

Enhanced Sub-Surface Monitoring Plan: Goals and Status

- “Response Action”
- Informed by 3 Academic Outreach Sessions
- Interim Plan Signed by FOSC, final plan to be signed soon

Goals of the Implementation Plan are to:

- a. Monitor and assess the distribution, concentration, and degradation of the portion of the oil that remains in the water column and/or bottom sediments.**

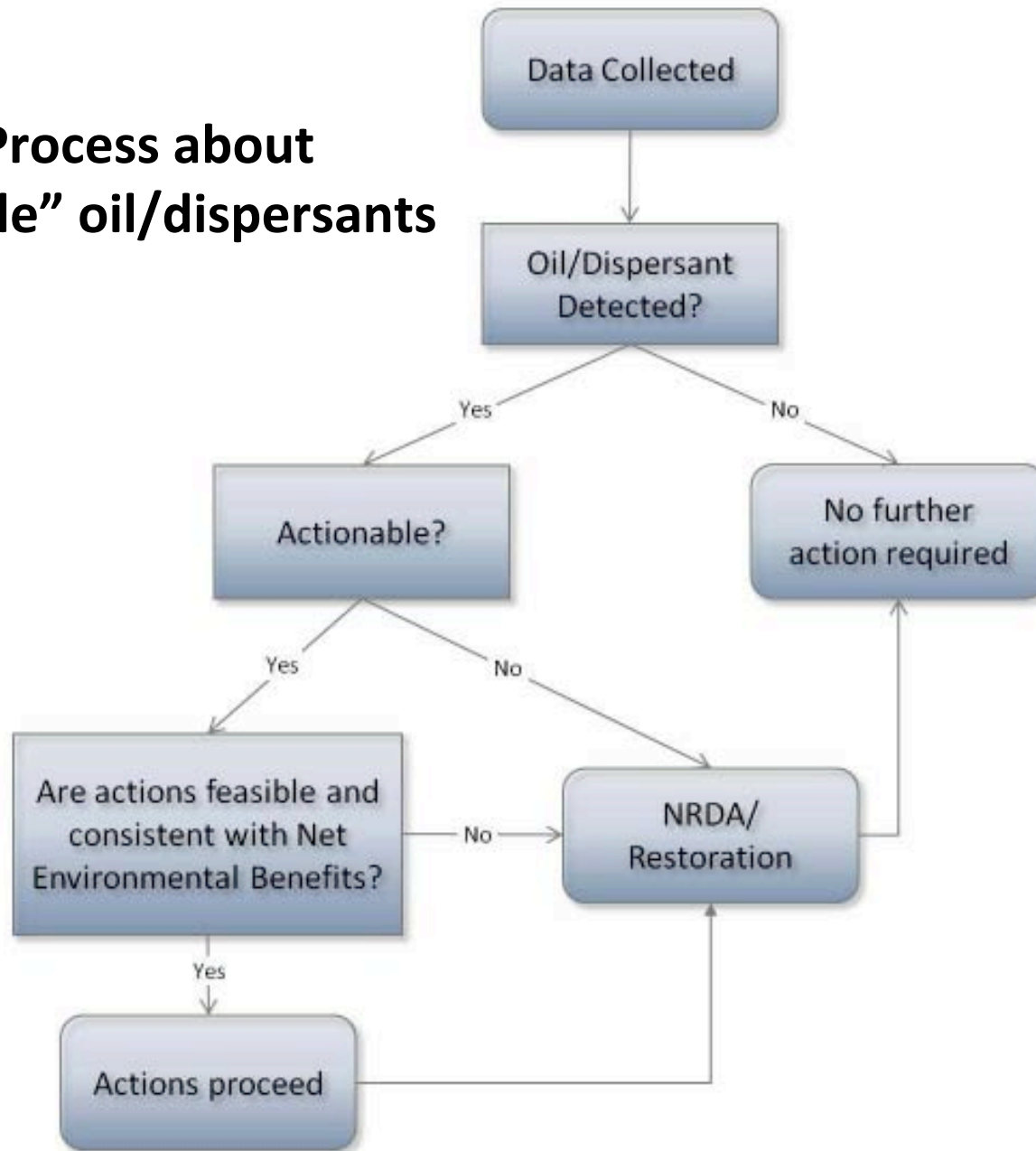
- b. Evaluate the distribution of indicators of dispersant or break-down products of dispersants used in oil spill response activities.**

- c. Identify any additional response requirements that may be necessary to address remaining sub-surface oil.**

When will sampling cease or transition to long-term monitoring or impact assessment occur? Decision points are based on:

- 1. Whether oil or dispersant is present that is attributable to the DWH**
- 2. Whether oil or dispersant is “actionable” (that is, are there any actions that can be undertaken to address detected levels of oil and dispersants from the environment under OPA definitions of removal actions)**
- 3. Whether actions are feasible and consistent with the principle of net environmental benefit (the actions do not create additional environmental issues of greater concern than allowing the oil/dispersants to remain in the environment).**

