending on location and climatic conditions, it may bloom in early July or still be in flower as late as early October. Ute ladies'-tresses orchid is endemic to moist soils near wetland meadows, springs, lakes, and perennial streams where it colonizes early successional point bars or sandy edges. The elevation range of known occurrences is 4,200 to 7,000 feet in alluvial substrates along riparian edges, gravel bars, old oxbows, and moist to wet meadows. Soils where Ute ladies'-tresses orchid have been found range from fine silt/sand, to

gravels and cobbles, and from highly organic to peaty soil types. Ute ladies'-tresses orchid is not found in heavy or tight clay soils or in extremely saline or alkaline soils. Ute ladies'-tresses orchid seems intolerant of shade and small scattered groups are found primarily in areas where vegetation is relatively open. Surveys should be conducted by knowledgeable botanists trained in conducting rare plant surveys. Ute ladies'-tresses orchid is difficult to survey primarily due to its unpredictability of emergence of flowering parts and subsequent rapid desiccation of specimens.

Wyoming toad

Historically, the Wyoming toad (*Bufo baxteri*) occupied flood plains, ponds, and seepage lakes associated with shortgrass communities occurring between 7,000 and 7,500 feet in elevation within the Laramie Basin. The Wyoming toad was associated with both the Big and Little Laramie Rivers. Populations of the Wyoming toad suffered a dramatic decline in the 1970s and the current distribution is limited to a few sites in Albany County. The proposed project involves an inter-basin transfer of water and the storage of water in Lake Hattie in Albany County which is located within a few miles of the last remaining locations where Wyoming toads survive in the wild. An inter-basin transfer of water has a very real potential of introducing detrimental new biota (water borne disease agents, parasites, predators, competitors, etc.) to the Laramie Basin, which may impact Wyoming toad survival and recovery. Our concern for the Laramie Basin is heightened because the out-of-basin water source includes an area of significant recreational use, Flaming Gorge and, therefore, presents a greater potential for the introduction and spread of detrimental biota.

Further, the proposed project may involve constructing new pipelines and roads within the Laramie Basin, including in close proximity to Mortenson Lake National Wildlife Refuge (NWR), home to the only currently self-sustaining population of Wyoming toads. We are concerned about the effect that construction of new pipelines and roads may have to the sensitive wetlands through the Laramie Basin. The proposed project also involves constructing new pipelines within Sweetwater County, Wyoming. We request the effects of pipeline construction, and inter-basin water transfer on the Wyoming Toad populations and habitat be analyzed.

Black-footed ferret

Black-footed ferrets (*Mustela nigripes*) may be affected if prairie dog towns are impacted. Please be aware that black-footed ferret surveys are no longer recommended in black-tailed prairie dog towns in Wyoming. If white-tailed prairie dog towns or complexes greater than 200 acres will be disturbed, surveys for ferrets may be recommended in order to determine if the action will result in an adverse effect to the species. Surveys are recommended even if only a portion of the white-tailed prairie dog town or complex. According to the Black-Footed Ferret Survey Guidelines, a prairie dog complex consists of two or more neighboring prairie dog towns less than 7 kilometers (4.3 miles) from each other. If a field check indicates that white-tailed prairie dog towns or complexes may be affected, you should contact the USFWS' Ecological Services Wyoming Field Office for guidance on ferret surveys in Wyoming. We encourage project proponents to protect all prairie dog towns or complexes for their value to the prairie ecosystem and the many species that rely on them. We further encourage you to analyze potentially disturbed prairie dog towns for their value to future black-footed ferret reintroduction.

Blowout penstemon

Blowout penstemon (*Penstemon haydenii*) is a perennial herb with stems less than 12 inches tall. The inflorescence is 2 to 6 inches long and has 6 to 10 compact whorls of milky-blue to pale lavender flowers. Blowout penstemon was listed as endangered on October 1, 1987. The plant's current known range in Wyoming consists of the Ferris dunes area in northwest Carbon County where the plant is restricted to two habitat types: steep, northwest-facing slopes of active sand dunes with less than 5 percent vegetative cover; and on north-facing sandy slopes, on the lee side of active blowouts with 25 to 40 percent vegetative cover. Recent surveys have indicated that systematic surveys are warranted in all lower elevations (below 6,700 feet) in Wyoming where sand blowout features are located.

Blowouts are formed as strong winds deposit sands from the windward side of a dune to the leeward side and result in a sparsely vegetated crater-like depression. Associated vegetation includes blowout grass, thickspike wheatgrass, lemon scurfpea, Indian ricegrass, and western wheatgrass. Threats to the plant occur when sand dunes are removed or overly disturbed by vehicular traffic. Known populations in Wyoming are found between 6,680 to 7,440 feet. Recent surveys (June 2002) indicate that surveys may be warranted in some lower elevations where active sand blowout features occur. Surveys should be conducted from mid-June to early-July when flowering occurs by knowledgeable botanists trained in conducting rare plant surveys. The USFWS does not maintain a list of qualified surveyors, but we can refer those wishing to become familiar with the blowout penstemon to experts who can provide training/services.

Yellow-billed cuckoo

On July 25, 2001, the USFWS designated the yellow-billed cuckoo, in the western part of its range, as a candidate for listing as threatened under the ESA. The population of the yellow-billed cuckoo west of the Continental Divide has been identified as a distinct population segment (DPS), unique and important to the species as a whole. The yellow-billed cuckoo is a slender, long-tailed bird approximately 12 inches long.

In Wyoming, the cuckoo is dependent on large, woody, riparian areas that include both a dense shrubby understory for nesting and a cottonwood overstory for foraging. Cuckoos have a short nesting period enabling them to maximize their utilization of short bursts of prey abundance during insect outbreaks. Destruction, degradation, and fragmentation of wooded, riparian habitat are a continued threat to yellow-billed cuckoos west of the Continental Divide. Additionally, since nest success is correlated to cyclic outbreaks of insects, activities controlling outbreaks of caterpillars, cycads, or grasshoppers, and the general use of insecticides in or adjacent to riparian areas, may negatively affect yellow-billed cuckoos.

Surveys to determine the presence of yellow-billed cuckoos are difficult due to the secretive nature of the species and the variability in the timing of nesting. Therefore, we recommend as a conservation practice that projects avoid impacting large, woody, riparian areas during the period when yellow-billed cuckoos seasonally occur (e.g., in Wyoming late May to September). Determination of the potential impacts of the proposed project on yellow-billed cuckoo should be included in the NEPA analysis.

Species of Concern

The USFWS was recently petitioned to list the following species: greater sage-grouse (*Centrocercus urophasianus*), black-tailed prairie dog, white-tailed prairie dog, pygmy rabbit (*Brachylagus idahoensis*), and Wyoming pocket gopher (*Thomomys clusius*). Although the USFWS has not yet made determinations on whether the petitioned actions may be warranted, the receipt of a petition suggests there may be a conservation concern for these species. We recommend you consider the potential impacts to these species now in order to minimize potential impacts and possible project planning delays should any of these species be determined to warrant listing in the future. If these species are proposed for listing, the lead Federal agency would be required to confer with the USFWS if that agency determines their action (e.g., approval of the project) is likely to jeopardize the continued existence of these species.

Greater sage-grouse

This species is dependent on sagebrush habitats year-round. Habitat loss and degradation, as well as loss of population connectivity have been identified as important factors contributing to the decline of greater sage-grouse populations range-wide (Braun 1998; Wisdom et al. 2002). Therefore, any activities that result in loss or degradation of sagebrush habitats that are important to this species should be closely evaluated for their impacts to sage-grouse. If important breeding habitat (leks, nesting or brood rearing habitat) is present in the project area, the USFWS recommends no project-related disturbance March 15 through June 30, annually. Minimization of disturbance during lek activity, nesting, and brood rearing is critical to sage-grouse persistence within these areas. Likewise, if important winter habitats are present, we recommend no project-related disturbance November 15 through March 14.

We recommend you contact the Wyoming Game and Fish Department to identify important greater sage-grouse habitats within the project area, and appropriate mitigative measures to minimize potential impacts from the proposed project. The USFWS recommends surveys and mapping of important greater sage-grouse habitats where local information is not available. The results of these surveys should be used in project planning, to minimize potential impacts to this species. No project activities that may exacerbate habitat loss or degradation should be permitted in important habitats.

Pygmy rabbit

The USFWS is currently conducting a status review of the pygmy rabbit (*Brachylagus idahoensis*) for possible listing under the ESA (78 FR 1312). Pygmy rabbits occur in portions of many western States including southwestern Wyoming where they have been confirmed to occur in isolated populations in Lincoln, Uinta, Sweetwater, Sublette, and Fremont Counties. Pygmy rabbits are sagebrush obligates, and are primarily found in dense sagebrush communities where there is a forb understory. Conversion of sagebrush grasslands, habitat fragmentation, and overgrazing are potential threats to pygmy rabbits. Project measures that retain large tracts of suitable habitat and corridors to adjacent habitat will aid in the conservation of this species.

Wyoming pocket gopher

The USFWS is currently conducting a review to determine if the Wyoming pocket gopher (*Thomomys clusius*) warrants listing under the ESA (74 FR 6558). This pocket gopher is a small, light-colored member of the Geomyidae family. Pocket gophers are fossorial, living most of

their lives in burrow systems and underground tunnels. Distribution of the species is believed restricted to Sweetwater and Carbon Counties in Wyoming, and possibly northern Colorado. The Wyoming pocket gopher is believed to occupy well-drained, gravelly ridges instead of the valley bottoms and riparian areas, with deeper soils, preferred by the northern pocket gopher.

