

APPENDIX

DETAILED NARATTIVE

The following is a summary of activities carried out to date (16th August 2006) by Emu Ltd/Impact Assessment Inc (the Project Team), in support of the above MMS contract, entitled *WORLD-WIDE SURVEY OF DREDGING IMPACTS ON COMMERCIAL AND RECREATIONAL FISHERIES AND ANALYSIS OF AVAILABLE MITIGATION MEASURES TO PROTECT AND PRESERVE RESOURCES*.

The project is now in its final stages, with a completion of field work and accrual of information. A draft copy of the final project report is 90% completed, and includes a comparison between two U.S. case study sites and one U.K case study site. The two U.S. case study sites include the Brevard County, Florida site and the Collier County, Florida site, both located in federal waters. A third site, coming from Hastings Shingle Bank (HSB), U.K, serves as a site for comparing U.S. issues and regulations pertaining to dredging and beach renourishment to those of the U.K.

Brevard County, Florida

The Brevard County study took place in April 2005, with a follow-up study conducted in May/June 2006. During the initial phase of the study, more than 45 individuals participated in interviews, including 13 commercial fishermen, 11 charter fishermen, and 15 recreational fishermen. The follow-up phase of the study included an additional 39 fishermen, roughly half commercial and half charter. Findings at this site show that little conflict took place, largely because 1) the location of the borrow site is in a location closed to fishing by Federal law (i.e. because it lies within the Space Shuttle launch and security zone; 2) there was no intervention between fishermen and equipment in the movement of sand; 3) dredge traffic was minimized; 4) the concern with dredging was viewed as extremely minor compared to other, more pressing issues at hand (e.g. rapid development threatening the closure of fish houses and docking space; the price of fuel; restrictions in catch set by NMFS/NOAA); 5) many of the commercial fishermen interviewed were transient and had concerns not attached to the history of the port; and 6) charter fishermen were organized into an action group that disseminated information about the dredge operation and could openly discuss issues, if they were to arise. The dissemination of information was found to be critical in the success of the operation, and, even among commercial fishermen, information about dredging was disseminated easily and rapidly through the fact that fishermen using the waters active with dredge traffic all harbor at the same port and, thus, communicate frequently and openly.

This study was formalized into a report, which served as the basis for a poster presented at the MMS conference in Florida in June 2006.

The follow-up study in the Cape Canaveral area revealed that few problems were associated with the beach renourishment project and that, rather, many believed the overall effects to be beneficial. Some associated the beach renourishment project with a lively tourism economy that, in turn, maintained their work as fishermen, both commercial and charter. In the case of commercial fishermen, work was maintained indirectly through sales to fish houses, which sell retail to restaurants and directly to customers and which continued to flourish as the tourism industry was maintained. In the case of charter fishermen, work was maintained directly through clientele, many of whom come to the area to enjoy the beaches.

Collier County, Florida

A second site, Collier County, Florida, offers a different perspective of conflict / cooperation from that of Brevard County, Florida. This study was conducted in May 2006 and included over 63 interviews with fishermen, ferry operators, government officials, dredge workers, and beach goers. Of the 51 fishermen interviewed, 22 were commercial fishermen, 11 charter, and 18 recreational. Fieldwork also included attendance at weekly public meetings for dredging and interviews with authorities at Great Lakes Dredge and Dock. Findings at this site show that significant conflict took place, largely because 1) the location of the borrow site and dredge path was located in heavily fished waters; 2) there was considerable intervention between equipment in the movement of sand and fishing equipment, most notably Stone crab traps; 3) dredge traffic was frequent and inconsistently demarcated; 4) the concern with dredging was viewed as extremely major because of loss of property and communication radio channels; and 5) many of the commercial fishermen interviewed had no formal body through which to communicate concerns.

A number of issues were associated with the Collier County site. The issue emphasized by all fishermen interviewed was the take-over of fishermen-used radio channels by dredge operators. Radio channels commonly used by fishermen were also used by dredge captains during operation to the extent that communication between fishermen and between fishermen and fish houses was almost eliminated. A more critical issue, however, included the disruption and slowing of crab harvesting through the cutting of buoy lines by dredge operation vessels. On average, fishermen reported that up to 50% of their traps were lost to dredge operators. This issue was reported to stem from inconsistent dredge paths and inconsistent anchoring locations at night. Inconsistent dredge paths were reported to stem from the lack of communication not between dredge authorities and fishermen but among dredge company employees, as fishermen felt the communication between fishermen and dredge authorities was good.

This leads to the Draft Fieldwork Plan, which compares both U.S. case study sites with a third site taken from HSB, U.K. This third site compares with the Collier County study in terms of conflict. The U.K. analogue site, however, is significantly different from the U.S. cases in terms of its regulatory environment. Although the U.K. regulatory environment includes a mandate to carry out an Environmental Analysis similar to the U.S. National Environmental Protection Act (NEPA), the U.K. regulation is carried out by a single governing agency whereas multiple governing agencies (e.g. USACE; NOAA; MMS) are responsible for carrying out requirements set by NEPA. Further, in the U.K case, fishermen are assumed under the definition of “environment” and are accorded attention in the EA.

The report details mitigation measures used by all U.S. parties concerned. It was found that governmental agencies and dredge companies are most likely to have detailed mitigation measures, as they each form a decision-making body. Commercial fishermen, by contrast, largely because of a lack of disposable time and income, long hours at sea, few hours on land, are less likely to form an action group that can establish mitigation measures used to alleviate conflict with dredge operations. There are individual measures undertaken, and these include the removal of fishing vessels and equipment from waters active with dredge vessels, once those waters (i.e. routes) become specified.

It was also found that, while dredge company authorities established a number of techniques to communicate with fishermen, including sending spokespersons to the docks to discuss operations, governmental agencies were more limited in occupationally-appropriate means to communicate with commercial fishermen (e.g. at the docks during non-working hours). Importantly, fishermen were not included in the planning phases of the renourishment project, a result of 1) the lack on inclusion of fishermen in general interpretations of the definition of “human environment” under NEPA and 2) the lack of inclusion of general public comment – including fishermen - in the non-competitive leasing process.

Impacts on the “human environment” - defined as the natural and physical environment and the human relations with that environment (CFR 1508.14) –are considered critical to examine under NEPA. During an EA or EIS, the human environment must be considered, and, should potential or real effects be discovered, stipulations written into the contract should related such effects and address them appropriately. In a review of the contracts awarded to Brevard County and to Collier County, stipulations addressed the natural environment but not the human environment, suggesting a lack of attention to user groups of the dredge / renourishment areas. It is possible that a system of multiple Federal government agencies covering NEPA requirements, coupled with loose interpretations of NEPA definitions, create a likelihood of “holes” in EA requirements through which attention to “human environment,” particularly fishermen, falls.

The final sections of the report focus on recommendations that might be drawn from its discussion and suggestions as to institutional linkages that might alleviate future conflict and strengthen cooperation between user groups of dredge site areas.

In conclusion, the result of fieldwork spanning two years and resulting in three case studies is an analysis and reporting of recommendations that may benefit MMS and provide some guidance for conflict prevention and resolution, should potential issues arise in the future.