Decision Process about “actionable” oil/dispersants



Three Sampling Domains in the Plan

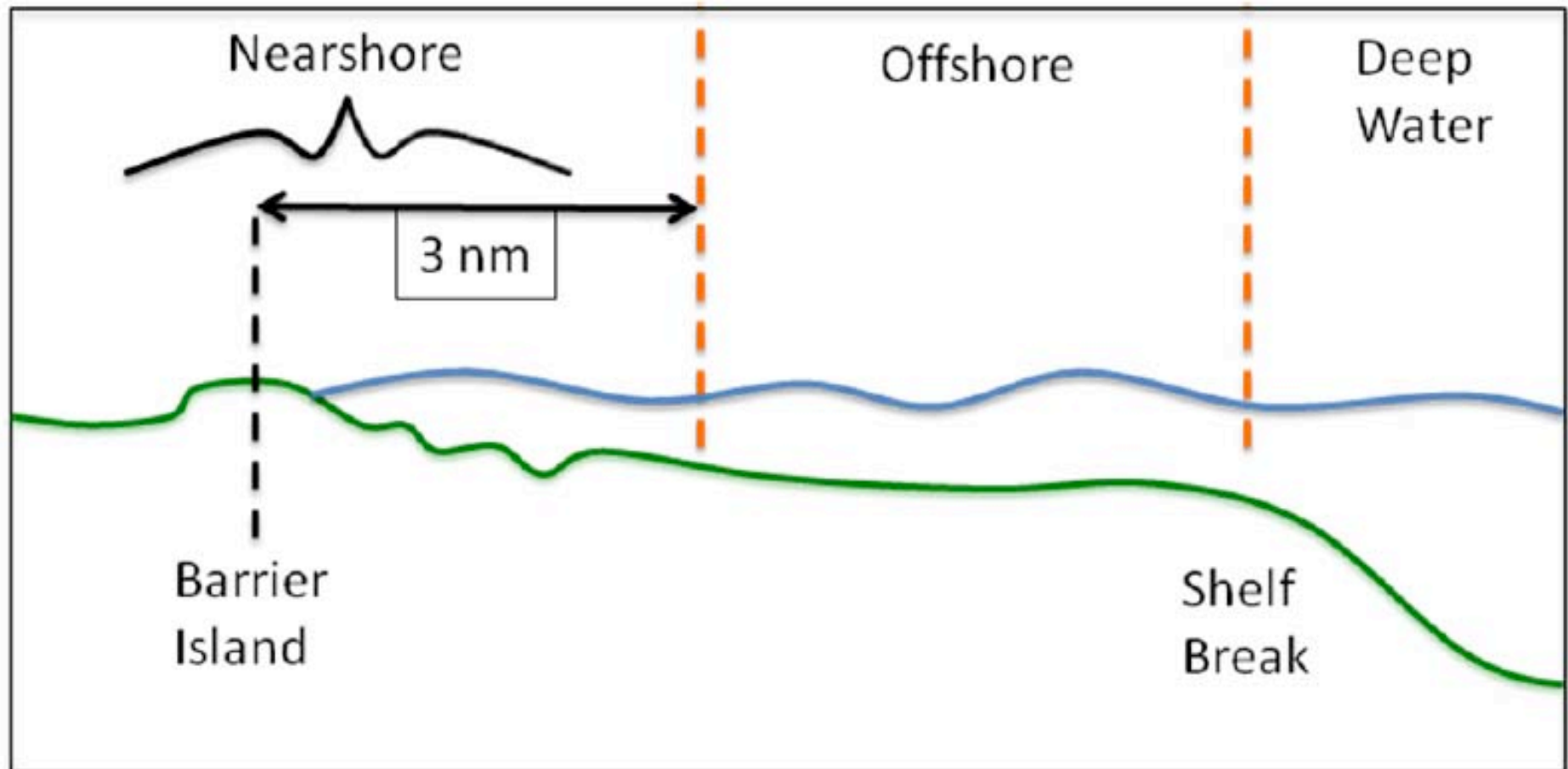
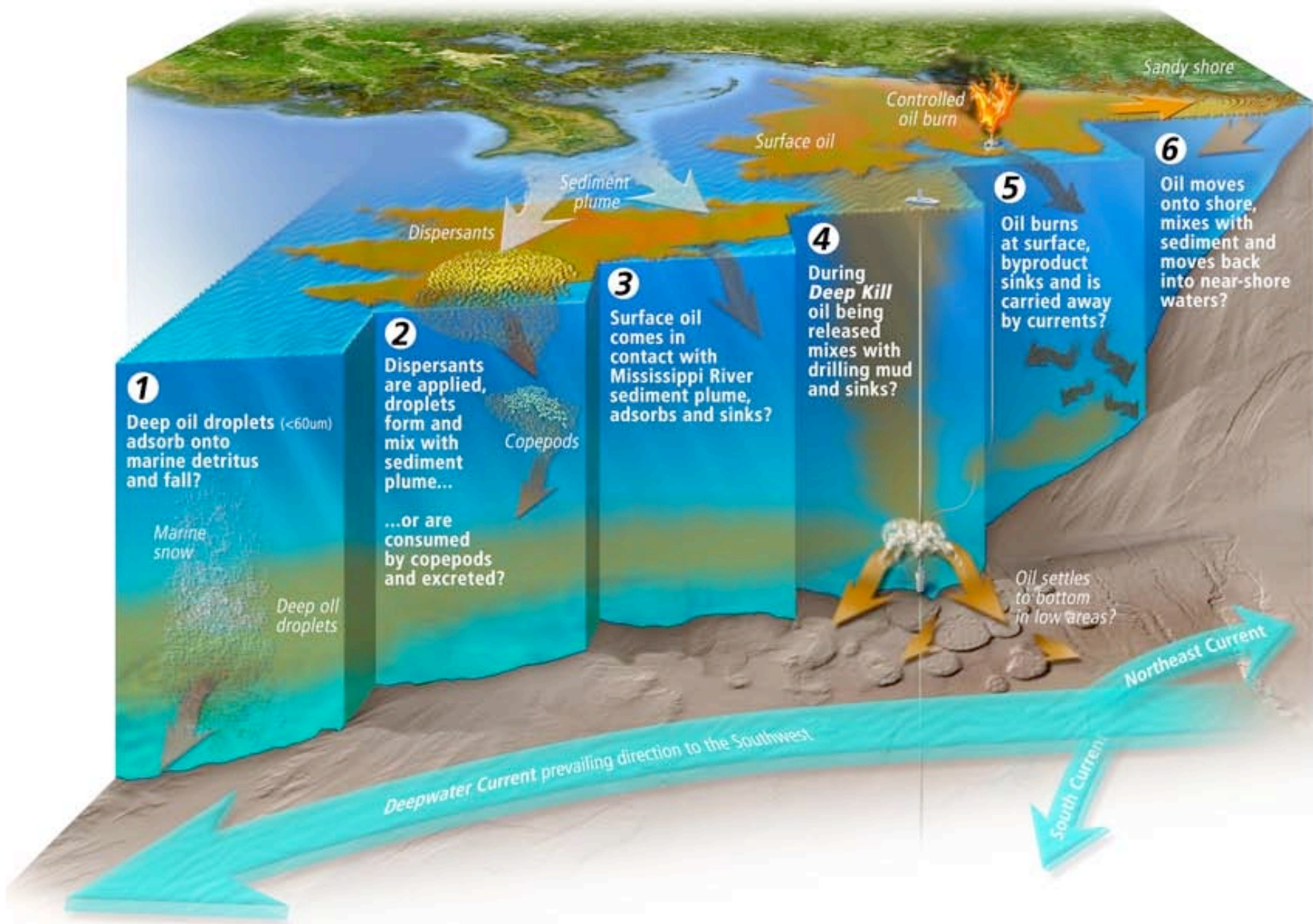


