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The Salt-Gila Aqueduct Project and Hohokam Archeology

The Salt-Gila Aqueduct Project began in 1980, one in a long series of archeological undertakings associated with the Bureau of Reclamation's Central Arizona Project. When it ended more than 4 years later, after investigations at 65 sites ranging from very small artifact scatters to a 60-acre village, Hohokam archeology was changed. The major studies that preceded SGA were relatively few: excavations at Los Muertos by the Hemenway Expedition in the 1880s (Haury 1945), at Snaketown in the 1930s (Gladwin, *et al.* 1937) and again in the 1960s (Haury 1976), at Painted Rocks Reservoir in the 1960s (Wasley and Johnson 1965), and the Escalante Ruin Group in the 1970s (Doyel 1974) were the most substantial. There were also a number of smaller and sometimes significant studies, but the avalanche of Hohokam data that we now experience was definitely in the future. Salt-Gila also represented the first substantial series of excavations focused on smaller villages and farmsteads rather than the largest settlements.

The size of SGA was a cause for concern on the part of the agency. Large CRM projects had a checkered history. Many considered it questionable whether these efforts could justify their substantial costs. SGA was budgeted at 69.6 person-years of effort at a cost of \$1,671,309.51, exclusive of cost-sharing. This was clearly a project on a scale to provoke concern. Although I am not an unbiased observer, it seems to me that the project did fulfill its promise and justify its cost.

In 1980, the transition between the pre-Classic

Hohokam and the subsequent Classic Period was not well understood, although there had been much speculation. The period between the demise of the Phoenix Basin platform mound system of community organization in about A.D. 1350 and the arrival of the Spanish in the Southwest in 1540 was even less known. SGA added significantly to our information regarding both of these periods. In addition, discussions of Hohokam prehistory had been marked by an assumption of regional uniformity; SGA made the great diversity of the Hohokam regional system apparent.

Environment and the Hohokam

It is important that SGA identified no environmental change that was by itself causal in major cultural change (Miksicek 1984). This was

Example of siphon on Salt-Gila Aqueduct. Photo courtesy L. Hobbs, Bureau of Reclamation.



a major research conclusion in itself, since reconstructions of Hohokam prehistory dominant at the time that the project began posited environmental causality for a variety of shifts in settlement, social organization, economy, and material culture (for example, Doyel 1980). SGA set out to test the suppositions underlying that reconstruction of prehistory (Teague 1982), and made a major contribution in documenting the extent to which the Hohokam had the knowledge and the technology to adapt to the non-catastrophic kinds of environmental variability that they encountered in the Sonoran Desert.

Another assumption that was common among Hohokam archeologists as the project began was that the early Classic Period was characterized by a severe economic decline, probably precipitated by environmental problems (Doyel 1980). It also had been proposed that there was a “collapse” of the Hohokam regional system, represented by the ballcourt complex and accompanying belief system (Wilcox and Sternberg 1983). SGA did not find evidence of the proposed economic decline (Teague and Crown 1984). In the early Classic Period the Hohokam in the study area experienced stable or increasing economic interaction with those elsewhere at the same time that there was increased differentiation from those areas in styles of material culture, architecture, and ritual expression.

Social Organization and Economy

A major focus of SGA research was the internal organization of Hohokam communities.

The SGA project confirmed that the pre-Classic Hohokam were an essentially egalitarian people with little role specialization or difference in access to trade goods. There was high mobility, particularly during the pre-Classic periods, with many individuals and families spending portions of the year in fieldhouses, returning to villages during the remainder of their annual round. Those permanent villages might be on the rivers or on productive major washes like Queen Creek and Siphon Draw. However, participation in central community activities would have required association with a village having a ballcourt, and these were not present at Queen Creek. During the pre-Classic periods riverine and non-riverine settlements complemented one another as part of the flexible economic and social strategy of the Phoenix Basin Hohokam.

Shifts in the location of settlements at the time of the Sedentary-Classic Period transition had been documented for some time, beginning with the excavations at Los Muertos by the Hemenway Expedition in the 1880s (Haury 1945). Nonetheless, the process of change leading to this changed settlement structure had not been very thoroughly investigated. SGA provided an opportunity to excavate some of the smaller settlements on the rivers, documenting the persistence of Hohokam house-in-pit architecture into the Soho phase of the Classic Period (Shaw 1983). The evolution from houses in pits to the compound architecture of the Civano Phase was also traced on the Gila River near

The Central Arizona Project

In 1968, Congress authorized construction of the Central Arizona Project, or CAP, by the Bureau of Reclamation. The CAP consists of a 335-mile long aqueduct designed to carry 1.5 million acre-feet of water per year from the Colorado River to cities, farmlands, and Indian communities in central and southern Arizona.

