SUMMARY

This environmental assessment (EA) has been prepared by the Ashley National Forest, Duchesne Roosevelt Ranger District, (the Forest Service) in accordance with the national Environmental Policy Act of 1969 (NEPA) (PL 91-190 as amended), the National Forest Management Act of 1976 (NFMA) (PL 94-588), and the Ashley National Forest Land and Resource Management Plan of 1986. The EA was prepared in response to the Duchesne County Upper Country Water Improvement District's (the Water District) request to amend its existing Special Use Permit. The Water District proposes to develop Spring #3 in Cow Canyon, and to connect flows from this spring into its existing culinary water system, which was previously built on Forest Land (hereafter referred to as the "Proposed Action"). The purpose of the Proposed Action is to develop a dependable culinary water supply that will meet both the immediate and long-term needs of the Water District's users.

Background

The Water District is a Public Water System (PWS) in the State of Utah. It's service area covers approximately 104 square miles in northern Duchesne County, supplying culinary water to the communities of Altamont, Altonah, Bluebell, Boneta, Mountain Home, Mt. Emmons, Sand Wash, and Talmage. The Water District was organized in August 1990 as a Special Improvement Water District to address long-standing culinary water problems faced by these communities. As organized, the Water District has the authority to levy taxes on landowners within the Water District's service area. State law requires that all tax-paying landowners within the Water District's service area must be provided equal access to the Water District's services; and that the Water District must provide access to its services when requested.

The Water District has water rights for two perennial springs in Cow Canyon, which is situated on Forest Land in the Yellowstone River watershed immediately downstream of the Moon Lake hydroelectric project. In 1991, the Water District sought a Special Use Permit from the Forest Service for the development of Springs #1 and #2 in Cow Canyon, and the construction of a buried pipeline to convey the spring water to its culinary system. An EA was completed for the culinary water project and the Forest Service issued a Decision Notice and Finding of No Significant Impact in July 1992 for the development of the two springs. The Water District also obtained a Section 404 Permit from the U.S. Army Corps of Engineers (USACE) authorizing the development of the two springs, contingent upon the maintenance of mitigation bypass flows for downstream aquatic and wetland habitats.

The Forest Service issued a Special Use Permit specifying the terms and conditions for the development of Springs #1 and #2, including the requirements for mitigation bypass flows. Construction for the spring development was completed during the winter of 1992-93. The Special Use Permit is renewable. Its current expiration date is December 31, 2011.

A source protection plan for the Spring #1 and #2 developments has been filed with the Utah Division of Drinking Water (UDDW).

Need for Additional Water Supplies

The Water District has an immediate need to develop additional water supplies in order to:

- Maintain compliance with State-mandated ERC requirements; and
- Meet both present-day and future user demands.

State of Utah Requirements. The UDDW has rules and regulations pertaining to the minimum amount of source water that PWSs must have available for their tax-paying users (see R-309-510 of the State of Utah Administrative Rules). A PWS must be able to supply each residential connection a minimum amount of water for both indoor domestic use and outdoor irrigation. The combined flow requirement for indoor and outdoor use is referred to as an equivalent residential connection (ERC).

The Water District's current water supply can service 474 ERCs. The Water District has obligations to provide service for 675 ERCs that are currently in use, and an additional 61 ERCs that have been obligated but are currently not in use. As such, the Water District's water system is currently over-appropriated by a total of 262 ERCs (or about 294 gpm), and is out of compliance with State-mandated ERC requirements. The Water District could lose funding opportunities, be fined, and/or forfeit its PWS to the State if it does not resolve its ERC requirements.

User Demands. The Water District does not have sufficient water supplies to meet the peak summer demands of its existing users. The shortage in water supply has precluded the Water District from issuing new connections to its system. In the summer of 2003, the Water District was forced to enact a moratorium on the issuance of new connections until additional water supplies are brought into the system. The Water District does, however, have ample water supply to meet the demands of its existing users during the non-irrigation months. When user demand is less than the available water supplied by Springs #1 and #2, the unused water (i.e., surplus water) is released with the mitigation bypass flows. Approximately 50 percent of the Water District's authorized flow volume, or 350 acre-feet (114 million gallons), is bypassed as unused surplus water.

