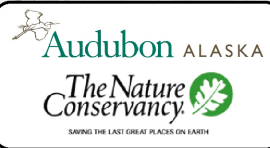


A Preliminary Ranking of Watershed Values

for Conservation of Focal Species and Ecological Systems*

based on a spatial optimization using the Marxan decision-support system







Marxan Analysis:

A series of scenarios was developed (n = 50) to examine alternative conservation strategies across a range of goals for representation of focal species and ecological systems (range = 20% - 80% of current distribution). We included a suitability factor for roads (km) within the watershed as well as a base cost proportional to the total land area (hectares). Thus, these results identify ecologically valuable watershed that exist in a primarily roadless condition (roadless scenario).

Over these iterations, the frequency with which any watershed was identified by Marxan as part of the "best" solution, is considered an index to the relative value (irreplacability) of that watershed as part of an efficient and representative conservation system.

Preliminary Ranking

(Index of Irreplacability)

-  Highest Value
(0.75 - 1.0)
-  High Value
(0.50 - 0.74)
-  Moderate Value
(0.25 - 0.49)
-  Lower Value
(0 - 0.24)

* Focal Species and Ecological Systems

Terrestrial

Brown and Black Bear
- summer habitat

Sitka Black-tailed Deer
- winter habitat

Large Tree Forest
- Riparian
- Upland

Marbled Murrelet
- nesting habitat

Freshwater

Salmon
- freshwater spawning
& rearing habitat for 5
species of Pacific salmon
and steelhead

Coastal

Estuaries
- intertidal emergent
vegetation

