

Performance Report

State: New Hampshire Grant W-89-R-5

Period Covered: July 1, 2004 – June 30, 2005

Grant Type: Survey and Inventory

Project Title: FURBEARER RESEARCH AND MANAGEMENT Project V

Job 1: HARVEST DATA COORDINATION, COLLECTION, ENTRY AND ANALYSIS

Job Objective:

To gather and analyze annual harvest information from trappers and fur-buyers.

Summary:

Four hundred and twenty-two (422) trapping licenses were issued for the 2004-2005 (04/05) trapping season. A significant number of licensed trappers (75) are over age 68 and hold permanent licenses. The estimated value of the pelts taken by trappers during the 04/05 season was calculated to be \$120,452.00. The number of licensed trappers decreased slightly from last year. Harvest frequencies decreased for beaver, otter, red fox, gray fox, coyote, fisher and weasel from the 03/04 trapping season. Beaver, otter, mink, gray fox, fisher, skunk and weasel harvests were below the previous 5-year averages. Muskrat, red fox, coyote and raccoon harvests were above the 5-year averages. Pelt values increased for beaver, otter, mink and raccoon, but were down for muskrat, red fox, gray fox, coyote, and fisher from the previous year. The pelt values for all tracked species, except muskrat and gray fox, were above the previous 5-year averages. However, relatively low pelt values continue to cause low harvest frequencies compared to historical high values in the 1970s. Beginning in 1997, fur season regulations were adopted for a two-year period. The only significant change in furbearer regulations for this report period was an increase in the fisher bag limit from 10 to 15 in twelve of the fifteen wildlife management units. However, this did not significantly affect the harvest of fisher as it was actually down 5 percent from the previous year.

Target date for achievement:

June 30, annually

Status of progress:

On schedule

Significant deviations:

None

Estimated costs:

Procedures:

Annual furbearer harvest data are collected from licensed trappers and fur-buyers via mandatory annual trapper and fur-buyer reports. Failure to submit said reports is punishable under state rules. Otter pelts are tagged by conservation officers in accordance with CITES, while other species (e.g., fisher) may be tagged depending on data, research, and/or law enforcement considerations. Catch per unit effort data are generated, as are other harvest data attributes and trends. Information regarding furbearer sign and food abundance are collected on a voluntary basis, per a survey on the back of mandatory trapper report forms. All data are entered into an electronic database for storage, analysis and distribution. Members of the department furbearer team help formulate biennial furbearer trapping and hunting season recommendations. Recommendations are subject to peer review, public input, and commission approval.

Results and Discussion:

Trapping remains an important management tool in NH. Furbearers are taken throughout the state. The number of licensed trappers has remained low for the last decade including only 422 in 04/05. For most of our furbearer species the harvest was well distributed throughout the state's ten counties (Table 1). Most furbearer species have experienced a general decline in harvest over the past 20 years, with the exception of fisher, otter, gray fox, skunk and coyotes. Pelt values have experienced a notable decline since the historic highs of the 1970's (Table 2). The decline is particularly dramatic when inflation is considered.

Data analysis suggests that furbearer harvest rates in the form of catch per unit effort, represent our best indicator of population trends in the state. Therefore trappers are required to provide data on the number of traps and trap nights set per species. Effort data has been available since 1983 and facilitates long-term trend analysis. This data is used to calculate trap nights per species per year (Table 3). By using total trapper effort and the total harvest by species, harvest rates are calculated and are reported as catch per 100 trap-nights of effort (Table 4). Based on the average pelt value of the New Hampshire Trappers Association's winter auction and the total harvest by species, the economic value of the 04/05 harvests was calculated to be \$120,452.00 (Table 5).

Beaver: The 04/05 take of 2,496 beaver was down 9% from 03/04 and down 20% from the 5-year average. Beaver harvest increased in four counties, but was down in six. The pelt value of \$15.94 was up 13% from \$14.06 the previous year and was 22% above the previous 5-year average. There were a total of 28,288 trap-nights of effort, which was down 21% from the previous trap year. Catch per 100 trap-nights was 8.82 versus 8.55 the previous year. Beaver pelts were valued at \$39,786 to the trappers, which was more than any other species. Beavers remain a significant furbearer species in New Hampshire due to the diversity of species living in the habitats they create. Beavers also provide a significant amount of recreational trapping opportunity as well as nuisance trapper work.

Otter: The 04/05 otter harvest was 304. This was 14% below the previous year's harvest of 352 and 2% below the 5-year average. The pelt value of \$80.56 was 13% above the previous year, and was 64% above the previous 5-year average. Otter pelt values have remained high compared to most other species for the last several years. Trapper effort was 15,875 trap-nights; up 20% compared to 13,263 the previous year. A season bag limit of 10 otter was imposed in 1994 and has continued. The catch per 100 trap-nights decreased to 1.91 from 2.68 the previous year. Catch per unit effort data from 1982 to 1998 was analyzed in an effort to determine potential otter trapping thresholds. Based on this analysis it appears that a harvest of 350 otter or more, for several years, could cause a decline in NH's population. The 04/05 harvest of 304 is an acceptable harvest. Since 1980 the threshold of 350 has only been surpassed in 1993, 1994, 1996, 2001 and 2003.

