

Status of Marine Minerals Environmental Studies (as of May 6, 2004)

Total MMS Environmental Studies Program \$ Appropriated to Date: \$9,521,531

**Total of All Environmental \$ Allocated to Date (includes non-MMS Funds, e.g. USGS/BRD and LSU):
\$11,842,481**

Compiled by:

Barry S. Drucker, Physical Scientist/Physical Oceanographer

MMS Leasing Division

Marine Minerals Program

Study Title	Awarded Amount
COMPLETED STUDIES	
Generic	
Marine Mining Literature Search Study (OCS Study 93-0006, March 1993)	\$155,000
Marine Mining Mitigation and Technology Study (OCS Report 95-0003, July 1996)	\$180,000
Marine Mining Placer Mining Test (Progress reports available)	\$60,000
West Florida Shelf Benthic Repopulation Study (OCS Report 95-0005, Sept. 1996)	\$425,000
Synthesis of Hard Mineral Resources on the Florida Panhandle Shelf (Final Report completed Sept. 1998)	\$149,782
A Numerical Modeling Examination of the Cumulative Physical Effects of Offshore Sand Dredging for Beach Nourishment (MMS Study 2001-098, March 2003)	\$200,000
Development of Criteria to Evaluate Wave Refraction Models (OCS Study 99-0096, Oct. 1999)	\$60,000
Design of a Monitoring Protocol/Plan for Environmentally Sound Management and Development of Federal Offshore Sand Borrow Areas Along the United States East and Gulf of Mexico Coasts (OCS Study 2001-089, Oct. 2001)	\$351,296
Model Development or Modification for Analysis of Benthic and Surface Plume Generation and Extent During Offshore Dredging Operations (Final model delivered December 2003)	\$200,000
Worldwide Analysis of Shipwreck Damage Caused by Offshore Dredging: Recommendations for Pre-Operational Surveys and Mitigation to Avoid Adverse Impacts (OCS Study 2004-0005, Feb. 2004)	\$123,327
	Total of Completed Generic Efforts: \$1,904,405
Site-Specific	
Environmental Surveys of OCS Sand Resources off Virginia (OCS Report 97-0025, January 1998)	\$420,000
Wave Climate Modeling and Evaluation Relative to Sand Mining on Ship Shoal, Offshore LA, for Coastal and Barrier Islands Restoration (OCS Study 96-0059, Oct. 1996)	\$396,171

Environmental Surveys of OCS Sand Resources Offshore Alabama (OCS Study 99-0051, Sept. 1999)	\$498,943
Surveys of Sand Resource Areas Offshore Maryland/Delaware and the Environmental Implications of Sand Removal for Beach Restoration Projects (OCS Study 2000-055, August 2000)	\$384,241
Environmental Surveys of OCS Sand Resources Offshore New Jersey (OCS Study 2000-052, Dec. 2000)	\$599,048
Wave Climate and Bottom Boundary Layer Dynamics with Implications for Offshore Sand Mining and Barrier Island Replenishment, South-Central Louisiana (OCS Study 2000-053, Dec. 2000)	\$393,671
Collection of Environmental Data Within Sand Resource Areas Offshore North Carolina and the Environmental Implications of Sand Removal for Coastal and Beach Restoration (OCS Study 2000-056, Sept. 2003)	\$499,969
	Total of Completed Site-Specific Efforts: \$3,192,043
Aggregate Studies	
Investigation of Benthic and Surface Plumes Associated With Marine Aggregate Dredging Activities (OCS Study 99-0029, July 1999)	\$140,000
Study of the Cumulative Effects of Marine Aggregate Dredging (OCS Study 99-030, Feb. 1999)	\$100,000
Integrated Study of the Biological and Physical Effects of Marine Aggregate Dredging (OCS Study 2000-054, October 2002)	\$320,000
	Total of Completed Aggregate Dredging Effects Efforts: \$560,000
	Total \$ Expended for All Completed Efforts: \$5,656,448
ONGOING STUDIES (Contracted)	
Environmental Surveys of Potential Borrow Areas on the East Florida Shelf and the Environmental Implications of Sand Removal for Coastal and Beach Restoration (Site-specific/Continental Shelf Associates) Note: Draft report currently under review-final report expected June 2004, will be OCS Study 2004-037)	\$550,000
Environmental Surveys of Potential Borrow Areas Offshore Northern New Jersey and Southern New York and the Environmental Implications of Sand Removal for Coastal and Beach Restoration (Site-specific/Applied Coastal Research and Engineering)	\$500,000
Winter Waterbird Survey of Offshore Shoals From Northern New Jersey to the Virginia/North Carolina Border (Interagency Agreement with Fish and Wildlife Service) (Generic/Fish and Wildlife Service)	\$25,000

Field Testing of a Physical/ Biological Monitoring Methodology for Offshore Dredging and Mining Operations (Generic/Site-specific – being conducted at Sandbridge Shoal, offshore Virginia (Cooperative Agreement with Virginia Institute of Marine Science) (<i>Phase 1: \$58,000; Phase 2: \$564,469</i>)(<i>Site-Specific/Generic</i>)	\$622,469
Environmental Investigation of the Use of Shoals Offshore Delaware and Maryland by Mobile Benthos and Finfish Species (Site-specific/Generic/Versar)	\$500,000
Review of Existing and Emerging Environmentally Friendly Offshore Dredging Technologies (Generic/Baird and Associates)	\$176,664
Analysis of Potential Biological and Physical Dredging Impacts on Offshore Ridge and Shoal Features/Engineering Alternatives and Options to Avoid Adverse Environmental Impacts (Generic/Continental Shelf Associates)	\$400,000
	Total, Ongoing Contracted Studies: \$2,774,133
ONGOING STUDIES (MMS/LSU Coastal Marine Institute)	MMS \$ only shown below
Wave-Bottom Interaction and Bottom Boundary Layer Dynamics in Evaluating Sand Mining at Sabine Bank for Coastal Restoration, Southwest Louisiana	\$345,172
Environmental Investigation of the Long-Term Use of Ship Shoal Sand Resources for Large-Scale Beach and Coastal Restoration in Louisiana (Co-funding provided by Louisiana Department of Natural Resources)	\$600,000
Ship Shoal, Louisiana: Sand, Shrimp, and Seatrout Investigation	\$145,778
	Total, Ongoing MMS/LSU CMI (MMS \$ only): \$1,090,950
	Total of ongoing studies (MMS \$ only): \$3,865,083

OTHER ONGOING STUDY EFFORTS (USGS BRD)	
Focused Analysis/Review of Benthic Assemblages on Ridge and Shoal Features of the U. S. East and Gulf of Mexico Coasts (Generic)	Total BRD \$, one-year effort: \$210,000
Investigation of Finfish Assemblages and Benthic Habitats Within Potential Borrow Areas in Federal Waters Offshore Southeastern Texas and Southwestern Louisiana (Site-Specific)	Total BRD \$ over 3 years: \$1,020,000
STUDIES TO BE INITIATED IN FISCAL YEAR 2004	STATUS
Worldwide Survey of Dredging Impacts on Commercial and Recreational Fisheries and Analysis of Available Mitigation Measures to Protect and Preserve Resources	RFP issued to prospective contactors, award expected in June 2004