

Additional Comments Submitted by Jurisdictions to Further Expand
Moose Workshop Checklist, as Follows:

1. Alaska - Warren Ballard:

Seasons

Only one area has been specifically established as a primitive weapons area; however, all state parks, which prohibit discharge of firearms (including black powder), allow bow hunting.

Licencing

Non-resident moose hunters are required to purchase a non-resident hunting licence (\$60 U.S.) and a nontransferable locking metal tag (\$200 U.S.). Licences and non-resident tags are issued by private vendors.

Hunting pressure and harvest are sometimes regulated by establishment of a permit hunt or registration hunt. Permit hunts have a predetermined number of hunters which allows them to take one moose of a specific sex and/or age class. All interested hunters may apply for one permit hunt. Successful permittees are selected by lottery. In comparison, registration hunts allow all who wish to hunt the opportunity to do so until the desired harvest is reached, at which time the season is closed by emergency announcement.

Ineligible candidates for permit hunts are not notified individually, but any interested person can contact or telephone a Department office which maintains lists of successful and unsuccessful applicants.

Each applicant for a permit hunt must include a \$5.00 (U.S.) application fee which is nonrefundable. Permit applicants do not need to acquire a hunting licence until a permit has been issued.

Permit and registration hunts are either for bulls only or antlerless moose. Bull calves, calves, and yearlings are sometimes taken but regulations do not purposefully put pressure on those age classes. In at least two management units where neither permits/or registration hunts are in effect, an antler restriction has been imposed: in one unit bull moose with an antler spread of 36 inches or three brow tines on one antler may be taken while in another unit a legal bull must have a minimum antler spread of 50 inches or three brow tines on one antler. In the latter two hunts all who wish to participate may do so.

Harvest Data

Except for permit and registration hunts, all moose hunters who participate in the general moose season are required to have in their possession a nontransferable harvest ticket which includes a section for recording success. Harvest tickets are issued free of charge at both private vendors and Fish and Game offices. Originally hunters were to be mandatorily required to report success on the harvest report; however, this has not been the case. Nonreporting hunters are often sent up to three followup letters which has resulted in an overall response rate of approximately 65 to 75 percent. Both successful and unsuccessful hunters who participate in permit or registration hunts must report on their success. Violators are issued a citation requiring them to appear

in court and they are not allowed to apply for a permit hunt the succeeding year.

Hunters are not required by regulation to provide the Department with biological specimens during the general bull season but they are encouraged to voluntarily provide the incisors. During permit and registration hunts, incisors are usually required and other specimens may also be required as a condition of the hunt.

Enforcement

All hunters who participate in hunts other than permit or registration hunts (usually bulls only season) must have a paper harvest ticket in their possession. When successful, the ticket must be punched to show the kill date and the validated ticket must be in the possession of the hunter until the animal is delivered to the location where it will be processed for consumption. Non-resident hunters must also possess a metal tag which must be affixed to the animal.

2. British Columbia (B.C.) - Wally Macgregor:

In 1980, 73% of the harvest was bulls, 21% females, 6% calves. In the heavily hunted central portions of the province we are having a general season on young bulls with two points or less on one antler, a calf season in October and are controlling the take of mature bulls and cows and calves by a combination of lottery permits for residents and non-resident quotas for guides. We are allowing the use of dogs on leash for hunting moose for the first time in 1981. Our general hunting licence is being increased from \$7.00 to \$10.00 with the three

dollars being earmarked for the Habitat Conservation Fund which is used to acquire and manage critical wildlife habitat. Non-resident licences also increased by \$3.00.

3. Manitoba (Man.) - Vince Crichton:

For 1982, a few summary points may be pertinent at this time.

1. A bull only season in the general areas will prevail again in 1982 with the exception of the far north where any moose applies.
2. Eight draw areas exist in the province and there are two additional areas which have bull only seasons with draws for a limited number of any moose licences.
3. The Department of Natural Resources has recently taken over the handling of the non-resident moose hunt from the Department of Tourism. More control is being exercised, quotas established for areas and the licences allocated amongst the various operators.

