"Preservation of Historic Resources on Barrier Islands"

By: W.P. Gregg

[Paper delivered at 1978 Annual Meeting of State Historic Preservation Officers and Federal Representatives]

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Memorandum

To: Michelle Aubry, OAHP

From: Bill Gregg

Subject: Paper on cultural resources preservation on barrier islands

I've enclosed a copy of the paper I delivered at the recent Hotel Washington conference. It is essentially the same as I delivered it, with a few minor modifications to elaborate on a few points and improve clarity. I did not delete colloquial language. This could be done easily if you believe it's necessary for purposes of publication in "11593." I have added an editor's note to formally solicit comments.

I appreciate your interest in the unique interrelationships between natural resource and cultural resource protection on barrier islands and am glad you suggested publication of the paper. If the paper serves only to stimulate some additional thought on the future of these resources I'll consider the effort successful.

/s/
Bill Gregg

Enclosure

bcc: Dr. Paul Godfrey, Univ. of Massachusetts
Mr. Laurance S. Rockefeller, Natural Resources Defense Council
Mr. Jim Macfarland, OCZM, Department of Commerce
Mr. Robert Peoples, FWS
Mr. Ron Cooksy, HCRS
NARO, Dr. Paul Buckley
560, Mr. Ross Holland
550, Mr. Lee Purkerson
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PRESERVATION OF HISTORIC RESOURCES ON BARRIER ISLANDS

W. P. Gregg, Jr., National Park Service

(Text of paper delivered at 1978 Annual Meeting of State Historic Preservation Officers and Federal Representatives, Hotel Washington, Washington, D.C., February 26-March 1, 1978)

I've come to talk with you today as a natural scientist with a strong interest in historic resources preservation. As an ecologist, I've always regarded historic resources as analogous to endangered species. Once they're gone, nothing can be done to bring them back. For both historic resources and endangered species, it is of the utmost importance that we identify what there is, where it's located, and what can be done to protect it. I don't presume to have a panacea for the ills of either resource, but I do want to spend a few minutes to discuss the plight of historic resources on the barrier islands and barrier spits which fringe our coastlines. I sincerely believe that important opportunities for historic resource preservation exist here, as well as some unique challenges in developing protection strategies for both natural and historic resources in these places.

First, I think it's a good idea to look at some of the major characteristics of barrier islands and spits. These natural resources are recent phenomena. Most of them have been around for less than 10,000 years, being formed after the last Ice Age. Nearly all are made up entirely of unconsolidated materials--sands, silts, and clays. Nearly all contain a central spine of dunefields, which varies from a few hundred feet to several miles wide. On the mainland side, there is always a lagoon, which provides important habitat for fish, shellfish, and other estuarine life. Between the lagoon and the dunefields, there is usually a band of tidal marshes, which provide the prime breeding and nursery grounds for many of our commercially important fish and shellfish. On the ocean side, there is always the beach and a zone of offshore sand bars which--together with the dunes near the beach--form a physiographic system in which sand is continually being moved around and exchanged from one compartment to another. If the amount of sand washing up onto the beach and blown up into the dunes is greater than the amount being carried offshore by storm tides or blown offshore, an island will grow both upward and seaward. On the other hand, if the loss of sand is greater than the gain, an island's shoreline position will recede.

Although we can always find examples of islands that are growing seaward, the trend has been for shoreline positions to recede as sea level continues to rise at a rate now estimated at more than a foot a century. Sediment profiles taken from under the ocean near barrier islands often contain peat deposits, which mark the locations of bayside tidal marshes at times not long ago when the barrier islands were located hundreds of yards, if not many miles, offshore from their present positions.

Well, you may ask--if sea level is rising and the barrier islands are receding, won't these resources simply drown and be lost forever? The answer is an emphatic no, because barrier islands and spits are well adapted to the winds, waves, and tides which continually move them around and reshape their landforms. Although every island is different in its evolution, all have the ability to migrate toward the mainland so long as storm events are allowed to move sediment from the ocean to the bayside of the island. As the sediments move, the islands simply change their loctions. Evidence of physical disturbance rapidly disappears as the well-adapted barrier island plants and animals soon recolonize and revitalize areas reworked by wind and wave.

Because most barrier islands move around so much, they are often extremely unsuitable for any kind of permanent development. However, the economic incentives for development along the ocean shoreline are great and today about a third of the approximately 300 barrier islands and spits of the Atlantic and gulf coasts support substantial developments and, in a few cases, major cities like Atlantic City, Miami Beach, and Galveston. The cost to society of protecting such permanent settlements on barrier islands continues to mount along with the potential for economic disasters. Witness the tens of millions of dollars in damage from North Carolina to Cape Cod caused by this winter's succession of severe storms!