Mink: A total of 354 mink were harvested, an increase of 1% from the previous year and 12% below the 5-year average. The pelt value of \$13.92 was 30% above the previous year and 42% above the previous 5-year average. Effort at 14,291 trap-nights was 17% below the previous year. The catch per 100 trap-nights was 2.48 compared to 3.71 the previous year. Trapper effort and harvest remained significantly below historic levels due to poor pelt values and limited trapper interest.

Muskrat: Muskrat trapping also continued at a below average pace compared to the number taken a decade or more before. Trappers took only 2,315, up 20% from the previous year's harvest of 1,929 and 7% above the previous 5-year average. The pelt value decreased from \$2.27 to \$1.96 the previous year. Trapper effort at 23,045 trap-nights was 1% below the previous year. The catch per 100 trap-night success rate increased 19% to 10.57 from 8.91 the previous year.

Fisher: The fisher harvest was 749, a decrease of 5% from the previous year and 9% below the previous 5-year average. Fisher pelt values were \$26.67, a decrease of 2% from the previous year, but 24% above the previous 5-year average. Trapper effort was 27,618 trap-nights which was 8% above the previous year. Fisher harvest per 100 trap-nights decreased to 2.61 from 3.10 fisher taken per hundred trap-nights the previous year. The fisher bag limit was increased from 10 to 15 in twelve of the fifteen wildlife management units. Only five trappers took the greater bag limit of 15-fisher each. A total of 14 trappers took more than 10 fisher, for a total of 41 additional fisher, or 5% of the total catch. While the take was modest, the harvest rate suggests that fisher remain abundant. Long-term analysis of catch rate and total harvest suggests that the current level of fisher harvest is well within acceptable limits.

Bobcat: The bobcat season remains closed to trapping and hunting. Occasional sightings are reported and trappers provide reports of abundance by completing a voluntary questionnaire. Trappers occasionally report the capture and release of bobcats from their sets. These reports suggest that bobcats occur over a wide area of the state but remain uncommon for the most part.

Raccoon: Trappers took a total of 626 raccoons, an increase of 22% from the previous year and 49% above the previous 5-year average. The pelt value, at \$9.98, was up from the previous year by 29%, and 23% above the previous 5-year average. Trapper effort was 18,498, down 1% from the previous year. The catch rate per hundred trap-nights was 3.38 compared to 3.16 the previous year. Trapper interest in raccoons remains very low compared to harvests as high as 5,000 well over a decade ago. The mid-Atlantic strain of raccoon rabies continues to be endemic in the state.

Fox: Trappers took 115 gray fox and 408 red fox. The gray fox harvest was down 57% from the previous year and was 26% below the previous 5-year average. Grey fox pelt values decreased 41% to \$11.00 from the previous year and were 4% below the previous 5-year average. The red fox harvest also decreased and was 18% below the previous year but 24% above the previous 5-year average. Red fox pelt value decreased to \$17.88 from the previous year value of \$22.87, down 22% but 6% above the previous 5-year average. Trapper effort to take red fox was 20,463 trap-nights,

which was 1% below the previous year. Gray fox trapper effort was 6,850 trap-nights, a decrease of 55% from the previous year. Red fox harvests are significantly below historic numbers when pelt values were much higher.

Coyote: The coyote take decreased 8% from 716 to 659 in 04/05. The 04/05 harvest was 36% over the previous 5-year average. The pelt value decreased from \$26.73 to \$18.10 in 04/05. The pelt value was 2% above the previous 5-year average. Trapper effort was 39,185 trap-nights, which was up 16% from the previous year. The catch per 100 trap-nights decreased to 1.68 from 2.26 the previous year. Coyotes have no closed season by trapping or hunting based on legislation enacted decades ago. A coyote night hunting season was established in 1997 during the months of January, February and March. There was a commission proposal to lengthen the coyote night hunting season until the end of August. After significant negative public comment, the proposal was withdrawn by the commission.

Conclusion.

Analysis of the harvest data is critical to the long-term understanding of the influence of trapping on furbearers. Trapping plays a key role in mitigating the affects of some species, especially beaver, on forest lands, crops, roadways and other human uses of the land. While most people appreciate the presence of these species their attitude can often abruptly change when they have a negative encounter. Furbearers are a valuable natural resource. Trapping and hunting continues to provide valuable services to the state's citizens.

Recommendation:

Continue this job as planned as it provides needed information for furbearer management in New Hampshire.

