

Resource	Indicators	Existing Data	Data Needed
Estuarine Systems	<p>Definition 3:</p> <ol style="list-style-type: none"> 1. Area of estuarine habitats protected (acres & percent): 2. Estuarine water quality 	<p>Cornight et al., 1987; Fishman Environmental Associates, 1987; Good et al., 1998; Good, 1999; NOAA, 1989; Skelton, 1999 (DEQ data); Greg McMurray, pers. comm., 1999</p>	<ol style="list-style-type: none"> 1. More complete data on recent regulatory losses and gains as well as on non-regulatory restoration of salt marshes and other estuarine habitats
Freshwater wetlands	<ol style="list-style-type: none"> 1. Change in wetland area and spatial distribution 2. Permitted change in wetland area 3. Change in diversity and distribution 4. Change in assemblages of native plants and animals 5. Degree of connectivity with other aquatic resources and upland habitats 	<p>Akins, 1970; Dahl, 1990; Fretwell et al. 1995; Borgias and Patterson, 1998; Christy et al. 1998; Daggett et al. 1999; National Wetlands Inventory; Or. Div. of State Lands permit database</p> <p>Kentula et al 1992; Shuch and Franklin, 1995; Or. Div. Of State Lands database and reports</p> <ol style="list-style-type: none"> 1. Regional status and trend studies (ONHP). 2. Land cover/land use change analysis. 3. Permit program outcome evaluation <p>Christy et al. 1988; Daggett et al. 1998; Gwin et al. 1999; NWI</p> <p>Benner and Sedell, 1994; NWI</p>	<ol style="list-style-type: none"> 1. Develop and support a program to measure & monitor wetland ecosystem health 2. NWI maps digitized statewide 3. Develop additional Local Wetlands Inventories (more detailed than NWI) within urban areas 4. Oregon Hydrogeomorphic Wetland/Riparian Assessment Project expanded beyond Willamette Valley ecoregion pilot study 5. Sample of biological indicators of wetland health at reference sites 6. Digital county soil survey data (soil series level) statewide 7. Land Use/Land Cover mapping at regular intervals 8. Wetland status/trend studies for key ecoregions
Riparian Resources	<ol style="list-style-type: none"> 1. Proportion of intact or functional riparian vegetation 2. Number of large native trees in riparian area 3. Total area of riparian forests 4. Wet community types 	<p>Pumell, 1994; H.J. Andrews Long-term Ecological Research Program; CLAMS Project; USFWS maps; USDA – Forest Service Watershed Analysis Program; Pacific Northwest Ecosystem Research Consortium</p>	<ol style="list-style-type: none"> 1. More comprehensive assessments of riparian status and conditions. 2. Evaluation of the economic role of riparian landscape features. 3. Large-scale regional assessments of riparian plant communities. 4. Continued development of satellite imagery techniques (with finer resolution) and new digital maps to analyze riparian condition (e.g., land use/cover mapping at regular intervals) 5. Finer scale remote sensing data

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<p>Freshwater Fish Communities</p>	<p>1. Proportion of fish populations classified as "healthy" (e.g., species abundance and geographic distribution). 2. Stressors on native fish communities (e.g., proportions of exotic fish species, proportion of diseased or deformed fish, presence of species at risk). 3. Harvest levels for sport and commercial fishing. 4. Extinctions and listings as threatened or endangered species</p>	<p>1. Distributional data 2. Abundance of migratory species over dams or through ladders 3. Spawner surveys 4. Commercial catch 5. Habitat surveys 6. Fish models</p>	<p>1. State-wide comprehensive monitoring program to systematically track the status of representative, well-distributed species 2. Increased attention to population status and habitat relationships in lowland streams and large rivers 3. Better understanding of the sources, consequences, and potential solutions regarding the relationships between toxic contaminants and health of both fish and human communities 4. 1: 24000 stream network coverages and detailed road coverages</p>
<p>Forest Resources</p>	<p>WETTER ECOREGIONS Condition: Coarse Scale (landscape) -- 1. Extent of major forest types 2. Distribution among structural stages (open/young and late successional/old growth) 3. Landscape pattern of patches. Fine scale (stand): 1. Species diversity within stands 2. Structural diversity (legacy trees, snags, and down wood) 3. Stand densities. Productivity: 1. Annual growth of trees 2. Timber harvest Investment: 1. Level of activity</p> <p>DRIER ECOREGIONS Course scale (landscape): 1. Degree to which forests support the structures associated with historical fire regimes Fine scale (stand): 1. Degree to which forests support large trees and snags and support a well-developed understory</p> <p>Definition: 1. Presence of native vegetation 2. Individual species of native vegetation varying with time since last disturbance, soils, and precipitation patterns. 3. Absence/suppression of exotic species 4. Upward trend in ecological status over time 5. No accelerated soil erosion 6. Fire as a natural event</p>	<p>NO SOURCES LISTED (FEMAT, 1983)?</p>	<p>1. Comprehensive information and measurement of the characteristic composition, structure, and processes of Oregon forest types (e.g., quantification of historical range or variability in forest composition and structure) 2. Estimates of the growth and harvest potential of federal and State forest lands 3. Land use/land cover mapping at regular intervals</p>
		<p>Trout Creek Mountains Project ICBEMP</p>	<p>1. Consensus on a vision for rangelands 2. Adequate information gathering on a landscape level 3. Management programs to restore natural functioning condition 4. Monitoring to judge the success of those programs 5. Proper funding to accomplish the aforementioned 6. Land use/land cover mapping at regular intervals</p>