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SEDIMENT BASIN PROJECT, SAVANNAH HARBOR, GEORGIA

by

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INTRODUCTION

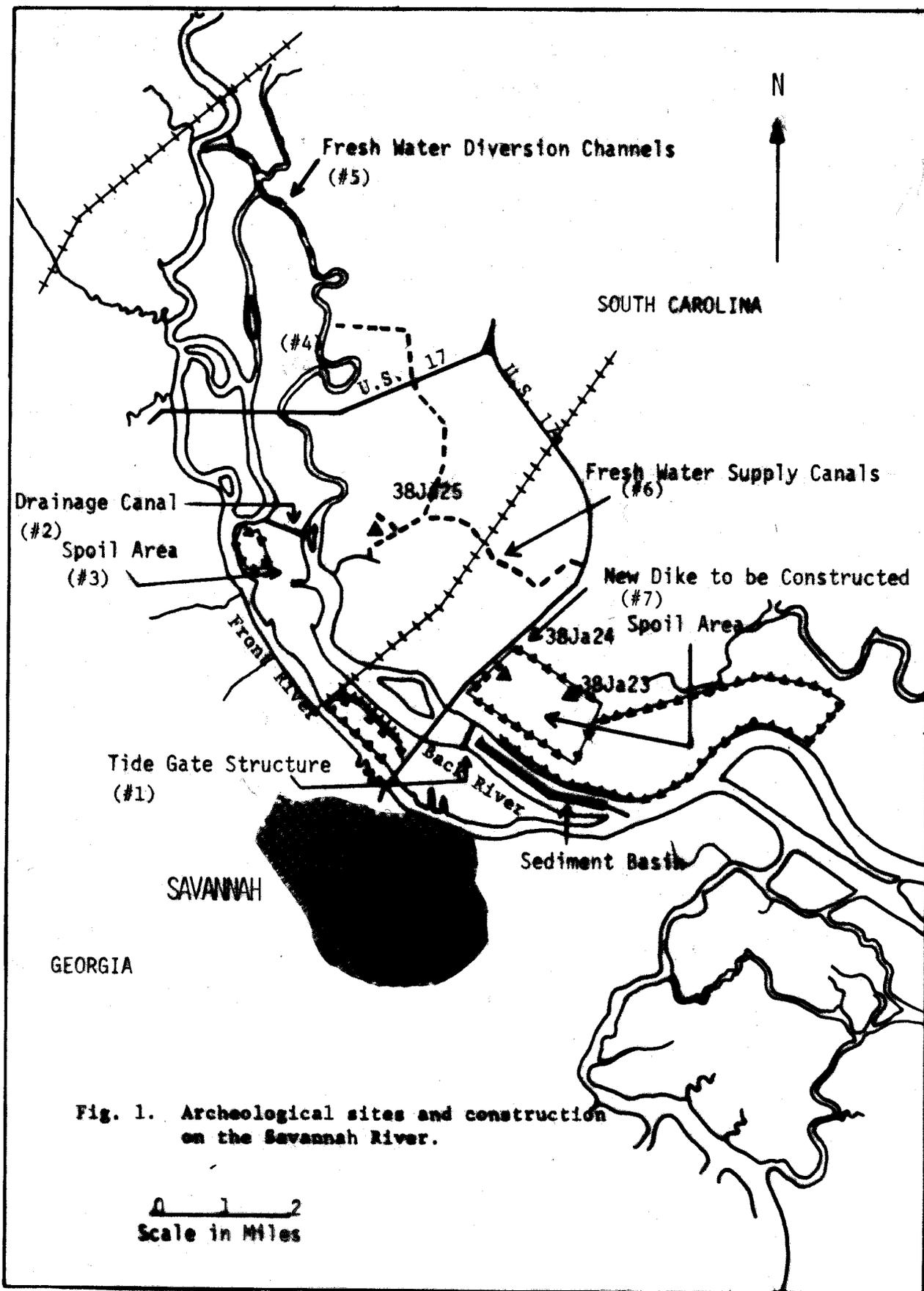
The Sediment Basin Project of the Savannah Harbor is described by the U. S. Army Engineer District report (1973) as:

Construction of a sediment basin and tidegate structure in Back River, Savannah Harbor, Georgia, and construction of a fresh-water diversion system for the Savannah National Wildlife Refuge and adjacent areas (Fig. 1).