Prepared by: _____
Eric P. Orff, Wildlife Biologist
July 30, 2005

Table 1. NEW HAMPSHIRE TRAPPER TAKE 2004-2005 / SUMMARY OF SPECIES BY COUNTY

COUNTY	BEAVER	COYOTE	FISHER	GRAY FOX	MINK	MUSKRAT	OPOSSUM	OTTER	RACCOON	RED FOX	SKUNK	WEASEL
BELKNAP	152	21	39	11	9	55	0	14	12	15	4	3
CARROLL	113	16	41	12	18	21	1	17	18	11	7	2
CHESHIRE	255	89	73	13	30	89	1	45	39	20	10	3
COOS	199	200	89	5	47	813	0	12	82	114	5	13
GRAFTON	234	159	55	7	86	266	3	25	145	110	50	1
HILLSBORO	405	42	107	26	46	263	3	42	76	36	28	6
MERRIMACK	496	64	91	10	48	358	5	57	70	40	33	4
ROCKINGHAM	406	19	152	12	26	289	3	53	89	16	44	4
STRAFFORD	132	9	26	13	9	58	4	20	55	27	25	7
SULLIVAN	104	40	76	6	35	103	0	19	40	19	7	9
TOTAL:	2496	659	749	115	354	2315	20	304	626	408	213	52

Table 2. NEW HAMPSHIRE FURBEARER HARVEST RECORDS (1980-2004)

Part 1: Grey Fox /Red Fox/Lynx/Marten/Mink/Bear/Beaver/Bobcat

Season Opening (year)	Number Licensed Trappers	Grey Fox		Red Fox		Lynx		Marten		Mink		Bear		Beaver		Bobcat	
		No.	Average Price	No.	Average Price	No.	Average Price	No.	Average Price	No.	Average Price	No.	Average Price	No.	Average Price	No.	Average Price
1980	996	203	\$40.48	1400	\$59.7	-	-	-	-	656	\$31.52	229	-	4267	\$23.08	10	-
1981	879	324	\$32.37	1491	\$54.01	-	-	-	-	711	\$21.53	180	-	3355	\$16.86	35	\$104.33
1982	958	287	\$27.35	1826	\$35.66	-	-	-	-	671	\$15.81	182	-	3043	\$11.32	19	\$51.60
1983	849	249	\$27.35	1307	\$37.66	-	-	-	-	483	\$18.53	251	-	2840	\$14.17	14	\$77.42
1984	783	163	\$26.74	1310	\$37.19	-	-	-	-	500	\$21.56	-	-	4150	\$19.24	28	\$84.35
1985	786	225	\$21.06	1191	\$26.30	-	-	-	-	509	\$18.95	112	-	4161	\$22.52	41	\$62.09
1986	774	172	\$25.21	1249	\$35.75	-	-	-	-	488	\$29.83	148	-	4258	\$24.28	34	\$80.39
1987	870	174	\$25.97	1301	\$22.70	-	-	2	-	701	\$33.98	293	-	4099	\$18.08	30	\$86.57
1988	791	106	\$14.81	743	\$19.60	-	-	-	-	618	\$30.89	227	-	3637	\$17.58	31	\$42.40
1989	643	58	\$9.46	504	\$12.95	-	-	-	-	465	\$22.71	281	-	3098	\$17.39	5	-
1990	624	63	\$6.66	415	\$8.09	-	-	1	-	358	\$19.00	329	-	2589	\$8.83	6	-
1991	457	76	\$7.66	426	\$14.88	1	-	-	-	537	\$24.69	149	-	3372	\$11.29	4	-
1992	418	86	\$12.00	381	\$12.52	-	-	2	-	381	\$28.29	262	-	2059	\$7.49	7	-
1993	380	76	\$8.83	378	\$14.94	-	-	-	-	441	\$17.77	306	-	3612	\$17.52	5	-
1994	439	97	\$12.65	444	\$17.89	-	-	10	-	513	\$15.13	260	-	5901	\$13.19	-	-
1995	393	75	\$10.18	343	\$19.55	-	-	1	-	386	\$9.38	480	-	4048	\$17.79	-	-
1996	403	129	\$10.30	264	\$18.77	-	-	-	-	587	\$11.62	185	-	4752	\$13.92	-	-
1997	411	104	-	324	\$14.19	-	-	-	-	429	\$13.39	378	-	3975	\$23.37	-	-
1998	400	120	\$6.98	195	\$8.91	-	-	-	-	453	\$8.33	313	-	3784	\$9.38	-	-
1999	397	89	\$6.68	181	\$11.65	-	-	-	-	416	\$9.70	557	-	3416	\$11.78	-	-
2000	387	75	\$9.00	208	\$11.90	-	-	-	-	256	\$11.23	490	-	2832	\$14.43	-	-
2001	419	183	\$14.63	409	\$16.01	-	-	-	-	618	\$9.15	527	-	4378	\$14.72	-	-
2002	443	167	\$8.14	352	\$21.65	-	-	-	-	362	\$8.28	338	-	2240	\$9.98	-	-
2003	432	267	\$18.96	498	\$22.87	-	-	-	-	350	\$10.68	936	-	2735	\$14.06	-	-
2004	422	115	\$11.00	408	\$17.88	-	-	-	-	354	\$13.92	679	-	2496	\$15.94	-	-

Table 2. (Cont'd) NEW HAMPSHIRE FURBEARER HARVEST RECORDS (1980-2004)