Prairie dogs

White-tailed and black-tailed prairie dogs (*Cynomys leucurus* and *C. ludovicianus*) have been petitioned for listing under the ESA. White-tailed prairie dogs occupy mid to high grass meadows, shrub-grass, and desert grasslands 5,500 to 9,800 feet in elevation. Black-tailed prairie dogs occur on the Great Plains and desert grasslands around 5,000 feet in elevation. Both species are social and live in aggregations of burrows called colonies. Prairie dog populations are threatened by plague, resource development, recreational shooting, urban sprawl, habitat fragmentation, and conversion of grasslands. Eradication programs have significantly impacted many populations. Project measures that protect and retain prairie dog colonies for their value to the prairie ecosystem will aid in the conservation of this species and the many species that rely on them.

Section 2 – Potential Environmental Impacts for National Environmental Policy Act Review

In addition to federally listed and sensitive species, the project may alter other environmental resources, and any effects to these resources should be considered under NEPA review.

Effects on Flaming Gorge Reservoir

Flaming Gorge Reservoir is a popular recreational fishing destination. Both Utah Division of Wildlife Resources (UDWR) and USFWS manage recreational fisheries in Flaming Gorge Reservoir. Under the current USFWS plan, 400,000 rainbow trout and 500,000 kokanee salmon are annually stocked in the reservoir. The success of the recreational fisheries may be impacted by proposed project operations. The Draft EIS should analyze project impacts on the magnitude and frequency of reservoir fluctuations, and consequent effects on the reservoir shoreline ecosystem, shallow spawning habitats, and the epilimnion surface area and volume habitable by fish. Water depletions upstream and from within Flaming Gorge Reservoir may increase the magnitude and variability of elevation fluctuations. Ecologically, highly variable reservoir elevation impact aquatic and shoreline ecosystems. Changes in magnitude and frequency of lake level fluctuations could affect consistency of available shoreline habitat. Changes to inflows could affect the thermocline, which also would be altered by a fluctuating reservoir level. Changing ecosystem properties could greatly affect population dynamics of aquatic organisms and alter lacustrine ecosystem dynamics.

A fluctuating reservoir level could impact the terrestrial shoreline vegetation community at Flaming Gorge Reservoir through reduced soil moisture levels. Aquatic shoreline habitat is important for fish reproduction. Specific to Flaming Gorge, the kokanee salmon sport fishery may be impacted, as this species uses shoreline areas for spawning. If the reservoir were drawn down after spawning, kokanee eggs could become desiccated.

Effects on Lands of National Wildlife Refuge System

Seedskaadee and Browns Park NWRs were legislatively established as mitigation for Flaming Gorge Dam. The formation of the refuges included specific water rights. Both refuges provide residence and stop-over habitat to many sensitive species as well as recreation to the user public. The impacts of the water diversion on river elevation, and the ability to secure water withdrawals from the river by both refuges should be identified. The NEPA review should consider potential impacts of habitat alteration from construction, operation, and maintenance; harm to wildlife species; behavioral effects on wildlife use; and public recreation on the NWR lands.

Effects on Hydrologic Support for Wetland and Riparian Communities

Wetland and riparian habitats perform significant ecological functions which include: 1) providing habitat for numerous aquatic and terrestrial wildlife species, 2) aiding in the dispersal of floods, 3) improving water quality through retention and assimilation of pollutants from storm water runoff, and 4) recharging the aquifer. Wetlands also possess aesthetic and recreational values. The USFWS recommends measures be taken to avoid and minimize wetland losses in accordance with Section 404 of the Clean Water Act, Executive Order 11990 (wetland protection) and Executive Order 11988 (floodplain management) as well as the goal of no net loss of wetlands. If wetlands may be destroyed or degraded by the proposed action, those wetlands in the project area should be inventoried and fully described in terms of their functions and values. Acreage of wetlands, by type, should be disclosed and specific actions should be outlined to avoid, minimize, and compensate for all unavoidable wetland impacts.

Plans for mitigating unavoidable impacts to wetland and riparian areas should include mitigation goals and objectives, methodologies, time frames for implementation, success criteria, and monitoring to determine if the mitigation is successful. The mitigation plan also should include a contingency plan that would be implemented if the mitigation not be successful. In addition, wetland restoration, creation, enhancement, and/or preservation does not compensate for loss of stream habitat; streams and wetlands have different functions and provide different habitat values for fish and wildlife resources.

Long-term physical habitat impacts are common at stream crossings, regardless of stream crossing methodology, and new crossings will likely result in long-term channel instability unless the crossing is properly designed with site specific information, and the site is properly restored post-construction. Ongoing, post-construction verification of site stability and a remediation plan for problems should be included in the projects waterbody crossing plan.

Because stream complexity and diversity within the project alignment is substantial, significant field data should be collected for each waterbody crossing, and an appropriate level of analysis should be completed to design the least-impactful waterbody and wetland crossing. Specific restoration plans and follow-up monitoring and remediation plans also are necessary for each waterbody crossing. The NEPA analysis should identify the magnitude and description of impacts to riparian and wetland habitats both to the Green River due to water diversion and drainages affected due to construction of the pipeline.

Effects to Migratory Birds

Under the MBTA and BGEPA, the COE has a mandatory obligation to protect the many species of migratory birds, including eagles and other raptors which may occur on lands under its jurisdiction. Of particular focus are the species identified in the USFWS Birds of Conservation Concern 2008 (BCC). In accordance with the FWCA (16 USC 2912 (a)(3)), this report identifies “species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing” under the ESA. This report is intended to stimulate coordinated and proactive conservation actions among Federal, State, and private partners and is available at <http://www.fws.gov/migratorybirds/reports/BCC2008/BCC2008m.pdf>.

The MBTA, enacted in 1918, prohibits the taking of any migratory birds, their parts, nests, or eggs, except as permitted by regulations, and prosecution does not require that intent be proven. Section 703 of the MBTA states, “Unless and except as permitted by regulations ... it shall be unlawful at any time, by any means or in any manner, to ... take, capture, kill, attempt to take, capture, or kill, or possess ... any migratory bird, any part, nest, or eggs of any such bird...” The BGEPA, prohibits knowingly taking, or taking with wanton disregard for the consequences of an activity, any bald or golden eagles or their body parts, nests, or eggs, which includes collection, molestation, disturbance, or killing.

The EIS should evaluate and plan mitigation for potential project impacts to migratory birds. For example it should evaluate for: noise, visual, and light effects from project activities; habitat fragmentation; and whether habitat enhancement efforts may minimize displacement impacts for some species. Habitat impacts for species on the USFWS BCC 2008 list should be evaluated and mitigated in project plans.

Potential short-term and long-term impacts to migratory birds and their habitat should be evaluated and minimized, focusing on species on the USFWS’ 2008 list of BCC and species that are listed among the Partner’s in Flight Priority Species. Impact analyses should include potential changes to riparian communities, as discussed above. If avoidance in these areas is not possible, we recommend you survey the route prior to construction to identify nest locations for BCC species, schedule activities around located breeding birds, and compensate for habitat lost by contributing to habitat enhancement in those high-value habitat areas (Executive Order 13186).

Potential Transport of Aquatic Invasive Species and Their Impacts to Project Operations

We recommend that the Draft EIS analyze and address the spread of invasive, nuisance, and invasive aquatic species. Because the project proposes to carry water hundreds of miles, with many delivery points, surface reservoirs, and maintenance valves, this project could transport aquatic invasive species from Flaming Gorge to countless rivers, lakes, reservoirs, and municipal water systems across the States of Wyoming and Colorado. In particular, we recommend that zebra and quagga mussels, burbot, and invasive plant species (including salt cedar) be addressed. Zebra and quagga mussels are freshwater, bivalve mollusks that typically have a dark and white (zebra-like) pattern on their shells. They are alien to North America but have invaded many of our waters east of the 100th Meridian. There are two species of *Dreissena* in North America: *Dreissena polymorpha*, commonly called “zebra mussels” and *Dreissena rostriformis bugensis*, commonly called “quagga mussels.” Despite minor morphological and ecological

differences, both species are very similar and pose a significant threat to our waters. Both species, in general, are usually about an inch or less long, but may be larger. Unlike native freshwater bivalves, they attach to hard substrates much like marine mussels. They are often found in large clusters.

When they are present in North American waters, they usually occur in excessive numbers. Zebra and quagga mussels are biofoulers that occlude pipes in municipal and industrial raw-water systems, requiring millions of dollars annually to treat. Zebra mussel densities have been reported in densities over 700,000 individuals per square meter in some facilities in the Great Lakes area. They produce microscopic larvae that float freely in the water column, and thus can pass by screens installed to exclude them. Monitoring and control of zebra and quagga mussels costs millions of dollars annually.

Zebra and quagga mussels negatively impact aquatic ecosystems, harming native organisms (including already imperiled indigenous mussels). In huge numbers, they out-compete other filter feeders, starving them. They adhere to all hard surfaces, including the shells of native mussels, turtles, and crustaceans. Zebra and quagga mussels actively feed on green-algae and may increase the proportion of foul-smelling blue-green algae in water systems.