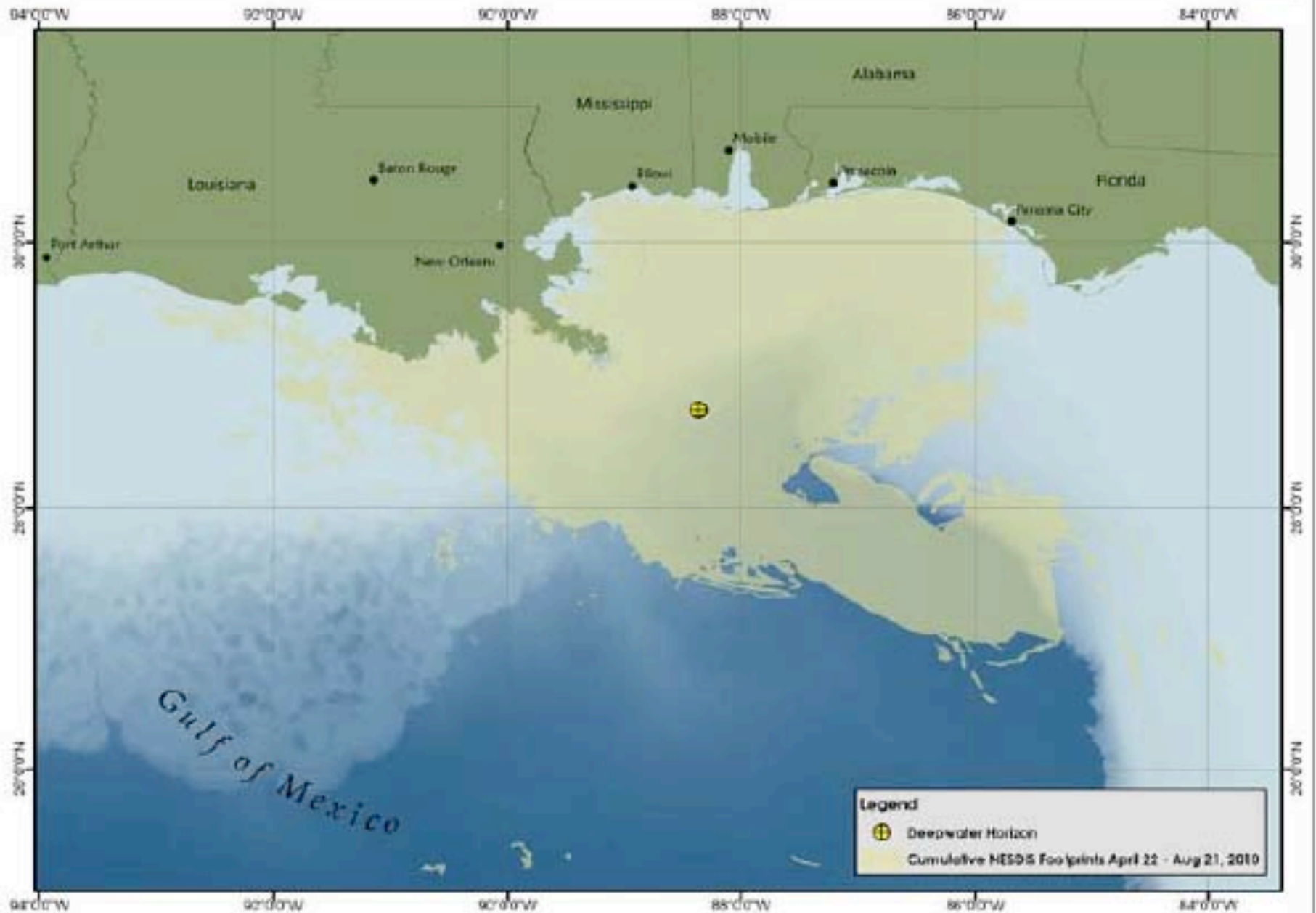
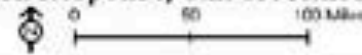
Figure 1.1 Sampling zones from behind the barrier islands to deep water environments (nm=nautical miles). This figure is not to scale.

