

Appendix 13. Decision Support Systems.

Previous TRTs have employed a number of different decision systems to identify demographically independent populations in their respective DPSs and ESUs. Most have relied on an expert opinion system, either to directly identify populations or to establish criteria for decision systems, which, in turn, identify demographically independent populations. Myers et al. (2006) utilized a simple set of basin size and distance parameters (geographic template model) to identify presumptive populations in the Lower Columbia and Upper Willamette River Recovery Domain. The Southern Oregon/Northern California Coast (SONCC) Coho Salmon Workgroup of the TRT developed a method for using principal component and clustering analyses of climate, physiographic, and biogeographic data to identify areas of similar environmental conditions (Williams et al. 2006). Lawson et al. (2007) proposed a different approach to identifying historical populations of coho salmon in the Oregon Coast ESU. Independent drainages along the Oregon Coast were evaluated according to their persistence and independence. Functionally independent populations, the equivalent of DIPs (McElhany et al. 2000), had to be both large enough to persist into the foreseeable future and remote enough to experience minimal demographic influence from adjacent populations. Potentially independent populations met the persistence criteria, but were not sufficiently isolated to meet the independence criteria, while dependent populations were both too small to persist independently and subject to demographic influences from adjacent populations.