LOUISIANA DEPARTMENT OF
CONSERVATION AND ENERGY

ENHANCED OIL RECOVERY

FREQUENTLY ASKED QUESTIONS

What is Enhanced Oil Recovery (EOR)?

- EOR is a process used by energy exploration companies to re-invigorate older oil fields that are no longer seen as commercially productive by injecting carbon dioxide (CO_2) into the oil sands.
- The injected CO_2 raises the reservoir pressure and helps loosen the oil within the tightly packed sand, allowing it to flow more readily to production wells.
  - Much of the injected CO_2 flows back up with the oil and waste salt water.

Has EOR been done in Louisiana?

Yes, Louisiana has hosted two major EOR projects in the past 20 years, one in the Lockhart Crossing Field in Livingston Parish and the other in the Delhi Field mostly located in Richland Parish.

Does the CO_2 remain permanently underground?

No, some of it remains in formation, some comes up with the oil and can be captured for re-use or shipping to other sites by pipeline, and some is dissolved into the crude oil or produced water that comes up with it.

Can all old oilfields be re-invigorated with EOR?

No, not all fields are suitable for EOR operations, either because of the local geology, the specific characteristics of the reservoir, or because of mineral rights ownership issues.

Are Class VI injection for CO_2 sequestration and injecting CO_2 for EOR the same thing?

- No. Both the rules and the actual activities are very different – Class VI rules are vastly more stringent than the Class II rules involved in EOR.
- EOR, also known as Tertiary Recovery, is treated as a type of stimulation for oil well production, and thus falls under the EPA's Class II category for injection wells associated with hydrocarbon injection
  - A key difference is that EOR involves raising the pressure in a reservoir, then reducing it again through production, while sequestration continuously increases pressure until an established maximum is reached.

Who regulates EOR projects?

- These types of projects are regulated by the Louisiana Department of Conservation and Energy's (C&E) Office of Permitting and Compliance.
  - The Class II carbon injection aspect of the projects is overseen by the Mining and Storage Division.
  - The production well operation and maintenance is overseen by the Oil and Gas Division.