I have personally been involved with this last one and I can assure you it has been a difficult task; however, it has the support of most of the lodges and outfitters catering to non-resident moose hunters and they have been involved in development of these quotas. They also see it as a mechanism to protect the viability of their moose hunt for the future. This latter point was of real concern to me as there were some residents complaining about the number of non-resident moose hunters in some areas. If the number of non-resident hunters was all-

towed to expand uncontrolled, resident complaints would undoubtedly reach a state whereby government would be forced to close the areas to non-resident moose hunts.

4. Minnesota (Minn.) - Pat Karns:

1. Number of hunters limited; potentially have 500,000 hunters in state to draw from.
2. Can use any primitive weapon legal for the taking of big game during the moose season.
3. Application must be postmarked no later than 15 June. Selected permittees must purchase licence prior to 1 August.
4. Must bring all edible meat to registration station, plus any other parts in possession.
5. All pieces of moose brought to registration stations are individually tagged.

5. Nova Scotia (N.S.) - Art Patton:

Moose and caribou were the ungulates of Nova Scotia at the time of European settlement in the Province.

The introduction in the mid-1890's and subsequent population boom of white-tailed deer and its parasite P. tenuis completed the eradication of caribou and the severe restriction of moose to primarily certain highland areas.

Legal hunting ended in 1935 but the population remained low and relatively constant probably controlled by poaching and P. tenuis.

In 1964 limited open seasons were again established to

allow some legal utilization of the resource. After 10 years of limited hunting, sex and age distribution showed no significant changes from those of the original legal kill. This suggests that the legal harvest merely replaced other mortality factors.

Uneven hunter concentrations led to zoning and limiting licences per zone to attempt more equitable distribution related to moose distribution. Despite this and reduced numbers of licences, recent indices suggest that our population is declining in several zones. It is generally felt that an increase in some mortality factor other than the legal harvest is the major influencing factor.

In 1981, 450 resident licences will be issued and distributed among 8 management zones comprising 7,281 square miles of total area for 9 hunting days. A legal harvest of approximately 150 moose of any sex or age is anticipated from a population of probably around 1,000 animals.

6. Ontario (Ont.) - Ray Stefanski:

Harvest Control

1982 Province-wide quota hunt system

- . party licence
- . general lottery draw for residents only
- . preferred pool system to ensure a hunt every other year or better
- . hunter choice of unit (1st, 2nd, or 3rd)
- . central administration of computer draw

Season structure

- . four broad areas with similar dates
- . central range to open in early October and close in late November
- . fixed date of the month opening and closing dates
- . seasons to remain fixed for three years

Hunter access to moose

- . restrictions on snowmobiles, ATV, aircraft in specific units
- . designated routes and areas introduced in specific units
- . closure of seasons in specific, local areas

1983 Quota hunt system - program maintained

Selective harvest system (bull, cow, calf) introduced in one unit

1984 Quota hunt system - program maintained

Selective harvest system - program expanded

1985 Quota hunt system - program maintained

Selective harvest system - program implemented province-wide

Allocation

1982 Province-wide implementation of policy requiring non-residents to use the facilities of established tourist outfitters.

Province-wide implementation of policy of providing for clients of tourist establishments by a special quota of licences.

7. Alberta (Alta.) - Gerry Lynch:

1. Moose in Alberta occupy 433,000 square kilometers (167,000 mi²) or 66% of the Province's 661,188 kilometers (255,285 mi²).
2. Moose densities are variable between phytogeographic regions and locally between cover types within the regions.
3. The estimated number of moose in Alberta based on most recent population surveys is 229,000.
4. A total of 65,482 moose hunters (64,176 residents, 1,306 non-residents) harvest 12,973 moose (1979 data) (12,473 by residents, 500 by non-residents). This represented 6% of the estimated population.
5. Hunter success is 19.4% for residents and 38.3% for non-residents (1979 data).
6. Non-resident moose hunters in Alberta are required to contract the services of a guide.
7. Alberta is divided into 16 big game zones for wildlife management purposes. The big game zones are subdivided into a total of 150 Wildlife Management Units. Moose occupy nine zones and 81 Wildlife Management Units.
8. Moose management in Alberta attempts to protect the moose resource and to preserve the quality of the hunting experience.
9. The quality of the hunt is enhanced by:
 - a) declaring long general hunting seasons to spread out hunting pressure temporally;