In order to reduce the economic and environmental costs associated with barrier island development, President Carter has directed Interior Secretary Andrus to prepare a plan for protecting remaining unspoiled barrier islands. A major objective of this plan is to find ways to get the Federal Government out of the business of subsidizing development in hazardous barrier island locations. As one of the National Park Service's participants in developing this plan, I feel strongly that historic preservation issues should be addressed. I've run into some interesting problems with respect to historic resources on barrier islands which I'd like to discuss with you for a minute.

FIRST, barrier islands are underrepresented as sites for historic preservation activities. Perhaps this is because most of them are in remote areas far from the urban centers where historic preservation organizations are likely to be most active. Perhaps it's because their distinctive resources just haven't been widely recognized as a significant part of our National Heritage. Or perhaps some other factor is responsible. In any case, in a recent survey of the National Register, we could find only 75 listed sites on the barrier islands and spits on the Atlantic and gulf coasts. Lack of existing resources is definitely not the problem, as the inventory is large. Ross Holland has identified 202 lighthouses along these coasts--many of them on barrier islands and most of them still standing. Yet to date, only 11 of barrier island lighthouses have been listed on the Register. We know that several States have lists of numerous barrier island sites that may be eligible for listing, but have yet to be nominated. From my vantage point, much more needs to be done to identify what we have and to provide the extra measure of protection that National Register status affords.

SECOND, the potential educational value of historic resources on barrier islands is underutilized. In my view, the historical personages and events associated with barrier islands should be extremely interesting to a broad cross-section of our society. What youngster isn't fascinated by the era of the privateers and the sailing ships laden with treasure? Who among us fails to sense the challenge and lure of the sea upon viewing the solitary witness of an old lighthouse? The use of barrier islands as early settlement sites, as bases for whaling and other marine industries, and as coastal fortification sites provide unique opportunities for communicating important aspects of our history. Tens of millions of people visit barrier islands each year for recreation. With such an audience, the educational opportunities are virtually limitless. By encouraging governmental agencies, private organizations, and individuals to make barrier island resources available to the public and to promore public appreciation of their importance in our cultural heritage, our vacations will acquire an added and important new dimension.

THIRD, and perhaps most importantly, we need to make some hard decisions on preservation now. In many cases, the dynamic nature of barrier island environments is incompatible with long-term protection of development, whether historic or not. Our coastlines contain many examples of lighthouses, lifesaving stations, and other resources which have been claimed by the elements. Perhaps we should have tried to save them, perhaps not. In any case, they are gone forever. For the resources that remain, we need to draw up plans for their future. We must determine what resources we wish to preserve and what resources can realistically <u>be</u> preserved. We need to know the amount of risk to which these resources are being subjected and what can reasonably be done to minimize damage to resources in high hazard areas-such as, for example, the feasibility of relocating them to less hazardous places. In particular, we need to know how the measures we might contemplate to preserve historic resources are likely to affect the processes that are responsible for perpetuating the barrier islands themselves. For example, expensive stabilization of land around an historic fort may keep the structure from falling into the sea for a few dozen additional years. But, if the stabilization causes accelerated erosion elsewhere, it may be a poor investment.

One further point. We now know that inlet stabilization, emplacement of groins on the beach, navigational dredging, and other activities can upset the natural sediment balance and actually increase the rate of erosion. Historic preservationists need to give particular scrutiny to such projects to be sure that every possible mitigation is taken to prevent an increased risk of damage to historic resources. In order to do this effectively, close cooperation will be needed between the coastal geologists and ecologists--who can evaluate effects on natural processes--and historic preservation specialists--who can determine what these effects mean in terms of protecting historic resources.

The Barrier Island Protection Plan which the Secretary of the Interior will send to the President this year may well contain recommendations to promote identification and protection of historic resources on barrier islands. I urge you to let me have your ideas on strategies that should be considered as we develop the Plan. I'd also appreciate any information you may have on the nature and significance of barrier island resources in your State so we can get a better understanding of the full significance of our barrier island heritage.

Ed. Note: Protection of cultural resources on barrier islands is an important issue. Please send any comments or suggestions you may have to the author before April 30, 1978, so that they may be fully considered in developing the Barrier Island Protecion Plan. Dr. Gregg may be contacted at 202-343-2164 or at the following address:

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