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Project Summary

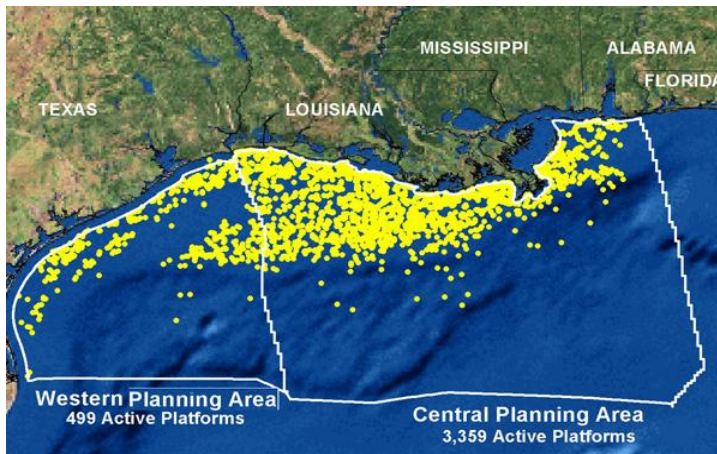
The Obama Administrations Energy Plan

“We cannot keep going from shock to trance on the issue of energy security, rushing to propose action when gas prices rise, then hitting the snooze button when they fall again”

President Obama March 30th, 2011

Blueprint for a Secure Energy Future

- When President Obama took office, America imported 11 million barrels of oil a day.
- President Obama pledged that by a decade from now the US will have cut that by one-third.
 - By producing more oil domestically though offshore drilling
 - Reducing our dependence on oil by increasing cleaner alternative fuels such as biofuels, natural gas and increasing fuel efficiency.



Nearly 4,000 oil and gas platforms are active in the northern area of the Gulf of Mexico. *NOAA Ocean Explorer*

Types of offshore drilling structures



1. Fixed platforms
2. Compliant towers
3. Semi submersible platforms
4. Drill ships
5. Floating production systems
6. Gravity based substructure
7. Spar platforms

Environment Impacts of Offshore Drilling (Other than the obvious oil spills)

Drilling for oil and natural gas requires drilling fluid sometimes called drilling mud to be used while drilling the wells. The purpose of the drilling fluids are to provide hydrostatic pressure, keeping the drill bit cool and clean, and can help avoid formation damage to the well and limit corrosion.

Types of drilling fluid/drilling mud

- Water based mud (WBM) – Water based with added clays “bentonite” and other chemicals.
- Oil based mud (OBM) – Oil based mud that provides greater lubrication and can withstand greater heat without breaking down.
- Synthetic based fluid (SBM) – Has similar properties of an oil based mud but the toxicity of the fluid fumes are much less.

Process of drilling

On the drilling rig the drilling liquid is pumped through the drill string cleaning and cooling the drill bit. The drilling liquid then carries the crushed rock through the surface casing to the surface. The returning fluid can contain natural gases or other flammable materials. The discharged rocks are also contaminated with the synthetic based drilling fluids that can be toxic and cause biodegradation by creating anoxic conditions in the sediment.

Environmental Impacts of Natural Gas Extraction

Gas and Oil companies use a process called hydraulic fracturing where chemicals are mixed with large quantities of water and sand and then are injected into wells at extremely high pressures. Risks in polluting drinking water and methane leaking from wells which has an estimated 23 times higher global warming potential compared to carbon dioxide.