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OSPR Aerial Survey Response to San Francisco Bay Oil Spill:

Distribution and Relative Abundance of Sensitive Wildlife Resources Subject to the Cape Mohican Oil Spill in San Francisco Bay

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Introduction and Background

On Nov. 1, 1996, an aerial survey of wildlife was conducted over waters contaminated or subject to potentially contamination by release of oil from the vessel *Cape Mohican* at drydock in the vicinity of Pier 42 on the eastern shore of the San Francisco peninsula. The spatial scope of the survey was determined by examination of the distribution of oiled birds and deposition of oil on beaches within San Francisco Bay and along the shoreline of the outer coast. Details of the survey methodology and logistics have been provided to OSPR in an earlier report (dated Nov. 6, 1996). Subsequent to that report, data have been entered and processed to produce graphic output and effort-corrected computer files.

This report provides maps of density-distribution of the most abundant species or species-groups observed on the aerial survey. Most effort on the aerial survey was conducted in nearshore waters where ducks and waders were most abundant. Only a single south-to-north transect was conducted in mid-waters of the south and central San Francisco Bay. Because these transects are the only available near real-time data on marine birds and mammals, they will have to suffice as representative of abundance in waters greater than about one nautical mile off shore.

Results

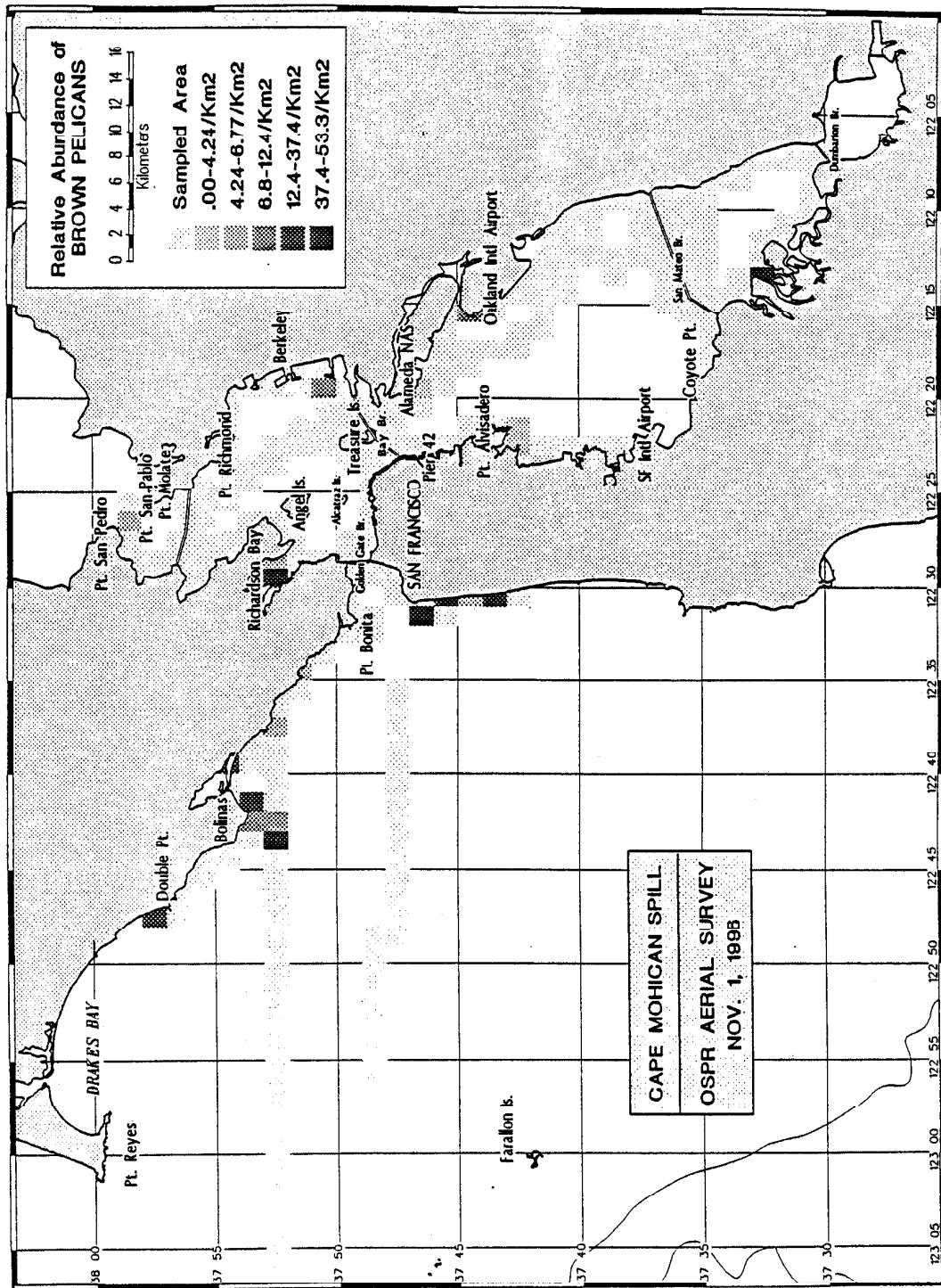
Distribution and abundance of birds and harbor seals are shown in Figures 1-10. Density is expressed as arithmetic percentile to provide greatest contrast among cells of a one-minute grid of latitude and longitude. This is simply a means of display- all data are conserved for later analysis and can graphically be presented on a variety of scales.