- b) regulating the number of female tags allotted per area;
 - c) restricting the use of ATV's (ATV's are restricted from some areas while in other hunting zones they may not be used in the AM);
 - d) restricting the number of tags that hunters may obtain in any one year (hunters may obtain 3 of 4 general licences and 3 of 8 special authorizations).
10. Moose populations are protected by:
- a) restrictive seasons on female moose;
 - b) limited numbers of female authorizations;
 - c) closed seasons in critical areas;
 - d) creation of wildlife sanctuaries in some critical areas;
 - e) habitat protection through a land use referral system;
 - f) habitat enhancement through interagency coordination of land use activities;
 - g) habitat manipulation (experimental);
 - h) intensive wildlife management strategies on industrially disturbed sites, marginal agricultural land, Indian reserves and Metis settlements (experimental).
11. Moose hunters must first purchase a Wildlife Certificate for \$10.00. Five dollars is ear marked for habitat development and \$5.00 into the wildlife damage fund. Resident hunters may then purchase a general moose licence (stamp) for \$10.00. Non-resident Canadians pay \$100.00 while non-resident aliens pay \$200.00 for a general moose licence. A special Zone 1 (far northern) licence is available to non-resident aliens

- for \$100.00. A metal locking tag is given out with each licence and is to be affixed to the animal immediately after it is killed.
12. Resident moose hunters may apply for a female moose authorization. Applicants who are drawn may then hunt male or female moose in the area specified on the authorization. There is no fee for the authorization.
13. Moose management data are obtained from aerial moose surveys (square mile quadrant method), mail-out hunter questionnaires and incisor bar collections from successful hunters (voluntary).
8. Northwest Territories (NWT) - Vern Hawley:
- The NWT also has a licence for natives or decendants of persons who hunted several decades ago. The licence (general hunting licence) permits the hunter to kill an unlimited number of moose of either sex at any time of the year for subsistence for him and his family (and his dogs if over 5 miles from the settlement). Those several thousand licence holders take moose but we have no estimate of the harvest.
9. Sweden (Swed.) - Sten Lavsund:
- Moose management in Sweden is based on private ownership of the land and the right of the landowner to harvest his own game and sell it. Thus, the moose management system in Sweden is so radically different from that of North America that it is outside the scope of the checklist of the workshop. I will therefore describe our system separately and when possible make comparisons with the checklist.

In Sweden the right to hunt belongs to the land-owner. To be allowed to hunt moose you must be a land-owner, a guest-hunter invited by a land-owner, or lease an area of land from a land-owner for hunting purposes. Every year the hunter has to buy a general hunting licence issued by the government in order to have the right to hunt any game. (This also applies to the land-owner on his own ground.) The licence fee is about \$ 20.

JURISDICTION

Sweden is divided into 24 counties, with an estimated 200,000 hunters and an estimated prehunt moose population of 400,000. The moose population is stable in some counties, increasing in many counties and decreasing in a few counties. The estimated 1980 harvest was 132,000 animals.

SEASON

The hunting seasons in northern Sweden are 15-20 days in the beginning of September and another period of 25-40 days in October and November. In southern Sweden the hunting season starts around October 10 and lasts for 30, or most commonly, 45-60 days. In some areas with dense populations, the season may be about 100 days. A moose hunter may hunt as many days as he wants during that period provided that moose are still left on the moose harvest licence of the hunting area. The mean number of moose hunting days for a Swedish moose hunter is

7-8. Only rifles of certain fixed calibres can be used for moose hunting (thus primitive weapons like bows and arrows and muzzle loaders are forbidden).

LICENCING

In Sweden a moose licence is obtained as follows. The possessor of the hunting rights has to register his piece of land as moose hunting ground with the County Authorities. Larger areas will get a moose harvest licence for a certain number of moose (see below). Small areas which do not produce one moose per year will get a permit to shoot one calf or one calf and one adult animal, normally a bull. The hunting season for these small areas is only 2-5 days which often makes it difficult to shoot any moose at all. The moose harvest licence system covers about 94 % of the total moose hunting area of the country.