Potential Scenarios for Oil in Sub-surface Areas



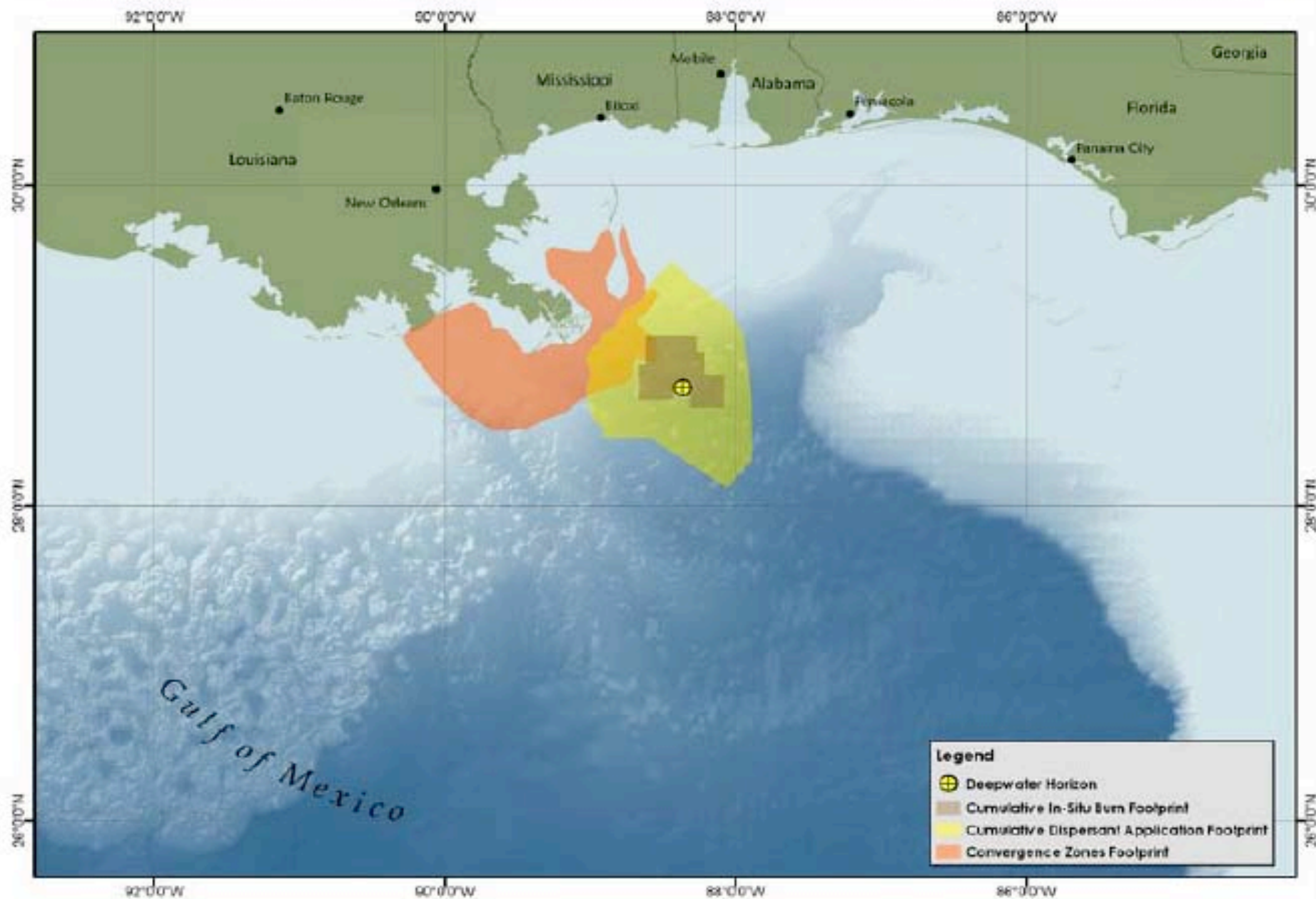
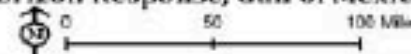
Cumulative Observations of Surface Oil (April 22-August 21, 2010)

