Results of the 2002 Survey of the Reintroduced Sea Otter Population in Washington State

Prepared by

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The survey was conducted from 9-11 July, and included the entire inshore area from Pt. Grenville (including Destruction Island) to Pillar Point. Biologists from the United States Geological Survey, Washington Department of Fish and Wildlife, United States Fish and Wildlife Service, Olympic Coast National Marine Sanctuary, and the Seattle Aquarium participated in the survey. Counting conditions this year ranged from fair to excellent.

Methods

Most of the range was surveyed from a fixed-winged aircraft (Cessna 185) with additional counts made by observers on the ground at Cape Johnson, Yellow Banks, Sand Point, Cape Alava, Duk Point (Seafield Creek), and Father and Son. Two surveys are conducted each day over a period of 3 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.

The survey total is 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 (highest counts were made on 11 July in both segments this year). 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. Slides 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 slide count.

Results

The highest count for the survey was 551 sea otters, which is virtually the same as the 555 counted in 2001 (Table 1). The finite rate of increase for this population since 1989 is 8.2% (Figure 1.). The overall growth rate has continued to decline and appears to have leveled off in recent years. This year 33 pups were counted during surveys, with most pup observations made from ground observation sites. It is not unusual for pups to go undetected from the aircraft because they are difficult to distinguish from adults from the air; however, experienced ground counters can easily make the distinction. This year pups were seen at all ground stations with the

exception of Cape Johnson. In 2001, the overall pup to adult ratio was 9:100, and in 2002 it was 6:100. In ground count areas the 2002 ratio was 15:100, above the 2001 level of 13:100.

The 2002 distribution of sea otters in Washington has changed somewhat when compared to previous surveys. In 2000, the southern segment (La Push south) comprised 40% of the total, in 2001 about 34%. In the northern section (La Push north) 60% and 66% of the total occurred in 2000 and 2001, respectively. However, this year the southern segment accounted for about the same percentage of the total population as the northern, 49, and 51 percent respectively. As in 2001, 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 there. Pups were seen in this group last year and we believe this is a female area and represents the most southern group of breeding females in Washington. The single largest concentration of sea otters continues to be located at Destruction Island with 181 otters counted this year. A large male group continues to be found at Destruction Island, primarily rafting in the northeast reef and kelp bed areas. An additional group of 20-25 reproducing females also use the island but prefer the reef and kelp bed areas on the west side of the island.

Survey results this year indicate no significant change in population size (Figure 1) has occurred in the Washington sea otter population, and as the slope of the regression model suggests that the overall rate of increase has decreased in recent years although the overall trend is still positive (Figure 1). Survey counts indicate Washington's sea otter population may be approaching equilibrium density in some rocky habitat along the outer coast. However, there still appears to be some quality unoccupied habitat available north of the Point of Arches and from La Push south to Destruction Island. Therefore, it's still too early to state the population will not continue to grow over time and reoccupy other suitable sea otter habitats in Washington. One thing that is clear from Figure 2 is the apparent shift in distribution from the northern half of the range to the south, particularly to the extreme southern end of the established range. Results indicating slowing in population growth also show the importance of continuing annual surveys to track changes in population trends and distribution.

Our survey area did not include inland waters east of Pillar Point i.e. Puget Sound, yet we are aware of several credible sightings of scattered individual sea otters in 2002. The frequency of such sightings seems to be increasing, but the actual number of individuals involved continues to be low. Most observations have been single animals. No groups have been noted to date, and we believe the number frequenting the inland waters would not add significantly to the population total. Also of note, the groups that were moving into the western Strait of Juan de Fuca each winter have not appeared for the last two winters, and have not appeared as of December this year.

Table 1. Results of the July 2001 and 2002 sea otter surveys in Washington State.

