

MINK ASSESSMENT

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NATURAL HISTORY¹

Mink occur from coast to coast, from the arctic tundra south to the desert areas of North America. They are an elongated, short legged weasel like animal. The tail is bushy and the feet are fully furred except for the pads. Males are usually 10% larger in size and weight than females. Weights of adult male mink range from 2 to 4 pounds and adult females from 1 3/4 to 3 1/2 pounds. The fur is dark chestnut brown except for a few white spots on the chin, throat, chest, abdomen and anal region. The tail is similar in color to the body but gets darker toward the tip. The pelts of most mink reach primeness during the first half of November and most mink are past prime by mid-January. Mink possess anal scent glands that emit a liquid with a very strong, musky odor.

Mink are generally solitary animals and males and females associate only for brief periods during the mating season, which occurs from late February to early April. They are sexually mature at 10 months of age and continue to reproduce for 7 years or more. As the breeding season approaches the general physical activity of the animal increases with the males traveling widely seeking females.

The duration of pregnancy in mink averages 51 days but may vary from 40 to 75 days due to variation in the duration of the preimplantation period. The young are born 28-30 days after implantation with whelping usually from the last week in April to the middle of May. Litter size is one to eight or more with four the average at birth. The eyes open around three weeks of age and they begin to consume solid food at about

¹ Adapted from Chapter 31, Mink, Linscombe, G. et al. in *Wild Mammals of North America*, 1982, J. A. Chapman and Feldhamer, eds., The Johns Hopkins University Press.

the same age. They reach 40% of adult weight and 60% of adult length by seven weeks of age.

Mink are associated with water and wetland environment of all kinds including banks of rivers, streams, lakes, ditches, swamps, marshes and backwater areas. High numbers have been found in coastal marshes.

The presence of den sites can be extremely important. They can consist of beaver and muskrat lodges and burrows as well as natural dens. Areas of intensive use, in a telemetry study, occurred in areas with suitable dens.

The mink is a carnivore and will feed on any animal material that they can find and kill. No single food item has been found to be most important. More than two thirds of food in mink stomachs in Missouri and Michigan was aquatic in origin.

Because they are at the top of the food chain, body tissues accumulate some of the environmental contaminants. Mercury, PCBs and pesticide residues are all suspected of involvement in reproductive failure and mortalities.

Many more parasites and diseases of mink have been reported than for any other members of the weasel family. They host mites, fleas, and lice externally as well as many kinds of roundworms and flatworms internally. Diseases identified number over a dozen. All of this applies to ranched mink but many have been found in wild mink also. Again the impact on populations is not known but no serious affect has been reported. The impact on longevity and reproduction is not known.

HISTORY

Habitat Trends

The trend in the amount of the wetlands (lakes, ponds, rivers, brooks, streams, marshes, and tide zones) and associated uplands has been negative. Human development has changed the natural character of some wetland edge areas to the point where they do not meet the life requirements of mink. The rate and magnitude of change over time are related to locations and amount of human populations and associated developments. There is no information source that directly measures the impacts on mink habitat. However, since the human population is increasing, it is assumed that a loss or degradation of mink habitat has occurred. Laws (Great Ponds, Stream Alteration, etc.) regulating the amount and types of development along waterways has reduced the amount of development degrading mink habitat.

The use of uplands associated with the edge of wetlands impacts the quality of mink habitat. where these areas are used for the production of forest products there is a trend toward a balance of tree density and size classes. Where forest products are not the primary use of forestlands, the resulting larger less dense forest stands are poorer mink habitat. The quality of mink habitat is positively related to the amount of small dense stands of trees and small woody growth.

Population Trends

There is no information indicating any changes, either positive or negative, in the populations of mink in Maine or any part thereof. It is assumed that populations have varied only because the habitat has varied.

Use and Demand Trends

Harvest Regulations

No record has been found to show when the present regulations were established, but in the early part of this century mink were taken incidentally by muskrat trappers, and some trappers concentrated on mink while getting ready to trap other furbearers during the winter. During this same period, raising mink in captivity was common in the State. Mink prices declined substantially during the 1960's and 70's, a trend that reversed in 1979 but fluctuates, as with other furbearers (Table 1).

