

Results of the 2005 Survey of the Reintroduced Sea Otter Population in Washington State

Prepared by

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The survey was conducted from 12-14 July, and included the inshore area from Pt. Grenville to Tongue Pt. Biologists and volunteers from the Washington Department of Fish and Wildlife (WDFW), United States Fish and Wildlife Service, Olympic Coast National Marine Sanctuary, The Seattle Aquarium and Point Defiance Zoo and Aquarium participated in the survey. Counting conditions this year ranged from good to excellent.

Methods

All of the sea otter range in Washington was surveyed from a fixed-winged aircraft (Cessna 185) and included coverage of coastal waters from Point Grenville on the outer coast to Tongue Point in the Strait of Juan de Fuca. Additional counts were made by observers on the ground at Cape Johnson, Yellow Banks, Sand Point, Cape Alava, Duk Point (Seafield Creek), and inshore of Father and Son. Typically, two surveys are conducted each day over a period of 3 or 4 days, weather permitting. Thus, when conditions are favorable, six surveys of the entire range are completed. An offshore leg added in 1999 to detect open water groups was included again this year. This year, we were able to complete six surveys of the sea otter's range in Washington.

The survey total was calculated by summing the highest daily total for the southern (Pt Grenville to La Push) and northern (La Push to Pillar Point) segments of the sea otter range. The high counts this year were on 14 July for both segments of the range. This method assumes little or no movement between the two segments during the survey period. Examination of survey data from years past, as well as documented movements of instrumented sea otters by USGS researchers in Washington support this assumption. Large groups (>20) observed from the air were generally counted and photographed with a digital camera. Digital images were later counted (3 times) and the resulting numbers were used when image quality was good and ground counts were not available or were less than the digital image count.

Results

The highest count for the survey was 814 sea otters, an increase of about 10% over 2004 (Table 1). The finite rate of increase for this population since 1989 has remained 8.2%. This year 53 pups were counted during the high counts, with most pup observations made from ground observation sites. It is not unusual for pups to go undetected or be undercounted from the

aircraft because they are difficult to distinguish from adults; however, experienced ground counters can easily make the distinction. This year pups were seen at all ground stations. Pups were also observed at Destruction Island, Diamond Rock, inshore from Perkins Reef (Rock 443), Giants Graveyard, and Anderson Point from the air. More pups are now being recorded in aerial counts because of the use of digital photography, which allows close examination of animals in groups when the digital image is counted. In some cases they may not appear in the summary because they were not observed during the highest counts. The pup to independent ratio increased from 13:100 in 2004 to 24:100 this year.

Survey results this year indicate growth of the Washington sea otter population continues to remain positive (*Figure 1*). Survey data indicate Washington's sea otter population may be approaching equilibrium density north of La Push where the rate of increase has been about 3.5% since 1989. Nevertheless, there still appears to be some quality unoccupied habitat available north of Point of Arches, and again this year significant numbers of otters, including pups, were sighted between Anderson Pt. and Bahobohosh Pt in Makah Bay (*Table 1*). South of La Push the population has been growing at about 20% per year since 1989. This trend began in the mid-1990s and has continued to date. These results illustrate the importance of continuing annual surveys to monitor population trends and changes in distribution.

The distribution (*Figure 2*) of sea otters has continued to change in recent years with the larger proportion of the population occurring south of La Push (*Figure 3*). In 2002, the southern segment accounted for about the same percentage of the total population as the northern, 49 and 51 percent respectively; however in 2003 the percentage shifted in favor of the south end with 46% north and 54% south, in 2004 it was 45% and 55%, and this year it was relatively unchanged at 46% and 54%, respectively.

As in the previous two years, the Diamond Rock raft located about 4 kilometers south of the Perkins Reef (Rock 443) group and 1.5 kilometers north of the Hoh River mouth was still present. Pups have been seen in this group for the past four years and along with the female group at Destruction Island (DI) represent the most southern groups of breeding females in Washington. The single largest concentration of sea otters continues to be located at DI with 307 otters counted during this year's survey. Consistent with recent surveys, a large male group continues to use the northeast reef and kelp bed areas for resting and a reproducing female raft is still located at the west end of the island. Counts made at the south end of the range over the survey suggest that females move regularly between three locations, Destruction Island, Diamond Rock, and Perkins Reef (Rock 443) areas. No otter groups were located during offshore survey legs.

As in 2004, our survey area did not include inland waters east of Port Angeles, although we are aware of credible sightings of scattered individual sea otters in the San Juan Islands and Puget Sound in recent years. Most of these sightings have been of single animals. No groups have been noted to date and we believe the number of sea otters frequenting the inland waters would not add significantly to the population total. Also of note, the groups that moved into the western Strait of Juan de Fuca during the past winters have not appeared since 2000. A single sea otter was observed at Tatoosh Island this year, which has often been the case in years past, and 14 otters observed near Kalaloch were the most southerly sightings.

Table 1. Results of the July 2003 and 2004 sea otter surveys in Washington State.