Flaming Gorge Reservoir, because it is a popular recreational boating facility, could easily become inoculated with *Dreissend* mussels. In fact, in April 2009, UDWR AIS Task Force officials prevented a boat from launching in Flaming Gorge Reservoir with a zebra mussel on board (Wyoming Game and Fish Department 2009). The threat of inoculation also is high because other water bodies in the area have been shown to harbor zebra and quagga mussels. The UDWR is currently investigating the presence of *Dreissend* mussels at the Red Fleet and Steinaker Reservoir complex, which is within 30 miles of Flaming Gorge Reservoir.

Additionally, the project's design should consider the potential for *Dreissend* mussels to impact project operations. Water operations are greatly impacted by *Dreissend* mussels, because the mussels clog pipes, drains, intakes, and other structures. Therefore, the project should consider implementation of a *Dreissend* mussel control plan, both for ecological and operational reasons.

In addition to invertebrates, the burbot (*Lota lota*) is an invasive species that has recently become established in Flaming Gorge Reservoir. The burbot is a highly predacious fish that currently is not found in the state of Colorado. The potential for the burbot transport through the pipeline delivery system, and its potential impacts on existing aquatic resources in Wyoming and Utah should be assessed.

Fish and Wildlife Coordination Act

We encourage the COE to contact the USFWS to discuss implementation of the FWCA. The FWCA provides USFWS and State fish and wildlife agencies the opportunity to minimize impacts from water development, and provide opportunity for enhancement of fish and wildlife resources.

We appreciate the opportunity to provide these comments. If you need further assistance, please contact Tim Modde, Region 6 Environmental Coordinator, at (303) 236-4253.

Sincerely,

A handwritten signature in black ink, appearing to be 'Tim Modde', written over a light gray rectangular background.

Assistant Regional Director
Ecological Services

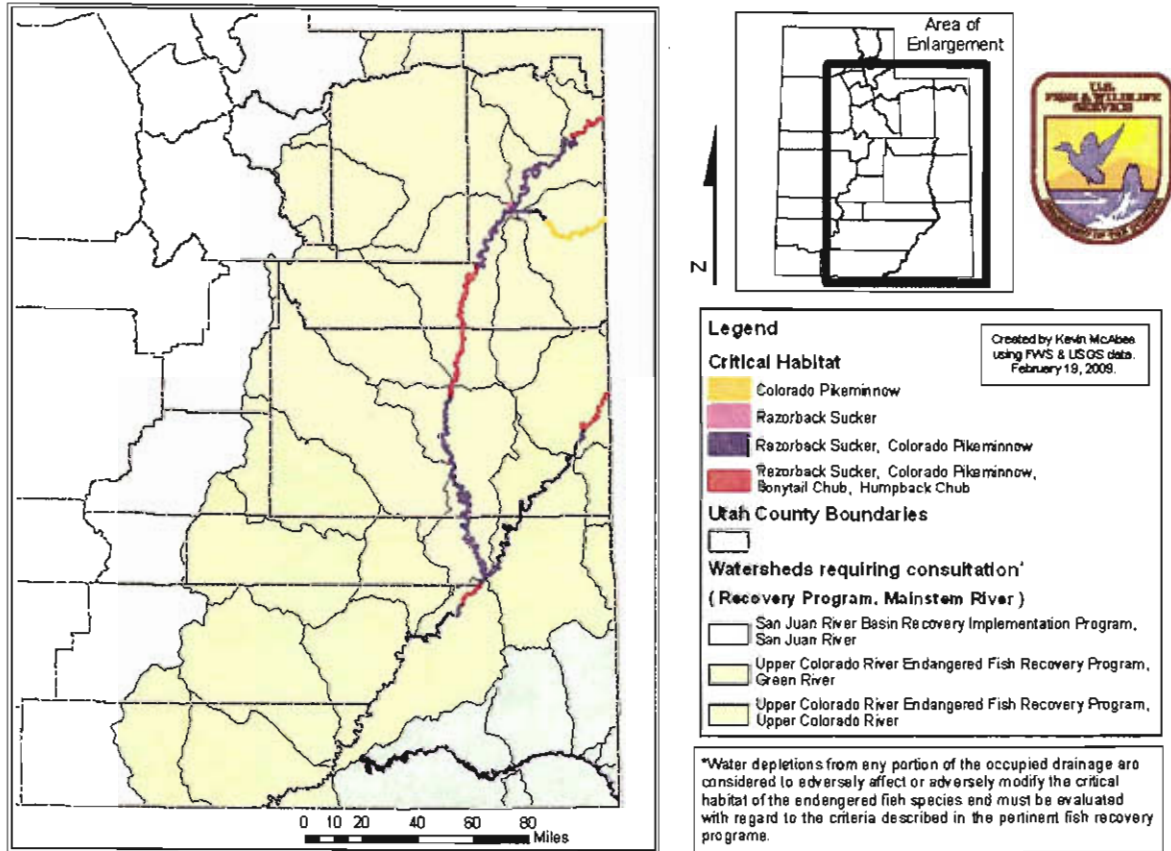
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Appendix A

Designated Critical Habitat in Utah for Federally Listed Colorado River Fish





IN REPLY REFER TO:

United States Department of the Interior

OFFICE OF THE SECRETARY

Program Director
CUP Completion Act Office
302 East 1860 South
Provo, Utah 84606-7317



CA-1300
ENV-6.00

JUL 23 2009



Ms. Rena Brand
U.S. Army Corps of Engineers, Omaha District
Denver Regulatory Office
9307 South Wadsworth Boulevard
Littleton, CO 80128

Subject: Scoping Comments - Environmental Impact Statement for the Regional Watershed Supply Project (RWSP) - Wyoming and Colorado

Dear Ms. Brand:

This letter provides our scoping comments concerning the Environmental Impact Statement (EIS) being prepared by your agency for the subject project. These comments are provided pursuant to Section 1501.7 of the Council on Environmental Quality Guidelines (40 CFR 1501.7) for implementation of the National Environmental Policy Act (NEPA).

The Central Utah Project (CUP) develops a portion of Utah's entitlement under the 1922 Colorado River Compact, in part by collecting flows from the Uinta Basin in eastern Utah for diversion to the populous Wasatch Front. We are the Secretary's representative in Utah overseeing the completion of the CUP. While Flaming Gorge Reservoir is not a CUP facility, a number of issues, as described below, are of related importance to the completion of the CUP and we request they be included in the scope of your EIS.

Given the tentative nature of the proposed action, we are able to give only general areas of concern from our office at this time. Nevertheless, we believe these issues are vitally important to the development of a viable proposal for a regional water supply plan and must be thoroughly evaluated in your draft EIS.

Purpose/Need and Alternatives

The Purpose and Need statement, as presented in your Scoping materials, is not well developed. Your project Need, which is the heart of all proposals, merely states the goal of meeting regional water shortages. Water shortages are common in many western states and are usually the subject of regional water supply studies or state water plans, of which Colorado and Wyoming undoubtedly have many. (The Corps of Engineers may also have completed several such studies

for this area over the years.) The water quantities presented in your Scoping materials also do not represent project needs, only potential elements of a proposed action.

A Need (as best expressed in an EIS) is a specific thing that is desired or a deficiency to be corrected. The general issue of regional water shortages is not well addressed by the vehicle of an EIS. Again, these are best evaluated by local and state planning studies which often develop specific proposals to meet a discrete need. If there are specific water shortages in the communities of Wyoming and Colorado to be corrected by the water development concepts represented by these alternatives, those shortages should be identified as the Needs for this action. Defining specific needs for this Regional Water Supply Pipeline should not be deferred to future studies as you propose. The risk here is that the applicant and the Corps of Engineers will invest much time and money in a struggle to evaluate a proposed action and alternatives when the underlying needs are not well defined or specifically identified.

The range of reasonable alternatives you have developed to meet the project Need is also inadequate. Assuming the Need is to meet regional water shortages, other reasonable alternatives need to be identified and evaluated in your EIS. Such alternatives could include groundwater development, water conservation, water recycling, in-basin water projects, and more. These are all technically and economically feasible means of developing water supplies. As the Lead Agency under NEPA, the Corps of Engineers may define "reasonable", but no EIS will be considered adequate without consideration of all reasonable means to meet a project Need.

The Project Purposes, as presented in your Scoping materials, are merely a restatement of the proposed action and should be reformulated. Project purposes are additional benefits or objectives that can be achieved by the proposed action and alternatives. They, too, should address certain needs, but are subsidiary to the fundamental project Need. For example, recreational fishing could be provided in the proposed reservoirs. Fishing (or other recreation) could be achieved along with completion of the proposed action. One utility of Purposes is to evaluate the relative merits of each proposed action alternative. An alternative that accomplishes more purposes may be better than one that meets fewer project purposes.

Availability of Water

The availability of 250 thousand acre-feet per year of uncommitted water from Flaming Gorge Reservoir and the Green River has already received much attention from the public. This issue will likely be hotly disputed as the basis for establishing the financial and technical feasibility of the proposed action. It is important from an environmental impact standpoint because withdrawal of such volumes may impact other environmental resources of the reservoir and the Green River system. Insuring water availability must be an important responsibility of the Corps of Engineers in completing any public interest review of this permit application and must be thoroughly evaluated in your EIS.