Each county is divided into moose management units. The hunters in all registered moose licence areas can make proposals to the County Authorities concerning the number of moose they want to shoot. The County Authorities and the County Hunters Association (equal to a local Fish and Game office) use these proposals together with other information on the number of moose in a certain area to determine the number of moose to be shot. There is a moose advisory board in each county representing local hunters associations, highway authorities, forestry, farming, nature conservation interests, and outdoor life organizations.

The proposals are based on aerial censuses (the best and most reliable information) as well as other kinds of surveys or information. When the board decides on the number of moose to be shot they must take into account the number of moose in the area, the productivity of the population, and the amount of damage to forestry and farming and the number of moose-car accidents in the area. Finally the possessor of the hunting rights receives a moose harvest licence stating the number of moose that can be shot in this area. The licence also states the proportion of the shot moose that have to be calves. There is no fee charged. In most licence areas a number of moose hunters hunt together and often 10-40 moose hunters cooperate in one area. The whole licencing process mainly takes place during the winter and spring.

HARVEST DATA

All possessors of licences have to report the number of moose shot (calf or adult, sex). Portions of the carcass are only required by the authorities when special investigations are being made. For each moose killed a fee must be paid. The fee is \$ 10-50 depending on the age (calf or adult) of the moose and county where the moose was shot. Negligence to report a shot moose and pay the fee is a crime.

ENFORCEMENT

There are no special tags or seals to mark the shot moose. The person who has got the licence in a certain area is responsible for ensuring that only the moose specified on the licence are shot. Hunters are allowed to use dogs - in most cases the licence states that the

hunters ought to have a dog available to track wounded moose. Moreover, dogs are used both unleashed and leashed to locate and drive moose towards the hunters or hold the moose at bay till the hunter is able to stalk the moose and shoot it.

TOURIST OUTFITTERS (T.O.)

The hunting system in Sweden means that there is nothing like T.O. in our country. No mandatory guiding exists.

HUNTER EDUCATION

All hunters who buy a new rifle must get a licence for that weapon. Before being granted the licence the hunter has to pass a shooting test. Most moose hunting teams have additional rules which require the members of the team to pass the test each year. Before the hunt starts, the leader of the hunt gives all the hunters information concerning hunter safety. Most moose hunting is very well organized and all hunters in a group have to follow the rules stated by the leader of the hunt. The leader is also responsible for the safety during a hunt and that only the moose stated in the licence are shot. (The number of fatal accidents due to shooting during moose hunting is very low - about 1 (one) person per year in all Sweden among more than 200,000 hunters.)

PUBLIC RELATIONS

There are many meetings throughout the year on different levels from the local hunters groups up to the County Authorities to provide

information and to discuss moose hunting. Information is published in local newspapers, in hunters' magazines and the moose hunt is covered by radio and TV. There is no opinion against moose hunting in Sweden, most people regarding moose hunting as a necessary task.

THE FUTURE

In 1982, new regulations will be introduced into the Swedish moose hunting system. Most changes involve decreasing the bureaucracy which the present system involves. One proposal is that only adult moose are licenced - thus calves will be free for shooting within a given space of time. But this still only is a proposal!

10. Yukon Territory (YK) - Doug Larsen:

- A. Limited baseline data are available on moose populations throughout the territory.
- B. Management efforts are directed at documenting harvest statistics:
 1. a series of voluntary questionnaires are sent to all resident hunters who purchased a hunting licence;
 2. response rate has averaged 75% over the past two years;
 3. non-resident harvest reporting is compulsory;
 4. hunting effort, kill and mode of transportation are reported by subzone (450 subzones in the territory

which average 405 square miles in size);

