Results of the 2004 Survey of the Reintroduced Sea Otter Population in Washington State

Prepared by

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The survey was conducted from 6 - 8 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 4 counts were completed, two on 7 July and two on 8 July. No counts were made on 6 July because of inclement weather.

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 was on 8 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 and this year, 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 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 743 sea otters, an increase of about 11% over 2003 (Table 1). The finite rate of increase for this population since 1989 is 8.2%. This year only 23 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 recorded from the air at Destruction Island, Diamond Rock, and Perkins Reef (Rock 443), but they don't appear in the total because they were not observed during the highest counts. The ground count pup to independent ratio increased from 8:100 in 2003 to 13:100 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 for the first time in recent years significant numbers of otters were sighted north of there between Anderson Pt. and Bahobohosh Pt in Makah Bay (***Table*** 1). South of La Push the population has been growing at over 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. Recent sightings in Oregon near Cape Arago and carcass recovery near Cape Disappointment suggest the possibility of some dispersal south.

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, and this year the percentages were 45% and 55% 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 three 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 342 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 of nearly 70 individuals was still located at the west end of the island. No otter groups were located during offshore survey legs.

As in 2003, our survey area did not include inland waters east of Port Angeles, although we are aware of several 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 winter have not appeared since 2000. To the south, we observed 3 sea otters near Kalaloch about 12 kilometers south of DI and 1 otter just north of Cape Elizabeth, 40 kilometers south of DI. None of these otters were observed during the high count and are not included in the total.

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

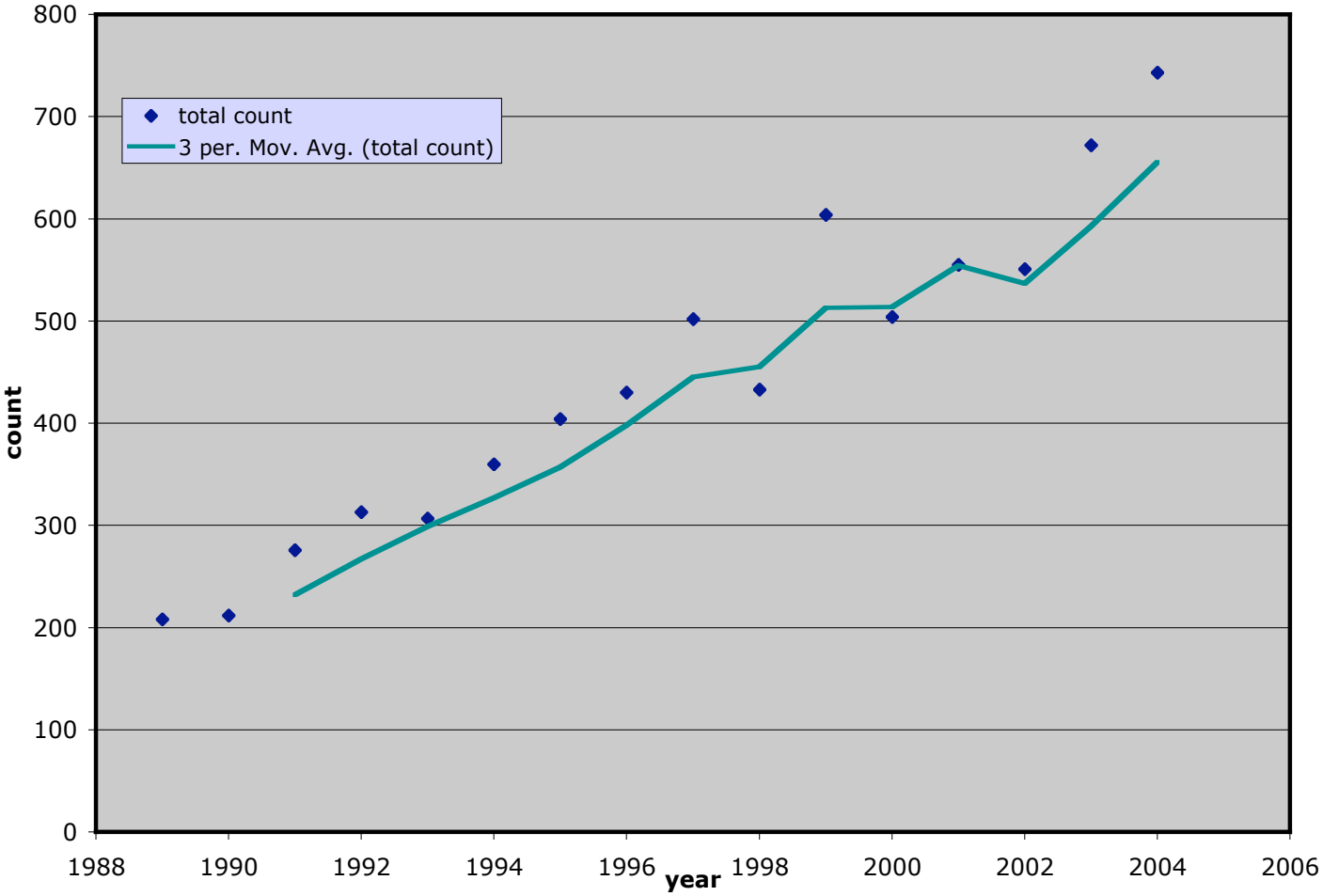
	2004			2003		
	INDEPENDENT	**PUPS**	**TOTAL**	**INDEPENDENT**	**PUPS**	**TOTAL**
DESTRUCTION I.[1]	342	0	342	270	0	270
HOH RIVER MOUTH	0	0	0	0	0	0
DIAMOND ROCK[3]	49	0	49	3	0	3
NORTH ROCK	0	0	0	1	0	1
PERKINS REEF (ROCK 443) [3]	9	0	9	88	0	88
GOODMAN CREEK	8	0	8	1	1	2
GIANTS GRAVEYARD	2	0	2	1	0	1
QUILLLAYUTE NEEDLES	0	0	0	0	0	0
S. CAPE JOHNSON/CHILEAN MEMORIAL	2	1	3	1	0	1
CAPE JOHNSON/BLUFF PT.[1, 2]	71	0	71	64	0	64
CARROL ISLAND/ SEA LION ROCK	0	0	0	0	0	0
SANDY I.	5	0	5	9	1	10
JAGGED I.	17	1	18	0	0	0
CEDAR CRK./NOR. MEM.[1]	35	1	36	20	1	21
NORTH KAYOSTLA BEACH	0	0	0	1	0	1
SOUTH YELLOW BANKS	2	1	3	0	0	0
YELLOW BANKS AREA[2, 3]	27	0	27	23	2	25
SAND PT.[2]	20	1	21	21	1	22
INSHORE WHITE ROCK /WEDDING ROCKS[2]	3	0	3	1	0	1
SOUTH END OZETTE ISLAND	11	0	11	0	0	0
OZETTE/CAPE ALAVA/BODELTEH[2]	67	10	77	20	3	23
DUK PT.[2]	13	1	14	120	8	128
FATHER AND SON[2]	21	7	28	0	0	0
PT. OF ARCHES	0	0	0	1	0	1
SHI SHI BEACH	0	0	0	1	0	1
S. PORTAGE HEAD	0	0	0	1	0	1
ANDERSON PT.	14	0	14	5	1	6
BAHOBOHOSH PT.	2	0	2	0	0	0
WAATCH PT.	0	0	0	2	0	2
TOTALS	720	23	743	654	18	672