Part 2: Muskrat/Otter/Raccoon/Skunk/Weasel/Coyote/Fisher

Season Opening (year)	Number Licensed Trappers	Muskrat		Otter		Raccoon		Skunk		Weasel		Coyote		Fisher	
		No.	Avg. Price	No.	Average Price	No.	Average Price	No.	Average Price	No.	Average Price	No.	Average Price	No.	Average Price
1980	996	14598	\$6.62	281	\$42.13	6062	\$15.81	727	\$2.66	42	\$1.00	181	\$24.70	128	\$155.55
1981	979	13033	\$4.30	174	\$29.98	7455	\$19.18	553	\$2.35	54	\$0.62	172	\$30.29	305	\$131.63
1982	958	13633	\$2.59	193	\$26.75	8481	\$11.82	461	\$1.57	91	\$0.75	236	\$25.61	372	\$97.71
1983	840	7374	\$3.01	210	\$26.04	4425	\$8.78	439	\$1.54	39	\$2.50	234	\$16.11	381	\$108.74
1984	783	8649	\$3.58	316	\$35.42	3755	\$15.99	240	\$1.39	26	\$1.47	210	\$18.33	365	\$126.04
1985	796	4858	\$2.39	287	\$27.62	3354	\$13.18	236	\$1.46	43	\$2.00	232	\$1750	640	\$130.59
1986	774	6115	\$4.16	319	\$35.74	3748	\$23.63	161	\$1.65	51	-	291	\$22.18	801	\$167.00
1987	870	6871	\$2.98	361	\$31.72	5135	\$10.07	175	\$1.43	75	\$1.53	264	\$18.30	718	\$165.00
1988	791	5809	\$2.46	308	\$20.86	1884	\$6.42	129	\$1.79	34	\$3.33	253	\$12.40	881	\$79.49
1989	643	3746	\$1.01	329	\$27.22	890	\$3.62	131	\$2.73	25	\$1.25	169	\$7.31	406	\$41.18
1990	624	2381	\$0.93	261	\$13.61	796	\$3.18	89	\$2.50	31	-	155	\$5.90	440	\$39.48
1991	457	3886	\$1.92	316	\$24.48	965	\$7.65	112	\$1.85	30	\$4.00	227	\$15.18	442	\$36.96
1992	418	2525	\$1.60	285	\$39.70	854	\$8.39	106	\$4.60	45	-	260	\$21.40	426	\$24.81
1993	380	2273	\$2.11	405	\$48.45	994	\$9.20	198	-	48	\$3.00	298	\$24.20	525	\$23.78
1994	439	4389	\$2.00	504	\$52.67	888	\$11.87	337	\$4.62	26	\$4.62	342	\$22.14	722	\$25.60
1995	393	2731	\$2.53	317	\$42.34	902	\$5.97	26	\$2.73	99	\$2.00	380	\$14.50	426	\$17.68
1996	403	2976	\$1.15	451	\$41.11	519	\$8.97	287	-	23	-	345	\$12.75	642	\$16.01
1997	411	3980	\$3.39	344	\$42.96	684	\$13.84	432	-	33	-	398	\$18.20	1187	\$33.05
1998	400	3517	\$1.02	288	\$27.52	459	\$2.98	265	-	36	-	318	\$8.21	923	\$19.44
1999	397	1714	\$1.54	291	34.18	374	\$4.62	330	-	83	-	279	\$11.13	894	\$15.22
2000	387	2137	\$2.39	242	\$42.86	241	\$7.50	276	-	15	\$2.50	358	\$12.50	668	\$17.54
2001	419	3604	\$3.12	397	\$48.25	558	\$11.00	362	-	110	-	556	\$19.40	1007	\$25.05
2002	443	1453	\$2.25	271	\$49.00	406	\$9.79	377	-	71	-	518	\$19.14	772	\$22.57
2003	432	1929	\$2.27	352	\$71.07	515	\$7.76	138	\$2.00	66	-	716	\$26.73	788	\$27.35
2004	422	2315	\$1.96	304	\$80.56	626	\$9.98	213	-	52	-	659	\$18.10	749	\$26.67

Table 3. NEW HAMPSHIRE TRAPPER EFFORT – CALCULATED TRAP-NIGHTS PER SPECIES PER YEAR

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Beaver	50,098	57,866	46,704	53,766	35,205	28,669	49,634	27,649	35,812	28,288
Otter	15,511	19,574	12,334	24,283	10,925	12,818	17,075	10,970	13,263	15,875
Mink	21,731	28,163	24,179	18,868	13,585	13,520	27,084	17,855	17,260	14,291
Muskrat	37,104	41,179	38,885	44,520	19,785	21,139	43,796	20,631	23,376	23,045
Fisher	14,423	19,177	31,428	28,453	26,026	24,069	30,035	30,705	25,535	27,618
Red Fox	12,845	14,172	11,650	8,253	6,433	8,137	14,829	16,608	20,653	20,463
Gray Fox	7,984	9,101	5,256	5,896	4,620	3,573	9,101	10,213	15,215	6,850
Coyote	31,275	18,884	13,267	13,732	14,126	26,531	23,701	17,003	33,906	39,185
Raccoon	12,895	13,478	16,780	14,072	8,373	6,645	16,082	14,828	18,731	18,498