Your Scoping materials mention the hydrologic modeling prepared by the U.S. Bureau of Reclamation (Reclamation) in 2006. Modeling completed in 2006 by Reclamation obviously evaluated a different proposed action and is not likely sufficient, in itself, for the subject project.

We understand that you will be working with Reclamation on updated hydrological modeling and analysis and believe this is absolutely essential to properly assessing the environmental impacts of the proposed action and alternatives. Moreover, we believe that any hydrologic modeling, pertinent to studies of the subject project, must be performed by Reclamation, or officially approved and adopted by them. Hydrologic modeling performed by the applicant, the applicant's consultant, or the Corps of Engineers, will not be acceptable to our office unless it is officially adopted by Reclamation. This is reasonable because Reclamation owns and operates both Fontenelle and Flaming Gorge Reservoirs and is ultimately responsible to meet all commitments for reservoir releases into the Green River from these facilities.

Ute Indian Tribal Water Rights in Flaming Gorge Reservoir and the Green River

Related to the issues of water availability and modeling, is the important issue of water rights belonging to the Ute Indian Tribe of the Uintah and Ouray Agency (Northern Ute Indian Tribe) in Flaming Gorge Reservoir. The Ute Tribe and the State of Utah are nearing completion on negotiations of the Ute Indian Water Compact (Compact) which will quantify Ute Indian water rights in the Uinta Basin which will, in turn, affect water availability in the Colorado River system. Pursuant to the Compact, approximately 115 thousand acre-feet of the Tribe's water rights will be moved to the Green River. The Department of the Interior has committed to provide space for this water in Flaming Gorge Reservoir as part of its trust responsibility to the Tribe.

Because this issue is new and evolving, we are concerned that this allocation of space/water in Flaming Gorge Reservoir has not been considered in prior hydrologic modeling. Obviously, this needs to be appropriately considered in any future modeling so this Indian asset is protected from any adverse impacts. We recommend this issue be included in your EIS as a part of the baseline condition as well as all hydrology sections. Discussion of this topic is probably also appropriate under socio-economic impacts and Environmental Justice as regards to the Northern Ute Indian Tribe. As trustees of Indian assets, both our agencies must be particularly attentive to this issue. We are available for further discussions on this matter so that this issue can be accurately portrayed in your draft EIS.

Endangered Species

Endangered fish recovery in the Colorado River system, including the Green River, has also received much public comment during your Scoping process and we will not attempt to reiterate all facets of this important environmental issue beyond emphasizing the need for a full analysis in your EIS.

You are aware that the Department of the Interior is a partner in the Upper Colorado River Endangered Fish Recovery Program and is committed to bring about recovery of fish species currently listed under the Federal Endangered Species Act. An important aspect of recovery is the commitment made by the Recovery Program partners for flows in the Green River as specified in the approved Recovery Plans, Biological Opinions pursuant to Section 7 of the Federal Endangered Species Act, and other operating agreements, for the listed species. The EIS

must include recognition of the potential for impacts on the availability of water for endangered fish in the Green River and the entire Colorado River system. Future hydrologic modeling must recognize and protect these commitments as well. Reclamation's 2006 modeling can be a basis from which to begin the modeling needed to evaluate the subject project impacts on flows in the Green River, but it cannot be a substitute for such analysis given the scope of the proposed action.

Socio-economic impacts

Any adequate public interest review of the subject project must evaluate the proposed condition that up to 250 thousand acre-feet of municipal water will be developed and controlled by a private enterprise. Typically water for municipal (and even industrial and agricultural) purposes is developed and controlled by public entities under the ultimate control of the people (who are the actual owners of the water under Wyoming and Colorado state water law). The EIS must evaluate whether it is in the public interest, from a social-economic standpoint, to have such a vital public utility in private ownership. We realize that equally vital utilities (natural gas, electricity, etc.) are often privately developed in the United States. However, these utilities are typically under the control of public utilities commissions that act in the best interest of the people. If such a proposal is planned (or is not contemplated) for the subject project, this should be thoroughly explained in the EIS and its implications identified.

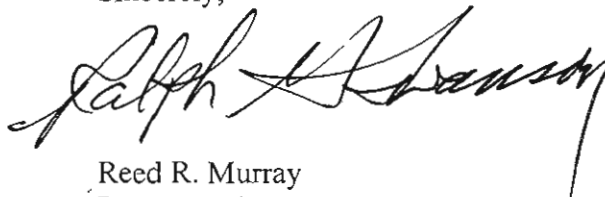
Cooperating Agencies

We note in your Scoping materials that neither Wyoming nor Colorado is a cooperating agency on the preparation of the subject EIS. The importance of local participation in Federal decision-making, particularly with respect to the NEPA process, has been recognized in Executive Order 13352 (Facilitation of Cooperative Conservation). We recommend that Wyoming and Colorado, as well as the individual counties affected by the proposed action and alternatives, be invited to participate as cooperating agencies in the preparation of this EIS. Such participation will increase public confidence at all stages of the NEPA process and improve the accuracy and credibility of the EIS.

We wish to remain on your mailing list to receive information on the RWSP EIS. We prefer that materials be transmitted by e-mail to rmurray@usbr.gov and rswanson@usbr.gov.

For further discussion of the issues in this Scoping letter, please contact Mr. Ralph Swanson at 801-379-1254.

Sincerely,



Reed R. Murray
Program Director

cc: Assistant Secretary - Water and Science, Washington, D.C.
Attention: Ms. Amy Holley, ms-6640MIB
Field Supervisor, U.S. Fish and Wildlife Service, 2369 West Orton Cr., West Valley City,
UT 84119
Regional Director, Bureau of Reclamation, 125 South State Street, Room 6102, Salt Lake
City, UT 84138
Environmental Programs Manager, Central Utah Water Conservancy District, 355 West
University Parkway, Orem, UT 84058
Area Manager, Provo, UT, Attention: Program Manager, PRO-107
Mr. Tod Smith, Whiting and Smith, 1136 Pearl Street, Boulder, CO 80302



IN REPLY REFER TO:

UC-720
ENV 6.00

United States Department of the Interior

BUREAU OF RECLAMATION

Upper Colorado Regional Office
125 South State Street, Room 6107
Salt Lake City, Utah 84138-1147



JUL 20 2009

Ms. Rena Brand
Regulatory Specialist
U.S. Army Corps of Engineers, Omaha District
Denver Regulatory Office
9307 S. Wadsworth Blvd.
Littleton, CO 80128-6901



Subject: Bureau of Reclamation Scoping Comments for the Regional Watershed Supply Project
Environmental Impact Statement (EIS)

Dear Ms. Brand:


The Bureau of Reclamation, Upper Colorado Region, offers the following comments on the scope of the EIS to be prepared for the Regional Watershed Supply Project (Project):

1. Reclamation is a cooperating agency for this EIS, because we have two potential Federal actions (water service contract, and license agreement to build and operate an intake structure and pipeline on Reclamation-administered lands). As such, the EIS will need to contain all of the information and analyses necessary to support a Record of Decision (ROD) by Reclamation, in addition to the decisions that must be made by the U. S. Army Corps of Engineers (Corps) as lead agency, and the Bureau of Land Management and U.S. Department of Agriculture Forest Service as cooperating agencies.
2. We note that the project design has changed over time. As originally proposed several years ago, the Million Conservation Group planned for diversion of 250,000 acre-feet of water (250 kaf) per year entirely out of Flaming Gorge Reservoir. We understand that their initial application to the Corps was for a 404 permit proposed diversion of the same quantity of water entirely out of the Green River just below Seedskaadee National Wildlife Refuge. Possible alternatives presented for the EIS scoping process include two diversion points on the Green River and two potential diversion points on Flaming Gorge Reservoir. The initial screening for all of these alternatives needs to include feasibility. We know from our previous hydrology modeling that the entire 250 kaf will not be available from Flaming Gorge Reservoir. Is it possible to divert the entire amount out of the Green River in Wyoming without reliance on storage in Fontenelle Reservoir? Reclamation notes that diversion of ANY amount of water out of the Green River in Wyoming will affect inflows to Flaming Gorge Reservoir, which in turn will affect the quantity of water available from the reservoir itself.

3. Reclamation's position on water service contracts for available water from Flaming Gorge Reservoir is that such new diversions cannot compromise our ability to operate Flaming Gorge Dam in accordance with the February 16, 2006, ROD on Operation of Flaming Gorge Dam, which prescribes flow and temperature regimes to assist in the recovery of the four Colorado River endangered fish species and their designated critical habitat downstream from Flaming Gorge Dam. Preliminary hydrology modeling performed in 2007 indicated that the maximum amount of water available from Flaming Gorge Reservoir for this proposed contract is 165,000 acre-feet per year, not taking into account proposed new diversions from the Green River in Wyoming.
4. Analysis in the EIS will need to include the potential effects of climate change on the water supply for the project.
5. Further, as previously communicated to the applicant (Million Conservation Group), Reclamation would not contemplate executing a water service contract for this proposed action without knowledge of the concurrence of the states of Colorado and Wyoming regarding this use of their respective Colorado River Compact allocations.
6. A good cumulative effects analysis regarding development of new water supplies from the Green River system will be critical to Reclamation's decision on whether to issue a water service contract from Flaming Gorge Reservoir, in view of our responsibilities under the previously referenced ROD together with the concerns of all participants in the Upper Colorado River Recovery Implementation Program to continue to make progress in the recovery of the four endangered fish species.
7. The location and design of any intake structure(s) on Flaming Gorge Reservoir must be reviewed and approved by Reclamation. We believe it would be most efficient to undertake at least preliminary review as alternatives are refined for analysis in the EIS, so as to assure that feasible alternatives are developed.
8. The effects of this proposed new water diversion on the generation of power at Flaming Gorge Dam, and cumulative effects to power generation in the CRSP system, must be analyzed in the EIS. Where appropriate, Reclamation's water service contracts include "loss of power" charges.
9. The area in and around Flaming Gorge Reservoir is known to be rich in both cultural and paleontological resources. Thorough and careful analysis of those resources, and project design to avoid impacts to those resources (or proposed mitigation where impacts cannot be avoided) will be essential.
10. Analysis of potential effects of proposed diversion structures on Flaming Gorge Reservoir will also need to include consideration of effects to recreation, public safety, and security.

