

**WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
ELECTRONIC CODED-WIRE TAG DETECTION EQUIPMENT STUDY DURING 1996
COASTAL RECREATIONAL FISHERY**

The Ocean Sampling Program (OSP) used two Northwest Marine Technology coded-wire tag (CWT) detection Wands during the 1996 ocean recreational fishery. One wand was used in Ilwaco, and the other was used in Westport. Both charter and private boats were sampled using the Wands, and a total of six individual samplers used the Wands, collecting data on accuracy and recording their qualitative impressions of the device.

A total of 1,069 coho salmon were sampled with 58 adipose marks (Table 1). We removed the snouts of all 58 fish and sent them to the Washington Department of Fish and Wildlife (WDFW) CWT Recovery Laboratory for processing. Five of the 58 fish with missing adipose fins did not have a CWT. Of the 53 that did have CWTs, samplers detected 44 (or 83 percent) with the Wands. Seven of the nine fish with CWTs that were not detected were missed by one sampler and the remaining two were both missed by a second sampler.

We had planned to do more sampling with the electronic detection equipment in 1996, but the season was short and only two days prior to the start of the season were we informed that it was going to start. We had little time for planning or training with the new detection equipment.

TABLE 1. RESULTS OF 1996 WDFW OCEAN SAMPLING FOR CODED-WIRE TAGS WITH ELECTRONIC HAND-HELD WAND DETECTORS

| Sampling Site | Fish Sampled | Known CWT'd Fish (with AD Mark) | CWTs Detected (With AD Mark) | CWTs Missed (With AD Mark) | False Detections | Detection Rate % | False Detection Rate % |
|---------------|--------------|---------------------------------|------------------------------|----------------------------|------------------|------------------|------------------------|
| Ilwaco | 956 | 46 | 37 | 9 | 14 | 80 | 1.50 |
| Westport | 113 | 7 | 7 | 0 | 22 | 100 | 20.8 |
| Totals | 1,069 | 53 | 44 | 9 | 36 | 83 | 3.5 |

Samplers estimated that using the wand approximately doubled sampling time per boat. False positives occurred under a variety of circumstances, including wearing a wristwatch, sampling on wooden docks with nails, sampling aboard charter boats using metal pins to identify customers' fish, and sampling near cleats or pilings with metal sheaths. Samplers found that they got best results when they lifted the fish well off of the dock or boat before using the Wand. Samplers reported that the Wands were bulky to carry, especially when climbing onto and off boats and when dealing with large groups such as when charter customers are debarking. The Wands worked through the plastic bags in which charter customers carry their fish off boats.

Much more extensive sampling effort needs to be conducted during the 1997 fishery to familiarize sampling staff with the electronic sampling equipment.