Deepwater Horizon Response, Gulf of Mexico



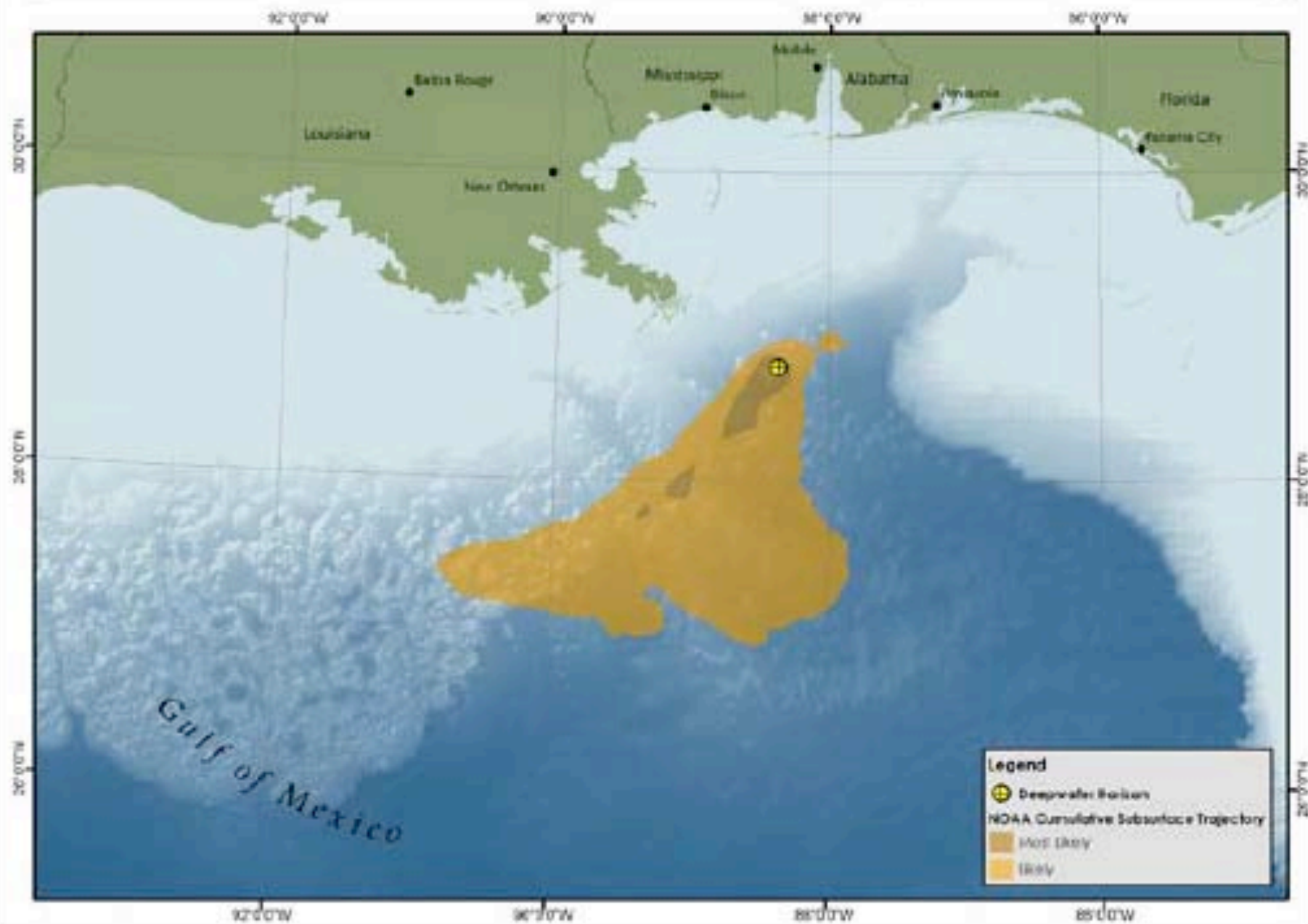
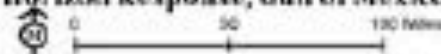
Locations of Oil Burns, Surface Dispersant Applications, and Mississippi River Convergence

