

This course provides a basic introduction to the information necessary for an informed oil spill planner to be an effective contributor to an integrated team. The course introduces the issues likely to surface as concerns during an oil spill, and then examines the physical and chemical processes that underlie the ecological, economic, and social concerns. Spill management options are examined to identify their risks, and benefits, as well as their limitations. The issues of planning and preparedness and the elements of a good response are reviewed and then used as the basis for a review of recent actual oil spill responses and current issues in oil pollution awareness and concerns.

Course Agenda

Day 1 (Morning)

Overview of oil pollution issues

- Chronic versus episodic pollution
- Ecological effects
- Social and economic effects
- Oil spills as a social concern
- Public perception and communication

What is oil?

- Physical properties of oil
- Compounds of interest

Day 1 (Afternoon)

Sources of oil in the marine and coastal environment

- Chronic sources
- Accidents
- Trends in oil pollution

Fate of oil

- Spreading
- Advection
- Evaporation
- Dissolution
- Dispersion
- Emulsification
- Photooxidation
- Biodegradation

Day 2 (Morning)

Ecological effects of oil spills

- Physical vs. chemical
- Chronic vs. acute
- Influence of habitat
- Trade-off comparisons
- Exposure: the key to understanding

Modeling oil spill fate (and effects)

Social and economic effects of oil spills

- Coastal resources
- Fisheries
- Protected species

Integrating ecological, social and economic effects

- Perception and reality collide

Day 2 (Afternoon)

Spill response options

- Goals and objectives of spill response
- Shoreline protection and removal
- At sea recovery
- Using dispersants
- Burning
- Limitations
- Risks and benefits

Day 3 (Morning)

Planning and preparedness

- Understanding key concepts
- Communication before a spill
- Organize, train and equip
- Exercises as a key to readiness

Essential elements of a good response

- Situational awareness and mobilization
- Tiered responses
- Setting priorities
- Monitoring operations
- Spill management and organization
- Communication and outreach

Ending a Response

- How much is enough?
- Demobilization

Day 3 (Afternoon)

Case studies on recent oil spills

Current "hot" topics in the media

Open discussion and lessons learned