

OIL AND GAS EXPLORATION AND PRODUCTION

Exploration and production of oil and gas resources in wetlands usually have adverse impacts since excavation and filling are generally required to accommodate access and production needs. Even in open marine waters, where dredging and filling is not necessary, specific recommendations may be required to ensure that the project will not adversely impact the environment or safety. In addition to the guidelines for navigation channels/access canals, dredged material disposal and pipeline installation, the following apply:

General Recommendations

- a. Exploration and production activities should be located away from environmentally sensitive areas such as bird rookeries, oyster reefs, wetlands, seagrass beds, endangered species habitats and other productive shallow water areas.
- b. Upon cessation of drilling or production, all exploration/production sites, access roads, pits and facilities should be removed, backfilled, plugged, detoxified, revegetated and otherwise restored to their original condition.
- c. A plan should be in place to avoid the release of hydrocarbons, hydrocarbon-containing substances, drilling muds, or any other potentially toxic substance into the aquatic environment and the surrounding area. Storage of these materials should be in enclosed tanks whenever feasible or, if not, in lined mud pits or other approved sites. Equipment should be maintained to prevent leakage. Catchment basins for collecting and storing surface runoff should be included in the project design.
- d. Exploration/production activities and facilities should be designed and maintained in a manner that will maintain natural water flow regimes, avoid blocking surface drainage, and avoid erosion.

Activities In Coastal Marsh:

- a. Activities should avoid wetlands. Drilling should be conducted from uplands, existing drill sites, canals, bayous or deep bay waters (greater than six feet), wherever possible, rather than dredging canals or constructing board roads. When wetland use is unavoidable, work in previously disturbed wetlands is preferable to work in high quality or undisturbed wetlands.
- b. If (a) is not possible, temporary roads (preferably board roads) to provide access are more desirable than dredging canals because roads generally impact less acreage and are easier to restore than canals. The following apply to the establishment of the well site:
 1. Proposed road alignments and well pads should utilize upland or already disturbed marsh areas and should be no larger than necessary to conduct exploration/production activities. All borrow material for the ring levees should come from within the leveed areas.
 2. Borrow pits for fill material, if necessary, should be dredged adjacent to and on

alternate sides of the roads and should be no more than 500 feet long. Continuous borrow pits are to be avoided.

3. Culverts or similar structures should be installed under the road at sufficient intervals to prevent blockage of surface drainage, tidal flow, and sheet flow (at least every 500 feet), with all culverts maintained open for the life of the roadway. Where possible, flowlines should be installed in the roadbed.

4. All streams, bayous, etc., should be bridged or culverted to prevent alteration to the natural drainage patterns.

5. If the well is a producer, the drill pad should be reduced to the minimum size necessary to conduct production activities and the disturbed area should be restored to pre-project conditions.

c. Upon completion or abandonment of wells in wetlands, all unnecessary equipment should be removed and the area restored to pre-project elevations. The well site, various pits, levees, roads and other work areas should be graded to pre-project marsh elevations and then restored with indigenous wetland vegetation. Abandoned canals frequently need plugging and capping with erosion-resistant material at their origin to minimize bank erosion and to prevent saltwater intrusion. In addition, abandoned canals will frequently need to be backfilled to maximize fish and wildlife production in the area and to restore natural sheet flows. Spoil banks containing uncontaminated materials should be backfilled into borrow areas or breached at regular intervals to re-establish hydrological connections.

Activities In The Open Bay:

a. Maximum use should be made of existing navigable waters already having sufficient width and depth for access to the drill sites.

b. Environmentally sensitive areas such as oyster reefs and seagrass beds should be avoided when siting extraction facilities. Sites located near bird rookeries may be subject to additional seasonal restrictions on timing of activities and distance from the rookery (see Texas General Land Office Resource Management Code Guidelines).

c. Over-water storage facilities and structures are generally not recommended.

d. All unnecessary equipment and structures should be immediately removed upon cessation of drilling or production.

e. Oyster reefs and seagrass beds should be marked to assure that they are not traversed. All equipment access should be limited to the immediate project area. Equipment operators should be closely supervised to avoid damaging environmentally sensitive areas.

f. Propwashing should be strictly avoided. No access channels or floatation canals should be constructed in areas containing seagrasses or oyster reefs if practical alternatives exist.

g. An oil spill response plan should be developed and coordinated with Federal and State

resource agencies.

In Offshore Anchorage Areas and Fairways:

- a. The installation of anchors to stabilize semi-submersible drilling rigs within fairways must be temporary and are allowed to remain only 120 days. This period may be extended by the District Engineer provided reasonable cause for such extension is otherwise justified.
- b. Drilling rigs must be at least 500 feet from any fairway boundary or whatever distance necessary to insure that minimum clearance over an anchor line with a fairway will be 125 feet. Additionally, drilling rigs must be at least three nautical miles from any drilling rig on the opposite side of the fairway.
- c. The Department of the Army may grant permits for the erection of structures within an area designated as an anchorage area, but the number of structures will be limited by spacing as follows:
 1. The center of a structure to be erected should not be less than two nautical miles from the center of any existing structure.
 2. In a drilling or production complex, associated structures should be as close together as practicable having due consideration for the safety factors involved. A complex of associated structures connected by walkways will be considered one structure for the purposes of spacing.
 3. A vessel fixed in place by moorings and used in conjunction with the productive complex will be considered an attendant vessel and its extent will include its moorings. When a drilling or production complex includes an attendant vessel and the complex extends more than 500 yards from the center of the complex, a new structure can not be erected closer than two nautical miles from the near outer limit of the existing complex.
- d. In anchorage areas, all abandoned structures must be cut off 25 feet below the mud line. If explosives are to be used, the National Marine Fisheries Service should be contacted to coordinate marine mammal and endangered species concerns.
- e. All natural reefs and banks, as well as artificial reef areas, should be avoided. Consult Texas Parks and Wildlife Department for a list of artificial reefs in State waters.
- f. Pipelines in anchorage areas require a minimum 16.5-foot burial below the mud line. Pipelines in fairways require a minimum of 10-foot burial below the mud line.