	2002			2001		
LOCATION	**INDEPENDENTS**	**PUPS**	**TOTAL**	**INDEPENDENTS**	**PUPS**	**TOTAL**
Willoughby Rock	0	0	0	0	0	0
Destruction Island[1]	181	0	181	116	0	116
Hoh River Mouth	1	0	1	0	0	0
Diamond Rock	24	0	24	24	1	25
Perkins Reef (Rock 443)	53	3	56	29	1	30
Goodman Creek	6	0	6	1	0	1
Toleak/Strawberry Point	0	0	0	5	0	5
Giants Graveyard/Teahwhit Head	1	0	1	9	1	10
Quilllayute Needles	1	0	1	0	0	0
Cape Johnson/Chilean Memorial	2	0	2	6	1	7
Cape Johnson/Bluff Point[2]	45	0	45	59	0	59
Carol Island/Sea lion Rock	1	0	1	0	0	0
Sandy Island	1	0	1	1	0	1
Jagged Island	7	0	7	0	0	0
Cedar Creek/Norwegian Memorial[1]	30	0	30	28	5	33
Kayostla Beach	0	0	0	1	0	1
Yellow Banks Area[2]	25	0	25	26	2	28
Sand Point[2]	16	1	17	44	7	51
Inshore White Rock /Wedding Rocks[2]	5	1	6	10	1	11
Southeast of Ozette Island[2]	0	0	0	2	0	2
Ozette/Cape Alava/Bodelteh Islands[2]	43	13	56	53	10	63
Duk Point[2]	40	3	43	49	6	55
Father And Son[2]	36	12	48	42	10	52
Anderson Point	0	0	0	4	0	4
Archawat Creek	0	0	0	1	0	1
Tatoosh Island[3]	0	0	0	0	0	0
Pillar Point	0	0	0	0	0	0
TOTALS	518	33	551	510	45	555

[1] Includes count from aerial photograph.
[2] Counted from land-based stations.
[3] A single sea otter was observed at Tatoosh during the first 2 days of the survey, but was not observed on the day of the high count and, therefore, was not included in the total.

Figure 1. Growth of the Washington sea otter population 1989-2002

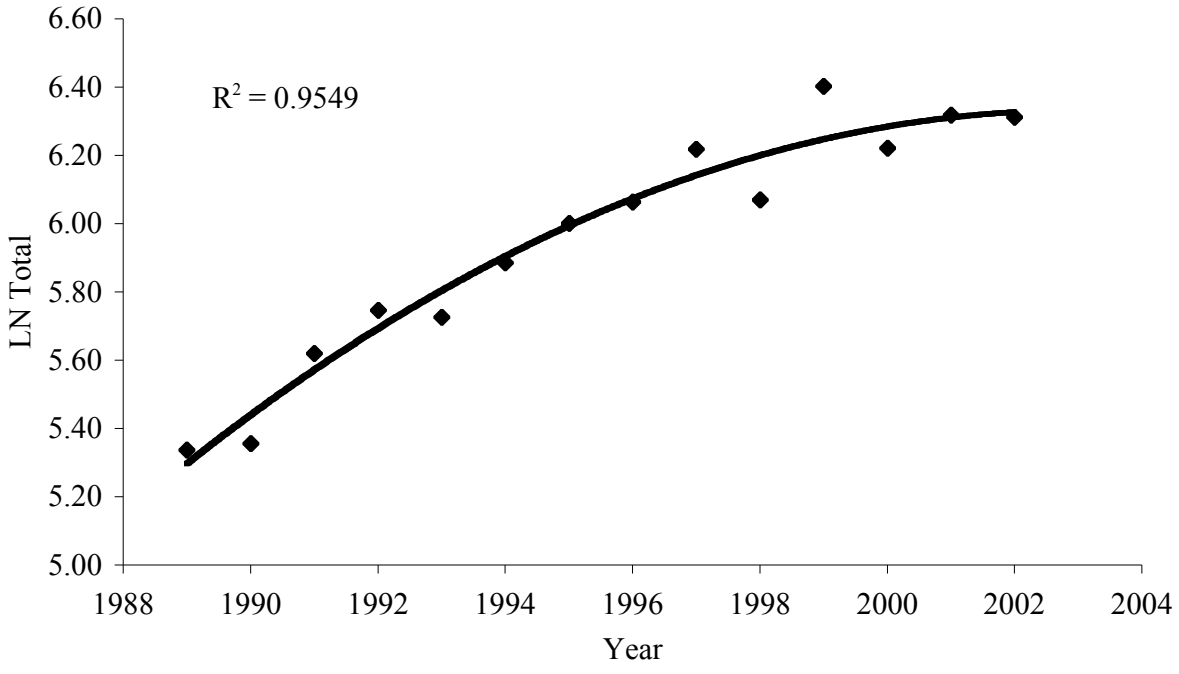

Figure 2. A comparison of the distribution of sea otters in Washington in 2002 and 2001.