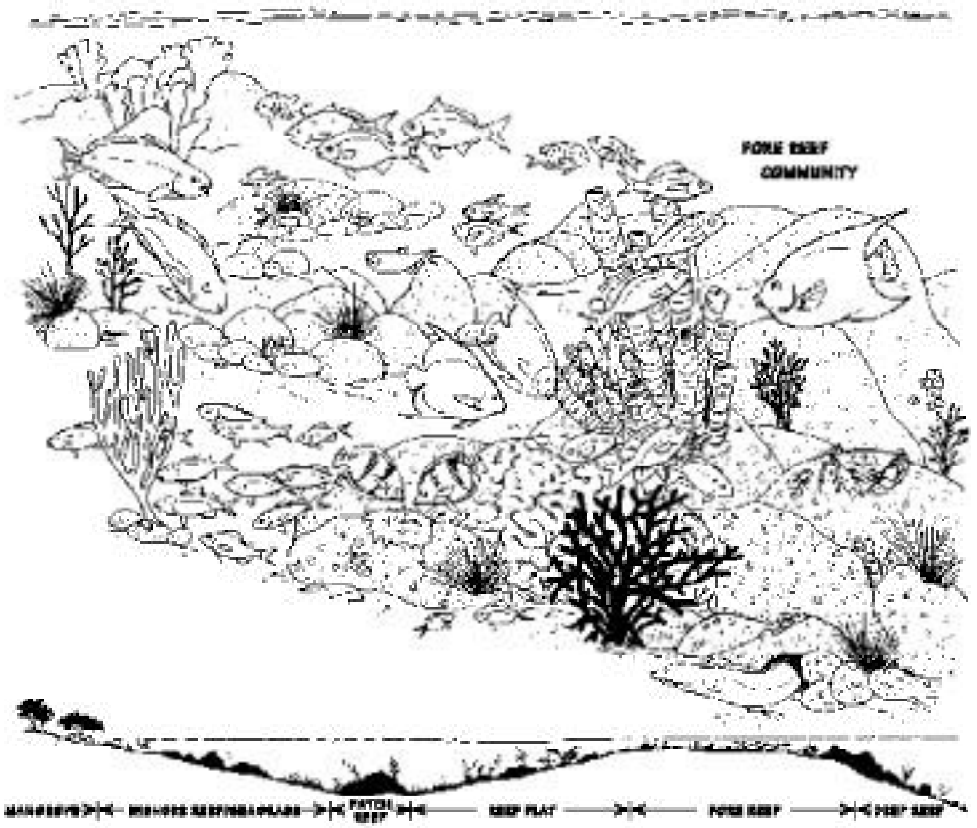
FORE REEF
COMMUNITY

# Coral Reefs



## Description

- Coral reefs are structures created and maintained by the establishment and growth of populations of stony coral and coralline algae.
- Coral reefs are mostly subtidal in nature, although the most shallow portions of some reefs can be exposed during very low tides.
- Broad, pavement-like platforms formed by reefs when they reach sea level are a special concern.
- Many coral species spawn simultaneously over a very short time period (days), a behavior that makes the entire recruitment class very vulnerable.

## Predicted Oil Behavior

- Coral reefs vary widely in sensitivity to spilled oil, depending on the water depth, oil type, and duration of exposure.
- There are three primary exposure pathways: direct contact with floating oil; exposure to dissolved and dispersed oil in the water column; and contamination of the substrate by oil deposited on the seafloor.
- Reef-associated community of fish, crustaceans, sea urchins, etc. can experience significant mortality.

## Response Considerations

- Caution is needed when deploying and anchoring booms near reefs to prevent physical damage to the reef.
- Foot and vehicular traffic should not be allowed across a reef flat; access must be from the seaward side via boats.
- The use of dispersants directly over shallow reefs is likely to have significant impacts to the reef community. Their use in offshore areas can reduce impacts to highly sensitive intertidal environments.
- In situ burning outside of the immediate vicinity of reefs can protect sensitive intertidal environments. Burn residues can sink; the potential effects of these residues will depend on the composition and amount of oil.

# SUBTIDAL



### Oil Category Descriptions

I – Gasoline products
II – Diesel-like products and light crudes
III – Medium grade crudes and intermediate products
IV – Heavy crudes and residual products
V – Non-floating oil products

**The following categories** are used to compare the relative environmental impact of each response method in the specific environment and habitat for each oil type. The codes in each table mean:

A = The least adverse habitat impact.
B = Some adverse habitat impact.
C = Significant adverse habitat impact.
D = The most adverse habitat impact.
I = Insufficient information - impact or effectiveness of the method could not be evaluated.
— = Not applicable.

| Response Method | Oil Category I | II | III | IV | V |
|---|---|---|---|---|---|
| Natural Recovery | A | A | A | A | B |
| Booming | – | B | B | B | – |
| Skimming | – | B | B | B | – |
| Physical Herding | – | – | – | – | – |
| Manual Oil Removal/Cleaning | – | – | B | B | B |
| Mechanical Oil Removal | – | – | – | D | D |
| Sorbents | – | A | A | A | B |
| Vacuum | – | – | B | B | B |
| Debris Removal | – | – | – | – | – |
| Vegetation Cutting/Removal | – | – | – | – | – |
| Low-pressure, Ambient Water | B | B | B | C | C |
| Dispersants | – | C | C | C | – |
| In-situ Burning | – | B | B | B | – |

Consult the *Environmental Considerations for Marine Oil Spill Response* document referenced on page 5 before using this table.