

CASE, PIPELINES AND TRANSMISSION LINES

Excavation of wetlands or submerged lands is sometimes required for installing submerged cables, pipelines and transmission lines. Construction may also require temporary or permanent wetlands filling. The following apply:

- a. Crossings should be aligned along the least environmentally damaging route. Environmentally critical habitats such as submerged aquatic vegetation, oyster reefs, emergent marsh, bird rookeries, sand and mud flats, and endangered species habitats should be avoided. In addition, aligning sewage lines with creeks beds should be avoided.
- b. Directional drilling, a technique that allows horizontal, subsurface placement of pipelines, is recommended for crossing sensitive wetland habitats, beaches, dunes or navigation channels. Directional drilling may qualify for General Permit SWG-1998-02413. Contact the Galveston District Corps of Engineers for additional information.
- c. Construction of permanent access channels should be avoided since they disrupt natural drainage patterns and destroy wetlands through excavation, filling and bank erosion. Construction equipment should be limited to the minimum size necessary to complete the work. Shallow draft equipment should be employed so as to minimize impacts and eliminate the necessity of temporary access channels for construction equipment. The size for the pipeline trench proper should also be minimized. The push-ditch method, in which the trench is immediately backfilled, reduces the impact duration.
- d. Where possible, excavated materials should be stored and contained on uplands. If storage in wetlands or waters of the United States cannot be avoided, alternating stockpiles should be used to allow continuation of sheet flow. Stockpiled materials should be stored on construction cloth rather than bare marsh surfaces, seagrasses or reefs.
- e. Excavated wetlands should be backfilled with either the same material as removed or a comparable material that is capable of supporting similar wetland vegetation. Original marsh elevation should be restored. Topsoil and organic surface material such as root mats should be stockpiled separately and returned to the surface of the restored site. Adequate material should be used so that following settling and compaction of the material the proper pre-project elevation is attained. If excavated materials are insufficient to accomplish this, similar grain size material should be used to restore the trench to the required elevation.

After backfilling, erosion protection measures should be implemented where needed to prevent fish and wildlife habitat degradation and loss.

- f. Following backfilling of the trench, planting of the disturbed area may be required in those areas previously supporting marsh or seagrass vegetation. Additional off-site mitigative actions may be required to offset unavoidable project impacts.
- g. Use of existing right-of way is generally preferred to lessen overall wetland encroachment and disturbance.
- h. Pipelines and submerged cables should be buried and maintained below the water bottom. The Corps of Engineers requires a minimum burial depth of 5 feet in shallow draft channels and 15 feet in deep draft channels.
- i. Submerged cables should be considered in lieu of overhead transmission lines within the migration routes of waterfowl and endangered or threatened birds.
- j. Inactive pipelines and submerged cables are to be removed.
- k. If seagrasses or oyster reefs occur at or near the project site, silt curtains or other type barriers should be used to reduce turbidity and sedimentation. These silt barriers should extend at least 100 feet beyond the limits of the seagrass beds or oyster reefs. If seagrasses and oyster reefs cannot be avoided, pre-and post-construction surveys should be completed to determine project impacts and mitigation needs.
- l. Equipment access should be limited to the immediate project area. Tracked vehicles are preferred over wheeled vehicles. Consideration should be given to the use of mats and boards to avoid sensitive areas. Equipment operators should be informed to avoid environmentally sensitive areas.
- m. Environmentally sensitive areas should be clearly marked to ensure that they are not traversed by equipment operators.
- n. Propwashing should be strictly avoided.