We look forward to working with the Corps and other cooperating agencies as development of the draft EIS for the proposed Project proceeds. As you know, we are presently coordinating with you on a meeting in the near future regarding hydrology modeling. If you have any questions regarding our comments, please contact Beverley Heffernan at 801-379-1161 or by email, bheffernan@usbr.gov.

Sincerely,


or Larry Walkoviak
Regional Director



File Code: 1950-4-2

Date: July 24, 2009

Ms. Rena Brand
Regulatory Specialist
US Army Corps of Engineers
Denver Regulatory Office
9307 S. Wadsworth Blvd.
Littleton, CO 80128-6901



Dear Ms. Brand:

This letter contains our initial comments on the Regional Watershed Supply Project proposed by the Million Conservation Resource Group. Based on the information available at this stage of the process, we are concerned about the potential for lowered water levels in the reservoir and reduced river flows below the dam. This would negatively impact scenic and recreation values on the Flaming Gorge National Recreation Area (NRA), with associated impacts to the local economy. Adverse effects to biological resources may also occur. For example:

- Existing recreation infrastructure may become non-functional (e.g., docks and boat ramps could become disconnected from the water, preventing access and affecting marina operations).
- Other facilities such as campgrounds would be further from the water, making them less desirable to forest visitors.
- Navigation through an area of the reservoir known as the cut-through would be compromised, requiring additional dredging
- Other navigation hazards may be exposed as the water level drops
- Recreational fisheries in and below the reservoir may be affected
- Scenic values would be reduced if a large 'bath tub ring' became a permanent feature of the reservoir
- Shoreline vegetation may be altered, with loss of riparian species and influx of weedy species in the exposed zone below the previous high water line
- The ability of the Bureau of Reclamation to provide adequate flows below the dam (both quantity and timing of releases) may be compromised. These flows are necessary to maintain the fishery, recreational boating opportunities, and riparian systems adjacent to the river.
- Collectively, the impacts to recreation values could result in reduced visitation and loss of revenue to the many tourism and recreation businesses in the area

Depending on the actual points of diversion and pipeline locations, there could be impacts to upland habitats and sensitive wildlife species as well. Species of concern include (but are not limited to) greater sage-grouse, white-tailed prairie dog, pygmy rabbit, burrowing owl, peregrine falcon, osprey, golden eagle, and midget faded rattlesnake. Pipelines may also fragment habitat and disrupt movements of game species such as pronghorn.

The severity of these impacts will not be known until the necessary water models are completed. However, initial calculations suggest the effect would be substantial, especially if the current



precipitation patterns continue. Issues related to reservoir levels, downstream flows, and availability of water for other uses should therefore be addressed in detail in the environmental analysis.

Other issues may arise as alternatives are developed. In addition, we understand the proponent is still considering alternate points of diversion. This makes it difficult for us to anticipate site-specific effects connected to the proposed action. We may raise new concerns as more information becomes available.

The legislation establishing the NRA specified three broad management goals, namely, to provide for: (1) public outdoor recreation benefits; (2) conservation of scenic, scientific, historic and other values contributing to public enjoyment; and (3) such management, utilization, and disposal of natural resources as will promote or be compatible with, and do not significantly impair the purpose for which the NRA is established (Ashley National Forest Land and Resource Management Plan, p. A-1). These goals should be considered when evaluating the cumulative effects of this proposal on the public interest.

In addition, the section of the Green River from the dam to the Forest Service boundary (13 miles) was recently found suitable for designation under the Wild and Scenic Rivers Act. The outstandingly remarkable values (ORVs) on which that decision was based must be maintained until a recommendation is presented to Congress, and a final decision regarding designation is made. The ORVs we have identified for the Green River are related to scenic, recreational, fishery, historic, cultural and wildlife resources. Please see the Utah Wild and Scenic River Suitability Study (<http://www.fs.fed.us/r4/rivers/index.shtml>) for more information on the designation process and values associated with this river segment.

Lastly, we would like to note that a special use permit will be required if any facilities are placed on National Forest System lands. Receipt of a permit application would trigger an evaluation process by Forest Service specialists (as well as cost recovery procedures); however, to date we have not received an application from the proponent despite the fact that the proposed action involves construction of facilities within the NRA.

Thank you for the opportunity to comment at this early stage of the process. Please continue to work with Kathy Paulin, Planning Staff Officer, to formalize cooperating agency status for the Ashley National Forest and to coordinate required Forest Service decisions with those to be made by the Corps.

Sincerely,

A handwritten signature in black ink, appearing to read 'KEVIN B. ELLIOTT', with a large, circular scribble to the right of the name.

KEVIN B. ELLIOTT
Forest Supervisor



United States Department of the Interior

NATIONAL PARK SERVICE
Dinosaur National Monument
4545 Highway 40
Dinosaur, CO 81610



L7617 (DINO-S)

July 24, 2009

Via Mail and Email

Ms. Rena Brand
EIS Project Manager
U.S. Army Corps of Engineers, Omaha District
Denver Regulatory Office
9307 South Wadsworth Boulevard
Littleton, Colorado 80128-6901



Dear Ms. Brand:

Thank you for the opportunity to provide scoping comments about the Regional Watershed Supply Project (RWSP) and the invitation for the National Park Service (NPS) to serve as a cooperating agency through the process of developing an environmental impact study (EIS) for the project. The NPS accepts the offer to be a cooperating agency on this project, and I will serve as the point of contact.

Along the Colorado River and its major tributaries, the NPS manages nine park units, including Rocky Mountain National Park, Dinosaur National Monument, Curecanti National Recreation Area, Black Canyon of the Gunnison National Park, Arches National Park, Canyonlands National Park, Glen Canyon National Recreation Area, Grand Canyon National Park, and Lake Mead National Recreation Area. These units contain more than 5 million acres within four of the seven Colorado River basin (watershed) states. Regulation of the river system directly or indirectly affects the resources of these park units that were generally established due to their historic, ecologic, and/or recreational importance.

In recent years, the NPS has become increasingly aware that river operations decisions made or influenced by other federal agencies, the states, and other stakeholder groups affect our ability to manage the Colorado River park units. The mission of the NPS, as defined in the 1916 National Park Service Organic Act (16 USC 1), is to preserve the natural and cultural resources and the wildness of parks unimpaired for the enjoyment, education, and inspiration of this and future generations. The impairment prohibited by the Organic Act is an impact that would harm the integrity of park resources or values. Consequently, this proposal to divert up to 250,000 acre feet of water from the Green River upstream of Dinosaur National Monument is of great concern to the NPS. The EIS must include recognition that NPS-related legal authorities also may substantially affect Flaming Gorge operations.

We have identified several concerns about the RWSP and have outlined them for you below.



- **The project proponent has not provided evidence that the project is legally and hydrologically feasible.**

The proposed action has legal complications under both Wyoming and Interstate water law that have not been tested. Before delving into the development of an EIS, we should require quantification of how much water is actually available and unappropriated.

Wyoming has not conducted a study to determine if there is any remaining water under the 1922 and 1945 compacts. Thus, because the current diversion points lie within Wyoming, the availability of water for this project in Wyoming is unknown and must be resolved before the project proceeds.

The project has not been thoroughly described in terms of water reliability. If the 200,000 to 250,000 acre feet cannot be delivered except during wet years, is this a viable project? What happens should the Lower Basin make a legal "call" on the river?

- **The RWSP, as proposed, does not contain enough detail to assess the potential impact of all aspects of the project.**

It appears that the primary purpose of the proposed diversion is to deliver water to the Front Range in Colorado. The purpose statement should be clarified to reflect this goal.

The scoping of alternatives is too narrow, and the EIS should include broad alternatives for the source of water delivered to the Front Range, not just focus on the Green River.

Alternatives should examine all reasonable options to deliver water to the Front Range and the cumulative impacts of those alternatives.

In addition, if the proposed action is to divert up to 250,000 acre feet, then the EIS needs alternatives that cover a range of total diversion rates between 0 and 250,000 acre feet.

- **Any EIS must include a complete analysis of the cumulative impacts on downstream resources and uses.**

The extent of impact analysis must include those NPS sites downstream of Flaming Gorge dam, including Dinosaur National Monument, Arches National Park, Canyonlands National Park, and Glen Canyon National Recreation Area. Substantial diversion of water from the Green River will affect Lake Powell surface elevation levels and may impact release volumes. This would also impact Grand Canyon National Park resources, which in turn triggers concerns about resources in Lake Mead National Recreation Area. Analysis should also include economic impacts on those NPS areas and their surrounding communities.