Deepwater Horizon Response, Gulf of Mexico



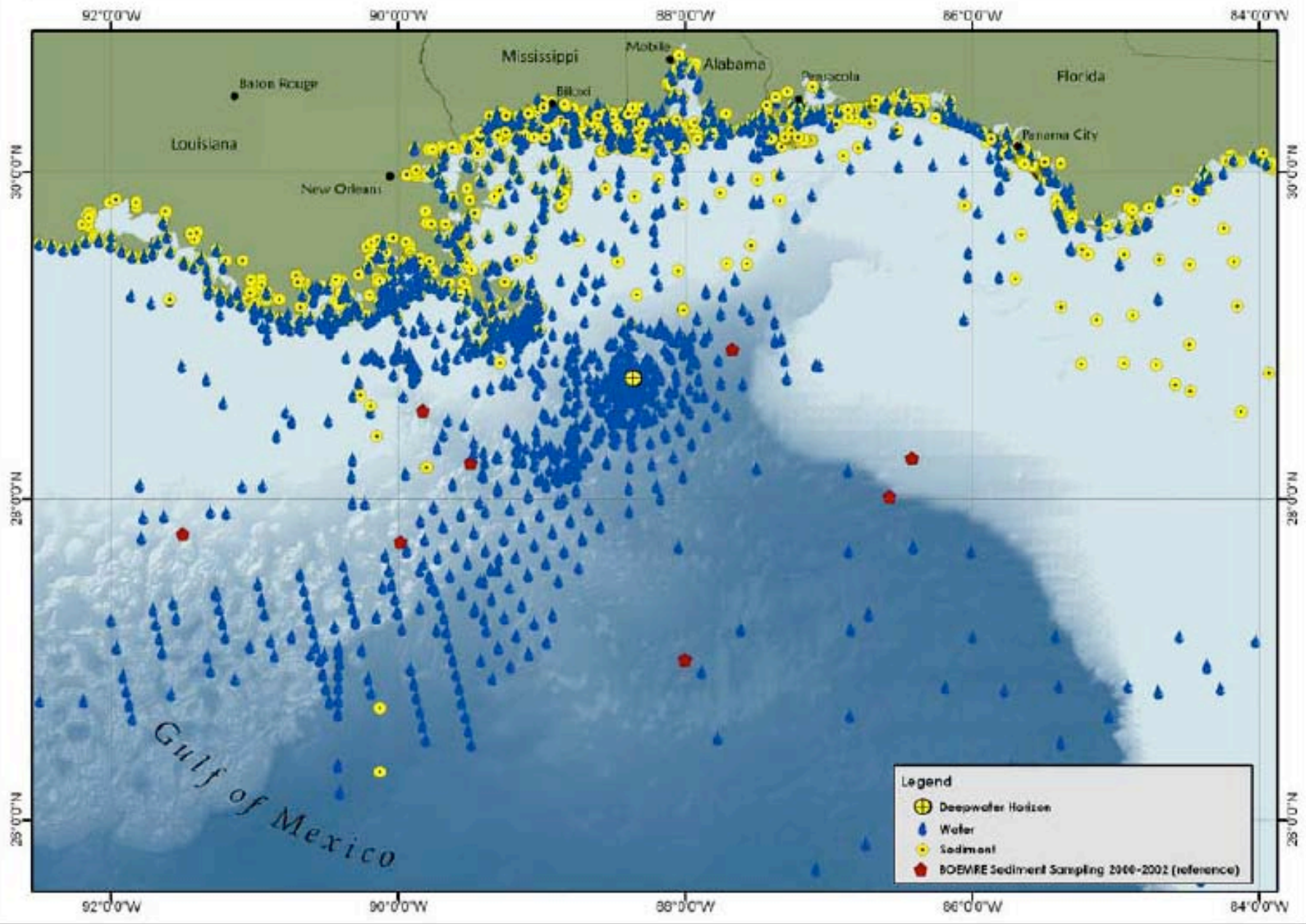
NOAA Cumulative Subsurface Trajectory
1,000-1,300 meter layer, April 22 - August 15, 2010