Table 4. CATCH PER UNIT EFFORT DATA DERIVED FROM NEW HAMPSHIRE TRAPPING DATA DURING THE PERIOD 1992 - 2004

STATEWIDE CATCH PER 100 TRAP-NIGHTS

Year	92	93	94	95	96	97	98	99	00	01	02	03	04
Beaver	6.51	9.74	6.58	7.91	7.66	8.51	7.04	9.28	9.87	8.85	9.99	8.55	8.82
Otter	2.08	2.06	1.43	2.02	2.21	2.29	1.19	2.81	1.88	2.48	2.86	2.68	1.91
Mink	1.21	1.32	1.01	1.76	1.75	1.77	2.40	4.20	1.89	2.41	2.72	3.71	2.48
Muskrat	7.34	7.69	6.92	6.90	6.73	10.2	7.90	11.2	10.1	7.97	8.97	8.91	10.57
Fisher	3.14	3.10	2.56	2.91	3.32	3.78	3.24	3.45	2.77	3.64	2.57	3.10	2.61
Red Fox	1.93	2.01	1.99	2.66	1.86	2.78	2.36	2.04	2.55	3.26	2.48	2.95	1.99
Gray Fox	1.09	0.91	1.37	0.94	1.42	1.98	2.04	2.35	2.09	3.02	2.26	3.69	1.67
Coyote	1.64	1.76	1.81	1.18	1.83	3.00	2.32	2.01	1.34	2.47	2.86	2.26	1.68
Raccoon	24.94	19.2	20.91	14.36	26.48	24.5	30.6	8.22	3.62	3.87	3.97	3.16	3.38

Table 5. NEW HAMPSHIRE PELT VALUE BY SPECIES AND METHOD (2004 - 2005 SEASON)

	PELT VALUE (\$)	NUMBER TRAPPED	TOTAL VALUE (\$)
Beaver	\$15.94	2,496	\$39,786
Otter	\$80.56	304	\$24,490
Mink	\$13.92	354	\$4,928
Muskrat	\$1.96	2315	\$4,537
Fisher	\$26.67	749	\$19,976
Raccoon	\$9.98	626	\$6,247
Red Fox	\$17.88	408	\$7,295
Gray Fox	\$11.00	115	\$1,265
Coyote	\$18.10	659	\$11,928
Weasel*	----	52	----
Skunk	----	213	----
Total of all furs trapped		8,026	\$120,452

*Inadequate sample size and/or unavailable data.

Performance Report

State: New Hampshire Grant W-89-R-5

Period Covered: July 1, 2004 – June 30, 2005

Grant Type: Survey and Inventory

Project Title: FURBEARER RESEARCH AND MANAGEMENT Project V

Job 2: COLLECTION AND ANALYSIS OF BIOLOGICAL DATA AND SAMPLES

Job Objective:

To collect sex, age and other biological data from selected furbearers for analysis.

Summary:

This job was inactive during this segment.

Target date for achievement:

June 30, annually

Status of progress:

On schedule.

Significant deviations:

None

Estimated costs:

Procedures:

Furbearer carcasses may be collected to allow for the collection of: furbearer population demographic data, heavy metal and/or toxicant samples, or trap performance and impact data as part of the national trap testing associated with the formulation of best management practices. Carcasses will be collected incidental to pelt tagging, on a voluntary or mandatory basis, or on an incentive/reward basis. Carcasses will be

collected and stored at regional Fish and Game offices. Depending on the nature of the work to be performed, data collection and analysis will be conducted by staff, university personnel, or contracted private agents.

Results:

Low harvest rates and long term analysis of harvest data indicates there is not a need at the current time to collect biological samples for age analysis. If anomalies in harvest rates or other data suggests a need to collect biological samples then some form of collection will be undertaken.

Conclusions:

Based on the analysis of harvest results the last several years we have not undertaken the collection of biological samples such as teeth for aging. However if we detect an anomaly in harvest data then we may seek to collect further biological data.

Further analysis of mercury levels in mink and river otter should be conducted if a funding source for analysis can be acquired. Samples of mink over various sections of New Hampshire could serve as a biological monitoring method to identify watersheds with elevated levels of mercury in the fish that could be hazardous for human consumption.

Recommendations:

Continue this job as planned.

Prepared by: _____
Eric P. Orff, Wildlife Biologist
July 30, 2005

Performance Report

State: New Hampshire

Grant W-89-R-5

Period Covered: July 1, 2004 – June 30, 2005

Grant Type: Survey and Inventory

Project Title: FURBEARER RESEARCH AND MANAGEMENT Project V

Job 3: HUMAN DIMENSIONS OF TRAPPING AND FURBEARER MANAGEMENT

Job Objective:

To increase our understanding of the social and biological values associated with trapping and furbearer management and share this information with the public.

Summary:

The furbearer biologist coordinated Best Management Practices (BMP) efforts in NH. The BMP program is a national effort coordinated by the International Association of Fish and Wildlife Agencies to educate the public about furbearers and their management by these agencies.

Target date for achievement:

June 30, annually

Status of progress:

On schedule.

Significant deviations:

None

Estimated costs:

Procedures:

Existing human dimensions information on trapping and furbearer management will be compiled. Our furbearer project will continue to participate in national efforts to formulate Best Management Practices (BMP's) for trapping. Pertinent human dimensions information as well as BMP information will be disseminated to the public by way of assorted media and outreach techniques.

Results:

Numerous human dimensions information or educational furbearer management information was provided to the public this year. The fur project leader coordinated continued participation in Best Management Practices in New Hampshire in a variety of ways as well as efforts he initiated.