When furbearer laws were more species specific than has recently been the case, the open season was consistently the month of November (Table 1). From 1976 to 1979 the rules covered mink, muskrat, and otter as a group. Since 1980, the same open season dates have applied to all furbearers in any portion of the State.

The effective season length is controlled by the opening date if the assumption that freeze-up closes the season is correct. Given this assumption the season has been longer since 1976. If the trend for freeze-up dates were known, it would be possible to show the trends in total trapping days.

Table 1. Mink historical record.

Year	Estimated average price ¹	Fall water trappers	Estimated harvest ²	Statutes and regulations	
				Trapping	Hunting
1955	20.00	---	2,982	November 1-November 30	same
1956	17.00	---	4,078		
1957	14.00	---	3,183		
1958	12.00	---	2,574		
1959	13.00	---	1,910		
1960	11.00	---	2,540		
1961	---	---	---		
1962	11.00	---	2,216		
1963	12.00	---	3,078		
1964	11.00	---	3,698		
1965	10.00	---	2,889		
1966	10.00	---	1,754		
1967	9.00	---	1,840	November 1-November 30	closed
1968	12.00	---	2,256		
1969	9.00	---	2,700		
1970	7.00	---	4,977		
1971	7.00	---	1,992	Statutory provision repealed	
1972	13.00	---	3,529	and replaced by regulation.	
1973	16.00	---	2,440	November 1-November 30	closed
1974	15.00	---	4,369		
1975	14.00	---	4,455		
1976	18.00	---	2,791	WMU's 1 and 2	closed
1977	18.00	---	3,496	October 20-November 30 WMU's 3-8 November 1-November 30	
1978	19.00	---	---	WMU's 1-6	closed
1979	25.00	---	---	October 20-November 25 WMU's 7 and 8 October 25-November 15	
1980	32.00	---	---	Northern and Western Deer Zone	closed
1981	22.00	1,001	1,956	October 20-November 30 Southern Deer Zone October 28-November 30	
1982	17.00	994	2,388	Northern Deer Zone October 20-November 30 Southern Deer Zone October 28-November 30	closed
1983	20.00	962	2,457	Northern Deer Zone	closed
1984	20.00	865	1,972	October 20-December 4 Southern Deer Zone October 28-December 4	

¹Estimated pelt price obtained from: trapper questionnaire from 1955-78, New Hampshire furbuyer survey from 1979-81, and Maine furbuyer survey from 1982 to present.

²Estimated harvest from trapper questionnaire from 1955-78 and mandatory pelt tagging from 1981 to present.

Other than the number of legal trapping days the only other rule impacting mink was to change the land/water split of opening dates to a common date for both. This occurred in 1980 and has been continued to the present.

Harvest Trends

Early accounts of the fur trade contain little mention of mink pelts. Seton mentions that the fur had little value in the 1820's and that pelts sold for about fifty cents in 1900. He also mentions that mink became established as a fur commodity during the fur boom of 1920. Norton (1930) briefly mentions mink in two sentences. Palmer (1937) quoted a report from 1903 that mink were common in the Katahdin area, and reported the catch by Maine trappers averaged 3,425 per year between 1928 and 1935.

Two to four year ups and downs are characteristic of mink harvests. The estimated average harvest in 1955-58 was 15% less than a recent average ending in 1977.

Users

From 1957 to 1971 the annual sale of trapping licenses did not exceed 1,700. It was as low as 1,323 in 1962. During this period the prices paid for mink pelts were high compared to other forbearer pelts traditionally taken in the fall of the year. However, prices were not high enough to make mink trapping a profitable independent endeavor. Contacts with some trappers during this time revealed two types of users. One was the muskrat trapper, taking mink in both muskrat and mink type sets. The other was the beaver trapper who trapped for mink in the fall while locating beaver colonies.

Beginning in 1971, the sale of trapping licenses increased annually and reached over 5,500 by 1980. During this same period, the reported prices for mink pelts more than doubled. The number of mink trappers is assumed to have increased as a result.