Flaming Gorge Dam, 47 miles upstream from Dinosaur's boundary, has already severely altered the Green River's natural regime below the dam. Regulated releases from Flaming Gorge Reservoir have reduced the magnitude of high water peaks, increased early spring and late summer flows, and created erratic diurnal fluctuations. In addition to modifying the flow of the river, impoundment has lowered water temperatures, changed the natural ion balance, decreased turbidity, altered natural deposition and scouring processes, and modified riparian communities. The diversion of 250,000 acre feet of water from the Green River above Dinosaur National Monument would result in additional impacts to park resources regardless of the point of diversion. Any and all of the proposed locations would result in less frequent and lower magnitude peak flows through the park.

Resource impacts that should be thoroughly analyzed for direct and indirect impacts, short- and long-term impacts, and cumulative impacts include, but are not limited to, channel narrowing, tamarisk invasion, loss of aquatic invertebrate biodiversity, other aquatic resources, recreation, water quality and quantity, riparian vegetation, etc.

Depending upon the actual points of division and pipeline locations, there could also be impacts to upland habitats and sensitive wildlife species. Pipeline could fragment habitat and disrupt movements of species, such as the pronghorn.

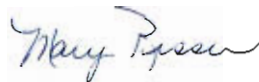
- **In addition to the resources mentioned above, the EIS must analyze this project's impacts on four endangered fish species.**

Biologists from several agencies, including the NPS, have struggled for three decades to recover four endangered fish species endemic to the Colorado River system through the Upper Colorado River Endangered Fish Recovery Program (CRRP). Dinosaur NM contains critical habitat for these declining fish species.

The Bureau of Reclamation (BOR) now operates Flaming Gorge Dam to meet or exceed flow recommendations developed for the endangered fish by the Fish and Wildlife Service. Currently, the BOR releases water from Flaming Gorge to match the Yampa's peak flow in an effort to replicate more natural conditions for the endangered fish and to create and maintain important habitat. With the additional diversion of up to 250,000 acre feet, the flow recommendations may not be met thus jeopardizing the recovery of the fish. The EIS must assess whether the project would cause the biological opinions to fail and trigger consultation with the existing users of the Green and Yampa rivers.

Again, thank you for the opportunity to comment at this early stage of the process. Please continue to work with us to formalize the cooperating agency status for the National Park Service.

Sincerely,



Mary Risser
Superintendent



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Rawlins Field Office
P.O. Box 2407 (1300 North Third Street)
Rawlins, Wyoming 82301-2407



In Reply Refer To:
1793 (WY-D03)
Regional Watershed Supply Project

AUG -3 2009



Ms. Rena Brand
U.S. Army Corps of Engineers
Denver Regulatory Office
9307 South Wadsworth Boulevard
Littleton, Colorado 80128-6901

Dear Ms. Brand:

The Army Corps of Engineers (ACE) has announced it is processing an environmental impact statement (EIS) in response to a water diversion proposal by the Million Conservation Resource Group (Resource Group). The proposal is titled the Regional Watershed Supply Project and proposes to divert water from the Green River basin in Wyoming to Colorado's front range, including Denver and Pueblo. Included in the proposal are water diversion structures, pipelines, pumping stations, reservoirs, roads, and other features. ACE is the Lead Agency in this action, under provisions of the National Environmental Policy Act (NEPA). Construction of the pipeline and associated facilities will require rights-of-ways across portions of the National System of Public Lands. The Bureau of Land Management (BLM) has jurisdiction, as appropriate, to receive, review, and approve development proposals on the public lands and is participating as a Cooperating Agency. The Rawlins Field Office has been assigned as the BLM's lead office to process this application.

We have reviewed the scoping notice issued by ACE. We have not received an adequate Plan of Development from the Resource Group in this matter. The information provided, to date, is not specific enough to allow BLM to issue the rights-of-way grants and other approvals that would be needed for the project. In addition, without the detailed information we require, an adequate analysis of the environmental effects of the proposal cannot be performed.

We have enclosed a copy of Illustration 4 from the BLM 2408 Manual. It contains details on what must be submitted for the BLM to be able to process rights-of-way applications. In addition, important information for this project includes:

- Exact location of all federal lands that will be effected
- Diversion Points
 - Site specific location and number
 - Facilities associated with the diversion point
- Details on water storage facilities
 - Site specific location and number
 - Facilities associated with the diversion point
 - Powerlines and roads needed
 - Federal lands affected by the proposal
- Reclamation and annual monitoring plans including who is responsible for them

In addition, examples of the information needed in processing a pipeline can be found at:

http://www.blm.gov/wo/st/en/prog/energy/cost_recovery_regulations.html

If you have any questions concerning this information, please contact David Simons, Office Lead, at the address shown above or phone (307) 328-4328.

Sincerely,


Patrick Madigan
Field Manager

1 Enclosure:

1 - BLM Manual 2804, Illustration 4 - Applying for FLPMA Grants

Illustration 4

.10D2

2804 - APPLYING FOR FLPMA GRANTS

Outline – Pipeline Plan of Development

1. Purpose and Need

- a. what will be constructed
- b. commodity to be transported and for what purpose
- c. is the pipeline for a gathering system, trunk line, or distribution line
- d. will it be surface or subsurface
- e. length and width of the right-of-way and the area needed for related facilities
- f. is this ancillary to an existing right-of-way
- g. list alternative routes or locations

2. Right-of-way location

- a. legal description
- b. site specific engineering surveys for critical areas (note: in addition to normal centerline survey)
- c. maps and drawings showing river crossings
- d. acre calculation of the right-of-way by land status

3. Facility Design Factors

- a. pipeline pressure standards
 - 1) pipe wall thickness and pounds per square inch (psi) rating
- b. toxicity of pipeline product
- c. anticipated operating temperatures
- d. depth of the pipeline
- e. permanent width or size
- f. temporary areas needed

4. Additional Components of the Right-of-way

- a. connection to an existing Right-of-way
 - 1) existing components on or off public land
 - 2) possible future components
- b. location of pumping and/or compressor stations
- c. need for sand and gravel and where will it be obtained
- d. location of equipment storage areas

5. Government Agencies Involved

- a. FERC, USFWS
- b. copy of FERC Sec. 7c Application, if applicable
- c. state and local agencies that may be involved

6. Construction of the Facilities

- a. construction (brief description)

From: Dennis_Doncaster@blm.gov
To: [MCRGEIS; David_Simons@blm.gov;](#)
cc: [Jeromy_Caldwell@blm.gov; Bernie_Weynand@blm.gov;](#)
Subject: Water Availability study
Date: Friday, June 12, 2009 10:00:32 AM

In the latest meeting in Rock Springs on the proposed Trans Basin Diversion, the proponents cited a study that averaged the river flow over the period of record and came to the conclusion that even with the present drought that there was plenty of water available.

In the April 30 Green River Basin Advisory Group (GRBAG) meeting held by the Wyoming Water Development Commission (WWDC) a different study was presented that looked at the decadal averages over the period of record and found a marked decrease in water availability in the last 10 years. This is a different conclusion than was reached by the proponents of the diversion. I believe that the main difference is the time frame over which the average was taken.

The presentation is not on the web at this time but should be linked to this page when it is.

<http://waterplan.state.wy.us/BAG/green/20090430-min.html>

The full study should be placed on the Wyoming Water Resources Data System (WRDS) <http://www.wrds.uwyo.edu/> when it is published. I believe that this difference in interpretation based on analysis should be discussed in the draft EIS.

Dennis Doncaster
Bureau of Land Management
280 Hwy 191 North
Rock Springs WY 82901
Phone (307) 352-0207
Fax (307) 352-0328

From: Dennis_Doncaster@blm.gov
To: [MCRGEIS;](#)
Subject: More thoughts for the EIS
Date: Wednesday, April 15, 2009 12:16:02 PM

More thoughts that I forgot to put down at the Green River Meeting

Removal of the Colorado share above Flaming Gorge Dam may not affect lake levels, provided that the volumes of water that are part of the Colorado share obtained from streams originating in Colorado is not included in the volumes withdrawn. What it would affect would be the volumes of water available for hydroelectric generation. The head pressure would remain the same. So the reduction in potential electrical production and the increased need for other electrical sources and their potential carbon footprints need to be considered.

If the total Colorado share is withdrawn from Flaming Gorge then all diversions in the state of Colorado would need to stop and the lake level would decrease, along with potential energy production from loss of volume and head

Given present technology, the potential for drilling a tunnel or a series of tunnels through the higher peaks in Colorado may not be out of the realm of consideration and could allow for a shorter transport distance.

If the statement of purpose and need could be changed to obtaining additional water for the Colorado Front Range, as opposed to obtaining water from the Green River, then alternate sources could be explored, including recycling, desalinization, CBM produced water, etc.

Good Luck with all of this.