Besides providing water, the CAP provided a unique opportunity to look into Arizona’s past. As part of the project, the Bureau of Reclamation conducted one of the largest federal archaeology programs ever undertaken. Most of the CAP archaeological investigations have focused on the remnants of a people archeologists call “Hohokam.” Although they left no written records, archeologists have learned much about these people who lived from about 300 B.C. to about A.D. 1450 in the Salt and Gila river valleys near modern-day Phoenix.

CAP archeological studies have been performed by private groups, including universities, small businesses that specialize in archeological research, and most recently by a Native American tribal archeological program. Since the early 1970s over 5,500 archeological sites have been identified, and almost 600 of these have been excavated. The main stem of the CAP aqueduct is completed and carrying water; remaining to be completed are CAP systems on several Native American Indian communities.

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Florence (Sires 1983a). Prestige goods were concentrated more heavily in mound settlements than elsewhere in the Hohokam world (Teague 1984a), but everywhere there was evidence of continued participation in religious ritual by individuals throughout the society (Teague 1984b). By comparing data from the SGA sites with information from earlier excavations and from ethnographically documented cultural traditions of the Southwest, evidence was found suggesting that during the Classic Period the religious institutions of the Hohokam included interlocking ritual societies similar to those found ethnographically in the Southwest.

The Post-Classic

One of the significant results of SGA was the discovery that the El Polvorón site dated to the period after the decline of the platform mound system (Sires 1983b). The site gave its name to the Polvoron Phase in local prehistory and enabled project researchers to identify post-Classic occupations within multi-component sites that had been excavated earlier, at other sites on the lower Salt and middle Gila rivers (Crown and Sires 1984).

In Hindsight

Almost two decades after it began, we can ask how well Southwestern archeology assimilates the results of projects like SGA. Fortunately, Reclamation supported then, as it continues to support, efforts to get information out to the profession and to the general public. The SGA contract supported project researchers presenting both individual papers and project sessions at SAA and Pecos Conference meetings. Nine volumes of technical reports were published. A project-based program provided educational curriculum enrichment for schools in the Apache Junction and Florence, Arizona, areas.

This isn't always enough. Archeologists continue to rediscover the obsolescence of the core-periphery model of the Hohokam tradition, the residential mobility of the Hohokam people, or other conclusions reached 14 years ago by SGA researchers. Numerous citations of SGA in reports over the past 15 years testify to the continuing visibility of SGA in the Hohokam literature and to the importance that the project research has had for studies of the Hohokam.

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Reclamation's Museum Property

In addition to making contemporary contributions to the understanding of North American prehistory, Reclamation's 50 years of dam good archeological research* preserved a substantial collection of artifactual material that continues to be available for research and exhibit.

In 1990, the Department of the Interior Inspector General found that the Department, including Reclamation, was not in control of its art work and artifacts. Working under Departmental requirements for museum property that were put in place in 1993, Reclamation is well along in its commitment to reach accountability for all identifiable collections by the end of fiscal year 2003.

Although Reclamation's museum property includes items from a number of subject areas, e.g., the

mission of the bureau, art, paleontology, and zoology, the vast majority is prehistoric objects.

At the end of October 1999, Reclamation had:

- verified museum property in 61 non-federal and 2 federal repositories and in 40 Reclamation offices;
- determined that the collections include 2,315,016 archeological objects/lots which have been catalogued into the repository's or a Reclamation system, and that an estimated 3,800,000 archeological objects/lots remain to be catalogued;
- found that associated with these objects/lots are more than 1,000,000 individual and 775 linear feet of documents; and
- expended more than \$6,638,523 to locate, catalogue, and bring collections to acceptable standards.

For additional information on Reclamation's Museum Property Program, contact Bobbie Ferguson on 303-445-2707 or at <bferguson@do.usbr.gov>.

* Research conducted primarily under the River Basin Surveys program, the Reservoir Salvage Act/Archaeological and Historic Preservation Act, the National Historic Preservation Act, and the Archeological Resources Protection Act.

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