Past Management Goals

In the 1975 assessment, a goal was adopted to increase the harvest of mink and maintain the population level. The objective was to have an annual harvest of 10,000 mink by 1,100 trappers. To meet the original objective there were seven management strategies identified. The objectives associated with four of these strategies have been met. The critical strategy calling for regulations so that use and success would increase did not result in any action.

In 1980, the goal was changed to maintain both the harvest level of mink and the population level. The objective was changed to have an annual harvest of 3,500. This objective was adopted because it was realized that regulations needed to meet the original objective were not feasible.

The second (1980) objective was selected based on a harvest estimate from a trapper mail survey. Since 1981, mink pelts have been tagged. The deviations shown in Table 2 are due more to overestimates by the mail survey than any real failure to meet the objective.

Table 2. Mink harvest vs objective harvests, 1981-84.

Year	Harvest	Objective harvest	Percent deviation
1981	1,963	3,500	-44
1982	2,388	3,500	-32
1983	2,457	3,500	-30
1984	2,027	3,500	-42

HABITAT ASSESSMENT

Statewide

Status

The quantity and quality of the shallow edge of wetlands and the associated uplands determines the ability of the land to support mink. Mink habitat is estimated by the length (in miles) of shoreline along lakes, ponds, rivers, brooks, streams, marshes, and tidal zones. In the case of brooks and streams, both edges are combined so that one mile of brook or stream is one mile of habitat. With rivers, one mile of length is two miles of habitat; one mile for each shore. Shoreline with human development is not considered mink habitat. The amount of mink habitat is estimated to be 38,492 linear miles (Table 3).

The quality of Maine's mink habitat was assessed by applying forest survey and water quality data to a Habitat Suitability Index (HSI) model. The HSI model numerically evaluates an area's suitability for mink based on measurable biological and physical characteristics. The model is useful for making general evaluations and comparisons of habitats for mink.

The quality of mink habitat is determined by its ability to produce food. The amount of aquatic foods produced was estimated by a measure of the waters basic productivity (total dissolved solids). The amount of upland food (number of small mammals) was estimated from the density of shrubs and small trees in the upland habitat; higher densities of shrubs and small trees support more small mammals. The food suitability index is a combination of these two indices.

Table 3. Current mink habitat suitability.

Wildlife Management Unit	Total ¹ shoreline miles	Mink ² habitat miles	Food suitability Index	Habitat units
1	3,893	3,226	0.77	2,484
2	9,449	8,813	0.63	5,552
3	5,976	5,159	0.53	2,734
4	7,942	6,909	0.53	3,662
5	3,957	3,340	0.78	2,605
6	5,328	4,261	0.53	2,558
7	3,560	2,912	0.48	1,398
8	4,769	3,872	0.50	1,936
Total	44,874	38,492	--	22,929

¹Shorelines of lakes, ponds and marshes plus 2 miles for each mile of river and plus one mile for each mile of stream and brook.

²Non-habitats are all urban and developed nonurban shore miles plus one-fourth of the balance that is assumed to lack the denning requirement.

The number of habitat units was obtained by multiplying the miles of mink habitat by food suitability index values. one habitat unit represents one linear mile of prime mink habitat.

Changes

No comparison of habitat between what is shown in this plan and what was shown in the previous plan is made. The data sources and analytical methods are completely different.

Values for habitat length are known to be changing due to human development. From 1976 to 1982 the Department approved permits for development at the rate of 212 miles per year. Mink are known to use developed shorelines but it is assumed that the critical upland food component of small mammals as estimated by the number of small trees and shrubs is removed from developed sites. Relationships of mink to developed areas is complex and has not been subjected to investigations. For instance, small mammals associated with human developments are known to attract mink. In addition, items such as docks, old boat houses, and stone block jetties provide denning sites. Conversely, mink are shy and avoid humans and their pets.

A decrease in the upland food value is indicated by a decrease in the area of the State classified as sapling or smaller in 1971 and 1982 (Powell and Dickson 1984). While not all these acres are associated with mink habitat, it is safe to conclude that the area with small dense tree growth has decreased and that this life requisite for mink has decreased.

The changes that have taken place in water quality are important to the quality of mink habitat. A decrease in pollution has taken place as a result of state and federal laws enacted for this purpose. This has the effect of increasing the aquatic life mink use as food. .

