

Environmental Studies Program: Ongoing Study

Study Area(s): Gulf of Mexico OCS, Western, Central and Eastern Planning Areas

Administered By: Gulf of Mexico OCS Region

Title: OCS-Related Coastal Infrastructure Fact Book Update (NSL GM-14-03-09)

BOEM Information Need(s) to be Addressed: 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 decision-makers 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.

Total BOEM Cost: \$230,000

Period of Performance: FY 2016–2018

Conducting Organization(s): Coastal Marine Institute

Principal Investigator(s): [David Dismukes](#)

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Description:

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 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; 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.

Current Status: Research is ongoing. Several preliminary draft deliverables have been submitted, the rest are in process of completion. Technical review is ongoing.

Final Report Due: June 30, 2018

Publications Completed:

Affiliated WWW Sites:

Revised Date: March 8, 2018