Scoping and Identification of Issues

In 1997, the Water District began discussions with the Forest Service about its need for additional water and the possibility of developing Spring #3. At the Water District's request, the Forest Service began the scoping process for the proposed development of Spring #3 in February 1998. Scoping letters were mailed to federal, state, and local agencies and interest groups that participated in the 1992 EA for the development of Springs #1 and #2. In addition, a Public Notice was printed in the Uinta Basin Standard to inform the public of the proposed project and inviting comments from the public.

The Forest Service released a predecisional EA for public and agency review in August 2002 and subsequently received numerous comment letters that were considered. Further input was

obtained through various meetings and site visits with representatives from the Forest Service, USACE, U.S. Fish and Wildlife Service (USFWS), the Water District, and third party consultants. In addition, the Water District sought agency comment on its 2003 Water Resources Planning Report, which is attached to this EA as Appendix A. The report was prepared, in part, to satisfy Forest Service requirements. It documents the Water District's existing culinary water system and water rights; financial situation; user fees and water conservation incentives; State-mandated ERC requirements; historic and present-day water usage; projected needs for additional water supplies over a 25-year planning period; and certain water supply alternatives that were considered by the Water District. The Water District received comment letters from the USACE, USFWS, U.S. Environmental Protection Agency (EPA), and UDDW.

Alternatives Selection Criteria

The Forest Service evaluated a wide range of potential alternatives that were identified during the scoping process. Four screening criteria were developed to determine the practicability of alternatives:

- The alternative must be responsive to the purpose of and need for the Proposed Action;
- The alternative must be responsive to issues identified during the scoping process;
- The alternative must be legally and administratively available to the Water District and compliant with applicable federal, State and/or local rules and regulations; and
- The alternative must be reasonable considering costs, logistics and existing technology.

Alternatives Considered but Eliminated from Detailed Study

Alternatives that did not meet the above screening criteria were eliminated from detailed evaluation. These alternatives included:

- Water Conservation Alternative
- Groundwater Development
- Development of Alternative Spring Sources
- Storage of Unused Flows from Spring #1 and #2
- Surface Water Storage Alternative
- Surface Water Diversion Alternative

Alternatives Considered in Detail

A total of three alternatives were evaluated in detail.

Alternative 1 – No Action. Under the No Action Alternative, the Forest Service would not amend the Special Use Permit for the Water District to develop Cow Canyon Spring #3. The Water District would continue to operate and maintain its existing spring developments as per the terms and conditions of the existing Special Use Permit. The Water District would have to pursue other administratively available alternatives to address its need for additional water supplies. The Water District would remain out of compliance with its State-mandated ERC requirements, and would have to continue its moratorium on issuing new culinary water connections until an alternative water supply is identified and developed.

Alternative 2 - Proposed Action, Cow Canyon Spring #3 Development. Under the Proposed Action, the Water District would develop Spring #3 and incorporate its flows directly into its existing culinary water system. A maximum of 413 gpm (0.9 cfs)(or about 79 percent of the total flow) would be developed. Approximately 112 gpm (0.5 cfs) would be continuously released as mitigation bypass flows to maintain downstream aquatic and wetland habitats. Unused surplus water would also be bypassed. The Water District has an agreement with the Moon Lake Hydroelectric Project to release up to 1.5 cfs (675 gpm) of additional flows such that there would be no net loss of flow in the Yellowstone River.

This alternative would provide enough flow for an additional 369 ERCs (843 ERCs total). As proposed, the development of Spring #3 would provide enough water for the Water District's projected peak demands for approximately 21 years, and would bring the Water District into full compliance with the State-mandated ERC flow requirements for approximately 15 years.

Approximately 0.21 acre of unavoidable impacts to open water (a small pond associated with the spring source) and wetland habitats would be mitigated on-site and in-kind. The loss of open water would be mitigated at a 1:1 ratio with the creation of an approximately 1,510 sq-ft (0.03 acre) spring-fed pond. Wetland impacts would be mitigated at a 2.2:1 ratio with the hydrologic restoration of approximately 17,700 sq-ft (0.4 acre) of an abandoned beaver pond/wetland complex located approximately 200 feet east of Spring #3. The Water District would obtain a Section 404 Permit from the U.S. Army Corps of Engineers (USACE), and would be responsible for monitoring the mitigation areas for a period of three years, or until the mitigation areas have been successfully established. Erosion and sediment control best management practices (BMPs) would be implemented during project construction.