Projections

By 1990, the habitat for mink will decrease in both quantity and quality (Table 4). Since the quantity of habitat is a fixed geographical and climatological feature it will change due to human development only.

The small mammal indicator that is part of the food index is expected to decline but not at the same rate as in the past. A large part of the State has managed forests. The relative amount of area of small trees and shrubs is expected to decline slightly in these forests. In the part of the State with a lower forest management level, a decline in this area ratio is expected to continue until, or almost until, the year 1990.

No change is projected in the amount of aquatic foods. Environmental contaminants that would change this are not measured.

Wildlife Management Units

Status

As could be predicted, the habitat miles per total shoreline mile is greatest in WMU's 2, 3, and 4 and least in WMU's 1 and 5. Total habitat is greatest for WMU 2 (Table 3).

Table 4. Future mink habitat suitability (1990).

Wildlife Management Unit	Total ¹ shoreline miles	Mink ² habitat miles	Food suitability Index	Habitat units
1	3,893	3,225	0.73	2,354
2	9,449	8,812	0.63	5,552
3	5,976	5,157	0.52	2,682
4	7,942	6,906	0.48	3,315
5	3,957	3,339	0.77	2,571
6	5,328	4,260	0.48	2,445
7	3,560	2,901	0.43	1,247
8	4,769	3,861	0.45	1,737
Total	44,874	38,461	--	21,903

¹Shorelines of lakes, ponds and marshes plus 2 miles for each mile of river and plus one mile for each mile of stream and brook.

²Non-habitats are all urban and developed nonurban shore miles plus one-fourth of the balance that is assumed to lack the denning requirement.

The food suitability index values differ greatly between units with WMU's 1 and 5 having the best quality habitat (Table 3). The small mammal value from small tree and shrub densities accounts for most of the difference. WMU's 3, 4, 6, 7, and 8 were cut over long enough ago so that the small trees have grown past the seedling-sapling stage on more area than is being created by cutting.

Changes

Examining changes between the WMU's is subject to the same limitations as assessed in the statewide section. Changes in the small tree and shrub densities show the same type of information for the WMU's as for statewide. The area in the sapling and smaller forest types has decreased in all WMU'S, with exceptionally large decreases in WMU's 4, 7, and 8.

Projections

The identified rate of human development is so small that reduction of habitat is expected to be of very low significance in all WMU's (Table 4). Habitat quality, as indicated by the food index, is expected to continue to decrease in all WMU'S.

The above declines are expected to be partially offset by improvement in the water quality of mink habitat. This statement is conjectural as measurements that would make projections possible in any WMU's have not been made.

POPULATION ASSESSMENT - CARRYING CAPACITY

Statewide

Status

The carrying capacity is completely based on the quantity and quality of the habitat as described in the previous section. Each habitat unit can support and provide the territorial space for one adult female mink. With the sex ratios for adults being equal, there is also one adult male per female in the population that shares each habitat unit. The males have a larger territory than females but home ranges of males overlap. In addition to the two adults, each habitat unit is supporting young of the year. with the carrying capacity being season specific for the fall preharvest point in time and with the population assumed as static, about two-thirds of the young of the year die between birth and fall, leaving an average of 1½ young per habitat unit. The summation of this is 3½ mink per habitat unit.

With the current number of habitat units at about 23,000, the carrying capacity is almost 80,000 mink in the fall (Table 5).

Changes

Since the carrying capacity is determined by habitat, carrying capacity has decreased as the quantity and quality of habitat has decreased.

Table 5. Current (1981-1984) and projected (1990) maximum supportable fall mink populations by Wildlife Management Unit.