Dennis Doncaster
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280 Hwy 191 North
Rock Springs WY 82901
Phone (307) 352-0207
Fax (307) 352-0328

From: Dennis_Doncaster@blm.gov
To: [MCRGEIS;](#)
Subject: More Studies on Colorado River
Date: Monday, July 27, 2009 9:01:18 AM

You may have already seen this one but a news story this morning made me think that it should be part of the Regional Water Supply Analysis. It appears a bit more detailed than the averaging of the entire record that the proponent has used as their basis for proceeding with the project.

<http://www.terradaily.com/reports/>

[Colorado_River_Reservoirs_Could_Bottom_Out_999.html](http://www.terradaily.com/reports/Colorado_River_Reservoirs_Could_Bottom_Out_999.html)

<http://www.sfgate.com/cgi-bin/article.cgi?f=/n/a/2009/04/20/state/n145427D24.DTL&type=science>

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

JUL 22 2009



Ref: 8EPR-N

Ms. Rena Brand, Regulatory Specialist
U.S. Army Corps of Engineers, Omaha District
Denver Regulatory Office
9307 S. Wadsworth Blvd.
Littleton, CO 80128-6901

RE: EPA Scoping Comments on the
Regional Watershed Supply Project

Dear Ms. Brand:

This letter is written in response to the Army Corps of Engineers' (Corps) request for scoping comments for the proposed *Regional Watershed Supply Project* (RWSP). The U.S. Environmental Protection Agency Region 8 (EPA) will review this project in accordance with EPA's responsibilities under the National Environmental Policy Act (NEPA), and EPA's authority under Section 309 of the Clean Air Act. EPA plans on moving forward as a Cooperating Agency for this project as defined by 40 CFR 1501.6, and as outlined in the EPA/Corps Cooperating Agency Agreement once finalized.

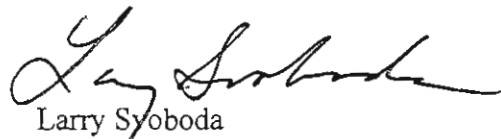
The Corps is preparing an Environmental Impact Statement (EIS) in accordance with NEPA as well as Clean Water Act (CWA) Section 404 requirements, including the CWA Section 404(b)(1) Guidelines, 40 CFR § 230.10. The proposed water supply project will be constructed, owned, and operated by Million Conservation Resource Group to provide approximately 250,000 acre-feet per year to agricultural entities, municipalities and industries in Southeastern Wyoming and the Colorado Front Range through 2030 and beyond. The privately funded project proposes to construct two water withdrawal facilities, one on the east side of the Flaming Gorge Reservoir in Wyoming and the other on the east bank of the Green River approximately 200 feet downstream of the Seedskaadee National Wildlife Refuge. The RWSP will have five reservoirs along the pipeline path: one water treatment storage reservoir near the Green River intake, one regulating reservoir located along the western end of the pipeline system, and three water storage/flow-regulation reservoirs (Lake Hattie in Wyoming, Cactus Hill near Fort Collins, Colorado, and T-Cross near Pueblo, Colorado). EPA is concerned that the Purpose and Need have only been loosely defined, specific users have not been identified, and water rights have not yet been acquired at this time.

EPA offers the enclosed comments for your consideration, which include the following preliminary areas of concern: the lack of a clear and accurate definition of the purpose and need; joint consideration of CWA 404(b)(1) Guideline requirements in the NEPA process; a reasonable scope of alternatives that includes sustainable water management, conservation and growth considerations; identification of mitigation measures for, among other things, any water quality and stream morphology impacts; and full disclosure of the direct, indirect, and cumulative impacts to aquatic systems. These issues are further described in the enclosed Detailed Comments.

In addition, EPA is also concerned with the potential cumulative effects of this new water supply source on growth in the region. We recognize that constructing a water supply source does not necessarily encourage growth, however growth will occur in the prospective user areas, which will impact resources also impacted by this project. The EIS should include a rigorous analysis of indirect and cumulative growth impacts. In addition, the analysis should also disclose the impacts of all reasonably foreseeable actions on environmental resources in a way for decision-makers and any participating counties/states to be able to effectively plan to reduce impacts on such resources as much as possible. The resources that are generally affected by projects of this nature that should be studied cumulatively include, but are not limited to, habitat fragmentation and loss, ecosystem disruption, wetland loss, and potential changes in water quality and water quantity.

EPA appreciates the opportunity to provide detailed scoping comments at this early stage of the EIS process. Our review and participation in RWSP will be coordinated by Melanie Wasco of my staff. If we may provide further explanation of our comments during this phase of your planning process, please contact Ms. Wasco at 303-312-6540, or me at 303-312-6004.

Sincerely,



Larry Syoboda
Director, NEPA Program
Ecosystems Protection and Remediation

Enclosure

Detailed Comments by the US EPA R8
Regional Watershed Supply Project Draft EIS
U.S. Army Corps of Engineers, Omaha District

Purpose and Need

When creating the purpose and need statement for this project, please describe fundamentally the quantity of water that is needed above the current supply and the reasoning behind the need. This demand analysis should identify Project Participants and document existing use by each entity using consistent methodology (e.g., gallons per day or gallons per capita), and this methodology should be described in the EIS. Current build-out boundaries should also be described and demand estimated. If the project is built around fulfilling a shortage, the purpose and need should explain how regional participation collaboratively addresses that shortage while reducing impacts to the local human and ecological environments. The purpose and need statement should remain broad enough to encompass an appropriate range of both “reasonable” and “practicable” alternatives to meet a defined project purpose, including the proposed action and other methods available, e.g., temporary or permanent agreements for use of agricultural water rights.

Range of Alternatives

The EIS should summarize the criteria and process that were used to develop the proposed alternatives, including any environmental criteria used to identify and/or screen potential sites involved in the project alternatives. A list of reasonable and practicable alternatives can be found in Chapter 8 of the Statewide Water Supply Initiative (SWSI) developed by the Colorado Water Conservation Board.¹ The EIS should carefully consider the screening criteria used to eliminate alternatives and also disclose the reasoning used to eliminate alternatives. This rationale for eliminating alternatives must be based upon the “practicability” criteria consistent with the CWA 404(b)(I) Guidelines. 40 CFR § 230.10. (also see preamble language defining practicable alternatives).

The range of alternatives should include a suite of structural and non-structural alternatives to meet the basic and overall project purpose. Because non-structural alternatives (e.g., conservation, water rights leasing, etc.) may individually contribute less towards meeting the project purpose than structural components (e.g., new or expanded reservoir storage), screening criteria should be designed such that these non-structural components are not eliminated solely on the basis of their potentially smaller individual contributions to meeting the project purpose and need. A combination of non-structural alternatives could serve to meet a portion of the defined need, and together may reflect a practicable alternative that is potentially less damaging than a single larger structural component.

Baseline Environmental Conditions

Special attention should be given to the development of the current environmental

¹ <http://cwcb.state.co.us/IWMD/SWSITechnicalResources/>

baseline (as opposed to the No Action alternative). In the past, some projects have described the No Action alternative as potential construction of other water supply projects in the area. However, current environmental conditions also need to be described in the document as a baseline so that future changes to environmental resources can be measured for all alternatives, including the No Action alternative.

Mitigation

Each alternative in the EIS should explicitly include identification of appropriate mitigation where impacts are expected. The description should include designation of the entity responsible for implementing the mitigation, the funding source, and specific temporal milestones to meet rehabilitation standards.

Sustainable Water Management

Each alternative should incorporate sustainable water management. Sustainability should be defined as the maintenance and balance of both human and ecological needs. Alternatively, a specific alternative that meets the need or shortage through sustainable water management or conservation of current resources rather than construction of added facilities could be analyzed.

Analysis of Water Supply Shortages

A thorough assessment of the risk of water supply shortages is necessary to establish the least damaging practicable alternative. The assessment should include information on safe yields from streams and groundwater, water demand, and drought management. We recommend reviewing previously conducted studies by the Institute for Water Resources of the Corps of Engineers. (See "An evaluation of the Risk of Water Shortages in the Lower Peninsula, Virginia," Revised Report, August 15, 2001, IWR Special Study, US Army Corps of Engineers.)

This water supply assessment should also include an evaluation of potential influences of climate change on the proposed project. Climate change influences on the overall RWSP may translate into modified design and operational assumptions for determining resource supplies, system demands, system performance requirements and operational constraints (Brekke, L.D., Kiang, J.E., Olsen, J.R., Pulwarty, R.S., Raff, D.A., Turnipseed, D.P., Webb, R.S., and White, K.D., 2009 Climate change and water resources management – A federal perspective: U.S. Geological Survey Circular 1331, 65 p.).

Although predictions of the potential influences of climate change on specific regions (such as the upper Colorado River basin) involve inherent uncertainty, several recent and planned publications may be instructive, including:

- A recent overview of climate change impact in the U.S. (Global Climate Change Impacts in the United States, Thomas R. Karl, Jerry M. Melillo, and Thomas C. Peterson, (eds.). Cambridge University Press, 2009);
- A synthesis of climate change in Colorado (Ray et al., 2008; Climate Change in

- Colorado, A Report by the Western Water Assessment for the Colorado Water Conservation Board); and
- Ongoing and planned studies by the Colorado Water Conservation Board including the *Joint Front Range Climate Change Vulnerability Study* and the *Colorado River Availability Study* (see <http://cwcb.state.co.us/>).