5. subzones allow managers to monitor as well as regulate harvest in localized areas;
 6. in 1979, residents spent 21,000 mandays hunting moose with an average of 25 mandays to bag an animal.
- C. Priority populations, including unhunted and hunted areas will be monitored through aerial surveys during the post rutting period. These areas will be monitored periodically to determine population status and regulate harvest.
11. Maine (Me.) - Karen Morris:
- A. Moose are found statewide but are relatively rare in the southern half of the state. Moose hunting was permitted in 32,745 km² in northern Maine.
 - B. In addition to each member of the parties general hunting licence (\$9.50 for residents and \$65.50 for non-resident) there was a \$5.00 application fee, a \$10.00 permit fee, and a \$10.00 registration fee. The last three prices were the same whether 1 or 2 hunters participated.
 - C. The paper tag is a "temporary transportation tag" a metal seal is attached when the moose is registered.
 - D. Only the permittee may hunt alone and only one licence (tag) is issued whether 1 or 2 people are hunting.
- The 1980 season was permitted under a bill which allowed hunting for only 1 year. A new bill has been introduced to the legislature. It is quite similar to the 1980 bill as outlined in the check list except that it would permit annual seasons

beginning in 1982. Other exceptions are:

1. up to 1,000 permits (2,000 hunters);
2. up to 10% of the permittees - no restriction on sub-permittees;
3. commissioner to set dates of season as long as it does not exceed 6 days;
4. \$25.00 for permit, \$5.00 for application, \$9.50 for general licence;
5. \$200.00 for permit, \$10.00 for application, \$65.50 for big game licence;
6. hunting zones were not permitted in 1980, in future the commissioner may establish zones and the number of permits to be issued for each;
7. the commissioner may establish the number of permits not to exceed 1,000 and may establish the quotas for zones; these quotas must be made public 14 days before application may be made;
8. the mechanics have not yet been worked out and some will have to go through the public hearing process;
9. in 1980, the subpermittee had to be named on the application and substitutes were not permitted - this created some hardships so in future the hunter partner may be named when the permit is purchased;
10. all hunters had to return a questionnaire, in future, only the permittee will be required to return a questionnaire.

The information in the check list covers the 1980 season.

A new bill which allows annual seasons beginning in 1982 is quite similar. Major changes include:

1. The Commissioner of the Department of Inland Fisheries and Wildlife can set the opening date, establish hunting zones within the open area, set quotas for each zone and issue up to 1,000 permits.
2. Up to 10% of the permits may be issued to non-residents. (Previously a non-resident could be a subpermittee not a permittee).
3. There is no longer a registration fee. The non-refundable application fee is \$5.00 for residents and \$10.00 for non-residents. The cost of the permit is \$25.00 for residents and \$200.00 for non-residents. A general hunting licence is also required.

12. Norway - Jon Lykke:

The moose kill in Norway today consists approximately of:

- Calves - 25%
- Yearlings - 20%
- Older cows - 15% (spared)
- Older bulls - 40%.

1. Success rate refers to number of moose killed in relation to a predetermined number.
2. Moose hunting season in the county of Nord-Troendelag: September 25 - October 1 and October 10 - 23. There are

some variations throughout the country, within the limits of 14 - 21 days.

3. No primitive weapons allowed. Firearm requirement: expanding bullet (soft point), with an energy of 200 kgm. at a distance of 300 m. - all hunters must pass a shooting test each year.
4. Licence system is totally different from most North American systems (see J. Lykke, 1974: Moose Management in Norway and Sweden. *Naturaliste Can.*, 101: 723 - 735). Norway has a harvest control by area; ie. there is a minimum area requirement to kill a moose. (The fixed area varies from district to district and from year to year. It is set by the Department, after advice from a local game committee.) The landowners, private and state as well, apply for a certain number of moose each year, according to their area. This "licence" costs \$5.00 per moose. The landowners hunt themselves or rent out a certain "moose area" with a fixed number of animals to be killed. There is always only one "hunting team" on each "area".
5. Motorized vehicles are forbidden in any phase of the hunt except for transportation of the meat.
6. Dogs are not only allowed, but it is a demand that a good dog shall be at hand, and everybody uses dogs here.
7. Tourist outfitters and guides are almost unknown here. The few landowners who rent out moose hunting to foreigners take hand of the "guiding" themselves.