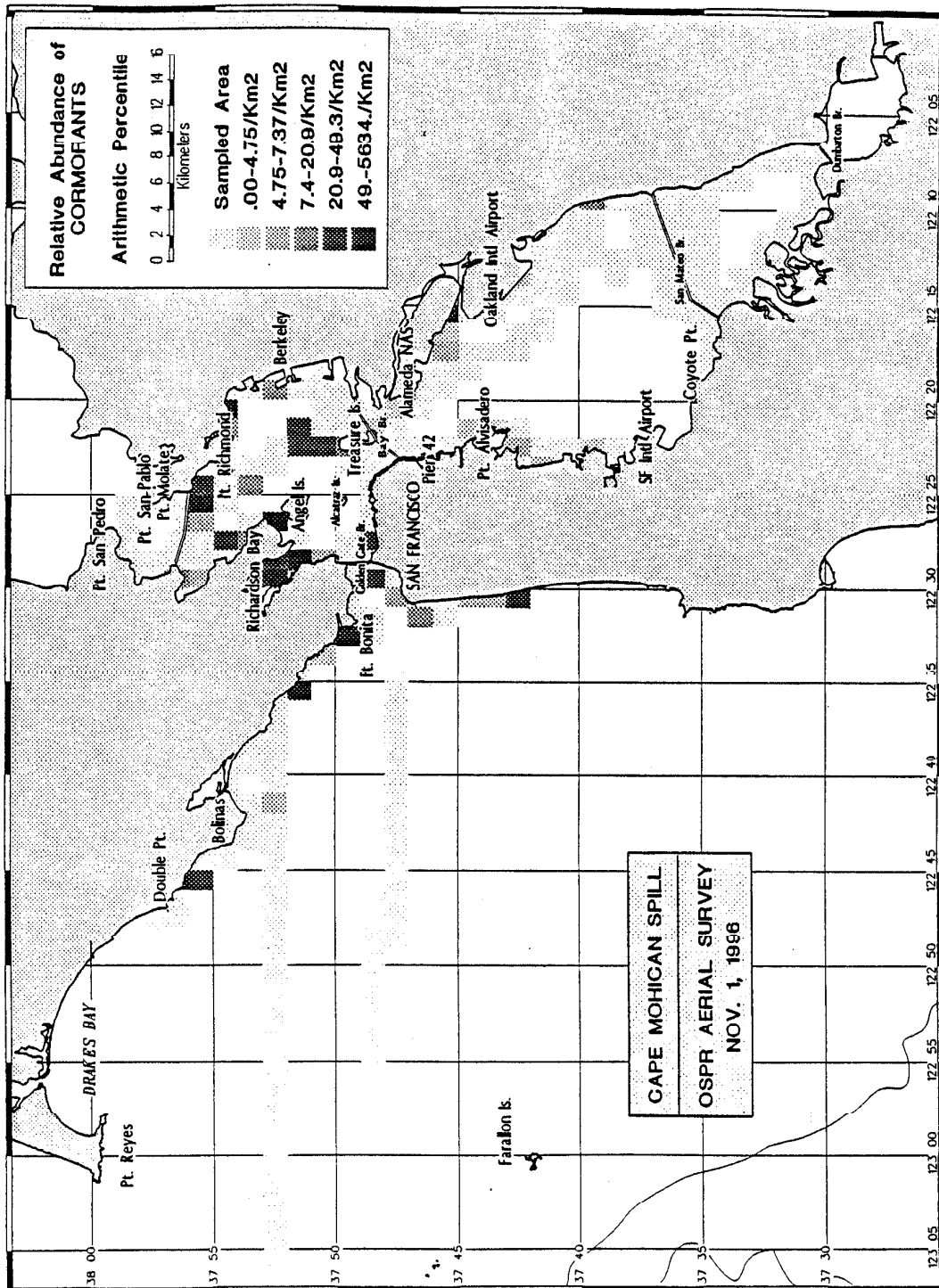
In this survey, a single south-to-north transect was conducted in the southern San Francisco Bay and the central San Francisco Bay. In the absence of other data, the results of these transects should be considered representative of open-waters of the Bay. Considerable variance exists within pooled data on south Bay and central Bay mid-water transects (Table 1). In the south Bay, the vast majority of sightings on mid-water transects were Surf Scoters; in the central Bay, lesser densities were recorded and

