

Environmental Studies Program: Ongoing Study

Title	Update to BOEM Gulf of Mexico Fact Book Data and Analysis (GM-14-03-09)
Administered by	GOM OCS Region
BOEM Contact(s)	Sindey Chaky (sindey.chaky@boem.gov)
Procurement Type(s)	Cooperative Agreement
Conducting Organization(s)	Louisiana State University, Coastal Marine Institute
Total BOEM Cost	\$230,000
Performance Period	FY 2016–2021
Final Report Due	December, 2021
Date Revised	August 10, 2021
PICOC Summary	
<i><u>Problem</u></i>	BOEM needs a better understanding of the cumulative socioeconomic impacts of hazardous events and trends in the in the Gulf coast region
<i><u>Intervention</u></i>	A multidisciplinary study combining quantitative and qualitative methods and statistical analyses.
<i><u>Comparison</u></i>	N/A
<i><u>Outcome</u></i>	A multidisciplinary study combining quantitative and qualitative methods and statistical analyses.
<i><u>Context</u></i>	Coastal and near-coastal parishes and communities in Louisiana.

BOEM Information Need(s): BOEM requires updated OCS-related infrastructure information to support scenario development for environmental impact assessments required by the National Environmental Policy Act (NEPA) and conducted for Gulf of Mexico Region (GOMR) lease sales. This information will inform BOEM decisionmakers in their oversight and management of Outer Continental Shelf (OCS) resources as mandated by the Outer Continental Shelf Lands Act. The oil and gas industry utilizes many different types of onshore infrastructure from platform fabrication and pipe coating to waste disposal and product transportation. A clear understanding of these infrastructure types, their characteristics, utilization trends and future outlook are critical for developing scenario projections that inform BOEM’s environmental impact analyses across all resources.

Background: BOEM funded three previous fact book efforts that have proved extremely useful and instructive, covering a broad range of critical infrastructure information with specific geographic information system (GIS) data. The first fact book established the basic framework describing the characteristics, applicable regulations and industry trends and outlook for: platform fabrication yards; port facilities; shipyards/shipbuilding; support and transport facilities; waste management facilities; pipelines; pipecoating; gas processing and storage; refineries and petrochemical plants (The Louis Berger Group 2004). The second fact book addressed the numerous support sectors that service OCS activities such as: drilling contractors; diving; remotely operated vehicles (ROVs); muds, drilling fluids and lubricant providers; air and water transportation; geophysical services; dredging; catering; workover services; and environmental consultation and mitigation services (Dismukes 2010). After the devastating

2005 hurricane season, the next fact book was initiated to include updated facility information, a post-hurricane impact assessment, an additional chapter on power generation to address renewable energy and a second volume to address issues of the surrounding communities (Dismukes 2011, Kaplan 2011). Since the last fact book effort, several significant changes have occurred that necessitate an update:

- Removal of the Oil Export Ban by the U.S. Congress in December 2015.
- Development of several new crude oil storage facilities and export terminals in response to substantial increases in U.S. crude oil production
- Considerable changes in energy markets related to the sustained crash in world energy prices and the expansion of onshore unconventional oil and gas markets
- Major restructuring and reconfiguration of existing and planned U.S. pipelines
- Conversion and development of new greenfield liquefied natural gas (LNG) export facilities along the Gulf of Mexico
- A recent boom in new petrochemical manufacturing facilities along the GOM given low prices and abundant feedstock supplies (natural gas and crude oil)
- Extensive, ongoing industry re-configurations through mergers and acquisitions, along with ownership shifts, which makes our current GIS data on facilities significantly out of date.

The updated fact book will include information about these new facilities, inter-modal transportation, a database covering all OCS-related coastal infrastructure facilities with a GIS component, including the requisite metadata for accurate mapping purposes.

Objectives: The objective of this study is to improve and expand upon the very successful fact book approach to understanding OCS-related onshore infrastructure and to inform the ongoing pervasive analytical task of developing forecasts scenarios for resources analyses included in BOEM environmental impact statements and assessments.

Methods: Primary and secondary information will be collected from a wide range of sources including federal and state government databases, media and trade press publications, commercial sources, and other industry-related information such as trade association-specific publications and press announcements. GIS metadata will be compiled with a focus on quality assurance/quality control.

Specific Research Question(s) What are the geographical locations and updated baseline, trend and outlook information for OCS-related coastal infrastructure facilities along the Gulf coast?

Current Status: Work continues on finalizing deliverables and review of final database.

Publications Completed: N/A

Affiliated WWW Sites: <https://marinecadastre.gov/epis/#/search/study/100149>

References:

The Louis Berger Group, Inc. 2004. OCS-related infrastructure in the Gulf of Mexico fact book. U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study MMS 2004-027. 234 pp.

- Dismukes, D.E. 2010. Fact book: Offshore oil and gas industry support sectors. U.S. Dept. of the Interior, Bureau of Ocean Energy Management, Regulation and Enforcement, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study BOEMRE 2010-042. 138 pp.
- Dismukes, D.E. 2011. OCS-related infrastructure fact book. Volume I: Post-hurricane impact assessment. U.S. Dept. of the Interior, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study BOEM 2011-043 and 2011-044. 372 pp. and 163 pp., respectively.
- Kaplan, M.F., A. Laughland, and J. Mott. 2011. OCS-related infrastructure fact book. Volume II: Communities in the Gulf of Mexico. U.S. Dept. of the Interior, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region.