

## LANDSCAPE ANALYSIS OF BALING TWINE IN OSPREY NESTS

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Baling twine is polypropylene rope used by farmers to tie together bales of hay. After the hay is used to feed livestock, loose strands of baling twine are sometimes left in fields. ospreys (*Pandion haliaetus*) have a propensity to collect baling twine and use it to line their

nests. For example, one osprey nest near Missoula, Montana contained  $> \frac{1}{4}$  mile of baling twine. Chicks and adults can easily become entangled in baling twine causing significant mortality: some studies estimate that over 10 percent of osprey chicks become so tangled that they die in the nests before fledging. Our goal was to describe the general extent of this problem. We sampled 115 osprey nests in parts of western Montana, Wyoming, Idaho and Washington. To test what landscape features are associated with the amount of baling twine in Osprey nests we used GIS analyses to describe land use within several different distances of nests. Not surprisingly, nests that are far ( $\geq 3$  km) from any agricultural land tend to have no baling twine. However, the amount of agricultural land and livestock pastures within 1 km of osprey nests are poor predictors of the amount of baling twine in nests. These analyses suggest that Ospreys travel considerable distance to collect baling twine, and that fairly distant point sources of baling twine, e.g., a single, small dirty field, can be important. Our initial efforts in public education about the importance of picking up baling twine are promising.