Wildlife Management Unit	1981-1984 maximum supportable population		1990 projected maximum supportable population	
	range	mid-point	range	mid-point
1	7,060 - 10,320	8,690	6,590 - 9,890	8,240
2	15,750 - 23,110	19,430	15,950 - 22,910	19,430
3	7,590 - 11,550	9,570	7,380 - 11,400	9,390
4	10,260 - 15,380	12,820	9,050 - 14,150	11,600
5	7,430 - 10,810	9,120	7,240 - 10,760	9,000
6	7,470 - 9,710	8,950	7,720 - 9,410	8,560
7	3,730 - 6,050	4,890	3,190 - 5,530	4,360
8	5,230 - 8,330	6,780	4,670 - 7,490	6,080
Total	64,520 - 95,260	79,900	61,790 - 91,540	76,700

Projections

The carrying capacity is expected to decrease by 4% to 76,700 by 1990 following a continuing habitat decrease.

Wildlife Management Units

Status

WMU's 2 and 4 are the largest WMU'S, having the highest carrying capacity. Conversely, WMU 7 is the smallest WMU and has the lowest carrying capacity.

Changes

The changes in carrying capacity for each WMU are habitat factors as described in the habitat section.

Projections

Carrying capacity is expected to decrease slightly in all WMU's except WMU 2, which will remain constant.

POPULATION ASSESSMENT - CURRENT ESTIMATED POPULATIONS

Statewide

Status

There is no direct measure of mink populations. The mink population is assumed to be at carrying capacity unless there is a recent harvest high enough to impact the population or evidence of a declining population from nonharvest causes indicated by a combination of declining harvest along with declining success rates. Neither of these situations has occurred. Therefore, the current preseason population is estimated to be the same as carrying capacity, 79,900 (Table 6).

Changes

The actual population changes are determined by habitat changes. The factors involved are discussed in the habitat section. The population estimate is much higher than that used in the 1980 assessment.

Projections

The population projections are determined by the habitat projections. The factors involved are discussed in the habitat section.

Populations are expected to decrease slightly to approximately 77,000 by 1990.

Table 6. Current (1985) and projected (1990) fall mink population estimates by Wildlife Management Unit.

Wildlife Management Unit	1985		1990	
	Estimated population range	mid-point	Estimated population range	mid-point
1	7,060 - 10,320	8,690	6,590 - 9,890	8,240
2	15,750 - 23,110	19,430	15,950 - 22,910	19,430
3	7,590 - 11,550	9,570	7,380 - 11,400	9,390
4	10,260 - 15,380	12,820	9,050 - 14,150	11,600
5	7,430 - 10,810	9,120	7,240 - 10,760	9,000
6	7,470 - 9,710	8,950	7,720 - 9,410	8,560
7	3,730 - 6,050	4,890	3,190 - 5,530	4,360
8	5,230 - 8,330	6,780	4,670 - 7,490	6,080
Total	64,520 - 95,260	79,900	61,790 - 91,540	76,700

Wildlife Management Units

Status

The numbers shown for populations in each WMU (Table 6) are derived as described for statewide. WMU's 2 and 4 have the highest estimated population while WMU 7 has the lowest.

Changes

Estimated populations are higher for all WMUIS, but increased the most for WMU 8.

Projections

Population decreases are expected in all WMU's except WMU 2.

POPULATION ASSESSMENT - RELATIONSHIP OF CURRENT ESTIMATED POPULATION TO MAXIMUM SUPPORTABLE POPULATION

At the present time the actual population is being limited by the quantity and quality of the habitat. By most definitions this is a population at carrying capacity. This conclusion is reinforced by the characteristics of mink as a species. They are short-lived animals with a high reproductive rate. Adult females establish exclusive territories which are fairly small. In addition, harvest records indicate that trapping exploitation rates are very low. Because trapping effort is limited by road access, only those mink which inhabit areas containing roads are accessible to trappers. Consequently, most of the mink population is not subjected to trapping pressure.

USE AND DEMAND ASSESSMENT - HARVEST

Statewide

Status

The recent average take of mink by trappers is over 2,100 (Table 7). The harvest is much less than the allowable harvest.

Changes

The method for estimating harvest changed from a mail questionnaire to pelt tagging in 1981. Therefore, comparisons are not possible. The actual change in harvest is not known.

Projections

A small harvest increase is projected for 1990 (Table 8). These projections are based on current trends only.

The harvest will not exceed the allowable harvest if current trends continue.

Wildlife Management Units

Status

Higher WMU harvests are reported in the WMU's with higher numbers of trappers. Higher numbers of trappers are found in WMU's 1, 2, 4, 7, and 8 (Table 7).