Deepwater Horizon Response, Gulf of Mexico



Water and Sediment Sampling Locations Through September 20, 2010

Deepwater Horizon Response, Gulf of Mexico

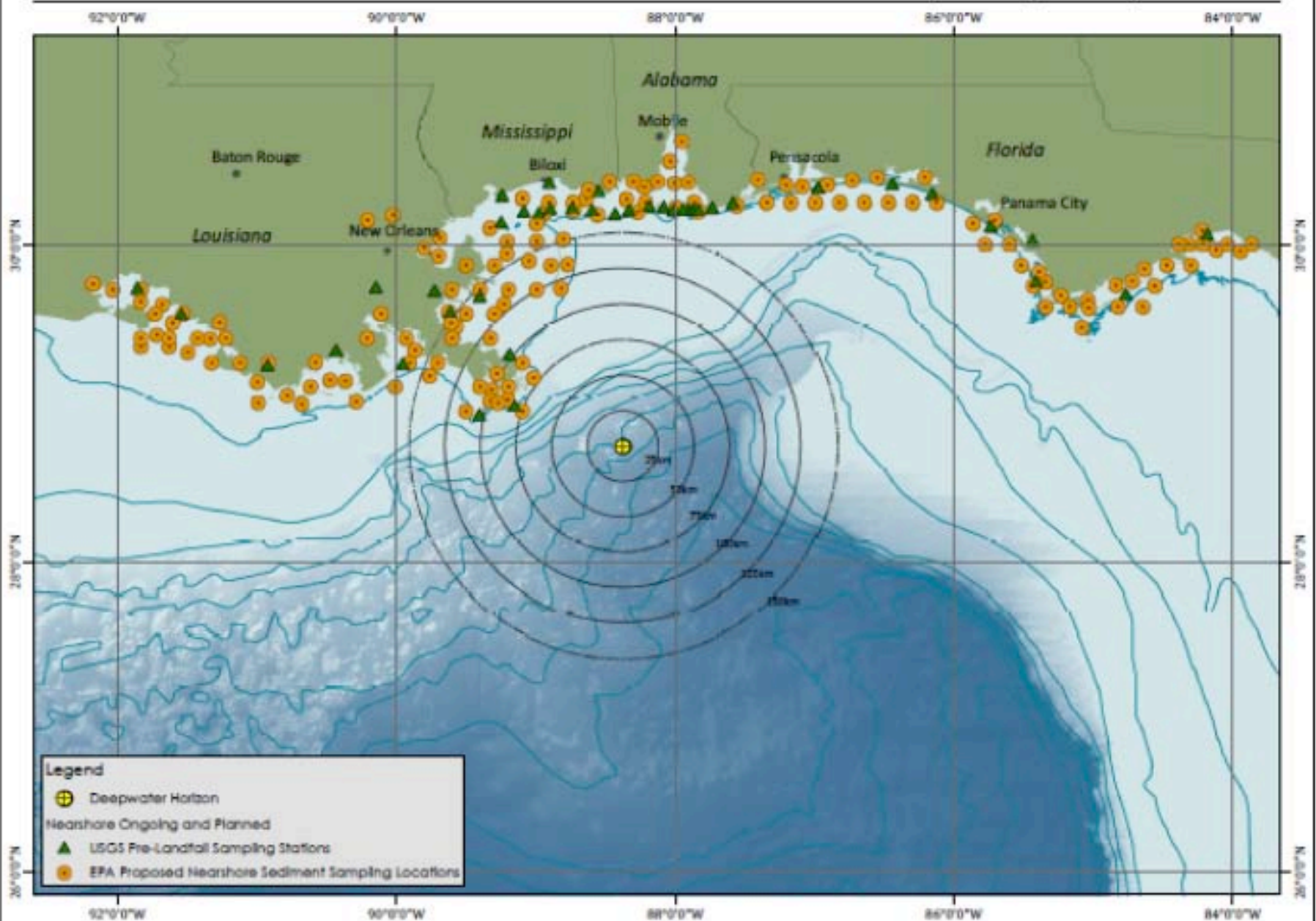


Proposed Nearshore Water Sampling Sites (USGS and EPA)

