

**THE HABITAT EQUIVALENCY METRICS WORKSHOP**  
**at the COASTAL RESPONSE RESEARCH CENTER**  
**DECEMBER 4-6, 2007**

**LESSONS LEARNED: REGULATORY  
REQUIREMENTS TO CONSIDER  
“BASELINE” IN THE NRDA PROCESS**

***INDUSTRY EXPERIENCE***

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## Baseline Considerations in the NRDA Process

- Regulatory Requirements
- Recurring Baseline Issues
- Recent Case Experiences
- Lessons Learned
- Questions



## Baseline Conditions - This





**Or This!**



## Background

- DOI Rule:

***“Upon completing the Injury Determination phase, the authorized official shall quantify for each resource determined to be injured . . . the reduction from baseline in the quantity and quality of services” 43 CFR 11.70(a)(1)***

- NOAA Rule:

***“In addition to determining whether injuries have resulted from the incident, trustees must quantify the degree, and spatial and temporal extent of such injuries relative to baseline.” 15 CFR 990.52(a)***



## Recurring Baseline Issues

- **Local Condition of the Resources**
  - Relative to a pristine, adjacent or other reference area
- **Variability of Conditions**
  - Use of point estimates or ranges
- **Historical Impacts to Resources**
  - Natural processes and human activities
- **Other Contributions**
  - Prior Spills and Releases

## Recent Experiences

- **Sediment habitat case in the Northwest**  
NRD Settlement Agreement in Place
- **Sediment habitat in the Gulf**  
NRD Settlement Agreement In Place
- **River, stream habitat in the Southeast**  
Cooperative Assessment in Process
- **River, stream habitat in Northwest**  
Trial Recently Completed



## Sediment Habitat Case in the Northwest

- Area of fill extending into saltwater bay
- Fill material containing hazardous substances
- Reference area habitat for fish and shoreline birds
- 100% service loss



*Failed to consider loss of baseline services through human activities*





## Sediment Habitat Case in the Gulf

- Releases of hazardous substances into saltwater bay
- Closure of bay to recreational & commercial oyster harvesting
- Reference conditions full season harvesting for entire time of closure
- Subject to periodic "red tide" events



*Failed to consider temporal impacts to baseline service levels*



## River, Bay Habitat Case in Southeast

- Releases of hazardous substances into inter-tidal river system
- Fish consumption advisory
- Recreational fishing losses based on healthy target fish populations
- At time of FCA, target fish population severely depleted by other causes



*Failed to consider variability of biological conditions over time*



## River, Stream Habitat Case in Northwest

- Releases of hazardous substances into freshwater mountain stream
- Baseline determined by fish density relative to a selected reference area
- Injury projected to continue for at least 100 year period
- By time of claim fish density above “baseline levels”



*Failed to adequately select reference area*



## Lessons Learned

- Avoid jumping directly from injury determination to restoration selection
- Recognize that baseline is not a static condition
- Obtain and consider all “reasonably” available data
  - Historical data
  - Biological/toxicity/chemistry data
  - Economic data



# Questions

Thank you.

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