[1] Includes count from aerial photograph.

[2] 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, 1989-2004



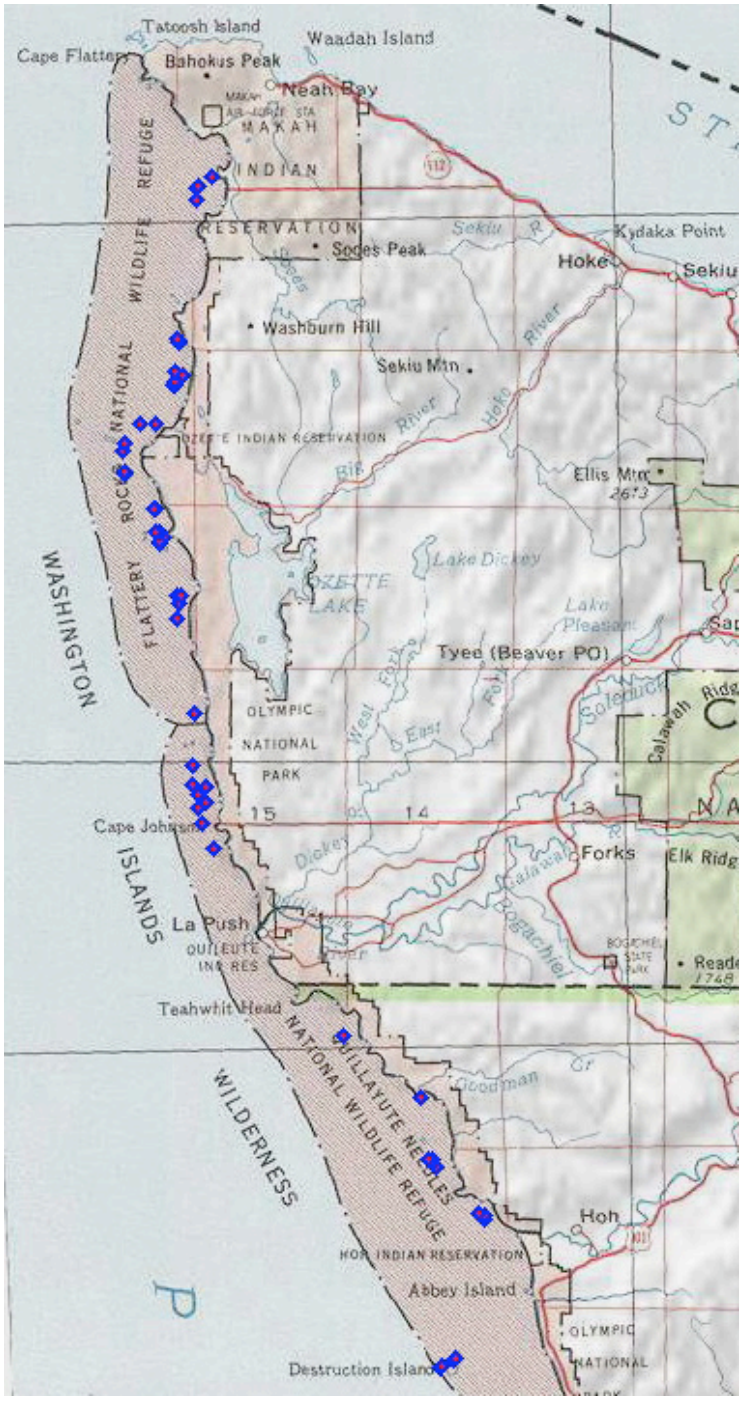


***Figure* 2.** Distribution of sea otter along the Washington Coast, July 2004, blue/red diamonds represent locations of sea otters sighted during survey.

***Figure* 3.** Distribution of sea otters in Washington as a percentage of total population count within north and south segments, 1989-2004.