Trapping and Furbearer Management in North America Wildlife Conservation booklets were distributed to the public at Fish and Game events, hearings and functions. A supply was provided to the NH Trappers Association for their events or the public events they attended including fairs and local outdoor events including the trappers Fall Rendezvous. The trappers were also asked by the project leader to purchase additional copies for their distribution. The project leader facilitated the acquisition of another 600 booklets for the NH Trappers Association in May of 2005.

The project leader, who serves on the Northeast Fur Technical Committee's Education Committee, continued to meet on a regular basis with staff from Vermont and Massachusetts Fish and Wildlife as well as other staff from NH to continue work on the committee's education curriculum for the state's school. The final Fur Education Kits were completed in August of 2004. An Education Committee member presented them to the individual state members of the Northeast Fur Tech Committee in September 2004 in Delaware. The New Hampshire project leader has assisted in outreach efforts to educate teachers about the kits availability. Other staff members have presented the kit at state and national teacher workshops.

The project leader provided numerous interviews with the press, at least on a monthly basis, in regards to inquiries by the press into furbearer related matters. He also provided information to the public on furbearer management in NH at numerous lectures or speaking engagements including: the UNH Thompson School forestry class, the NH Student Conservation Association, The Beaver Brook Conservation Association, the Plaistow and North Hampton Fish and Game Clubs, the towns of Rye, Candia and New Castle Conservation Commissions, the Friends of the Suncook River and Bear-Paw Regional Greenways, Moose Mountain and Seacoast Land Trusts; and at the Teacher As a Leader workshop.

The project leader scripted and read radio public service announcements (PSA's) dealing with furbearer management. The radio PSA's are broadcast on over 50 stations in the state.

The Fish and Game Department completed a segment on furbearer management and trapping which was broadcast in the Department's Wildlife Journal TV program.

On a weekly basis, the project leader answered numerous email inquiries directed at the department and forwarded to him to handle, dealing with furbearer management from the public.

Conclusions:

NH will continue to participate in BMP educational program as opportunity allows as well as numerous initiatives of its own. During the next segment the department will produce a segment on trapping and furbearer management for its TV show, Wildlife Journal. The fur project recognizes the importance of public education and has focused greater attention on this job during this segment and will continue to do so.

Recommendations:

Continue this job as planned. The BMP school curriculum will be incorporated into the NH school system as soon as possible. The species BMP trapping practices brochures will be used to educate the trappers and the public with specific recommendations for numerous species, as they become available. The project leader will continue to aggressively educate the public in a variety of ways including lectures, radio and TV interviews and written materials during the next project segment by employing a number of educational aids regarding furbearer management.

Prepared by: _____
Eric P. Orff, Wildlife Biologist
July 30, 2005

Performance Report

State: New Hampshire Grant W-89-R-5

Period Covered: July 1, 2004 – June 30, 2005

Grant Type: Survey and Inventory

Project Title: FURBEARER RESEARCH AND MANAGEMENT Project V

Job 4: DISSEMINATION OF GRANT INFORMATION

Job Objective:

To actively disseminate information and data generated in New Hampshire's furbearer management project to all interested parties, and to promote an interest in, a knowledge of, and appreciation for all New Hampshire furbearers.

Summary:

Furbearers continue to be a topic of significant public interest. Coyotes, beaver, fisher, wolves and mountain lions continually draw interest from the public and corresponding inquiries from the press.

Target date for achievement:

June 30, annually

Status of progress:

On schedule

Significant deviations:

None

Estimated costs:

Procedures:

Furbearer management project information, goals, and accomplishments will be communicated to the public through a variety of techniques. These will include preparation of annual reports, magazine and newsletter articles, harvest summaries, pamphlets, slide presentations, assorted personal communications, and formal group

presentations. Television, radio, and newspaper interviews will be given as time and opportunity allow.

Results:

Inquiries regarding furbearer species come from students, teachers, reporters, naturalists, environmental consultants and the general public. The project leader presented slide presentations to various public groups, on an approximate monthly basis, depicting current furbearer trends and populations versus those of the past. The slide presentation is titled "Living In the Golden Age of Wildlife in N.H." Although this job is very similar to job 3 (see results of job 3), the project leader uses this job to relate specific information or data generated by the project. For instance, the project leader is frequently contacted by environmental consultants in regard to the presence of species in a particular town or location in order to determine the impacts of development on local populations of animals. On an approximate weekly basis the project leader provided interviews or information to various news media and outlets regarding the presence of specific species in certain towns and their life histories as well as abundance. Fisher, coyotes, wolves and mountain lions continued to be the primary focus of public concern and inquiry. E-mail requests for information, sighting reports or other furbearer related topics were forwarded to the project leader almost on a daily basis from headquarters or regional offices for a response when deemed necessary. An annual furbearer summary report was printed in the widely distributed "2004 New Hampshire Wildlife Harvest Summary" (Appendix 1). Due to the wide variety of furbearer species and substantial public ignorance regarding their ecology and management, this job remains an integral part of the project. Specific information from this project has been used in the following publications: The New Hampshire Fish and Game (NHF&G) biennial report and Wildlife Journal Magazine, the Trappers Annual Booklet, the annual Fur Regulation pamphlet, the NHF&G Annual Harvest Report, The Northeast Furbearer Technical Committee status report, the CITES annual river otter/bobcat report, and data made available to the news media as reported above.