Environmental impact is divided into beneficial (a) and detrimental (b) effects in the report:

- a. Divert a major portion of Savannah Harbor suspended sediment accumulating adjacent to the City of Savannah to Back River where adequate spoil sites are available. This will result in improved navigation safety, decreased maintenance costs, improved control of channel velocities, and continued maintenance of the existing water quality and ecology of the Savannah National Wildlife Refuge and surrounding area.
- b. Temporary lowering of water quality during dredging and construction operations, upstream advancement of the salt water wedge in Middle and Back Rivers, and the use of abandoned ricefields as spoils areas.

This project began prior to the establishment of the National Environmental Protection Agency, and a portion of the project is now under construction. The Sediment Basin-Tidegate System (Fig. 1 #1) is about half completed. The drainage canal from Front to Back River between Hutchinson Island and Argyle Island (Fig. 1 #2) has been cut, and the spoil area adjacent to Front River on Hutchinson Island has been used for several years (Fig. 1 #3). The plans to cut a channel across an ox-bow on Little Back River on the western side of Argyle Island (Fig. 1 #4) have been cancelled. Projects remaining are the cutting of ~~fresh-water~~ diversion channels from the main channel of the Savannah River to Middle and Back Rivers at the northern end of Argyle Island



(Fig. 1 #5), the construction of fresh water supply canals on the Savannah National Wildlife Refuge (Fig. 1 #6), and the construction of an additional dike adjacent to U.S. Highway No. 17A (Fig. 1 #7) to retain spoil from dredging in the Back River sediment basin.

The Institute of Archeology and Anthropology of the University of South Carolina was requested by the Savannah District, Corps of Engineers to investigate the impact of the proposed construction on the archeological resources of the lower Savannah River area. With assistance by the Corps of Engineers I reconnoitered the area of construction on October 16 and 17, 1973. Three archeological sites (38JA23, 38JA24, and 38JA25) were located in the construction area (Fig. 1).*

EFFECTS OF ENVIRONMENT ON ARCHEOLOGICAL SITES IN THE SAVANNAH AREA

Archeological evidence suggests that people have occupied the Southeastern United States since about 12,000 years ago. The entire history of these people has been an interaction between changing lifeways and a changing environment. Lifeways have varied from the specialized hunting and gathering patterns of Paleo-Indians, through more generalized natural exploitation and farming by the Indians, to the recent introduction of Western European and Black African culture. During this period of occupation the physical environment has seen changes in land area and morphology, climate, sea level, and biota. Since all of these are components of an ecosystem, the location of

*Mr. Bill Young, Project Engineer, has picked out 38JA23 as an archeological site and had located the island that was later confirmed to be 38JA24.

human activity at any particular point in time is determined by both cultural configuration and environment. Our finding archeological sites today depends upon past culture and environment as well as geomorphological activity since occupation.

The physical geography of the mouth of the Savannah River has been formed as a result of continental submergence stemming from the melting of the last continental glaciation. Rising sea level resulted in the drowning of landforms adjacent to the ocean and formation of estuaries. Coincident with and following drowning, sedimentation from rivers with heavy discharge such as the Savannah has encouraged the growth of marsh areas and the development of deltas (Colquhoun 1969).

Sea level rose steadily from the end of the Wisconsin glaciation to about 3000 B.C. when most geologists consider the sea to have reached the present level (Butzer 1971: 216). However, James Michie (1973) has recently tabulated evidence from several Southeastern habitation sites that are presently below mean sea level. These sites are intact occupational middens that were occupied when sea level was lower relative to the land than it is today. Michie has estimated that there may have been as much as an eight to ten foot rise in sea level in the last 3500 years.

The difference between the accepted time of stabilization and Michie's data may simply be one of degree. When considering sea level rise geologists are in the habit of dealing with glacio-eustatic fluctuations on the order of several hundred feet. A deviation of a few feet from a "stable" sea level may be of only minor importance to the development of major geomorphological features. On the other hand, small

fluctuations may have serious implications for archeological sites located only a few feet above the water.

The marsh on the left bank of the Savannah River that is the focus of this investigation is an area that has been subjected to both inundation and sedimentation since the end of the Pleistocene. Furthermore, the environment that we see today is quite different from even the very recent past. Since the beginning of the historic period dredging, filling, and dike construction have significantly changed the pattern of water movement in the area. Also, Waring (Williams 1968: 198) mentions that in the vicinity of the Savannah National Wildlife Refuge a fresh water cypress swamp was cleared during the plantation period and used for rice production.

Prehistorically, the primary topography beneath some of this marsh may have been used for villages, hunting ranges, etc. As sea level rose and more of the area was inundated only those locations above the water were utilized. As a result only older sites that were on high ground and most of the younger sites that were responding to a sea level similar to that of today are visible. Older sites on the lower levels were probably covered by the rising sea and buried by sediment.

