



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

LESSSONS LEARNED: REGULATORY REQUIREMENTS TO CONSIDER "BASELINE" IN THE NRDA PROCESS

INDUSTRY EXPERIENCE

Neal Brody December 6, 2007





Baseline Considerations in the NRDA Process

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







Baseline Conditions - This

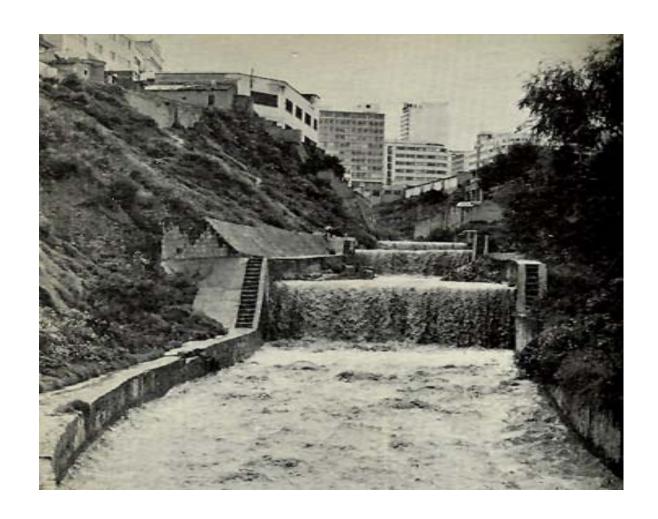








Or This!









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)







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



THE



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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Pictures Credited to John Brody