	2005			2004		
	INDEPENDENT	PUPS	TOTAL	INDEPENDENT	PUPS	TOTAL
KALALOCH/BROWNS PT.	14	0	14	0	0	0
DESTRUCTION I. ¹	303	4	307	342	0	342
HOH RIVER MOUTH	3	0	3	0	0	0
DIAMOND ROCK ¹	68	1	69	49	0	49
NORTH ROCK	1	0	1	0	0	0
PERKINS REEF1 (ROCK 443) ¹	19	0	19	9	0	9
GOODMAN CREEK	0	0	0	8	0	8
GIANTS GRAVEYARD ¹	22	0	22	2	0	2
QUILLLAYUTE NEEDLES	2	0	2	0	0	0
S. CAPE JOHNSON/CHILEAN MEMORIAL	5	0	5	2	1	3
CAPE JOHNSON/BLUFF PT. ^{*1}	103	1	104	71	0	71
CARROL ISLAND/ SEA LION ROCK	0	0	0	0	0	0
SANDY I.	3	1	4	5	0	5
JAGGED I.	0	0	0	17	1	18
CEDAR CRK./NOR. MEM. ¹	29	3	32	35	1	36
NORTH KAYOSTLA BEACH	1	1	2	0	0	0
SOUTH YELLOW BANKS	0	0	0	2	1	3
YELLOW BANKS AREA*	28	3	31	27	0	27
SAND PT.*	19	3	22	20	1	21
INSHORE WHITE ROCK /WEDDING ROCKS	6	4	10	3	0	3
SOUTH END OZETTE ISLAND	13	0	13	11	0	11
OZETTE/CAPE ALAVA/BODELTEH*	47	14	61	67	10	77
DUK PT.*	21	6	27	13	1	14
FATHER AND SON*	28	9	37	21	7	28
ANDERSON PT. ¹	22	3	25	14	0	14
BAHOBOHOSH PT.	2	0	2	2	0	2
WAATCH PT.	2	0	2	0	0	0
TOTALS	761	53	814	720	23	743

¹ Includes count from aerial photograph.

* Counted from land-based stations.

³ Pups were observed at these locations during the survey period, but not when the high count was made.

Figure 1 . Growth of Washington sea otter population, showing 3-yr running average of counts, 1989-2005

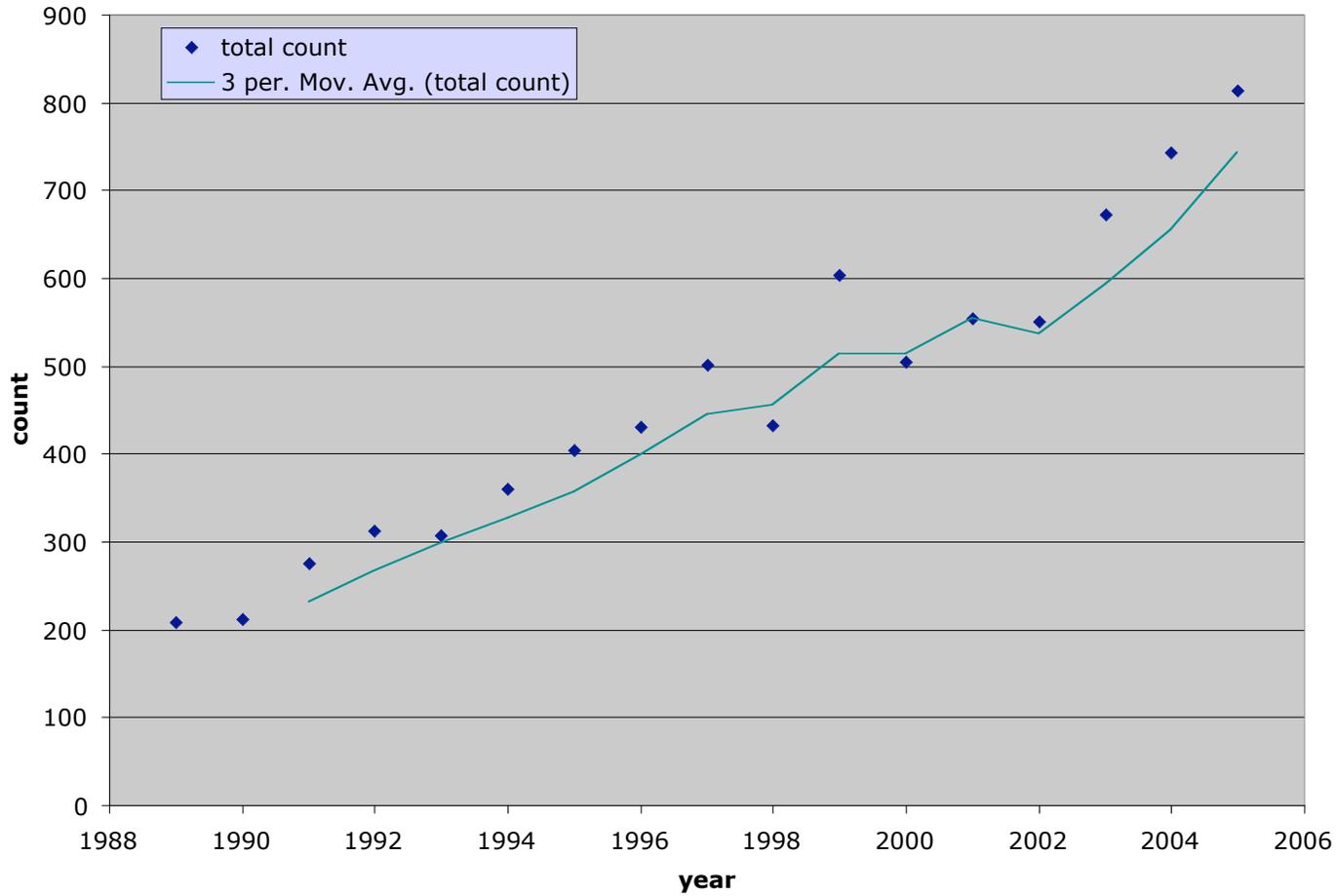


Figure 3. Distribution of sea otters in Washington as a percentage of total population count within north and south segments, 1989-2005.

