

## **INFORMATION PAPER**

### **Navigation on the Apalachicola**

The water resources of the ACF River Basin have been developed to serve multiple purposes, including flood control, navigation, hydropower, water supply, water quality, recreation, and fish and wildlife enhancement. A basin-wide development plan, authorized by the River and Harbor Act of 1945 and modified in 1946, consisted of three multi-purpose reservoirs on the Chattahoochee above Columbus, Georgia (only two were constructed); three multi-purpose reservoirs on the Flint River above Albany, Georgia (none were constructed); and six locks and dams (three were constructed). Navigation was to be provided by (1) dredging, cutoffs, training works, and other open river methods; (2) a series of locks and dams; and (3) flow regulation from upstream storage projects. The project ultimately constructed consisted of a 9- by 100-foot navigation channel along 107 miles of the Apalachicola River between the Gulf Intracoastal Waterway and Jim Woodruff Lock and Dam. From there the navigation channel extends 155 miles up the Chattahoochee River to Columbus, Georgia, and Phenix City, Alabama, and 28 miles up the Flint River to Bainbridge, Georgia.

The project authorization required local interests (six Florida counties along the river) to provide public port facilities and all lands, easements, rights-of-way and disposal areas for maintenance of the navigation channel in the Apalachicola River. Local interests were reluctant to provide perpetual easements for disposal of maintenance dredged material because of the potential financial liability for the counties. Accordingly, five-year disposal easements were approved by the Corps for the initial construction of the waterway project. After those easements expired subsequent attempts to obtain further easements were unsuccessful and in 1988 the counties formally rescinded their commitments to provide local sponsorship for the project. Since that time, the Corps has been able to continue to maintain the navigation channel primarily through the use of within-bank disposal areas subject to Federal navigation servitude (i.e., no requirement for easements from local sponsors).

The controlling depth for navigation has often been less than the authorized 9 feet during a large portion of the normal low flow period of the summer and fall each year. Over the period 1970-1999, a 9-foot channel has been available only about 62 percent of the time and a 7.5-foot channel 82 percent of the time. In dry years a 7.5-foot channel may be available only 25 percent of the time. The original design of the project estimated that a discharge from Jim Woodruff Dam of 9,300 cubic feet per second (cfs) together with dredging would provide a 9-foot channel. In the mid-1980's the discharge providing a 9-foot channel was estimated to be 11,000 (an increase of 18%). The majority of the dredging activity in the Apalachicola River occurs between miles 35 and 45 and between miles 76 to 81, accounting for about 40 percent of the annual dredging quantities.

In accordance with the Clean Water Act of 1972, as amended, the Corps obtained water quality certifications from the State of Florida for maintenance dredging in the

Apalachicola River, beginning in 1979. Over the years conditions placed on the certification have imposed increasing restrictions on dredged material disposal area usage, required an extensive monitoring program, and the re-opening of sloughs along the river. These actions limited dredged material capacity and increased maintenance costs. In response to these limitations new management techniques, such as mechanical redistribution, were developed to provide for additional dredged material disposal capacity. Mechanical redistribution was initiated in 1987 and has been used primarily at one disposal site within the controlling reach of the river, and involved the mechanical grading of material from a within banks disposal area into the river during high flows to facilitate transport of the dredged sediment downstream with the river bedload. Mechanical redistribution was certified in the State of Florida water quality certification issued in 1991, subject to a monitoring program. However, the five-year water quality certification issued in 1999 prohibits the continued use of this technique

Following discussions with navigation users during and after the 1986 drought, the Corps developed a technique to provide for a planned period of navigation called a Navigation Window. This techniques involves temporarily storing water in West Point Lake, Walter F. George, and Lake Seminole that then is released over a 10-day to two-week period at a rate to provide for economically navigable depths (at least a 7.5-foot channel) in the Apalachicola River. During the Drought of 1988 a Navigation Window was planned for early September 1988, but sufficient rain occurred so that the Window was not necessary. This technique was employed beginning in 1990 and continued throughout the decade. Beginning in the mid 1990's, Navigation Windows were scheduled in advance, approximately one per month during the low water months, in order to provide the waterway users a predictable reliable channel. Because channel conditions were also deteriorating, Navigation Windows were used with increasing frequency, as many as six a year, generally between May and December. Maintenance of navigation depths became increasingly dependent upon flows due to continued channel degradation and a lack of adequate dredged material disposal capacity. In the 1990s, the discharges from Jim Woodruff Dam required to provide a limited 8-foot channel during navigation windows ranged from 13,000 cfs to over 20,000 cfs, dependent upon the condition of the dredged channel. With increased water supply and recreational demands in the upstream reservoirs, fluctuations of reservoir levels necessary to support navigation window releases have become increasingly controversial.

As much as 1.2 million tons of cargo moved on the ACF in 1985, but traffic has continually declined since then as difficulties in maintaining the project and providing a reliable channel have increased. Presently less than 400,000 tons move on the waterway. The principal commodity is sand and gravel, which is not dependent upon navigable depths on the Apalachicola River and can move economically at shallower depths than can some other commodities. The next most important products are petroleum products and fertilizers. Studies conducted during the ACT/ACF Comprehensive Study evaluated the potential additional traffic that could economically be moved on the ACF. At the time about 500,000 tons were being moved and the Comprehensive Study indicated that an additional 490,000 tons could potentially move on the waterway.

O&M costs for the ACF navigation project were \$6.1 million in FY 1999, consisting of \$1.9 million for lock operation and maintenance and \$4.2 million for other navigation costs which includes dredging and snagging, disposal area maintenance, channel condition surveys, etc. The 1998 Operation and Maintenance (O&M) Cost Savings Initiative report was an internal Corps document which contained the results of a comprehensive review of the Corps O&M program with the objective of identifying potential areas of saving O&M costs, while maintaining justified levels of project services. This review established benchmark values for project performance (output and cost) and identified those projects, the performance of which, did not meet the benchmark. For Inland Navigation, the benchmark value, based on O&M cost and ton-miles, was \$.02. Projects with a value greater than this benchmark were candidates for evaluation to identify savings in O&M costs. The value for the ACF was \$.113.

Discontinuing navigation would have an effect on the commercial activities depending on the waterway for navigation as well as recreational activities that utilize the locks. Some of the special users of the waterway would be especially impacted when an alternative mode of transportation is not readily available or cannot handle the movement because of the physical size of the cargo being moved. A study of de-authorizing navigation would document the potential impacts to other project purposes, to the National and regional economies, and to the environment; changes to maintenance and operation procedures necessitated by deauthorization; opportunities for environmental restoration; and revised reservoir water control operations.

The Army Corps of Engineers feels that before deauthorization of navigation is accomplished in law, a study should be conducted and a post-authorization report prepared that documents potential impacts to other project purposes, changes to maintenance and operation procedures necessitated by deauthorization, opportunities for environmental restoration, and revised reservoir water control operations.