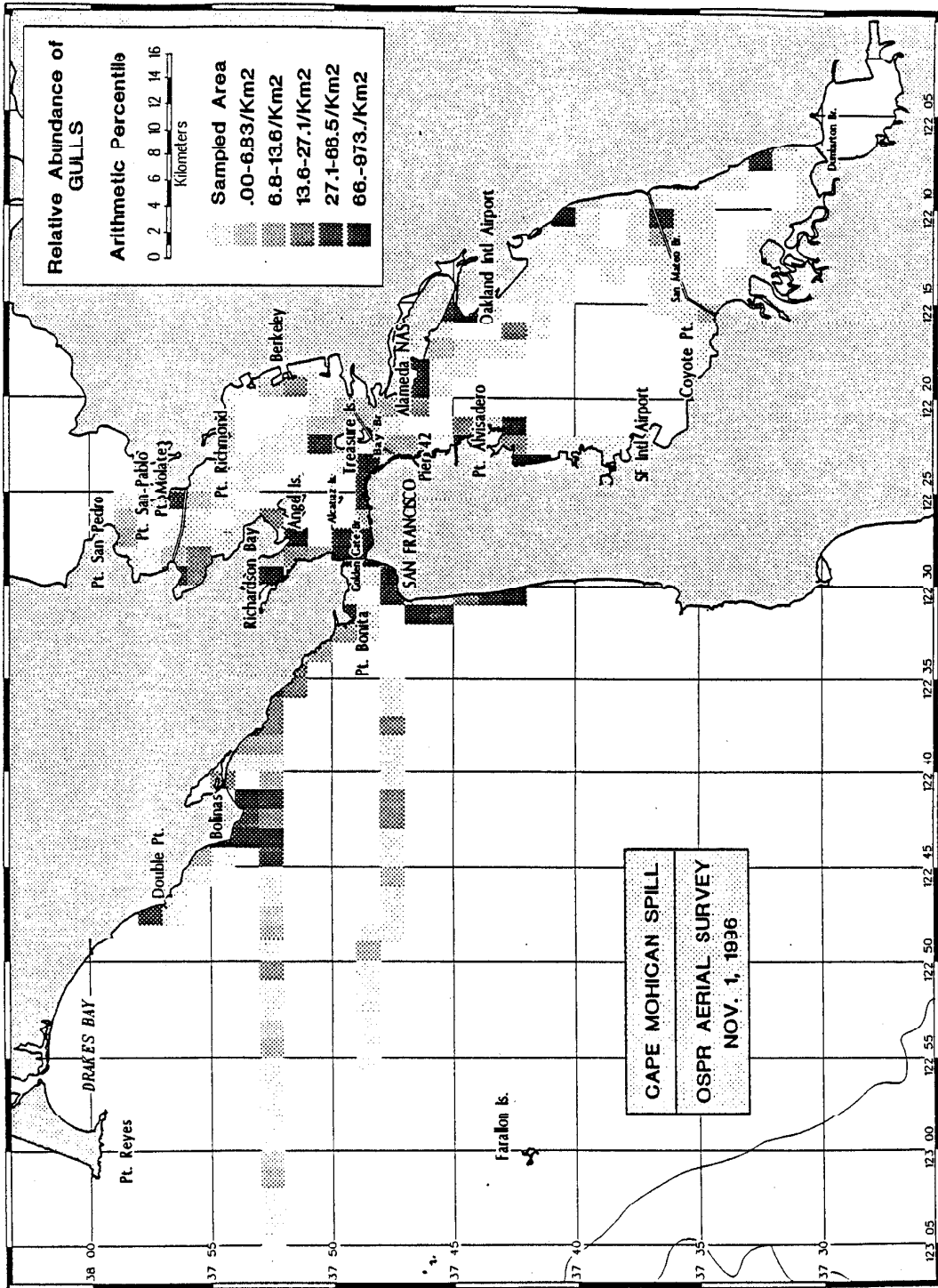
consisted predominately of cormorants, grebes, and ducks.