Conclusions:

It is very important to keep the public well informed of many of the furbearer species. These are the species that are frequently encountered by the public and due to a lack of information may be feared unnecessarily. Also the ongoing spread of both raccoon and fox rabies has increased public concerns regarding these species. The wide variety of furbearer species and their distribution across the state bring people in contact frequently with these species. The continued rapid urbanization of much of the state has increased the likelihood of an encounter with a wild furbearer by a much less informed public.

Recommendations:

Continue this job as planned.

Prepared by: _____
Eric P. Orff, Wildlife Biologist
July 30, 2005

APPENDIX 1.

2003/2004 FURBEARER HARVEST SUMMARY REPORT

Trapping is a highly specialized skill and one that provides substantial public benefit to our residents. Trappers continue to play a significant role in the management of furbearer populations. They provide important data to management programs and provide an important public service in their capacity as damage control specialists. This furbearer harvest report summarizes data collected during the months of October 2003 through April 2004 (i.e., the 2003 trapping season).

New Hampshire furbearers remain abundant and widespread as indicated by results from the 2003 New Hampshire trapping season. Trapper numbers continued to rebound from a notable record low of only 387 in 2000 to 432 in 2003. Average pelt values were derived from the annual winter fur auction conducted by the New Hampshire Trappers Association. Pelt values averaged higher than they have in nearly a decade. The value of the 2003 fur harvest to trappers was \$133,002 based on average pelt values and the total amount of fur harvested in New Hampshire.

The 2003 beaver harvest was 2,735 up 22 percent from 2,240 taken in 2002. Beavers contribute significantly to the nuisance animal complaints received by our staff. Trappers play a significant role in managing local populations and in reducing human/beaver conflicts. Harvest rate, measured as the catch per 100 trap-nights, serves as a useful indicator of species abundance. The 2003 beaver harvest rate was 8.55/100 trap nights; this rate indicates high densities of beaver in our state.

The otter harvest was 352, which was 30 percent above the 2002 harvest of 271. This was 18 percent above the previous 5-year average. The pelt value of \$71.07 was 45 percent above the previous year average. Long-term population analysis suggests that New Hampshire can sustain an annual harvest of up to 350 otters, and that a higher harvest over several years could lead to a decline. Harvests are generally kept below the threshold with the current season and an imposed bag limit of ten otters.

The 2003 mink harvest of 350 declined 3 percent from 362 in 2002 and was 17 percent below the 5-year average. The pelt value of \$10.68 was 29 percent above the previous year and 14 percent above the 5-year average. The catch per unit of effort was 3.71 mink captured per 100 trap-nights, an increase from 2.72 the previous year. Trapper effort and harvest remains significantly below historical levels due to low pelt values. The 2003 muskrat harvest of 1,929 was up 33 percent from 1,453 the previous year and was 22 percent below the 5-year average. The catch per 100 trap-nights was 8.91 compared to the previous year at 8.97.

The fisher harvest was 788, an increase of 2 percent from 772 in 2002 and was 8 percent below the 5-year average. Fisher pelt values average \$27.35, a notable increase from \$22.57 in 2002, and was 37 percent above the 5-year average. Trapper effort decreased by 17 percent from the previous year and the catch per unit of effort was 3.10; as compared to a catch rate of 2.57 the previous year. Past analysis of long-term fisher harvest data suggests that the population can sustain an annual harvest of approximately 1,100 animals. The catch per 100 trap-nights of 3.10 fisher indicates a continued abundant fisher population.

Raccoon trappers took 515 raccoons, an increase of 27 percent from 406 the previous year and 26 percent above the 5-year average. Fox trappers took 267 gray fox and 498 red fox, up 60 percent and 41 percent respectively, from the previous year. Coyote trappers took 716; the highest number ever taken.

NEW HAMPSHIRE FURBEARER HARVEST BY COUNTY (2003/04)

County	Beaver	Coyote	Fisher	Gray				Opossum	Otter	Raccoon	Red		
				Fox	Mink	Muskrat	Fox				Skunk	Weasel	
Belknap	135	38	35	19	23	51	0	15	26	37	7	5	
Carroll	195	47	41	24	20	30	0	23	20	17	0	13	
Cheshire	209	67	74	12	16	46	0	39	9	19	1	1	
Coos	274	140	70	5	42	488	0	23	105	120	17	19	
Grafton	289	156	60	31	74	217	0	31	97	81	58	8	
Hillsboro	424	78	135	36	34	276	1	49	60	88	18	4	
Merrimack	539	84	133	24	77	219	2	76	55	45	20	1	
Rockingham	443	41	132	45	29	507	1	62	67	33	5	4	
Strafford	127	31	45	57	20	32	3	22	29	41	3	8	
Sullivan	100	34	63	14	15	63	1	12	47	17	9	3	
Total	2735	716	788	267	350	1929	8	352	515	498	138	66	