Harvests do not exceed the allowable harvest in any WMU.

Table 7. Current (1981-84) mink harvest, effort and success rates by Wildlife Management Unit.

Wildlife Management Unit	Allowable harvest	Harvest	Estimated mink trappers	Successful mink trappers	Percent successful	Trappers per 100 habitat units
1	2,800 - 4,100	363	117	111	95	8
2	6,300 - 9,200	262	95	88	93	3
3	3,000 - 4,600	154	69	62	90	4
4	4,100 - 6,200	440	245	213	87	11
5	3,000 - 4,300	219	74	67	91	4
6	3,000 - 3,900	178	81	71	88	6
7	1,500 - 2,400	296	127	112	88	15
8	2,100 - 3,300	246	146	128	88	13
Statewide	26,000 - 38,000	2,159	956	852	89	7

Table 8. Future (1990) mink harvest, effort and success rates by Wildlife Management Unit.

Wildlife Management Unit	Allowable harvest	Harvest	Estimated mink trappers	Successful mink trappers	Percent successful	Trappers per 100 habitat units
1	2,600 - 4,000	403	96	89	93	7
2	6,400 - 9,200	207	68	67	99	2
3	3,000 - 4,600	132	49	46	94	3
4	3,600 - 5,700	496	201	200	100	10
5	2,900 - 4,300	285	68	53	78	3
6	3,100 - 3,800	140	46	46	100	4
7	1,300 - 2,200	445	153	143	94	14
8	1,900 - 3,000	196	105	96	91	10
Statewide	25,000 -37,000	2,270	770	730	95	6

Changes

For reasons described in the statewide section the actual change is not known.

Projections

If current factors influencing trappers continue, decreases in the harvest are expected in WMU's 2, 3, 6, and 8. Harvest increases are expected in all the other WMU's (Table 8).

The harvest is not expected to approach the allowable harvest in any WMU.

USE AND DEMAND ASSESSMENT - TYPES OF USERS

Statewide

Status

Over 900 trappers are taking mink or otter (Table 7) during the fall, with over 800 taking one or more mink. Both of these numbers have decreased in the last three years. The combination of mink and otter trappers decreased in all of the recent four years. Muskrat trappers also are potential mink trappers. Because muskrat pelts do not require a pelt tag it is not known how many there are. A recent review of furbuyer reports showed that one third of the trappers who sold a buyer some muskrat pelts also sold mink pelts. However, it is not correct to conclude that the other two thirds did not catch a mink. It is theorized that any trapper that takes more than a few muskrats also takes one or more mink.

A place and time to trap (use-opportunity) influences the number of mink trappers. Vehicle access, landowner permission, legal restrictions, inter trapper tolerance, pelt values, and other factors play a role in trapper numbers. The impact of these factors has not been measured.

Intolerance by humans (with live bait fish, fish hatcheries, small livestock, etc.) impacts mink use. Removal of mink has a very short-lived impact and intolerance by humans is estimated to have a very small impact.

Mink have value to some of the nonconsumptive public. The naturalist, wildlife photographer, and animal watcher are in this category. While their inherent interest is expectably large, the mink is both shy and crepuscular and does not create a very large

chance for nonconsumptive use activities. There is no measure of the quantity of this use. Because most mink trapping is done from water, access problems do not limit use-opportunity for mink trapping as greatly as land trapping.

Changes

Because use measures are all recent, there are no past values to show any actual changes.

Projections

The last four years of pelt tag records show a decreasing trend of successful mink trappers. The numbers are expected to decrease by more than 100 by 1990 (Table 8).

Wildlife Management Units

Status

The relative density of trappers (trappers per habitat unit, Table 7) shows a large variation between WMU'S. It reflects access and remoteness almost completely and mink abundance almost not at all. WMU's 4, 7, and 8 have trapper densities almost five times the density in WMU 2.

Changes

As under Statewide, there are no past values to show any actual changes.

Projections

Future use by trappers is expected to decrease by about the same ratio in all WMU's (Table 8). Numbers of nonconsumptive users in the wildlife world are increasing. There is no reason to believe it will not continue to increase in all WMU's but to an unknown degree.