Deepwater Horizon Response, Gulf of Mexico



0 25 50 100 Miles

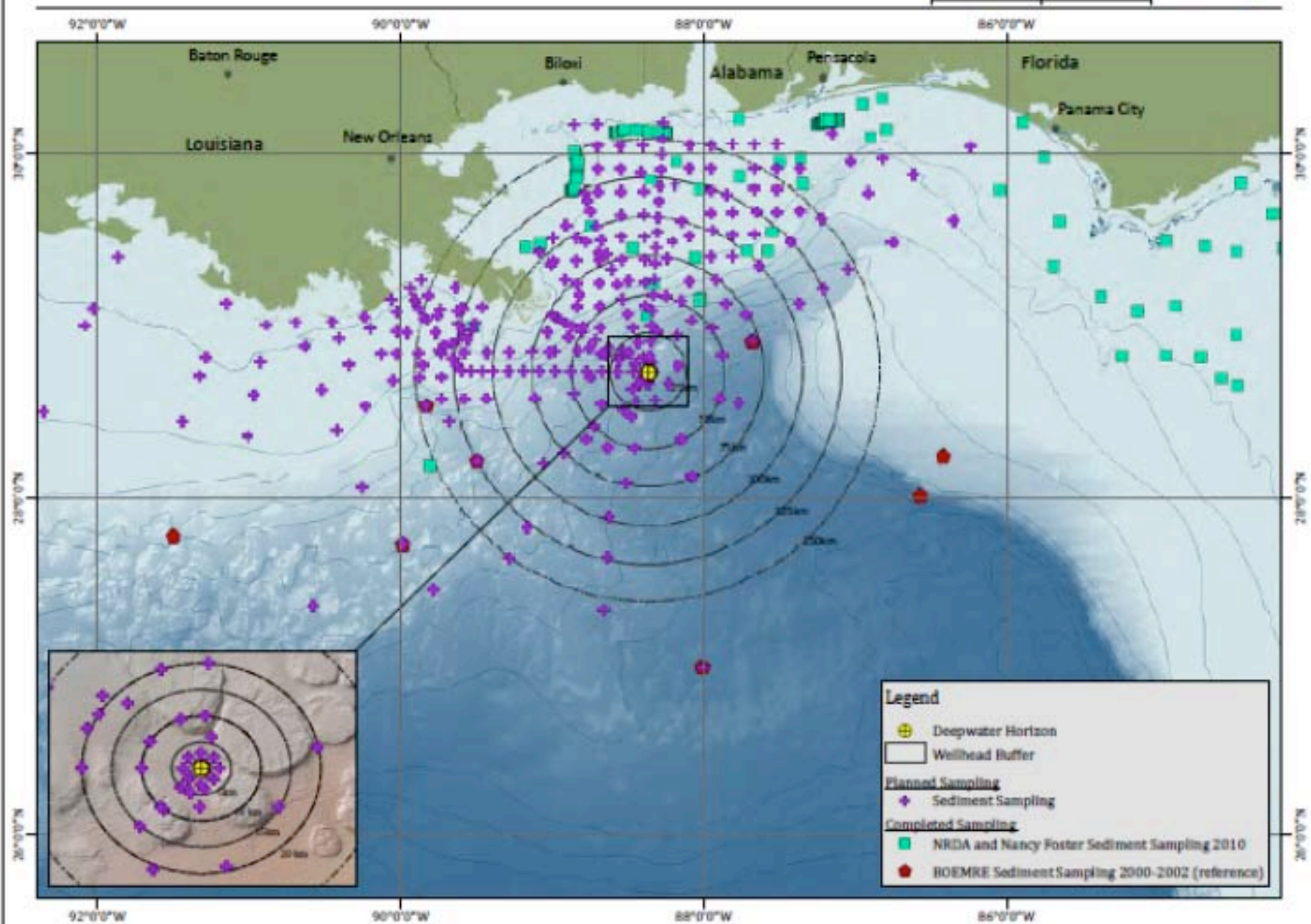


Legend

- Deepwater Horizon
- Nearshore Ongoing and Planned
- USGS Pre-Landfall Sampling Stations
- EPA Proposed Nearshore Sediment Sampling Locations

Ongoing and Planned Offshore and Deepwater Sediment Sampling Locations

Deepwater Horizon Response, Gulf of Mexico



Interim Plan Signed Out by FOSC

Activity #1: Nearshore Sediment and Water Sampling

Activity #2: Offshore and Deep Water Sediment Sampling

Activity #3: Enhanced Access to and Archival of Sampling and Monitoring Data

Relationship to Other Monitoring Goals

- Complete baseline of where oil/dispersants are/were and in what concentrations (exposure)
- Inform Natural Resource Damage Assessment
- Baselines for long term monitoring wrt Ecosystem restoration