NEW HAMPSHIRE FURBEARER CATCH PER 100 TRAP-NIGHTS

Year	91	92	93	94	95	96	97	98	99	00	01	02	03
Beaver	7.3	6.5	9.7	6.6	7.9	7.7	8.5	7.0	9.3	9.9	8.9	10.0	8.6
Otter	2.4	2.1	2.1	1.4	2.0	2.2	2.3	1.2	2.8	1.9	2.5	2.9	2.7
Mink	1.6	1.2	1.3	1.0	1.8	1.8	1.8	2.4	4.2	1.9	2.4	2.7	3.7
Muskrat	10.8	7.3	7.7	6.9	6.9	6.7	10.2	7.9	11.2	10.1	8.0	9.0	8.9
Fisher	2.6	3.1	3.1	2.6	2.9	3.3	3.8	3.2	3.5	2.8	3.6	2.6	3.1
Red fox	2.2	1.9	2.0	2.0	2.7	1.9	2.8	2.4	2.0	2.6	3.3	2.5	3.0
Gray fox	1.7	1.1	0.9	1.4	0.9	1.4	2.0	2.0	2.4	2.1	3.0	2.3	3.7
Coyote	1.4	1.6	1.8	1.8	1.2	1.8	3.0	2.3	2.0	1.3	2.5	2.9	2.3
Raccoon	17.6	24.9	19.0	20.9	14.4	26.5	24.5	30.7	8.2	3.6	3.9	4.0	3.2

NEW HAMPSHIRE HARVEST RECORDS FOR SELECT SPECIES DURING 1989-2003

Year*	Licensed Trappers	Gray Fox	Red Fox	Mink	Beaver	Muskrat	Otter	Raccoon	Fisher	Coyote
1989	643	58	504	465	3098	3746	329	890	406	169
1990	624	63	415	358	2589	2381	261	796	440	155
1991	457	76	426	537	3372	3886	316	965	442	227
1992	418	86	381	381	2059	2525	285	854	426	260
1993	380	76	378	441	3612	2273	405	994	525	298
1994	439	97	444	513	5901	4389	504	888	722	342
1995	393	75	343	386	4048	2731	317	902	426	380
1996	403	129	264	587	4752	2976	451	519	642	345
1997	411	104	324	429	3975	3980	344	684	1187	398
1998	400	120	195	453	3784	3517	288	459	923	318
1999	397	89	181	416	3416	1714	291	374	894	279
2000	387	75	208	256	2832	2137	242	241	668	358
2001	419	183	409	618	4378	3604	397	558	1007	556
2002	443	167	353	362	2240	1453	271	406	772	518
2003	432	267	498	350	2735	1929	352	515	788	716

*The year listed represents the year when the season opened. Depending on the species, the season may extend into the following calendar year.

Performance Report

State: New Hampshire Grant W-89-R-5

Period Covered: July 1, 2004– June 30, 2005

Grant Type: Survey and Inventory

Project Title: FURBEARER RESEARCH AND MANAGEMENT Project V

Job 5: Grant Planning And Administration

Job Objective:

To effectively and efficiently administer the furbearer management program in New Hampshire through oversight of all grant activities, and through participation in peer, legislative and public review.

Summary:

The furbearer project was effectively and efficiently administered during this project segment. The project leader has discussed the need for reactivating the planning process with the department's furbearer team, which he chairs.

The project leader maintained communication with other furbearer biologist from throughout the eastern United States and Canada. He represented New Hampshire on the Northeast Furbearer Technical Committee. Finally, he chaired periodic meetings of the New Hampshire Fish and Game Department furbearer team.

Target date for achievement:

June 30, annually

Status of progress:

On schedule.

Significant deviations:

None

Estimated costs:

Procedures:

All grant activities will be overseen and implemented. Public desires will be monitored via routine communications, periodic hearings, and constituency meetings. Management advances will be monitored and enacted via peer consultation and review, the tracking of pertinent literature, and routine attendance at furbearer technical committee meetings. Testimony against detrimental furbearer proposals and in support of beneficial furbearer proposals will be given to protect, maintain and enhance project effectiveness. All Federal Aid documents and assorted annual summary reports will be prepared and submitted in a professional and timely fashion.

Results:

The furbearer project leader administered over furbearer project jobs and operations. He attended the annual Northeast Fur Technical Committee meeting and maintained communication with other furbearer biologists from the eastern U.S. and Canadian provinces, as required. He also coordinated participation in Best Management Practices (BMP) research that was conducted in New Hampshire. In addition to representing New Hampshire on the Northeast Fur Technical Committee the project leader participated in several other furbearer management programs including: meetings to outline strategies and goals for developing a school curriculum program on furbearer management. He also attended most of the monthly New Hampshire Trappers Association meetings and served as a contact between them and the department. Finally, he prepared and submitted required summaries and annual reports in a timely fashion.

Conclusions:

Data generated for this job has been an ongoing process.

Peer contacts in the Northeast Region provide information on both state, national and international research and trends. Furbearer management in one state or province can be affected by changes in regulations in other nearby states or provinces. Therefore development of the best management practices includes knowledge of the management of furbearers in other jurisdictions.

Recommendations:

Continue this job as planned.

Prepared by: _____
Eric P. Orff, Wildlife Biologist
July 30, 2004