The National Fish Habitat Assessment: Current Status and Coming Attractions

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Abstract: The National Fish Habitat Action Plan (NFHAP) is a voluntary science-based effort to protect, rehabilitate, and improve the nation's aquatic habitat. One of the key components of the science effort is the development of a national assessment of the nation's fish habitat that eventually will examine our waters from the mountains to the shelf. The assessment will focus on ecosystem process impairments, will summarize large amounts of system data to allow for meaningful decisions about prioritization of systems and measurement of the Plan's success, and will provide for opportunities to apply lessons between similar systems. All of the nation's waters will be classified using published classification systems including the World Wildlife Fund's Aquatic Zoogeography Units, The Nature Conservancy's Ecological Drainage Units, and NOAA's Coastal and Estuarine Drainage Areas. Inland waters will use the National Hydrography Database Plus (NHD+) as their data structure. Condition analysis will focus on emergent processes: hydrology, bottom and channel form to include living habitat (i.e., coral reefs), material recruitment, connectivity, water quality, and energy flow. The initial inland assessment will use a minimum of 17 surrogate variables (ranging from % developed open space to superfund sites) from national datasets that were taken in a consistent fashion and are meaningful to structuring fish habitat. Similarly, the coastal assessment uses a minimum of 19 variables ranging from estimated areas assessable to fish to nutrient input concentrations to benthic communities. Future assessments will use detailed process related variables and will examine if systems are within 25% of the expected natural variability for each process variable, a scaleless analysis that allows meaningful comparisons between different systems. The initial analysis for inland rivers has been completed and others are in progress. Currently, the inland analysis is refining the rivers analysis, developing the lake and stream assessment, and starting to conduct the Alaska and Hawaii analysis. The coastal assessment is fully developing spatial units, completing indicator selection, and attributing spatial units for the lower 48 states, Hawaii, and parts of Alaska. The initial assessment will be complete in late 2010. Additionally, the NFHAP assessment structure is going to be used to assess the effects of climate change on the nation's aquatic habitat and this work will be completed in 2012.

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