Analysis/Resource Considerations

Affected Environment

Please consider the following when defining baseline conditions:

- Historical data (e.g., data 5 years or older) should be verified as currently representative;
- Selection of stream reaches for analysis is a critical exercise and should include interagency review and comment before actual survey work occurs; and
- The hydrologic analysis should be sufficiently detailed to provide the necessary information for the assessment of biological impacts. At a minimum, wet, average, and dry year analyses should be included. Also, potential influences of climate change on future hydrology should be considered (see references under *Analysis of Water Supply Shortages*).

Indirect and Cumulative Effects

Because NEPA and CWA Section 404 have slightly different definitions for indirect and cumulative impacts, the document should identify which statute is being used to evaluate the impacts and how the analysis would differ under the other statute's definition.

The EIS should examine the direct, indirect and cumulative impacts to the cultural, recreational, and resource characteristics of the Green River and Flaming Gorge Reservoir. This may include impacts to downstream threatened, endangered and/or sensitive species, fish and invertebrate assemblages, etc.

The EIS should examine the cumulative impacts of development. In determining whether a project may have a significant effect on the human environment, it should analyze direct and indirect effects, including past, present, and reasonably foreseeable future activities. The impacts should be analyzed according to airsheds and watersheds, for example, rather than political boundaries.

The cumulative effects analysis should take into account the effects of reasonably foreseeable growth in the area and its effects on the hydrology and aquatic resources. The impacts to aquatic resources can be limited by how the water projects are planned and coordinated with land-use planning. This relationship should be explored in the analysis.

The indirect impacts of development should also be analyzed. The project may not affect the location of the expected growth, but it may affect the timing and amount of growth.

Relation to Local Stakeholders and Watershed Groups

The project alternatives and their potential effects on local stakeholders and watershed groups should be analyzed in relation to the following issues:

- How will current stream and water usage be altered and what is the opportunity cost of ecosystem disruption in these areas (i.e., recreationists/recreation industry, intrinsic habitat quality, enhanced user experience, etc.)?
- How can water systems in the project participants' areas (once identified) be operated for metering, dual use, and/or non-potable recycling?
- How will each alternative affect property and real estate values?
- Existing water rights should be examined in relation to downstream existing rights and ecological needs, over-appropriation issues, etc.
- The impacts and estimates for the change in water use from agricultural to suburban, i.e., consumptive versus irrigation return flow water, should be analyzed.
- The relationship of these water projects to the transportation and land use planning process occurring in the impacted areas.

Wetlands

In order to illustrate effects to wetlands in the area, the EIS should specifically include the following analyses or descriptions:

- Clear maps, including wetland delineation and regional water features;
- Wetland delineation and descriptions including wetlands function analysis if there is any potential that the project will cause impacts;
- Detailed analysis of the direct, indirect and cumulative impacts to all wetlands in the system [immediate, directly impacted, or potentially hydrologically impacted but spatially removed from the actual construction footprint (EO 11990, Protection of Wetlands)]. This analysis should also include the indirect impacts to wetlands from loss of hydrology from water diversion/transfers, as well as the cumulative impacts to wetlands from future development scenarios based on population and growth estimates; and
- Potentially adverse impacts to aquatic resources from reasonably foreseeable development should also be analyzed.

Streams

Analysis of each alternative with respect to the stream system it will affect should account for alterations of seasonal water levels as well as water quantity and quality issues. The DEIS should include a reach-by-reach impacts analysis for the tributary system, especially if the point of diversion is altered. These impacts should also be considered regionally within the context of the cumulative analysis portion of the review. Should seasonal water levels, quantity and quality be altered, the DEIS should include analysis of the effects on:

- Impacts to resident fish species and invertebrate assemblages;
- Impacts to stream morphology;
- Impacts to sediment flow;
- Impacts to the timing, magnitude, duration, frequency, and rate of change of the flow regime, with an emphasis on the implications of these changes on channel complexity, aquatic habitat availability and life history adaptations;
- Impacts to established waste load criteria and discharge permit requirements or to the development of Total Maximum Daily Loads (TMDLs), designated and/or beneficial uses, water quality standards, and the Source Water Protection Program (this also includes recognition of future wasteload resulting from induced project area growth); and
- Identification of mitigation measures for potentially adverse impacts to stream systems.

Air Quality

Protection of air quality should be addressed in the EIS. The EIS should present existing air quality conditions in the project vicinity, including criteria pollutants and air quality related values (AQRVs). The amount of stationary, mobile and non-road source emission activities should be quantified and disclosed. Particulate emissions from construction activities and ongoing operation of the roadways should also be addressed. The EIS should evaluate and disclose air quality impacts and, if necessary, detail mitigation steps that will be taken to minimize associated adverse impacts. This analysis should address and disclose the project's potential affect on all criteria pollutants and AQRVs regarding the protection of any affected Federal Class I Areas designated under the Clean Air Act (CAA). Any significant concentrations of hazardous air pollutants should be evaluated to ensure public health protection. EPA is particularly concerned with impacts to AQRVs and ozone concentrations from emissions from the proposed 16 natural gas fired water pump engines. Finally, the project may be located in areas that are currently listed as nonattainment or maintenance according to provisions of the CAA for several pollutants. Under the General Conformity Rule, federal agencies must work with State governments in a nonattainment or maintenance areas to ensure that a federal action conforms to any state implementation plan (SIPs).

EPA recommends an inter-agency air quality workgroup be formed for projects that may have significant pollutant emissions to discuss the approach to air quality analysis, the results of the analysis, and appropriate mitigation measures. An air quality workgroup might include members from the EPA, the applicable State(s), and any other Federal or Tribal agency with management responsibilities in the area (i.e., the National Park Service, the U.S. Forest Service, the U.S. Fish and Wildlife Service). One of the primary purposes of an air quality workgroup is to provide feedback to the lead agency at the earliest stages of EIS development, which can reduce costly delays.

Threatened and Endangered Species

EPA recommends engaging the Fish and Wildlife Service as early in the analysis as possible, in order to assure that the proposed alternatives responsibly account for or are in compliance with the following issues:

- River restoration, flow and channel modifications, wetlands, and habitat fragmentation regarding species' habitat requirements;
- Migratory Bird Treaty Act; and
- A management plan for surrounding land uses (e.g. pesticide, nutrient, weed, and recreation management), for new reservoir construction alternatives.

Demand Analysis Update for Current Economic Downturn

Information on the demand shortfall within the Front Range should be updated to reflect the changes in the real estate market and job projections due to overall downturn in the national and world markets affecting the service area. These changes may slow community growth significantly in the areas served by RWSP (when specific users are identified). The most recent population forecasts for the Colorado Front Range were produced in October 2008 by the Colorado State Demography Office. The 2008 projections show a rate of community growth declining for the Denver Primary Metropolitan Statistical Area (PSMA) from 2.0 percent per year at the beginning of the century to less than 1.0 percent per year by 2030.² New information will be available from this office in October 2009 annual report. Additionally, population projections in Wyoming are conducted annually each July by the Economics Analysis Division in the Department of Administration and Information.³ Information on current economic activity and related employment levels and corresponding disposable income levels can also be found on the Department's website.⁴

² Colorado State Demography Office, Population Totals for Colorado & Sub-State Regions, <http://dola.colorado.gov/dlg/demog/population/forecasts/substate5yr.pdf>

³ Economics Analysis Division, Dept. of Administration and Information, <http://eadiv.state.wy.us/>

⁴ see http://eadiv.state.wy.us/creg/GreenCREG_May09.pdf

Dear Ms. Brand

Western Area Power Administration would like to take this opportunity to comment on the scope of the environmental impact statement on the proposed Regional Watershed Supply Project. We are mainly concerned that the EIS adequately discuss impacts to electrical generation that result from the project. Removal of a minimum of 250,000 acre feet from the Green River and Flaming Gorge reservoir above Flaming Gorge Dam will result in reduced generation at generating stations on the Green and Colorado Rivers from Flaming Gorge to the Gulf of California. The total impact to generation must be evaluated. This impact to generation may have economic consequences: both from the standpoint of regional impacts, such as loss of jobs, and in terms of the national economy.

Reduced generation at Federal facilities may have an impact on power rates that needs to be addressed in the EIS. The power from the dams on the Colorado River is marketed by Western Area Power Administration. The amount sold is based on historical flows and sold under contracts that run through 2024. Since Western must deliver the amount of power contracted for in its contracts if it is not available from its own hydropower generation it must be purchased on the open market. Generally, Western's hydropower is a very low cost resource. It is likely that power purchased to replace that lost because of reduced stream flows will be higher cost and Western may be forced to increase its rates. The impact of higher power costs on the economic wellbeing of the millions of retail customers of the companies that purchase a portion of their power from Western should also be evaluated in the EIS.

Electricity generated by hydropower at the dams on the Colorado River does not rely on combustion of any fuel to produce electricity. Replacement of hydropower with other resources may have an impact on air quality in the region. If this power is produced by coal or other conventional sources, carbon and other pollutants will be released into the atmosphere. Also, this may increase greenhouse gas emissions and contribute to climate change. These impacts should also be considered in the EIS.

Finally, removal of water from the Colorado River system may have an impact on the salinity of the water left in the river in the lower parts of the basin. The potential for increased salinity levels should be addressed as well as the costs to mitigate this impact.

Thank you for the opportunity to comment on the scope of the EIS. We look forward to working with you on this process.

Sincerely

Lyle Johnson