The existing livestock exclosure fences around Spring #1 and Spring #2 development sites would remain in place. Additional livestock exclosure fencing would be installed to protect the Spring #3 source area, the pond creation area, and the wetland restoration area.

Construction would be done with the use of two or three pieces of tracked equipment and would be completed within two weeks. No new road construction would be required. The equipment would use the Water District's existing pipeline right-of-way to cross the Yellowstone River and access the construction area. The Proposed Action would cost approximately $75,000 to construct. Maintenance and operational costs would be minimal. Mitigation monitoring and maintenance would cost approximately $5,000 per year (a total $15,000 for three monitoring years).

Alternative 3 – Full Utilization of Cow Canyon Springs #1 and #2. Under this alternative, the Water District would fully use the entire 756 gpm (1.68 cfs) combined flow of Springs #1 and #2 in Cow Canyon. The Water District has an agreement with the Moon Lake hydroelectric project to release up to 1.5 cfs (675 gpm) of additional flows such that there would be no net loss of flow in the Yellowstone River. A minor amount of work would be required to reconfigure the existing spring boxes to eliminate the mitigation bypass flows. The additional water would be fully used during the irrigation months when user demands are the greatest. During the non-

irrigation months when user demands are the least, all unused water (i.e., surplus water) would be bypassed into the existing spring channels to maintain downstream aquatic and wetland habitats.

This alternative would increase the Water District's water supply by approximately 250 gpm, and would provide an additional 233 ERCs (697 ERCs total). The increased supply would provide enough water for the Water District's projected peak demands for approximately 11 years. However, it would not provide enough water to bring the Water District into full compliance with the 736 ERCs it is required to have for all of its existing obligated connections. In addition, it would not provide enough water to meet ERC requirements for future growth.

At a minimum, 0.4 acre of open water and wetlands associated with the Spring #3 source area would be protected with livestock exclosure fencing as a mitigation measure for the Spring #1 and #2 flow reductions. The existing livestock exclosure fences around the Spring #1 and Spring #2 development sites would remain in place.

Alternative 3 would require an amendment to the Section 404 permit that was previously issued for the Spring #1 and #2 development project by the USACE. The Water District would be responsible for obtaining the Section 404 permit amendment, and for implementing any additional mitigation measures required by the USACE. The Forest Service would amend the Special Use Permit accordingly.

Construction would be done either without the use of heavy machinery or with one piece of equipment. Work could probably be done within a period of one week No new road construction would be required. The equipment would use the Water District's existing pipeline right-of-way to cross the Yellowstone River and access the construction area. This alternative would cost approximately $5,000 to construct, excluding any additional mitigation costs that may be required by the USACE. Maintenance and operational costs would be minimal.

Document Structure

This EA discloses the direct, indirect and cumulative environmental effects that would result from the Water District's Proposed Action and alternatives. The EA is organized into four Chapters:

Chapter 1 - Purpose and Need for Action. This chapter includes information on the history and background of the Water District's proposal to develop Spring #3, and its need to develop additional culinary water supplies. It contains a description of how the Forest Service solicited public and agency input and identified scoping issues for consideration in the preparation of this EA. It also contains a list of agency authorizations that must be obtained for the approval of the Proposed Action, and a description of the Forest Service's decision framework.

Chapter 2 - Alternatives. This chapter provides a more detailed description of the Proposed Action as well as alternative methods for the achieving the stated purpose of the Project. Alternatives were developed based on issues that were identified during the public and agency scoping process. It includes a summary of the alternatives that were considered, but eliminated

from detailed study because they did not meet minimum screening criteria. It provides a full description of the alternatives that are studied in detail, including a No Action Alternative. It also provides a comparison of the environmental consequences associated with each of the detailed alternatives.

Chapter 3 - Environmental Consequences. This chapter analyzes the environmental effects of implementing the Proposed Action and other alternatives. This analysis is organized by the significant physical, biological and socio-economic resource components of the affected environment. A separate section is given for the resource components that are analyzed. Within each section, a description of existing resource conditions is provided, followed by the effects of the No Action Alternative, which provides a baseline for the evaluation and comparison of the Proposed Action and other alternatives.

Chapter 4 – Consultation and Coordination. This chapter provides a list of preparers and agencies consulted during the preparation of this EA.

Chapter 5 – References Cited. This chapter provides a list of the supporting references that are cited this EA.

Appendices. The appendices provide supporting documentation for various analyses that are presented in this EA.