





Mosquito Ditches vs. Tidal Channels



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Characteristics of “Mosquito Ditches” vs. Tidal Channels

- Horizontal layout
- Vertical profile
- Design intentions
- Relationship to natural features
- Effects/impacts

Horizontal Layout

- Mosquito ditches – Straight, at regular intervals, grid or parallel pattern
- Tidal Channels – Curved or angled, no standard interval

Vertical Profile

- Mosquito ditches – Narrow (18”-36”), steep sides, may have berms alongside
- Tidal channels – Vary in width, depending on anticipated flow and area served. Sloped sides designed to mimic those of natural tidal channels, although these can have steep banks. Berms avoided to allow flooding, fish access.

Design Intentions

- Mosquito ditches – Originally intended to draw off surface water to physically control larvae. Later maintained primarily function as fish habitat in microtidal areas.
- Tidal Channels – Designed to provide tidal flow into and out of marsh and tidal circulation. Intended to maintain and improve water quality within marsh and maintain or improve marsh-estuary linkage

Relationship to Natural Features

- Mosquito ditches – Originally laid out with little regard to natural features of the marsh. Eventually became part of the landscape.
- Tidal Channels – Designed for compatibility with natural features. Intended to provide habitat and other benefits associated with natural tidal creeks.

Effects/Impacts

- Mosquito ditches – Highly variable effects and impacts, especially in microtidal areas. May have altered vegetation when installed, but current vegetation may depend on them. Highly site-specific impacts.
- Tidal Channels – When properly designed and constructed, provide multiple benefits: hydrology, vegetation, habitat.