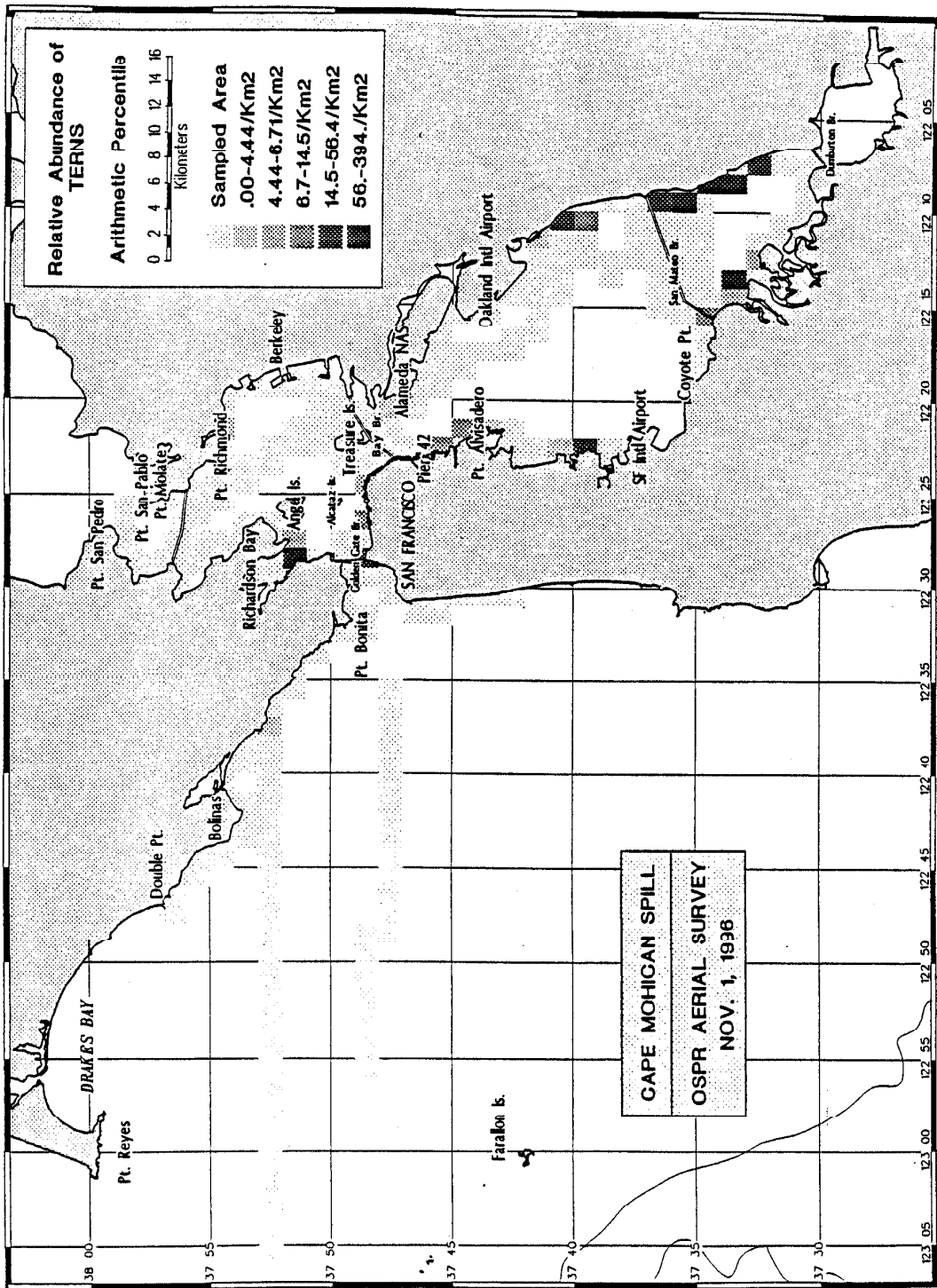
Table 1. Mean density and standard deviation on transect sample of abundance of birds and harbor seals in south and central San Francisco Bay.

	South Bay (n=16)	Central Bay (n=15)
Brown Pelican	0	0
Cormorants	0	9.27 (17.19)
Gulls	8.91 (25.40)	1.11 (2.33)
Terns	0	0
Loons	0	0
Grebes	8.90 (13.27)	3.65 (7.51)
Ducks	18.58 (40.93)	4.04 (14.62)
Scoters	672.02 (1367.71)	0
Waders/Shorebirds	0	0
Harbor Seals	0.39 (1.60)	0









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