FINAL

PREHISTORIC IRRIGATION IN ARIZONA:

A CONTEXT FOR CANALS AND RELATED CULTURAL RESOURCES

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Pueblo III times (A.D. 1150-1300) have been found along the Arizona boundary south of Navajo Mountain, and along the San Juan River just 11 to 15 miles north of the state boundary.[60] Although the only archaeogically excavated examples of canals were fed by either slope run-off or springs, the fact that canal technology was used makes it plausible that other canals emanated from the San Juan or its larger tributaries.

The Little Colorado Watershed

Prehistoric canals in the Little Colorado watershed area are described in early Mormon accounts of their first colonization of east-central Arizona, and were later documented along the Little Colorado River and its tributaries.[61] An early researcher of the ancient canals in Arizona recounted hearing stories of single canals on mountain streams, including one canal somewhere north of Springerville that was 20 miles long.[62] Other anthropologists cited reports of ancient irrigation canals in the vicinity of Round Valley and Springerville, and described a canal 2 miles north of Springerville that dated to the Pueblo IV period (A.D. 1300 to 1600).[63] At least some of the canals in this region, for example, canals at St. Johns, Springerville, and Tule Spring (near Lyman Lake) were dependent on springs rather than streams.[64]

Towards the towns of Show Low and Snowflake, canals along Show Low Creek, Silver Creek, Hay Hollow Draw, and at Concho Flats are associated with pueblo ruins dated between A.D. 950 and 1400.[65] Farther northwestward, prehistoric canals have been reported at the Nuvakwewtaqa (Chavez Pass) ruin[66] near Chavez Draw, which drains into the Little Colorado via Jack's Canyon; and nearby at the Pershing site,[67] which is along a stream in Anderson Canyon. Along the San Francisco Wash about 14 miles northeast of Flagstaff a prehistoric, "clay-lined" irrigation canal was found to have been used during the Pueblo I period prior to A.D. 900,[68] and another Pueblo I irrigation canal was reported just north of Flagstaff along Schultz Creek, a tributary of San Francisco Wash.[69] Prehistoric irrigation has also been inferred at the Ridge Ruin site that was occupied between A.D. 1070 and 1200 in Young's Canyon,[70] another tributary of the San Francisco Wash.

It is possible that ancient irrigation was in use along the Puerco and Zuni Rivers, and on Moenkopi Wash. An old earthen dam across an arroyo that flows into the Puerco River near Sanders formed a reservoir at a village of the Pueblo III period (A.D. 1100-1300); this dam was reportedly similar to dams at other sites in east-central Arizona and in the Quemado area of New Mexico.[71] It has also been reported that reservoirs constructed by damming arroyos were integral parts of irrigation systems elsewhere in the areas drained by the Little Colorado.[72] That irrigation was in use along the lower Zuni River it reasfonable to suggest because irrigation apparently was practiced in the Zuni Pueblo area along the upper Zuni River in New Mexico prior to A.D. 1375.[73] Canals existed at Moenkopi during the late 19th and early 20th centuries[74]; while it is possible the Hopis learned this practice from early Spanish missionaries, it is also plausible that the canals there were used prehistorically, because the prehistoric ancestors of the Hopi were in contact with the people of Zuni.

The Colorado River's Tributaries Below Grand Canyon

Just downstream from the Grand Canyon, Cataract Creek flows into Havasu Creek before reaching the Colorado River. It has been assumed that the relatively large increase in the number of archaeological sites along Cataract Creek Canyon after A.D. 900 was made possible by the use of irrigation.[75] However, no physical evidence of any archaeological canals has been reported in this area.