

Evaluating the Subsistence Service Recovery: Spatial and Temporal Characterization of Prince William Sound Subsistence Harvest Activities

EXECUTIVE SUMMARY

The Chugach National Forest, as the major land-owning Federal Trustee in the Sound, plays an important role in the EVOS recovery process. One area of critical importance to Forest managers, which has received less attention by researchers, is the distribution, behavior, and experience of human users throughout the Sound and the impact of these users on EVOS recovering resources and services. A key recovering human service is subsistence harvest of resources by eligible PWS communities which include Chenega Bay, Cordova, Tatitlek and Whittier. Recreation use is increasing in the Sound, and there is concern that increased competition from commercial and independent recreation may be negatively impacting harvest activities from these communities through direct competition for resources. This competition could be coming directly through taking of resources by sport fishers and hunters, and also indirectly through displacement of subsistence harvesters from traditional harvest areas.

We conducted interviews of 88 households in Chenega Bay (8), Cordova (35), Tatitlek (6) and Whittier (39) in 2009. We asked households to summarize their harvest activities within the Prince William Sound region in terms of resources sought, spatial extent of harvest and total numbers of days invested. We examined changes in harvest activity by asking respondents to summarize harvest based on a total history of use and report on their household's activities during a recent five year period from ~2004-2008. We also asked them to summarize their intentions for harvest in future years by identifying areas they may use less or abandon completely. For those areas identified we asked respondents to identify motivations for likely decreases in use.

All information collected was summarized by season of use and spatially, across a series of 160 terrestrial and marine polygons. The resulting information was entered into a GIS for summary and analysis. We evaluated resulting spatial and seasonal distributions of harvest effort with predictions of recreation activity density from a concurrent study evaluating recreation user experience in the Sound

We documented substantial investments in resource harvest by households from subsistence eligible communities in terms of days invested and spatial extent of travel in pursuit of resources. Harvesting of 24 different resources was reported, primarily halibut, salmon, rockfish, berries and deer. All harvestable resources identified have rich histories of use by respondents but all except salmon show apparent declines in use during the past five years. This decline was evidenced by a decrease in the number of households reporting use of the resource as well as a decrease in spatial extent of resource harvest. This decrease in reported use was paralleled by reported intentions to reduce use within certain sub regions within the study area.

Reasons for decreased use were primarily related to a variety of personal circumstances related to lifestyle change, aging/medical, household move, etc. but a close secondary reason stated was an apparent decline in resources within individual sub regions

(polygons). The third and fourth most often stated reasons were competition from other users followed by transportation costs.

Respondents reported competition within 37 individual polygons (~23%) that would likely result in them using those areas less. No respondents reported the intention of abandoning use of areas completely due to competition with others. When asked to rank who their perceived competition was, respondents overwhelmingly identified other harvesters as their main competition. They perceived these competitors as most likely to be other local harvesters, followed by commercial sport (guided hunting and fishing), and non-local sport, and commercial harvesters (commercial fishing). We found a weak positive correlation between higher densities of recreation activity and areas favored for subsistence harvest during summer. This indicates that the overall interaction with recreation may be greatest during summer but it's not completely clear how this interaction may result in feelings of competition.

Perhaps most important is our effort to define a baseline for spatial distribution and seasonal intensity of subsistence harvest in the Sound. Future management efforts, investigations and monitoring will likely benefit as a result.