SITE INVESTIGATION

Initial investigation included an examination of extant information concerning archeological sites that might fall in the construction area. A review of the William Bull Map of 1780, Mill's Atlas of 1825 (Lee 1965), the papers of Antonio Waring (Williams 1968), Clarence B. Moore's reports (1897, 1898a, 1898b) and the site files of the Institute of Archeology and Anthropology did not reveal any known sites in the construction area.

Sites recorded in the reconnaissance included two in the spoil area on the left bank of Back River near the tidegate structure and one on the Savannah National Wildlife Refuge:

38JA23 Location: This site is located adjacent to an existing dike on the northeastern side of the spoil area between Back River and U.S. 17A.

Description: Shell midden approximately five feet above the water table measuring 80 feet (NE-SW) by 180 feet (NW-SE). The northeastern edge of the midden has been cut by a canal along the dike. The midden is composed primarily of oyster shell, but conch shells, clam shells and animal bone were also recovered.

Cultural affiliation: Ceramics collected from the site include Deptford Bold Check Stamped, Deptford Linear Check Stamped, Deptford Simple Stamped, and Wilmington Heavy Cordmarked (Caldwell and Waring 1939). This material indicates cultural activity between 800 B.C. and A.D. 1100.

38JA24 Location: This site is southeast of U.S. Highway No. 17A within the proposed new spoil area.

Description: Sand mound approximately two feet above water level measuring 200 feet (NE-SW) by 60 feet (NW-SE). A small test pit placed in the center of the mound revealed a lensed fill. The site appears to be a small burial mound.

Cultural affiliation: The material recovered from this site was not diagnostic of any specific cultural period. One badly eroded sand tempered sherd and a few flint chips were the only artifacts found in the test pit. The site probably dates from some point between the time of Christ and the historic period.

38JA25 Location: Site is located on the east end of an island approximately 1000 feet west of collecting pool # 6 in Savannah National Wildlife Refuge.

Description: The eastern end of this island is somewhat higher than the remainder. The site seems to be centered on this eastern end.

Cultural affiliation: Artifacts were recovered from a dirt road crossing the island. These artifacts indicate two occupations. A Guilford point and debitage indicate an occupation about 3500 B. C., and historic white ware ~~probably~~ represents an occupation associated with the "rice cultures" of the nineteenth century.

EFFECTS OF CONSTRUCTION ON ARCHEOLOGICAL SITES

Planned construction and dredging activity endangers only two of the three recorded sites. 38JA23 and 38JA24 will be covered by spoil dirt from the sediment basin. Mr. Bill Young, Project Engineer, has assured me that the fresh water supply canals will only cut into the edge of existing islands on the Savannah National Wildlife Refuge. Thus, 38JA25 is not endangered.

Since some of the archeological sites in this marshland may be underwater, excavation for the construction of dikes and canals may have positive benefit allowing us to locate sites that would otherwise be missed.

CONCLUSIONS AND RECOMMENDATIONS

Examination of the area planned for construction indicates that archeological sites within the area cover a time span from about 3500 B.C. through A.D. 1100 with a later historic occupation during the eighteenth and nineteenth centuries. Since there has been a general rise in sea level beginning at the end of the Pleistocene the sites we have recorded may represent only the most elevated of prehistoric sites.

38JA23 has both a Deptford and a Wilmington component. Although these are two particularly important ceramic types from the lower Savannah area we know very little about the cultures beyond the ceramics. The Refuge Site (38JA5) is the only Deptford site in the lower Savannah area that has been discussed in the literature (Williams 1968: 198-208), and this report includes material from a ~~35 feet by 20 feet~~ test pit placed in this small shell midden. Furthermore, there has never been a report from the coastal area of a site with a significant Wilmington component. We know little of the ceramic relationship between these two cultures and even less of the life styles. With archeological sites being lost daily to development this site is too important to lose.

On the basis of the archeological importance of the sites in question I recommend the following action:

1. 38JA23 should be excavated before it is covered with spoil dirt.
2. 38JA24 should be more extensively tested and perhaps excavated.

3. An archeologist should examine the spoil piles created by the excavation of the fresh water supply canal in the National Wildlife Refuge and the dike construction around the spoil areas in order to record sites that may be discovered during excavation.

The excavation of 38JA23 and 38JA24 (if necessary) should require no more than six months using a crew of five persons on each project.

The examination of the spoil dirt during canal excavation should require no more than a few days.

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