SUMMARY AND CONCLUSIONS

Mink are dark, medium size members of the weasel family that are found associated with water over a large part of North America. Their pelts are a significant part of the fur industry. Except for areas with intensive human development, they occur most everywhere in Maine's lake, stream, and coastal environments. They eat almost anything they can kill, although small land animals are the most important part of their diet. Mink also consume water animals such as frogs and fish.

Mink are short-lived and are hosts of many parasites and diseases. Environmental contaminants may also play a role in regulating their numbers. They have a high reproductive rate; most individuals in the population die and are replaced in three years or less.

Adult female mink have home ranges that encompass less than two miles of shoreline. The home range size of males are larger; an individual male's range overlaps the territories of several females and other males. Mink are solitary and travel alone, except during the breeding season.

Maine contains about 38,000 linear miles of fair to good quality mink habitat, capable of supporting about 80,000 mink. Harvest records suggest that trapping is not regulating mink numbers; and the current population is estimated to be near the carrying capacity of the habitat (80,000 animals).

Continued human development will cause some loss of mink habitat over the next 5 years, and a slight decline in food abundance is expected to occur during the

period. By 1990, both the carrying capacity of the habitat, and the mink population level are expected to decline marginally to 77,000 animals.

Mink pelts have been valued by Maine trappers for the last sixty or seventy years. Annual reported harvests usually ranged from 2,000 to 4,000 mink during this period. Mandatory tagging of mink pelts began in 1981. Since then, between 1,900 and 2,500 mink ($x = 2,159$) have been tagged each year by 800 to 1,900 trappers.

Harvest rates are expected to increase marginally, averaging about 2,200 annually by 1990, but this harvest will still be less than 10% of the estimated maximum allowable harvest. Trapping is not likely to impact Maine's mink population in the near future. The maximum allowable mink harvest exceeds current harvest levels by a factor of ten (Table 9).

Table 9. Past, present and estimated future mink harvests and users by year.

Year	Harvests			Users	
	Actual	Allowable	Objective	Total	Successful
1981	1,963	33,000	3,500	1,029	885
1982	2,388	33,000	3,500	1,015	919
1983	2,457	33,000	3,500	992	906
1984	2,027	33,000	3,500	893	796
1990	2,300	32,000	---	770	730

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MINK MANAGEMENT GOAL AND OBJECTIVES 1985-1990

GOAL: Allow the mink population to fluctuate naturally in all WMU'S.

OBJECTIVES

Abundance: Monitor the mink population but allow mink densities to fluctuate naturally in all WMU'S through 1990.

Harvest: Maintain current user opportunity (season length and timing) through 1990.

Capability of Habitat: Mink habitat throughout Maine is capable of supporting naturally fluctuating mink populations.

Feasibility: Current harvest regulations and management programs will insure the achievement of the goal and objectives; no changes are required.

Desirability: Mink trappers are apparently satisfied with current regulations, and current harvests are not impacting the State's mink population. No changes in regulations are required under this goal and associated objectives. Therefore, they should be viewed as desirable by trappers.

Possible Consequences: None expected, unless changes in the fur market result in a dramatic increase in interest in mink trapping, which may result in trappers requesting liberalization of trapping opportunity.

Summary of Working Group Concerns

MINK

Habitat

1. Should monitor spraying of herbicides, fertilizers, etc., and siltation on ability of streams to support mink.

Populations

1. Distemper downeast may have affected mink as well as raccoon.
2. Populations estimates seem too high.
3. Populations are low in Washington County.
4. Spraying (herbicide and spruce budworm).

Harvest

1. Incidental take of mink when winter trapping should be legalized.

Mink Problem and Strategies in order of Priority

Problem 1: Lack of information on the size of mink populations throughout the State.

Strategy 1: Develop and implement a system to monitor mink populations on a WMU basis.

Problem 2: Decreasing accessibility of private lands to trapping.

Strategy 1: Develop a system to monitor the amount of land being lost to public access.

Strategy 2: Develop and implement programs to maintain access to private lands.

Strategy 3: Acquire public access rights to land where necessary.